S. 33
2208

MONOGRAPHIA CHRYSIDIDARUM ORBIS TERRARUM UNIVERSI.

(TABULÆ I., II.)

AUCTORE

ALEXANDRO MOCSÁRY

MUSÆI NAT. HUNGARICI ADIUNCTO,

ACADEMIÆ SCIENTIARUM HUNGARICÆ SOCIO.

o 97.

* *

DISSERTATIO INAUGURALIS IN ACADEMIA SCIENTIARUM HUNGARICA HABITA DIE 15. APRILIS 1889.

*

EDITIO SEPARATA SECTIONIS TERTIÆ EIUSDEM ACADEMIÆ. 1888—1889. II.

* *

BUDAPESTINI, 1889.

TYPIS SOCIETATIS FRANKLINIANÆ.

Ára 20 frt.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

MOCSÁRY A.

MONOGRAPHIA CHRYSIDIDARUM.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

FÖLDÜNK FÉMDARÁZSAINAK MAGÁNRAJZA.

IRTA

MOCSÁRY SÁNDOR

NEMZETI MÚZEUMI SEGÉDŐR,

A MAGYAR TUDOMÁNYOS AKADÉMIA LEV. TAGJA.

* *

SZÉKFOGLALÓ ÉRTEKEZÉSÜL BEMUTATTA A M. T. AKADÉMIA III. OSZTÁLYÁNAK 1889. ÁPRIL 15-ÉN TARTOTT ÜLÉSÉN.

*

A M. T. AKADÉMIA III. OSZTÁLYÁNAK KÜLÖN KIADVÁNYA. 1888—1889. II.

* *

BUDAPEST, 1889.

FRANKLIN-TÁRSULAT KÖNYVNYOMDÁJA.

**

(MEGJELENT 1889. ÁPRIL HÓ 26-ÁN.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Mocsáry, Sándor

MONOGRAPHIA CHRYSIDIDARUM ORBIS TERRARUM UNIVERSI.

AUCTORE

ALEXANDRO MOCSÁRY

MUSÆI NAT. HUNGARICI ADIUNCTO,

ACADEMIÆ SCIENTIARUM HUNGARICÆ SOCIO.

* *

DISSERTATIO INAUGURALIS IN ACADEMIA SCIENTIARUM HUNGARICA HABITA DIE 15. APRILIS 1889.

*

EDITIO SEPARATA SECTIONIS TERTIÆ EIUSDEM ACADEMIÆ. 1888—1889. II.

* *

BUDAPESTINI, 1889.

TYPIS SOCIETATIS FRANKLINIANÆ.

**

(EDITA EST DIE 26. APRILIS 1889.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Natura etiam in minimis miranda.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

Museum
Reference
Sherman
1-4-49
65231

Tekintetes Akadémia!

Mielőtt értekezésem tárgyára térnék, hálás köszönetemet kívánom kifejezni a tek. Akadémiának megválasztásomért; őszintén igérve, hogy erőm és tehetségemhez képest osztályunknak ezentúl is munkás tagja lenni óhajtok.

© 1-7-49 LWS

Székfoglaló értekezésem tárgya ama latin nagy munkának az ismertetése, mely az *egész földgömb Fémdarázsairól* szólva, mint a III-ik osztály külön kiadványa már legközelebb megjelenik.

Még 1879-ben, midőn a tek. Akadémia által a Vitéz-alapítványból kihirdetett jutalomra pályamunkámat készítettem s a Fémdarázsokat (Chrysididæ) tanulmányoztam, érlelődött meg bennem a szerencsés gondolat: a magyar fauna Fémdarázsainak magánrajza után, megírni az összes ismert Fémdarázsok monographiáját is; és pedig annál is inkább, mert tanulmányaim közben arra a tapasztalatra jöttem, hogy e kedvelt és szép család fajai a világirodalomban igen elszórtan vannak leírva és sem kellőleg tanulmányozva nincsenek, sem pedig nincsen olyan könyvünk, a melyben az ismert fajok összeállítva, életmódjuk s földírati elterjedésök és synonymjaik kitüntetve volnának; mert Dahlbom classicus műve — mely a svéd király költségén 1854-ben latin nyelven jelent meg Berlinben — 207 (213) fajról szól ugyan; de a különféle munkákban ekkorig már több mint 250 faj volt leírva, s Dahlbom nem ismerve a más nemzetek irodalmát, ezek nagy részéről tudomással sem bírt, a fajok synonymjait vagy egészen kihagyta, vagy nagyon is hibásan közölte. Dahlbom munkája óta 34 év telt el, a tudomány e téren is nagyot haladt, s ismét több mint 270 új fajt írtak le a világ minden részéből, melyek számos munkában vagy értekezésben elszórva találhatók.

A Fémdarázsokra vonatkozó irodalmat, mely 241, különféle nyelvű, sokszor igen drága és ritka munkában található, megszereznem sok fáradságba került. A Nemzeti Múzeum állattári szakkönyvtára már eddig is eléggé gazdagnak mondható ugyan; de korántsem öleli fel magában az összes ide vonatkozó világirodalmat. A hiányokért tehát a külföldhöz fordúltam, s a mely munkákat a berlini FRIEDLÄNDER könyvkereskedő czégtől kölcsön nem kaphattam, azokhoz ismerőseim útján a *bécsi, innsbrucki* s *berlini*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

udvari, a *párizsi* és *british múzeumi* könyvtárakból jutottam akként, hogy az illetők vagy magát a kívánt munkát bocsájtották rendelkezésemre, vagy legalább a szükséges leírásokat szóról-szóra lemásolták; s ezeket nekem szívesen teljesítették KOHL Bécsben, DALLA TORRE Innsbruckban, DEWICZ Berlinben, BUYSSON gróf Vernetben, KIRBY Londonban, kiknek e helyen is baráti szívességökért köszönetemet fejezem ki. — Az összes irodalmat ekként megszerezve, lépéseket tettem, hogy a mennyire lehetséges, a különféle gyüjteményekből és múzeumokból a typicus példányokat is megtekintés végett megkaphassam, mert ezek nélkül magánrajzot írni igen nehéz. Áll ez főleg a régi, sokszor nem egészen szabatosan leírt fajokra nézve, melyeknél a feltűnő jellegek nincsenek eléggé kitüntetve, vagy újabb időben más, szakavatott toll által újra leírva. Ez óhajom azonban csak részben teljesülhetett; mert némely nemzetek múzeumainál ama tilalom áll fenn, hogy a typicus példányokat senkinek sem adják ki. Hálás szívvel kell itt megemlítenem azt, hogy a *bécsi udvari Múzeum* igazgatósága e tekintetben dicséretes kivételt képezett, mert nemcsak a Múzeum összes Fémdarázsait megküldötte nekem, hanem azt a kevés typicus példányt is, melyeknek Fabricius és Dahlbom munkái után birtokában van; valamint köszönetemet kell kifejeznem RADOSZKOVSZKY orosz tűzér-tábornoknak s az orosz czár főhadsegédének, a ki többnyire az orosz birodalom újabb tartományaiból való ritka szép gyüjteményét s az ő és Eversmann typicus példányait — melyeket oly szép rajzokban adott ki — az 1886. év julius havában Marienbadból haza térve, Budapestre magával hozott és több hónapra tanulmányozás végett átengedett; valamint ROBERT DU BUYSSON grófnak, a ki a saját s ABEILLE némely typusait és FREY-GESSNERNEK, a ki a svájczi fauna typicus példányait küldötték be megtekintés végett.

Az összes typusokat meg nem kaphatva, meg kellett elégednem azzal, hogy 9 évi tanulmány alapján: a fajokat rendszerbe, a könnyebb áttekintés és meghatározás végett csoportokba állítsam, synonymjaikat és irodalmukat összeszedjem, életmódjukat feltüntessem, a számos új fajt s mindazokat újra jellemezzem, melyeket már a régibb szerzők felállítottak és most más példányokban hozzám kerültek, szóval mindazokat, melyeket biztosan ismerek, újra leírjam; a többiekre nézve pedig, melyek természetben előttem ismeretlenek maradtak, eredeti leírásaikat bármely mívelt nyelven a különféle munkákból szóról-szóra átvegyem, s ezek által egy olyan munkát nyújtsak, a melyben nemcsak az összes eddig ismert fajok, synonymjaik, irodalmuk és életmódjuk megvan, hanem, a mely után, bárhonnan való, ismert faj könnyen meghatározható legyen s pár forintért kezében legyen bárkinek is egy olyan nagyszabású munka, mely egy nagyon kedvelt család világirodalmát foglalja magában s minden más könyvet e családra nézve nélkülözhetővé tegyen. A tekintetes Akadémiának határtalan köszönettel tartozom, hogy e szándékomat tetemes anyagi áldozatok árán kivitelre segítette. A munka pár nap múlva kész lesz, szétmegy az

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

egész világra, s szabadjon remélnem, hogy az messze földek tiszteletét és meleg elismerését fogja az én őszinte hálámhoz csatolni a tek. Akadémia iránt; azt egy állattani Múzeum és szakbúvár sem nélkülözheti; ehhez hasonló művet szövegére nézve a leíró zoologia terén nem ismerek; nekem legalább nincsen tudomásom olyan munka létezése felől, mely egy családnak az egész világon élő 733 faját magánrajzilag minden tekintetben ismertetné; de egyik jó oldala leend az is, hogy e család mívelőinek már amúgy is tekintélyes számát tetemesen gyarapítani, ismereteinket fejleszteni fogja s napfényre hozza ama typusok új leírásait, melyeknek hollétéről manapság nincsen tudomásunk.

Dahlbomnak általánosan elfogadott rendszerében tetemes változtatásokat tettem: a családot, alcsaládot és a nemeket újra, sokban másképen jellemeztem, az ekkorig felállított 19 nemet 12-re vontam össze, kimutatva a többiek tarthatatlanságát. S erre magamat tökéletesen jogosítva éreztem azáltal, hogy az eddig leírt fajoknak több mint a felét természetben ismerem, mert nemcsak a Nemzeti Múzeumnak a maga nemében páratlan, mondhatnám az egész világon legszebb gyűjteménye állott rendelkezésemre, melyeknek több mint a felét külföldi ismerőseimtől kaptam ajándékban vagy cserében, hanem megkaptam a *bécsi, müncheni, drezdai, berlini, hallei, brémai, leydeni, genfi, zürichi* és *athénei Múzeumok* gyűjteményeinek példányait is; azonkívül rendelkezésemre bocsájtották gyűjteményeiket: Friese Schwerinben, Kriechbaumer és Hiendlmayr Münchenben, Schmiedeknecht Gumperdában, Wüstnei Sonderburgban, Sikkmann Iburgban, Saussure és Frey-Gessner Genfben, Schulthess-Rechberg Zürichben, Pérez Bordeauxban, Lichtenstein Montpellierben, André Bônéban, Buysson Vernetben, Fairmaire Párizsban, Radoszkovszky Varsóban, Gasperini Spalatóban, Korlevic Fiumében, Kolazy és Handlirsch Bécsben és számosan hazánkból; s így alkalmam volt néhány ezer, szebbnél-szebb Fémdarázst látni és tanulmányozhatni a világ minden részéből.

A mi ez állatok életmódját illeti, azok kivétel nélkül mind élősdiek azaz parasiták, mint a milyenekkel a hártyásszárnyú rovarok (Hymenoptera) legtöbb családjában találkozunk, sőt a legnagyobb családé, a fürkésző darázsoké (Ichneumonidæ) egyedül csak ilyenekből áll. A Fémdarázsok élősdiek a levél-, magánéltű redősszárnyú és kaparó darázsoknál s a magánéltű méhféléknél, tehát a saját rendjökben; mert Laboulbéne amaz állítása, hogy a *Chrysis ignita* Linn. a *Ptosima novemmaculata* Fabr. nevű bogár parasitája lenne, előttem nagyon kétséges s talán csak fölületes megfigyelésen alapul. Nem valószínűtlen ugyanis, hogy a bogár elhagyott meneteiben valamely kaparó darázs fészkelte be magát s a *Chrysis ignita* ennek a parasitája. Az élősdiséget illetőleg, az a Fémdarázsoknál kétféle alakban nyilvánul. A *Cleptes-nem* fajainál az anyaállat petéit a levéldarázs (Tenthredinida), jelesen a *Nematus-nem* pöszméte és ribizke bokrokon

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

szabadon élő álczáinak a bőre alá szúrja, miként a fürkésző darázsok a lepkék hernyóinál. A *Cleptes* álczája a levéldarázs álczájának a testéből nő fel, a nélkül, hogy elhalna; s csak midőn bábbá alakulás végett a földbe megy, idézi elő a Fémdarázs álczája annak a halálát; míg ellenben a többi Fémdarázsoknál az anyaállat petéit a fészeképítő darázs vagy méh távolkétében annak rejtett fészkébe teszi, akkor, midőn a sejt vagy a bölcső már készen van ugyan, de mielőtt azt az anyaállat befödelezte volna. Az álcza kikelve, fölemészti a neki készített táplálékot, s mielőtt teljes nagyságát elérné, kel ki a Fémdarázs petéje s álczája a fészeképítőnő álczájából már pár nap alatt felnő, aztán többnyire selyemszövedékkel veszi magát körül, egy ideig mozdulatlanúl hever s bábbá alakul, melyből rövidebb vagy hosszabb idő múlva kifejlődik a kész Fémdarázs; de mindaddig a fészekben marad, míg megjelenésének eljön az ideje, hogy nemének és fajának fenmaradását eszközölje. A Fémdarázs aztán a fészekbe többé nem tér vissza, hanem a bokrokon vagy a virágokon alszik. Nappal az ernyős növényeken vagy a fütejféléken tartozkodik, melyeknek a nectárjával él, vagy pedig az olyan fészkek körül ólalkodik, hol a *Nematus-nem* levéldarázs álczái — mint mondottuk — a pöszméte vagy ribizke bokrokon élnek, vagy hol a kaparó és magánéltű redősszárnyú darázsok és a magánéltű méhfélék fészkei vannak elhelyezve, mint a milyenek: a falhasadékok, ledöntött vagy levágott fák, kerítések, czölöpök, kiálló sziklák, homokos, agyagos partok, a szederbokrok ágai, a gubacsok és az üres csigaházak. A virágok közűl különösen szeretik az *Euphorbiákat,* kivált az *Euphorbia glareosa*-t, a *spárgát*, a *sárgarépát* és a *Heracleum spondylium*-ot, a *Sedum* fajait, a fészkes virágúak között az *egérfarkú Cziczkórót*. A Fémdarázsok fajai petéiket nem mindig egy bizonyos hártyásszárnyú rovar sejtjeibe teszik, hanem gyakran különféle fajok, nemek és családokéiba; s minthogy ez állatok igen különböző nagyságúak, e körülmény oka annak, hogy sok faj nagyságban annyira változó. — Munkám végén egy táblázatban állítottam össze mind ama Fémdarázsokat, melyeknek gazdáik már ismeretesek, megmondva egyszersmind azt is, hogy kinek a megfigyelése szerint.

Neveiket ez állatok: tűz-, vagy rézvörös, aranyos vagy zöldes aranyos, piros, zöld, kék vagy violaszín színezeteiknek pompás érczfényétől vettek, s alig képzelhetünk magunknak olyan színvegyületet, a melyet ezeknél megtalálni ne lehetne; ezek miatt egyszersmind a legszebb színezetű rovarok közé tartoznak, s bátran nevezhetni őket a rovarvilág kolibrieinek, mert szépen tündöklő fémes színök, mely minden egyes mozdulatnál más-más színjátékot ad, mintha az csupa rubinokból, smaragdokból s más drágakövekből volna kirakva: Amerika hamis ékköveit, a színek Crœsusait, a szép kolibriket juttatja eszünkbe. Első sorban természetesen azt hihetnők, hogy a tropicus tájak állatai itt is nagyszerű színpompájuk által tünnek ki; de csudálatos, hogy ez a

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Fémdarázsoknál csaknem ellenkezőleg áll. Mert ezek között határozottan legszebbek az európai fauna állatai; némi kivételt e tekintetben csak Dél-Áfrika képez, mert itt az egyszínű zöldes vagy zöldeskék fajok mellett olyanok is fordulnak elő, noha csekély számmal, melyek az európaiakkal színpompára nézve vetélkednek. A többi világrészek tropicus állatai ellenben többnyire egyszínűek: kékek, zöldek vagy zöldeskékek, és csakis Indiában és Jávában van pár olyan faj, melyek aranyos foltjaik vagy szallagaik által tünnek ki. Az ausztráliaiak és amerikaiak nagyon kevés színváltozatot mutatnak, legfejjebb csak tündöklő fényesek, ilyenek a braziliaiak is; míg e nagy ország többi darázs- és méhféléje a világos égkék színtől kezdve a vörös, sárga, fehér s fényes fekete színvegyületekben pompázik.

A Fémdarázsok már kora tavasztól fogva az ősz kezdetéig találhatók ugyan; de nálunk a legtöbb faj mégis junius és juliusban fordul elő. Jobbára a verőfényben, délelőtt tíz órától délután három óráig mutatkoznak, midőn csápjaikkal sebesen játszva, az olyan helyek körül röpködnek és futkosnak, a hol petéik elhelyezésére alkalmas gazdák, vagy pedig idegen sejtek vannak. Fürgeségök és éleslátásuk miatt csak nehezen foghatók meg; ekkor és veszély idején összegömbölyödnek és halottaknak szinielik magukat; de aztán, ha tehetik, csakhamar el is menekülnek. Nagyságuk 3—19 mm. között váltakozik; de a legtöbb 6—8 mm.-nél alig nagyobb.

Minthogy némely fajnak több válfaja van, melyek nagyságban, gyakran színezetben, alakban és vésményeikben is egymástól némileg eltérnek, úgy, hogy ezeket könnyen önálló fajoknak tekinthetnők: szükséges minden egyes fajból lehetőleg sok példányt gyüjteni s közöttük az átmenetet gondosan megvizsgálni. A meghatározás e végből némely fajoknál gyakran nehéz; mihez még ama körülmény is járul, hogy sok önálló faj színezetében egymáshoz hasonló. Némely különböző, de hasonló faj, a különféle szerzőknél ugyanegy; és ugyanegy faj gyakran különféle nevek alatt fordúl elő; azért a faj után a szerző neve mindig kiteendő. Sokszor szerepelnek válfajok önálló fajok gyanánt, s néha ugyanegy faj nősténye és hímje két különböző nevet visel.

A mi ez állatok földírati elterjedését illeti: 1888 végéig le volt írva mintegy 757 faj; ebből a mai napig synonym körülbelül 226 faj, marad tehát 531 faj. A különféle gyüjteményekben 178 újat s 19 új varietast találtam és írtam le. Elnevezését meg kelle változtatnom 24 fajnak. Munkám tehát 733 fajról szól. E 733 faj földíratilag a következőképen oszlik meg: Európában, a természetes határokat értve, él 229, Ázsiában 213, Áfrikában 190, Amerikában 164, Ausztráliában 31 faj. Már most a Wallace-féle régiók szerint: az ó-sarki övben (paleartic region) él 402 faj, az áfrikai övben (æthiopian region) 89, a keleti övben (oriental region) 39, az ausztráliai övben (australian region) 36, az új-sarki övben (neartic region) 93, az új-tropicus övben (neotropical region) 94

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

faj. — Az egyes birodalmak és országok szerint: Angliából ismeretes 23 faj, Svéd- és Norvégországból 30, Dániából 18, az európai Oroszbirodalomból Szibéria, Árménia és a Kaukázus nélkül 76, ezekkel együtt 116, Belgiumból 25, Hollandiából 19, Németországból 63, Svájczból 71, Francziaországból Korsika szigetével együtt 98, Ausztriából s az örökös tartományokból 77, Magyarországból 92, Portugalliából és Spanyolországból a baleari szigetekkel együtt 79, Olaszországból Sziczilia és Szardiniával együtt 84, Görögországból 58, a Balkán-félszigetről 22, az európai és ázsiai Törökbirodalomból 81, a Kaukázusból 71, Arábiából 7, Perzsiából 22, Turkesztánból 55, Szibériából 19, Mongolországból 8, Chinából 16, Japánból 5, Indiából 23, a Szundaszigetekről 20 s ebből Szumatrában 8, Borneóban 4, Jávában 11, Celebesben 15, a Molukki-szigetekről 2, a Philippini-szigetekről 4, Új-Guineából 1, Marokkóból 5, Algirból 66, Tuniszból 3, Egyiptomból 46, Nubiából 12, Nyugot- és Dél-Áfrikából a szigetekkel együtt 77, ebből Szenegámbiában 11, Guineában 8, a Jóreménysoknál 27, Caffrariában 7, Madagascarban 8, Észak-Amerikából a panamai csatornáig 103, ebből a Brit-Columbiában 4, Canadában 11, Cuba szigetén 11, Californiában 31, Mexicóban 26, Dél-Amerikából 46 s ebből Venezuelában 2, Guiana és Cayenneben 10, Braziliában 41, Chileben 9, az argentini köztársaságban 7, Patagoniában 1, Ausztráliából 31, Tasmániából 3, Új-Caledoniából 3. Ismeretlen a hazája 9 fajnak. Vannak olyanok, melyek két, sőt három világrészben is előfordúlnak; sőt egy igen szép nagy faj színváltozatokban az egész világon él. Ebből látható egyszersmind az is, hogy hazánkat, a melyben 92 faj él, a fajok száma tekintetéből csak Francziaország múlja felül 6 fajjal, a melyet pedig már több mint egy század óta kutat sok jeles természetbúvár; míg hazánkban ez állatok csak újabb időben lettek gondosan meggyüjtve.

Dahlbom műve, mely eddig legnagyobb volt e téren, csak 207 fajról szól s így az én munkám 526 fajjal többet foglal magában.

Ha most, az eddig ismert fajok után következtetni akarnánk arra, hogy mennyi Fémdarázs élhet e Föld hátán, aligha tévedünk, ha azok fajainak számát mintegy 1000-re teszszük, azaz csak 257 fajjal többre, mint a mennyit munkám felölel s a mely egyszersmind e szerint a Földön élő Fémdarázsoknak több mint $^2/_3$ részét foglalja magában.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Illustrissimi viri!

Antequam de re proposita dicere incipiam, facere non possum, quin vobis, viri præstantissimi, quam maximas agam gratias, quod me in cœtum vestrum cooptare voluistis, ac promittam, me operam meam collaturum, ut eiusdem illustrissimi cœtus gloriam pro virili parte mea promoveam.

In animo est paucis dicere de opere illo, quod Chrysididas orbis terrarum universi complectens sermone latino, ut Academiæ huius nostræ editio, ut dicimus, separata iamiam in lucem proditurum est.

Anno adhuc 1879, cum præmium liberali Cl. D. Vitéz legato institutum et ab hoc illustrissimo cœtu propositum referre cupiens, Chrysididas diligentiori indagationi subiicerem, sat feliciter in animum venit, post descriptionem Chrysididarum Hungariæ ulterius progredi ac omnes huius familiæ species accurata indagatione perscrutari et illustrare. Quod animi mei propositum vix natum crevit et tempore ipso vim accepit maiorem. Videbam enim, cum in hæc studia incumberem, præclaræ huius ac prædilectæ familiæ species dispersim esse descriptas nec satis accurato examini subiectas. Accedit, quod non existit opus, quod species notas complectatur omnes, vivendi modum, patriæ fines, diversa uniuscuiusque speciei nomina accurate disposita complectatur. Eximium illud opus Dahlbomi, quod anno 1854 sermone latino in lucem prodiit Berolini, species continet 207 (213); sed iam ad ea usque tempora 250 speciebus plures descriptæ fuerant, quarum in lucubratione Dahlbomi, qui ea, quæ apud exteras gentes de hac re acta et composita fuerant, penitus ignorasse videtur, ne minima quidem mentio occurrit. Specierum vero descriptarum synonymas denominationes vel neglexit vel perperam commemoravit. Præterea iam 34 effluxerunt anni, ex quo Dahlbomi liber in lucem prodiit; indagatio vero et studium diligens hanc quoque rem plurimum provexit ita, ut variis lucubrationibus ex diversis orbis terrarum partibus plus quam 270 novæ species descriptæ fuerint.

Quæ usquam sermone culto de Chrysididarum familia tractata fuerant comparare infiniti laboris fuit. Etenim omnia ea, quæ ad hanc rem pertinent, literaturam dicimus,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

dispersa atque disiecta inveniuntur in 241 lucubrationibus et operibus, linguarum varietate diversis, quorum magna pars rarissima est nec nisi ingenti pretio comparari potest. Bibliotheca zoologica Musæi Nationalis egregia quidem est et sat multorum voluminum; sed tantum abest, ut omnia complectatur, quæ hac de re ubique terrarum homines docti commentati sunt, ut absque auxilio exterorum finem propositum consequi nunquam potuissem. Quos libros a DD. FRIEDLÄNDER et *filiis*, bibliopolis Berolinensibus mutuo accipere non potui, per viros mihi notos ex bibliothecis Viennensi, Oenipontana, Berolinensi aulicis, Parisiensi et Londinensi Musæi Britannici mihi procuravi ita, ut iidem viri doctissimi vel ipsa opera inspicienda commiserint, vel quæ ad rem facerent, ad verbum descripserint. Auxilium hoc mihi præstiterunt DD. KOHL Viennæ, DALLA-TORRE Oeniponte, DEWITZ Berolini, Comes BUYSSON Verneti, KIRBY Londini, quibus hoc loco gratias agere iucundissimum accidit.

Reliquum erat, ut ex variis Musæis, quantum fieri posset, exemplaria archetypa oculis spectanda suppeterent. Difficillimum enim est, si tamen fieri possit, absque iis monographiam conscribere; quæ difficultas crescit, si sermo est de speciebus antiquis, quarum descriptiones sæpe ieiunæ et minus accuratæ sunt, quarum notæ characteristicæ minus expositæ sunt nec recentiore tempore ab auctoribus peritis expositæ. Sed enim obstabat lex illa variarum nationum musæis lata, quæ exemplaria typica cuiquam tradere vetat. Quo loco gratissimo cum affectu commemorandi mihi sunt *praesides musaei aulici Vindobonensis*, qui non modo totum Chrysididarum suarum thesaurum mihi submiserunt, sed neque exceperunt pauca illa exemplaria archetypa, quæ post Fabricii et Dahlbomi opera eidem Musæo obtigerant. Nec minore cum laude commemorandus est Cl. D. RADOSZKOVSZKY, rei tormentariæ in Russia præfectus, ut dicimus, generalis. Anno 1886 mense Julio ex thermis Marianis redux raræ pulchritudinis thesaurum Chrysididarum in recentioribus imperii rossiaci provinciis collectum sicut et exemplaria archetypa a se et a D. Eversmann descripta, quæ delineatione pulcherrime illustraverat, Budapestinum attulit et per plures menses perscrutanda concessit. Nec omittere debeo Comitem Robertum du Buysson et D. Frey-Gessner, quorum prior sua et aliquot a D. Abeille descripta exemplaria typica, alter Helvetica, quæ possidet, inspicienda commiserunt.

Cum ob rationem supra expositam universa exemplaria typica comparare non potuissem, reliquum erat, ut pro ea, quam novem in his studiis annis versatus acquisivi, rei notitia species ad perpetuam disciplinæ formulam revocarem, ad faciliorem conspectum et determinationem provehendam in tribus et cohortes distribuerem, nomina diversa et quæ apud omnes gentes de illis literis consignata erant, in unum colligerem, vivendi modum explicarem, plurimas species novas nec non eas omnes, quæ

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ab antiquis auctoribus descriptæ novis exemplaribus ad me pervenerant, verbo omnes, quas certe novi, denuo describerem, reliquas vero, quarum exemplaria videre non contigit, ipsis auctorum verbis transsumtis illustrarem atque hoc modo opus conficerem, quod non tantum omnes species adhuc usque notas, nomina earum synonyma, literaturam, quam dicimus, et vivendi modum complecteretur, sed etiam illud efficeret, ut species nota qualiscunque et undequaque orta facili negotio determinari posset; insuper ut quicunque vellet, levi pretio amplissimum opus comparare posset, quod omnia, quæ de ingenti hac et præcipua familia ubique terrarum literis consignata sunt, contineret et præter quod aliud necessarium non esset. Vobis, Academici spectatissimi, infinitis devinctus sum nominibus, qui propositum meum non sine magna mercede perficere auxiliati estis.

Opus hoc paucis diebus lucem aspiciet, distrahendum in omnes partes. Nec vereor sperare, cœtum hunc illustrissimum apud exteras etiam et a nobis longe dissitas nationes summam laudem consecuturum eoque honore eum, quo erga eundem afficior, gratum animi affectum cumulatum iri. Idem literarum genus secutis necessarium erit hoc opus nec ullum musæum zoologicum illo carere poterit. Sed enim illud etiam eveniet, ut huius familiæ cultores, iam nunc satis multos, numero augeri, novis cognitionibus ditescere videamus, nec frustra desideremus archetyporum illorum descriptiones, quæ ubi sint, hodiedum ignoramus.

Systemati Dahlbomi ubique recepto sat magnam commutationem attuli: familias, subfamilias et genera denuo nec raro aliis notis descripsi, genera hucusque statuta 19 ad 12 numerum redegi, cetera levia esse et infirma demonstravi. Idque optimo iure feci, quippe qui specierum descriptarum partem dimidio maiorem ipsis oculis vidi.

Præ manibus erat thesaurus Chrysididarum suo genere singularis et fere dixerim præ omnibus in toto terrarum orbe pulcherrimus Musæi Nationalis Hungarici, cuius facile ultra dimidiam partem a viris doctis mihi familiariter notis vel dono vel permutatione accepi; insuper lustare contigit oculis exemplaria *Musaeorum: Vindobonensis, Monacencis, Dresdensis, Berolinensis, Hallensis, Bremensis, Batavo-Lugdunensis, Genevensis, Turicensis* et *Atheniensis;* nec minore cura inspexi Chrysididas, quas DD. Friese Schwerino, Kriechbaumer et Hiendlmayr Monachio, Schmiedeknecht Gumperda, Wüstnei Sonderburga, Sikkmann Iburga, Saussure et Frey-Gessner Geneva, Schulthess-Rechberg Turico, Pérez Burdigala, Lichtenstein Montepessulano, André Bona, Buysson Verneto, Fairmaire Parisiis, Radoszkovszky Varsovia, Gasperini Spalatis, Korlevic Fluminibus, Kolazy et Handlirsch Vienna aliique non pauci e diversis patriæ nostræ regionibus mihi submiserunt; unde factum est, ut

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

plura millia pulcherrimarum Chrysididarum ex omnibus orbis terrarum partibus videre, examinare et inter se comparare licuerit.

Chrysididæ nomen a colore igneo vel cupreo-rubro, aureo vel viridi-aureo, roseo, viridi, cœruleo vel violaceo metallice splendente acceperunt. Pronum erat opinari, animalia regionum tropicarum magnifico splendore eminere; sed contrarium accidit. Pulcherrimæ enim sunt absque dubio Chrysididæ faunæ Europææ. Exceptis enim compluribus speciebus Africæ meridionalis incolis, iisque sat paucis, quæ colorum splendore cum nostris certant, et una alterave specie Indiarum et Javæ incola, quæ maculis vel vittis aureis eminet, ceteræ species regionum tropicarum plerumque unico colore gaudent eoque vel cyaneo, viridi vel viridi-cyaneo. Neque species ex Australia vel America oriundæ eminent magna colorum varietate, nisi forte splendore præstent maiore. Idem valet de specibus Brasiliensibus; dum Vespidæ et Apidæ ingentis huius imperii per omnes colorum varietates modo cyaneo vel cœruleo, modo rubro aut flavo vel flavescente, modo albo, imo etiam nigro lucido splendore ornentur.

Ad distributionem geographicam quod attinet: usque ad finem anni 1888. circiter 757 species erant descriptæ, e quibus 226 species ad synonymas pertinent. Restant igitur 531 species. In ingenti illa animalium, quæ examinare licuit, copia inveni et descripsi species novas 178 et 19 varietates, denominationem mutare debui 24 specierum; unde opus meum 733 species in se complectitur, quæ patria sic dividuntur: Europam incolunt 229, Asiam 213, Africam 190, Americam 164, Australiam 31. Si easdem species per regiones a Wallace statutas distribuamus: regioni palæarcticæ obtingunt 402, æthiopicæ 89, orientali 39, australiacæ 36, neoarcticæ 93, neotropicæ 94.

Si regnorum fines spectemus: Angliam incolunt 23 species, Sueciam et Norvegiam 30, Daniam 18, Russiam Europæam absque Siberia, Armenia et Caucaso 76; quas provincias si addamus, numerus specierum excrescit ad 116. Belgium incolunt 25 species, Hollandiam 19, Germaniam 63, Helvetiam 71. Species Gallicas vel Corsicanas novimus 98. Austriæ et provinciarum hæreditariarum incolas 77, Hungaricas 92, Lusitanas, Hispanas vel Baleares 79, Italas, Siculas et Sardas 84, Græcas 58. Peninsulam Balcanicam incolunt species notæ 22, Turciam Europæam et Asiaticam 81, Caucasum 71, Arabiam 7, Persiam 22; e speciebus Turkestanicis notæ sunt 55, e Sibericis 19, e Mongolicis (Tartaricis) 8, e Sinensibus 16, e Japonicis 5, ex Indicis 23. Archipelagum Sundaicum inhabitant e speciebus hucusque notis 20, quarum 7 Sumatram, Borneum 4, Javam 11, insulam Celebes 15 patriam habent; insulas Moluccanas incolunt species 2, Philippinas 4, Novam-Guineam 1, regnum Maroccanum 5, Algeriam 66, Tunisiam 3, Aegyptum 46, Nubiam 12, Africam australem et occidentalem et insulas adiacentes 77, quarum 11 invenias in Senegambia, 8 in Guinea, in Promontorio Bonæ

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Spei 27, in Caffraria 7, in insula Madagascar 8. E speciebus Americam septentrionalem usque ad Isthmum Panamensem incolentibus notæ sunt 103, quarum 4 Columbiam Britannicam, 11 Canadenses provincias, 11 insulam Cuba, Californiam 31, provincias Mexicanas 26 patriam suam profitentur. America meridionalis subministrat species omnio 46, quarum 2 in Venezuela, 10 in Guiana, 41 in Brasilia, 9 in regno Chilensi, 7 in republica Argentina, 1 in Patagonia sedes suas habere novimus. Australiam demum incolunt species 31, Tasmaniam 3, Novam-Caledoniam 3. Ignotæ patriæ species 9 numerantur. Nonnullæ unius regni finibus non constrictæ in duabus vel tribus orbis partibus occurunt; imo vero pulcherrima quædam species e maioribus coloris differentia plurima insignis orbis universi incola et civis est.

Opus Dahlbomi, quo maius in hac disciplina non extitit, tantummodo 207 species complectitur, unde patet opus hoc meum lucubrationem Dahlbomi 526 speciebus superare.

Iam si licet ex speciebus iam cognitis coniectura assequi: quot Chrysididarum species per universas orbis plagas volitent, satis prope ad veritatem accesserimus, si numerum 1000 adoptemus, qui præter species in opere meo enumeratas 257 novas complectitur. Ex quo perspicuum est, lucubrationem meam plus quam duas tertias partes universæ huius familiæ continere.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

LITERATURA CHRYSIDIDARUM.

1. *Opera, in quibus descriptiones continentur.*

AAR. TRANSACT. AMER. ENT. SOC. — Aaron, S. Frank, The North American Chrysididæ. (Transactions of the American Entomological Society of Philadelphia. XII. 1885, pag. 209—248.)

AB. FEUILLE JEUN. NATURAL. — Abeille de Perrin, Elzéar, Un battue aux Chrysides; Diagnoses d'espèces nouvelles et remarques sur des espèces rares (Feuille des Jeunes Naturalistes. VII. 1877. Nro 78, pag. 65—68.). (Homalus triangulifer, Hedychrum sculpturatum, longicolle, Chrysis Laïs, Gribodoi, virgo, dominula, Chevrieri, cerastes n. sp.)

AB. DIAGNOS. CHRYS. NOUVELL. — Abeille de Perrin, Elzéar, Diagnoses des Chrysides nouvelles, pag. 1—6. Marseille, 1878. (35 species.)

AB. ANNAL. SOC. LINN. LYON. — Abeille de Perrin, Elzéar, Synopsis critique et synonymique des Chrysides de France. (Annales de la Société Linnéenne de Lyon. XXVI. 1879. pag. 1—108.)

AHR. FAUN. INS. EUROP. — Ahrens, A., Fauna Insectorum Europæ. Halæ, fasc. II. tab. 17. 1814. (Parnopes carnea F.) (Contin. per E. F. GERMARUM.)

BLANCH. HIST. NAT. — Blanchard, E., Histoire naturelle des Insectes etc. 3. Vol. Paris, 1840. — Tom. III. pag. 294—298. (Chrysis Audouinii n. sp.)

BRULLÉ, EXPÉD. DE MORÉE. — Brullé, Expédition scientifique de Morée. 3. Vol. Paris, 1832—36. Zoologie. Tom. III, 1-re Partie, Deuxième Section. Des animaux articulés, par A. Brullé. Paris, 1832, pag. 374—378. (Chrysis pyrogaster, ignifrons, rufitarsis, sinuata, dorsata, elegans Lep., semi-cyanea n. sp.)

BRULLÉ, HIST. NAT. DES ILES CANARIES. — Webb et Berthelot, Animaux articulés reçueillis aux îles Canaries. (Histoire naturelle des îles Canaries. Tom. II. Part. II. Entomologie. Insectes par BRULLÉ.). Paris, 1839, pag. 93. (Chrysis ignita L. var.)

BRULLÉ, HYM. — Histoire naturelle des Insectes. Suites à Buffon. Hyménoptères. Par le Comte Amédée Lepeletier de Saint-Fargeau. 4 Vol. Paris, 1836—46. — Tom. IV. Par AUG. BRULLÉ. 1846, pag. 1—55.

BUYSS. REVUE D'ENTOM. 1886. — Buysson, R. du, Cleptes Putoni n. sp. (Revue d'Entomologie. V. 1886, pag. 151.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Buyss. REVUE D'ENTOM. 1887. — Buysson, R. du, Chrysidides inédites. (Revue d'Entomologie. VI. 1887, pag. 6—8.) (Cleptes Abeillei, afra Luc., syriaca n. sp.)

Buyss. REVUE D'ENTOM. 1887—88. — Buysson, R. du, Descriptions de Chrysidides nouvelles. (Revue d'Entomologie. VI. 1887, pag. 167—201.; VII. 1888. pag. 1—13.)

Cam. PROCEED. MANCH. LIT. AND PHIL. SOC. — Cameron, P., Descriptions of one new genus and some new species of parasitic Hymenoptera. (Proceeding of the Manchester Literary and Philosophical Society. XXVI. 1887, pag. 7—11.) (Hedychrum japonicum, Lewisi, Chrysis japonicus, pulchellus n. sp.)

Cam. BIOLOG. CENTR.-AMERIC. — Biologia Centrali-Americana; or, contributions to the knowledge of the Fauna and Flora of Mexico and Central-America. Edited by F. Ducane Godman and Osbert Salvin. Zoology. Hymenoptera, by Peter Cameron. Fam. Chrysididae. April 1888. pag. 457—466. (Amisega n. g. Cleptinarum] cuprifrons, Notozus nitidus Aar., Hedychridium guatemalense, miliare, Chrysis mexicana, sonorensis, quadri-tuberculata, selenia Costa, fasciata Fabr., montezuma, panamensis, pilifrons, proxima, Parnopes fulvicornis n. sp.)

Cederhj. FAUNAE INGRICAE PRODROM. — Cederhjelm, J., Faunæ Ingricæ prodromus exhibens methodicam descriptionem Insectorum agri Petropolensis etc. Lipsiæ, 1798, pag. 167. (Chrysis ignita Linn. et aurata Linn.)

Chevr. CHRYSID. DU LÉMAN. — Chevrier, Fr., Description des Chrysides du bassin du Léman. Genéve, 1862, pag. 1—134.

Chevr. MITTHEIL. SCHWEIZ. ENT. GES. 1869. — Chevrier, Fr., Description de deux Chrysides du bassin du Léman (Holopyga splendens, Hedychrum Gerstæckeri n. sp.). (Mittheilungen der Schweizerischen Entomologischen Gesellschaft. Vol. III. Nro I. 1869, pag. 44.)

Chevr. MITTHEIL. SCHWEIZ. ENT. GES. 1870. — Chevrier, Fr., Description de quelques Hyménoptères du bassin du Léman. (Chrysis insperata, Hedychrum nanum n. sp.) (Mittheilungen der Schweizerischen Entomologischen Gesellschaft. Vol. III. Nro. VI. 1870, pag. 265—268.)

Christ, NATURG. — Christ, J. L., Naturgeschichte, Classification und Nomenclatur der Insecten von Bienen-, Wespen- und Ameisengeschlecht. Frankfurt a. Main. 1791, pag. 260; 393—406.

Coqueb. ILLUSTR. ICON. INS. — Coquebert, de Mombret, A. J., Illustratio Iconographica Insectorum, quæ in Musæis Parisinis observavit et in lucem edidit Joh. Christ. Fabricius, præmissis eiusdem descriptionibus. 3 Decades. Parisiis, 1799—1804. — Dec. I. 1799, pag. 19; Dec. II. 1801, pag. 58—61.

Costa, ANNUARIO MUS. DI NAPOLI. — Costa, Ach., Stilbum variolatum, Chrysis selenia, vomerina, laborans n. sp. (Annuario del Museo Zoologico della R. Universita di Napoli. Anno II. (1862) 1864, pag. 67—68.)

Court. ANNAL. SOC. LINN. MAINE-ET-LOIRE. — Courtiller, A., Descriptions des Chrysides observées aux environs de Saumur. (Annales de la Société Linnéenne de Maine-et-Loire. III. 1858. (1859) pag. 61—72.) (Hedychrum Solandii n. sp. pag. 65.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

CRESS. PROCEED. ENT. SOC. PHILAD. 1865. — Cresson, E. T., On the Hymenoptera of Cuba. (Proceedings of the Entomological Society of Philadelphia. IV. 1865, pag. 103—110.) (Elampus viridis, Hedychrum vernale, cyaniventre, Chrysis divergens, oblonga, superba, purpuriventris, insularis Guér., dubia, subviridis, consimilis n. sp.)

CRESS. PROCEED. ENT. SOC. PHILAD. 1865. Cresson, E. T., Catalogue of Hymenoptera in the Collection of the Entomological Society of Philadelphia, from Colorado Territory. (Proceedings of the Entomological Society of Philadelphia. IV. 1865, pag. 303—313.) (Omalus læviventris, Holopyga compacta, Wiltii, Hedychrum cupricolle, viride, Chrysis integra, densa, perpulchra, scitula, virens, lauta, prasinus, pulcherrima, venusta, bella, clara n. sp.)

CRESS. TRANSACT. AMER. ENT. SOC. — Cresson, E. T., Forty new species of Hymenoptera etc. (Transactions of the American Entomological Society. VII. Proceedings of the Entomological Section. 1879, pag. IV. Euchroeus Edwardsii, pag. X. Parnopes Edwardsii, Cleptes purpurata et americana).

DHLB. MONOGR. CHRYS. SUEC. Dahlbom, A. G., Monographia Chrysidum Sueciæ. Londini Gothorum, 1829, pag. 1—19.

DHLB. EXERCIT. HYM. — Dahlbom, A. G., Exercitationes Hymenopterologicæ ad illustrandam faunam Suecicam. Londini Gothorum. Part. I—VI. 1831—33.

DHLB. DISPOS. — Dahlbom, A. G., Dispositio methodica specierum Hymenopterorum secundum Familias Insectorum naturales. Particula secunda. Londini Gothorum, 1845, pag. 1—20.

DHLB. OEFVERS. K. VETENSK. ACAD. FÖRHANDL. — Dahlbom, A. G., Sud-Afrikanska Chrysides (Omalus coriaceus, Chrysis jugum, Bohemanni, delicatula, Schönherri, modica, Wahlbergi n. sp.) (Oefversigt K. Vetenskaps Academie Förhandlingar. 1850, pag. 135—142.)

DHLB. HYM. EUROP. — Dahlbom, A. G., Hymenoptera Europæa præcipue borealia etc. 2 Vol. — Tom. II. Chrysis in sensu Linnæano. Berolini, 1854, pag. 1—412.

DE GEER, MÉMOIR. — Geer, Charles de, Mémoires pour servir à l'Histoire des Insectes. 7 Vol. Stockholm, 1752—1788. — Guêpes dorées. Tom. II. Partie II. 1771, pag. 831—838.

DESTEF., NATURAL SICIL. — De-Stefani, T., Note sulle Crisididi di Sicilia (Il Naturalista Siciliano. VII. 1888. Nro. IV—VII. pag. 88—95; 114—125; 139—145; 156—161; 177—182; 215—220. (Chrysis Ragusæ n. sp.)

DONOV. BRIT. INS. — Donovan, E., The Natural History of British Insects etc. 16 Vol. London, 1792—1813. — Tom. I. 1792, pl. 7; 19. VII. 1798, pl. 235.

DONOV. INS. OF INDIA. — Donovan, E., Epitome of the Natural History of the Insects of India, and the islands of the Indian seas. London, 1800—1803. — Natural History of the Insects of India etc. A new edition by J. O. WESTWOOD. London, 1842, pag. 87—89. (Chrysis fasciata Don., nec Oliv. — imperialis Westw. pag. 87.)

DUF. et PERR. ANNAL. SOC. ENT. FRANCE. — Dufour Léon et Perris Eduard, Mémoire sur les insectes Hyménoptères qui nichent dans l'intérieur des tiges sèches de la Ronce. (Annales de la

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

société entomologique de France. IX. 1840, pag. 37—40). (Chrysis obtusidens, indigotea, cyanea L., Hedychrum minimum n. sp.)

EVERSM. BULLET. SOC. NAT. MOSCOU. - Eversmann, E., Fauna Hymenopterologica Volgo-Uralensis. Fam. V. Chrysidarum. (Bulletin de la société impériale des naturalistes de Moscou. XXX. 1857. Nro IV. pag. 544—567.)

FABR. SYST. ENT. — Fabricius, J. Chr., Systema Entomologiæ etc. Flensburgi et Lipsiæ, 1775, pag. 357—359.

FABR. SPEC. INS. — Fabricius, J. Chr., Species Insectorum etc. 2 Vol. Hamburgi et Kilonii, 1781. — Tom. I. pag. 454—457.

FABR. MANT. INS. — Fabricius, J. Chr., Mantissa Insectorum. 2 Vol. Hafniæ, 1787. — Tom. I. pag. 269—270 ; 282—284.

FABR. ENT. SYST. — Fabricius, J. Chr., Entomologia Systematica emendata et aucta etc. 4 Vol. Hafniæ 1792—94. — Tom. II. 1793, pag. 184—185 ; 238—243. Tom. IV. 1794, pag. 458.

FABR. ENT. SYST. SUPPL. — Fabricius, J. Chr., Entomologiæ Systematicæ Supplementum. Hafniæ, 1798, pag. 257—258.

FABR. SYST. PIEZ. — Fabricius, J. Chr., Systema Piezatorum etc. Brunsvigæ, 1804, pag. 154—156 ; 170—177.

FORST. NOV. SPEC. INS. — Forster, J. R., Novæ Species Insectorum. Centuria I. Londini, 1771. (Chrysis cyanochrysa et cyanura, pag. 88—89.)

FÖRST. VERH. NAT. VER. PREUSS. RHEINL. — Förster, A., Beschreibungen neuer Arten aus der Familie der Chrysiden. (Verhandlungen des naturhistorischen Vereines der preussischen Rheinlande. X. 1853, pag. 304—356.)

FOURCR. ENTOM. PARIS. — Fourcroy, A. F. de, Entomologia Parisiensis etc. 2 Vol. Parisiis, 1785. — Tom. II., pag. 440—441. (Vespa carbunculus, ignita, aurata, cuprea, viridis. rufescens n. sp.)

FREY, CHRYS. HELVET. — Frey-Gessner, E., Hymenoptera Helvetiæ. Fam. Chrysididæ. (Mittheilungen der Schweizerischen Entomologischen Gesellschaft. Vol. VII. Hft Nro. 8. 1887, pag. 11—89.)

FUESSL. MAGAZ. DER ENTOM. — Fuessly, J. G., Magazin für die Liebhaber der Entomologie. 2 Vol. Zürich und Winterthur, 1778—79. (Chrysis nobilis Sulz. Tom. I. 1778, pag. 221.)

GEOFFR. INS. — Geoffroy, E. L., Histoire abregée des Insectes qui se trouvent aux environs de Paris etc. 2 Vol. Paris, 1762. — Guêpes dorées. Tom. II. pag. 382—385.

GERM. REISE NACH DALMAT. — Germar, E. F., Reise nach Dalmatien und in das Gebiet von Ragusa. Leipzig und Altenburg, 1817 pag. 260. (Chrysis similis Lep., nitidula, candens n. sp.)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

GERM. FAUN. INS. EUROP. — Germar, E. F., Fauna Insectorum Europæ. Halæ, 1817. Fasc. IV. fig. 12—13. (Chrysis nitidula et candens.)

GERST. PETERS REISE NACH MOSSAMB. — Naturwissenschaftliche Reise nach Mossambique, auf Befehl seiner Majestät des Königs Friedrich Wilhelm IV. in den Jahren 1842 bis 1848 ausgeführt von Wilhelm C. H. Peters. Zoologie. Tom. V. Insekten und Myriapoden. Berlin, 1862. Hymenoptera, bearbeitet von A. GERSTAECKER, pag. 519—520. (Stilbum splendidum Fabr., Pyria lyncea Fabr., stilboides Spin.)

GERST. STETT. ENT. ZEIT. — Gerstaecker, C. E. A., Zwei neue von Herrn Prof. Zeller in Ober-Kärnthen gesammelten Chrysis-Arten (Chr. hirsuta et cribrata) (Stettiner entomologische Zeitung. XXX. 1869, pag. 185.)

GIRAUD, VERH. ZOOLOG.-BOTAN. GESELLSCH. WIEN. — Giraud, J., Hyménoptères recueillis aux environs de Suse, en Piemont, et dans le département des Hautes-Alpes, en France. (Verhandlungen der zoologisch-botanischen Gesellschaft in Wien. XIII. 1863.) (Chrysis Segusiana n. sp. pag. 23—24.)

GMEL. LINN. SYST. NAT. — Gmelin, J. F., Caroli a Linné Systema Naturæ. Ed. XIII. Tom. I. Pars V. Lipsiæ, 1792, pag. 2712 ; 2744—2747.

GOG. ANAL. SOC. ESPAÑ. HIST. NAT. 1880. Gogorza, José, Himenopteros notables de la fauna Española. (Anales de la Sociedad Española de Historia Natural. IX. 1880. Cuaderno I. Actas II. pag. 31—33.)

GOG. ANAL. SOC. ESPAÑ. HIST. NAT. 1887. — Gogorza, José, Crisídidos de los alrededores de Madrid. (Anales de la Sociedad Española de Historia Natural. XVI. 1887. Cuaderno I. p. 17—88.) (Cleptes Perezii et Omalus Sanzii n. sp.)

GRADL, ENTOM. NACHRICHT. — Gradl, H., Aus der Fauna des Egerlandes. I. Hymenoptera. (Entomologische Nachrichten. VII. 1881.) (Holopyga imperialis n. sp. pag. 300.)

GRIB. ANNALI MUS. CIV. STOR. NAT. GENOVA, 1874. — Gribodo, G., Diagnosi di alcune specie nouve del genere Chrysis. (Annali del Museo Civico di Storia Naturale di Genova. VI. 1874, pag. 358—360.) (Chrysis Kriechbaumeri, halictula, Doriæ, Gestroi, macrostoma, Australasiæ.)

GRIB. PET. NOUV. ENTOM. — Gribodo, G., Diagnose d'un Hyménoptère nouveau de la famille des Chrysidiens. (Euchroeus Doursi.) (Petites Nouvelles Entomologiques. 1875, pag. 491.)

GRIB. ANNALI MUS. CIV. STOR. NAT. GENOVA, 1879. — Gribodo, G., Note Imenotterologiche. (Annali del Museo Civico di Storia Naturale di Genova. XIV. 1879, pag. 325—339.) (Pyria Drewseni, simillima, Chrysis Smithii, anceps, cognata, texana, imperforata, opaca, Abeillei, Frey-Gessneri, longirostris, Ghilianii, Radoszkowskyi, resecta, californica, pruna, Parnopes carnea Fabr. var. unicolor, Hedychrum cirtanum n. sp.).

GRIB. ANNALI MUS. CIV. STOR. NAT. GENOVA, 1879 et 1881. — Gribodo, G., Diagnosi precursorie di alcune specie nouve d'Imenotteri raccolto nel Regno di Scioa (Africa equatoriale) (Chrysis Scioensis.). (Annali del Museo Civico di Storia Naturale di Genova. XIV. 1879, pag. 344 ; et XVI. 1881, pag. 251—253.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

GRIB. BULLET. SOC. ENT. ITAL. Gribodo, G., Catalogo degli animali raccolti al Vulture, al Pollino et in altri luoghi dell' Italia meridionale e centrale (Bulletino della società entomologica Italiana. XIV. 1882, pag. 83.) (Chrysis succinctula Spin. var.).

GRIB. ANNALI MUS. CIV. STOR. NAT. GENOVA, 1884. Gribodo, G., Viaggio ad Assab nel Mar Rosso, dei signori G. Doria ed O. Beccari con il R. Avviso «Exploratore» dal 16 Novembre 1879 al 26 Febraio 1880. Imenotteri per Gribodo (Annali del Museo Civico di Storia Naturale di Genova. XX. 1884. pag. 392.) (Holopyga deflexa Ab.).

GRIB. ANNALI MUS. CIV. STOR. NAT. GENOVA, 1884. Gribodo, G., Spedizione italiana nell' Africa equatoriale. Resultati zoologici. Memoria secunda. Imenotteri Annali del Museo Civico di Storia Naturale di Genova. Ser. 2. Vol. I. 1884, pag. 316–323.) (Pyria lyncea Fabr., stilboides Spin., Chrysis Andromeda, inops n. sp., angolensis Rad. [vel n. sp. callaina], viridissima Klug.)

GRIB. ANNALI MUS. CIV. STOR. NAT. GENOVA, 1884. Gribodo, G., Sopra alcuni Imenotteri raccolti a Minhla nel regno di Birmania del Cap. G. B. Comotti. (Annali del Museo Civico di Storia Naturale di Genova. Ser. 2. Vol. I. 1884, pag. 365–368.) (Stilbum splendidum Fabr., Pyria oculata Fabr. var. sumptuosa Grib., Chrysis Schiödtei Dhlb., Comottii Grib. [insularis Sm. nec Guér.], lusca Fabr.)

GUÉR. REVUE ZOOLOGIQUE. Guérin-Méneville, M. F. E., Description de quelques Chrysides nouvelles. (Revue Zoologique. 1842, pag. 144–150.). (Stilbum viride, sexdentatum, Chrysis [Pyria] Mouattii, Gheudei, bispilota, orientalis, Chrysis truncata, brasiliana, carinata, Syriaca, Episcopalis, insularis, Miegii, Grælsii, Igniventer, bellula, Mionii, Polinierii, Chrysis [Pleurocera] viridis, Hedychrum viride).

GUÉR. ICON. REGN. ANIM. Guérin-Méneville, M. F. E., Iconographie du règne Animal de G. Cuvier etc. 3 Vol. in 6 partibus. Paris, 1829–44. Tom. II. 1844, pag. 418–421. (Chrysis mexicana Guér.).

HALD. PROCEED. ACAD. NAT. SCIENC. PHILAD. Haldemann, S. S., Descriptions of Insects presumed to be undescribed (Proceedings of the Academy of Natural Sciences of Philadelphia. II. 1844) (Hedychrum Janus, pag. 53.)

HEYD. BER. SENKENB. NATURF. GES. Heyden, L., Die Chrysiden oder Goldwespen aus der weiteren Umgebung von Frankfurt. (Bericht über die Senkenbergische naturforschende Gesellschaft. 1882–83, pag. 238–254.)

ILLIG. ROSSI FAUN. ETR. Rossi, P., Fauna Etrusca etc. Iterum edita et adnotationibus perpetuis aucta a CAROLO ILLIGER. 2 Vol. Tom. II. Helmstadii, 1807, pag. 78–79; 118–126.

JUR. HYM. Jurine, L., Nouvelle méthode de classer les Hyménoptères et les Diptères. Genéve, 1807, pag. 292–299.

KIRBY, PROCEED. ZOOLOG. SOC. LOND. Kirby, W. F., Report on a small collection of Hymenoptera and Diptera from the Timor Laut Islands, formed by Mr. H. O. Forbes. (Proceedings of the Zoological Society of London, 1883.) (Chrysis melanops n. sp. pag. 345.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

KLUG, WALTL REISE NACH SPAN. — Klug, Fr., Waltl Reise durch Tyrol, Oberitalien und Piemont nach dem südlichen Spanien. Passau, 1835, pag. 90. — Des Insectes d'Andalousie. Traduit de l'allemand par G. SILBERMANN. Hyménoptères (Silbermann, Revue Entomologique. IV. 1837. (Elampus cribratus Kl., micans Kl. n. sp. pag. 159.)

KLUG, SYMB. PHYS. — Klug, Fr., Symbolæ physicæ, seu icones et descriptiones Insectorum, quæ in itinere per Africam borealem et Asiam occidentalem Frid. Guil. Hemprich et Chr. God. Ehrenberg studio, novæ aut illustratæ redierunt. 5 Decades. Berolini, 1829–1845. — Decas V. 1845, tab. XLV. (Parnopes elegans, Chrysis nobilis, chlorospila, coelestina, Chrysis [Spintharis] xanthocera, maculicornis, humeralis, refulgens, frontalis, fasciolata, prasina, viridissima, pumila, integerrima n. sp.)

LABR. und IMH. INSECT. DER SCHWEIZ. — Insecten der Schweiz. Die vorzüglichsten Gattungen je durch eine Art bildlich dargestellt von J. D. LABRAM, nach Einleitung und mit Text von Dr. LUDWIG IMHOFF. 5 Vol. Basel, 1835–45. — Tom. III. 1842.

LAM. ANIM. SANS VERTEBR. — Lamarck, J. P. A., Histoire naturelle des animaux sans vertèbres. 7 Vol. Paris, 1815–1822. — Tom. IV. 1817, pag. 125—128.

LAMPR. GOLDWESP. DEUTSCHL. — Lamprecht, H., Die Goldwespen Deutschlands. Beilage zum Osterprogramm des Herz. Francisceums in Zerbst. Zerbst, 1881, pag. 1–26.

LATR. PRÉCIS. — Latreille, P. A., Précis des charactères génériques des Insectes etc. Brive et Bordeaux, 1796, pag. 127. (Genus Parnopes Latr.)

LATR. HIST. NAT. — Latreille, P. A., Histoire naturelle, générale et particulière des Crustacés et des Insectes. 14 Vol. Paris, 1802—1805. — Tom. XIII. 1805, pag. 233—240.

LATR. GEN. CRUST. ET INS. — Latreille, P. A., Genera Crustaceorum et Insectorum etc. 4 Vol. Parisiis et Argentorati, 1806–1809. — Tom. IV. 1809, pag. 41–50.

LEC. INS. OF NORTH AMER. — Description of the Insects of North America, by THOMAS SAY, with Illustrations and colored after Nature. Edited by L. Le Conte. 2 Vol. London, 1859. — Tom. I. pag. 222; 384. Tom. II. 730–731.

LEP. ANNAL. DU MUS. HIST. NAT. — Lepeletier de St. Fargeau, A. L., Mémoire sur quelques espèces nouvelles d'insectes de la section des Hyménoptères, appelés les porte-tuyaux (Chrysididæ). (Annales du Museum d'Histoire naturelle. VII. 1806, pag. 115—129.)

LEP. et SERV. ENCYCL. MÉTH. — Lepeletier de St. Fargeau A. L. et Audinet-Serville, J. G., Encyclopédie Méthodique. Entom. Vol. X. Paris, 1825, pag. 493—495. (Stilbum splendidum F., calens F., Pyria smaragdula, lusca Fabr., armata, tridens n. sp.)

LICHT. PETIT. NOUV. ENTOM. — Lichtenstein, J., Note sur le genre Chrysis (Olochrysis, Monochrysis, Dichrysis, Trichrysis, Tetrachrysis, Pentachrysis, Hexachrysis). (Petites Nouvelles Entomologiques. 1876. Nro 145, pag. 27.)

LICHT. ANNAL. SOC. ENTOM. FRANCE. — Lichtenstein, J., Chrysis (Gonochrysis) Gogorzæ n. sp. (Annales de la Société entomologique de France. Sér. 5. Tom. IX. 1879. Bullet. pag. CLXV.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

LINN. SYST. NAT. ED. XII. — Linné, C., Systema Naturæ. Edit. XII. Tom. I. Pars II. Holmiæ, 1767, pag. 946—948.

LINN. FAUN. SUEC. — Linné, C., Fauna Suecica. Stockholmiæ, 1746. — Edit. II-da. Stockholmiæ, 1761, pag. 413—414.

LUC. EXPLOR. DE l'ALGÉR. — Lucas, H., Exploration scientifique de l'Algérie. Zoologie. Tom. III. Paris, 1849, pag. 304—316. (Chrysis tafnensis, affinis, versicolor, dives, insignis, barbara, oraniensis, Blanchardi, unicolor, tricolor, cirtana, Elampus chlorosoma, Hedychrum numidicum, mauritanicum, fastuosum, micans, Fellmannii, Cleptes afra n. sp.)

LUC. SAGRA'S HIST. FISICA DE CUBA. — Ramon de la Sagra, D., Historia fisica, politica y natural de la Isla de Cuba. Secunda parte. Historia natural. Tomo VII. Paris, 1856 (1857). Hymenoptera por H. LUCAS, pag. 755 (Chrysis insularis Guér.).

MARQ. BULLET. SOC. HIST. NAT. TOULOUSE. — Marquet, M., Aperçu des Insectes Hyménoptères qui habitent le midi de la France. (Bulletin de la Société d'Histoire naturelle de Toulouse. Anné 1879, pag. 156—163.)

MOCS. PUBLIC. MATHEM. ET PHYS. ACAD. HUNG. — Mocsáry, A., Data ad faunam Hungariæ septentrionalis comitatuum : Zólyom et Liptó. (Adatok Zólyom és Liptó megyék faunájához.) (Publicationes mathematicæ et physicæ. Ab Academia Hungarica scientiarum editæ. Magy. Tud. Akad. mathematikai és természettudományi Közlemények. Vol. XV. 1877/8.) (Chrysis venusta n. sp. pag. 247.)

MOCS. TERM. FÜZ. 1879. — Mocsáry, A., Hymenoptera nova e fauna Hungarica. Új hártyaröpűek a magyar faunából. (Természetrajzi Füzetek [Naturhistorische Hefte.] Vol. III. 1879.) (Holopyga similis, bellipes, Chrysis placida pag. 120—124.)

MOCS. TOPOGR. MED. ET PHYS. REG. BUDAPEST. — Mocsáry, A., Data caracteristica ad faunam Hymenopterologicam regionis Budapestinensis. Jellemző adatok Budapest környékének hártyaröpű faunájához. (Topographia medicina et physica regionis Budapestinensis. Budapestini, 1879. Budapest és környéke orvosi és természettudományi helyírata. Budapest, 1879, pag. 8—10.)

MOCS. CHRYS. FAUN. HUNG. — Mocsáry, A., Chrysididæ faunæ Hungaricæ. Opus ab Academia scientiarum Hungarica coronatum et editum. Editio separata sectionis tertiæ eiusdem Academiæ. Budapestini, 1882, pag. 1—94. — A magyar fauna fémdarázsai. A Magyar Tudományos Akadémia által a Vitéz-féle jutalommal (1882) koszorúzott pályamű. A M. T. Akadémia III. osztályának külön kiadványa. 1882. III. Budapest, 1882.

MOCS. DISSERT. PHYS. ACAD. HUNG. — Mocsáry, A., Hymenoptera nova europæa et exotica. Európai és másföldi hártyaröpűek. (Dissertationes physicæ et mathematicæ. Ab Academia Hungarica scientiarum editæ. Értekezések a természettudományok köréből. Kiadja a Magyar Tudományos Akadémia. Vol. XIII. Nro 11, 1883.) (Hedychrum plagiatum. Chrysis scita, cruenta, Maroccana, dira, quinquedentata, pag. 14—18.)

MOCS. TERM. FÜZ. 1887. — Mocsáry, A., Studia synonymica. (Természetrajzi Füzetek. Vol. XI. 1887, pag. 13—17.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Mocs. HORAE SOC. ENT. ROSSICAE. 1887. — Mocsáry, A., Chrysis spinidens n. sp. (Horæ societatis entomologicæ Rossicæ. XXI. 1887, pag. 48.)

Mocs. ENTOM. NACHRICHT. — Mocsáry, A., Eine neue Goldwespen-Art und Varietät aus Deutschland. (Entomologische Nachrichten. XIII. 1887, Nro XIX. pag. 291.) (Ellampus punctipollis et var. atratus.)

Mocs. HORAE SOC. ENT. ROSSICAE. 1888. — Mocsáry, A., Hedychrum cyaneum, Chrysis Daphnis, remota, chlorochrysa, excisa, pœcilochroa, himalayensis, Euchrœus amabilis n. sp. (Horæ societatis entomologicæ Rossicæ. XXIII. 1888.)

Montr. ANNAL. SOC. LINN. LYON. — Perroud, B. P. et Montrousier, R. P., Essai sur la faune entomologique de Kanala (Nouvelle-Calédonie) et description de quelques espèces nouvelles ou peu connues. Hyménoptères par Montrousier. (Annales de la Société Linnéenne de Lyon. Sér. 2., tom. XI. 1864.) (Chrysis integra, Cristovallensis, Spinolæ n. sp. pag. 249—250.)

Muell. Stad. LINNÉES NATURSYST. DER INS. — Mueller, P. L., Stadius, Des Ritters Carl von Linné Vollständiges Natursystem der Insekten, nach der zwölften lateinischen Ausgabe etc. 6 Theile in 9 Bänden mit Suppl. und Register. Nürnberg, 1773—76. — V. Theil. II. Bd. 1775, pag. 873 ; 875—877.

Nort. TRANSACT. AMER. ENT. SOC. — Norton, E., On the Chrysides of North America. (Transactions American Entomological Society of Philadelphia. VII. 1879, pag. 233—242.)

Oliv. ENCYCL. MÉTH. INS. — Olivier, A. G., Encyclopédie méthodique. Histoire naturelle. Insectes. 10 Vol. Paris, 1789—1825. — Tom. V. 1790, pag. 672—677.

Pall. REISE. — Pallas, P. S., Reise durch verschiedene Provinzen des Russischen Reiches in den Jahren 1768—1774. 3 Theile in 5 Bänden. — Tom. I. Petersburg, 1771. Anhang, pag. 474. (Chrysis grandior Pall.)

Panz. FAUN. INS. GERM. — Panzer, W. G. F., Faunæ Insectorum Germaniæ initia, oder Deutschlands Insecten. Nürnbergæ, 1792—1810.

Panz. SCHAEFFERI ICON. INS. RATISBON. — Dr. Jacobi Christiani Schæfferi Icones Insectorum circa Ratisbonam indigenorum enumeratio systematica, opere et studio Dris G. W. Fr. Panzeri. Erlangæ, 1804, pag. 59 ; 90 ; 95 ; 122 ; 193.

Panz. KRIT. REV. — Panzer, W. G. F., Kritische Revision der Insectenfauna Deutschlands, nach dem System bearbeitet. 2. Vol. Nürnberg, 1805—1806. — Tom. II. 1806, pag. 95 ; 100—105.

Patt. CANAD. ENTOM. — Patton, K. W., Descriptions of several new Proctotrupidæ and Chrysididæ. (The Canadian Entomologist. Vol. XI. Nro IV. 1879.) (Cleptes aliena, Notozus marginatus, Chrysis verticalis, martia, pag. 66—68.)

Poda, INS. MUS. GRAEC. — Poda, N., Insecta Musæi Græcensis etc. Græcii, 1761, pag, 108. (Sphex ignita Linn.)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

PROV. NATUR. CANAD. — Provancher, l'Abbé, Petite faune entomologique du Canada. (Le Naturaliste Canadien. XII. 1880—81, pag. 300—304.)

PROV. FAUN. ENT. DU CANADA. — Provancher, l'Abbé, Petite faune entomologique du Canada et particulièrement de la province de Québec. Quatrième ordre. Les Hyménoptères. Québec, 1883, pag. 577—583. (Chrysis cærulans Lep., aurichalcea n. sp., Hedychrum violaceum Lep., Ellampus spinosus n. sp., coruscans Nort., viridis Cress., cyanescens n. sp., purpurascens n. sp., marginatus n. sp., Cleptes Americana n. sp.)

RAD. HORAE SOC. ENT. ROSSICAE. 1866. — Radoszkovszky, O., Enumération des espéces de Chrysides de Russie. (Horæ societatis entomologicæ Rossicæ. III. 1865—66, pag. 295—310.)

RAD. HORAE SOC. ENT. ROSSICAE. 1876. — Radoszkovszky, O., Matériaux pour servir à une faune hyménoptèrologique de la Russie. (Horæ societatis entomologicæ Rossicæ. XII. 1876. (Chrysis mirabilis, obscura, Branickii, caucasica, Hedychrum callosum n. sp. pag. 106—110.)

RAD. HORAE SOC. ENT. ROSSICAE. 1876. — Radoszkovszky, O., Compte-rendu des Hyménoptères recueillies en Egypte et Abyssinie en 1873. (Horæ societatis entomologicæ Rossicæ. XII. 1876. (Chrysis Taczanovszkyi, minutissima, dubia, Abyssinica n. sp. pag. 146—149.)

RAD. FEDTS. REISE IN TURKEST. — Reise in Turkestan von Alexis Fedtsenko. II. Zoolo gischer Theil. Hymenoptera Chrysidiformia, bearbeitet von O. RADOSZKOVSZKY. Moskau, 1877.

RAD. HORAE SOC. ENT. ROSSICAE. 1879. — Radoszkovszky, O., Les Chrysides et Sphegides du Caucase. (Horæ societatis entomologicæ Rossicæ. XV. 1879, pag. 140—147.) (Chrysis patriarchalis, pulchra, analis Spin. var. Perrisi, rubescens, incerta, undulata, apicalis, Erivanensis n. sp.)

RAD. HORAE SOC. ENT. ROSSICAE. 1881. — Radoszkovszky, O., Chrysis persica et Demavendæ n. sp. (Horæ societatis entomologicæ Rossicæ. XVI. 1881. Bullet. pag. V—VI.)

RAD. JORN. SCIENS. MATHEM. PHYS. E NATUR. LISBOA. — Radoszkovszky, O., Hyménoptères d'Angola. (Jornal de Sciencias Mathematicas, Physicas e Naturæs publicado sob os auspicios da Academia Real das Sciencias de Lisboa. Nro XXXI. 1881.) (Chrysis Oliveirii et Angolensis n. sp. pag. 219.)

RAD. HORAE SOC. ENT. ROSSICAE. 1887. — Radoszkovszky, O., Insecta in itinere Cl. N. Przewalskii in Asia centrali novissime lecta. (Horæ societatis entomologicæ Rossicæ. XXI. 1887.) (Elampus Mocsáryi Rad., Chrysis Przewalskii Rad., Keriensis Rad., spinidens Mocs. n. sp. pag. 45—48.)

RAD. HORAE SOC. ENT. ROSSICAE. 1888. — Radoszkovszky, O., Revision des armures copulatrices des mâles de la tribu des Chrysides. (Horæ societatis entomologicæ Rossicæ. XXIII. 1888, pag. 3—40.) (Cleptes Radoszkowskii Mocs., Chrysis Mlokosewitzi, Lagodechii, asiatica et Mocsáryi n. sp.)

ROSSI, FAUN. ETR. — Rossi, P., Fauna Etrusca, sistens Insecta, quæ in provinciis Florentina et Pisana præsertim collegit. 2 Vol. Liburni, 1790. Tom. II. pag. 53; 74—78.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Rossi, MANT. INS. — Rossi, P., Mantissa Insectorum, exhibens species nuper in Etruria collectas, adiectis Faunæ Etruscæ illustrationibus ac emendationibus. 2 Vol. Pisæ, 1792—94. — Vol. I. 1792, pag. 132—134.

Saund. TRANSACT. ENT. SOC. LOND. — Saunders, S. S., On the Habits and Economy of certain Hymenopterous Insects wchich nidificate in briars; and their Parasites. (Transactions of the Entomological Society of London. 1873. (Homalus nanus n. sp. pag. 411.)

Say, EXPED. TO THE SOURCE OF ST. PETERS RIV. — Say, Th., Keatings narrative of an Expedition to the source of St. Peters River, Lake Winnepeck, Lake of the Woods etc. Vol. 2. Philadelphia, 1824. (Hedychrum ventrale, dimidiatum n. sp. pag. 330.)

Say, CONTRIB. MACLUR. LYC. — Say, Th., Descriptions of new species of Hymenoptera of the United-States. (Contributions of the Maclurian Lyceum to the Arts and Sciences. Vol. I. Philadelphia, 1828.) (Chrysis pacifica, carinata, Hedychrium sinuosum n. sp. pag. 82.)

Say, BOST. JOURN. NAT. HIST. — Say, Th., Description of North-American Hymenoptera, and observations on some already described. (Boston Journal of Natural History. I. Nro III. 1835.) (Hedychrum obsoletum, speculum n. sp. pag. 284—285.)

Schaef. ICON. INS. RATISBON. — Schæffer, J. C., Icones Insectorum circa Ratisbonam indigenorum coloribus naturam referentibus expressæ. Natürlich ausgemahlte Abbildungen Regensburgscher Insecten. Regensburg. 3 Vol. 1766—1779. — Tom. I. tab. XLII. fig. V—VI; LXXIV. fig. VII—VIII; LXXXI. fig. V. — Tom. II. tab. CXV. fig. III. — Tom. III. tab. CCXXXIII. fig. VII. — Vide: Panzer.

Schck, NASS. JAHRB. — Schenck, A., Beschreibung der in Nassau aufgefundenen Goldwespen. (Jahrbücher der Vereins für Naturkunde im Herzogthum Nassau. XI. Wiesbaden, 1856, pag. 13—89.) — Zusätze und Berichtigungen (ibid. XVI. 1861, pag. 174—178.).

Schck, PROGR. GYMN. ZU WEILB. — Schenck, A., Die Goldwespen mit Bestimmungstabellen der nassauischen und kurzer Beschreibung der übrigen deutschen Arten. (Programm des königl. Gymnasiums zu Weilburg. 1870, pag. 1—18.)

Schck, STETT. ENT. ZEIT. — Schenck, A., Mehrere seltene, zum Theil neue Hymenopteren. (Stettiner entomologische Zeitung. XXXII. 1871.) (Chrysis minutula, Holopyga angustata n. sp. pag. 254—255.)

Schmiedkn. ENTOM. NACHRICHT. — Schmiedeknecht, O., Zwei neue Arten der Gattung Chrysis aus Thüringen. (Entomologische Nachrichten. VI. 1880.) (Chrysis Blancoburgensis, pag. 174, Chrysis thuringiaca, pag. 193.)

Schrk, ENUM. INS. AUSTR. — Schrank, F., Enumeratio Insectorum Austriæ indigenorum. Augustæ Vindelicorum, 1781, pag. 387—388.

Schrk, FAUNA BOICA. — Schranck, F., Fauna Boica etc. 3 Vol. 1798—1803. — Tom. II. Pars. II. Ingolstadt, 1802, pag. 343—347. (Chrysis fulgida, ignita, violacea, edentula n. sp., nobilis, cyanea, aurata, indica n. sp.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Scop. ENT. CARN. — Scopoli, J. A., Entomologia Carniolica, sistens Insecta Carnioliæ indigena etc. Vindobonæ, 1763, pag. 297—298. (Sphex Ignita L., Nobilis, Violaea n. sp.)

Scop. ANNUS QUINTUS HIST.-NAT. — Scopoli, J. A., Annus quintus historico-naturalis. Lipsiæ, 1772. Observationes zoloogicæ (Chrysis hungarica, pag. 122.)

Shuck. ENT. MAG. — Shuckard, W. E., Description of the Genera and Species of the British Chrysididæ. (The Entomological Magazine. IV. 1837, pag. 156—177.)

Smith, ZOOLOGIST. — Smith, Fr., Chrysis ornatus n. sp. (The Zoologist. 1851. Appendix, pag. CXXV.)

Smith, ANN. AND MAG. NAT. HIST. — Smith, Fr., Descriptions of some Hymenopterous Insects captured in India, with notes on their Oeconomy, by Ezra T. Downes. (The Annals and Magazine of Natural History. Ser. 2. tom. IX. 1852.) (Hedychrum rugosum, Chrysis pubescens n. sp. pag. 45—46.)

Smith, JOURN. PROCEED. LINN. SOC. ZOOLOGY. 1858. — Smith, Fr., Catalogue of Hymenopterous Insects collected at Sarawak, Borneo; Mount Ophir, Malacca; and at Singapore, by A. R. Wallace. (Journal of the Proceedings of the Linnean Society. Zoology. II. 1858.) (Hedychrum orientale, Chrysis malachitica, vestigator n. sp. pag. 128—129.)

Smith, JOURN. PROCEED. LINN. SOC. ZOOLOGY. 1859. — Smith, Fr., Catalogue of Hymenopterous Insects collected at Celebes by Mr. A. R. Wallace. (Journal of the Proceedings of the Linnean Society. Zoology. III. 1859.) (Hedychrum flammulatum, Chrysis purpurea, insularis, sumptuosa n. sp. pag. 26—27.)

Smith, JOURN. PROCEED. LINN. SOC. ZOOLOGY. 1861. — Smith, Fr., Descriptions of New Species of Hymenopterous Insects collected by Mr. A. R. Wallace at Celebes. (Journal of the Proceedings of the Linnean Society. Zoology. V. 1861.) (Chrysis apricans, obscura, fumipennis, seducta, Holopyga purpurea, pag. 66—68.)

Smith, ENTOM. ANNUAL. — Smith, Fr., A Monograph of the Family Chrysididæ. (The Entomologists Annual for 1862, pag. 80—104.)

Smith, TRANSACT. ENT. SOC. LOND. 1874. — Smith, Fr., Descriptions of new species of Tenthredinidæ, Ichneumonidæ, Chrysididæ, Formicidæ etc. of Japan. (Transactions of the Entomological Society of London. 1874. (Stilbum amethystinum F., Chrysis Daphne n. sp. pag. 398—399.)

Smith, TRANSACT. ENT. SOC. LOND. 1874. — Smith, Fr., A Revision of the Hymenopterous genera Cleptes, Parnopes, Anthracias, Pyria and Stilbum, with descriptions of new species of those genera, and also of new species of the genus Chrysis from North China and Australia (Transactions of the Entomological Society of London. 1874, pag. 451—471.)

Spin. FAUN. LIG. FRAGM. — Spinola, M., Faunæ Liguriæ Fragmenta. Dec. I. Genuæ, 1805. — (Chrysis fasciata Spin. pag. 14, n. 4.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

SPIN. INS. LIG. — Spinola, M., Insectorum Liguriæ species novæ aut rariores etc. 2. Vol. Genuæ, 1806—1808. — Tom. I. 1806, pag. 7—11; 62—65. Tom. II. 1808, pag. 3—5; 26—30; 74—75; 77; 169—171; 239—242.

SPIN. ANNAL. SOC. ENT. FRANCE. 1838. — Spinola, M., Compte rendu des Hyménoptères recueillis par M. Fischer pendant son voyage en Egypte. (Annales de la société entomologique de France. VII. 1838.) (Pyria stilboides, Reichei, Chrysis episcopalis, varicornis, pallidi-arsis, distinguenda, bihamata, elegantula, pallidicornis, singularis, incrassata, Hedychrum cœlestinum, Parnopes Fischeri, denticulata n. sp. pag. 446—456.)

SPIN. ANNAL. SOC. ENT. FRANCE. 1840. — Spinola, M., Hyménoptères recueillis à Cayenne en 1839 par M. Leprieur. (Annales de la société entomologique de France. IX. 1840.) (Chrysis punctatissima, spinigera, fasciata, intricans n. sp. pag. 200—204.)

SPIN. ANNAL. SOC. ENT. FRANCE. 1843. — Spinola, M., Notes sur quelques Hyménoptères peu connus, recueillis en Espagne, par V. Ghiliani. (Annales de la société entomologique de France. Sér. 2. tom. I. 1843.) (Chrysis crassimargo, Hedychrum aulicum n. sp. pag. 127—129.)

SPIN. GAY'S HIST. FISICA DE CHILE. — Spinola, M., Historia fisica y politica de Chile, publicada bajo los auspicios del supremo gobernio por Claudio Gay. Zoologia. Hymenoptera por SPINOLA. Tom. VI. 1851. (Chrysis Gayi, puberula, Hedychrum difficile, carinulatum, Elampus Gayi n. sp. pag. 403—412.)

SULZ. KENNZEICH. DER INSECT. — Sulzer, J. H., Die Kennzeichen der Insecten etc. Zürich, 1761, pag. 50. II. 121, tab. XIX. (Chrysis ignita L.).

SULZ. ABGEK. GESCH. DER INS. — Sulzer, J. H., Abgekürzte Geschichte der Insecten, nach dem Linnaeischen System. Winterthur, 1776. (Chrysis nobilis n. sp. pag. 193.)

TASCHB. HYM. DEUTSCHL. — Taschenberg, E. L., Die Hymenopteren Deutschlands nach ihren Gattungen und theilweise nach ihren Arten. Leipzig, 1866, pag. 146—152.

THOMS. OPUSC. ENTOM. — Thomson, C. G., Opuscula Entomologica. Fasc. II. Lund, 1870, pag. 101—108. (Chrysis brevitarsis n. sp.)

TOURN. PETIT. NOUV. ENTOM. — Tournier, H., Addition aux Chrysides du bassin du Léman. (Petites Nouvelles Entomologiques. Nro 165. 1877.) (Elampus Chevrieri, Holopyga smaragdina, Hedychrum longipilis, viridiaureum n. sp. pag. 105—106.)

TOURN. MITTHEIL. SCHWEITZ. ENT. GES. — Tournier, H., Nouvelle addition aux Chrysides du bassin du Léman. (Mittheilungen der Schweizerischen entomologischen Gesellschaft. Vol. V. Heft. Nro 6. 1878.) (Hedychrum obscurum, suave, scutellare, Stilbum Siculum, Euchroeus Beckeri n. sp. pag. 305—310.)

TOURN. ANNAL. SOC. ENT. BELG. — Tournier, H., Descriptions d'Hyménoptères nouveaux appartenant à la famille des Chrysides. (Annales de la société entomologique de Belgique. XXII. 1879.) (Cleptes semicyanea, Omalus curtiventris, Notozus rufitarsis, bipartitus, Chrysis lativentris, similaris, æneipes, superba, brevidens, Chrysogona tarsata, Spintharis pallipes, pag. 87—100.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

VILL. LINN. ENTOM. Villers, Ch. J., Caroli Linnæi Entomologia, faunæ suecicæ descriptionibus aucta etc. 4. Vol. Lugduni, 1789. — Tom. III. pag. 237; 255—260.

WALCK. FAUNA PARISIEN. — Walckenær (Baron), C. A. de, Fauna Parisienne. Histoire abrégée des Insectes des environs de Paris etc. 2 Vol. Paris, 1802. Tom. II. pag. 68; 84—85.

WALK. LORDS THE NATURALIST IN VANCOUV. ISLANDS. — Walker, F., K. Lords The Naturalist in Vancouver Islands and British Columbia. 2. Vol. — Tom. II. 1866. (Chrysis smaragdicolor n. sp. pag. 343.)

WALK. LIST OF HYM. COLL. BY LORD IN EGYPT. Walker, F., List of Hymenoptera collected by J. K. Lord in Egypt, in the Neighbourhood of the Red Sea, and in Arabia. With Descriptions of the new species. London, 1871. (Parnopes apicalis, Euchræus pallispinosus, Chrysis Sinaica, seminigra, multicolor, electa, communis, Hedychrum stilboides, pag. 6—9.)

WESM. BULLET. ACAD. BRUX. — Wesmael, C., Notice sur les Chrysides de Belgique. (Bulletin de l'académie royale des sciences et belles-lettres de Bruxelles. VI. 1839, pag. 167—177.)

ZETT. INS. LAPP. — Zettersted, J. W., Insecta Lapponica. Lipsiæ, 1840. (Hymenoptera, 1838.) pag. 433—434.

ZSCHACH, MUS. LESKEANUM. — Zschach, J. J., Museum N. G. Leskeanum. Pars entomologica ad systema Entomologiæ Cl. Fabricii ordinata. Lipsiæ, 1788, pag. 73—74.

2. *Opera, enumerationes specierum vel biologiam solum continentia.*

ABEILLE DE PERRIN, Elzéar, Reponse aux observations sur les Chrysides. (Le Naturaliste. I. Nro 14, 15 octobre, 1879, pag. 107—108.)

ASSMUS, E. PH., Enumeratio Hymenopterorum Chrysidiformium Gubernii Mosquensis. (Bulletin de la société impériale des Naturalistes de Moscou. XXXV. Nro III. 1862, pag. 264—270.)

BEUTHIN, H., Verzeichniss der um Hamburg beobachteten Arten der Chrysididæ. (Abhandlungen des Vereins für naturwissenschaftliche Unterhaltung. Hamburg. II. 1876, pag. 229). — Dritter Beitrag zur Kenntniss der Hymenopteren der Umgegend von Hamburg (ibid. IV. 1879, pag. 239—241.).

BRIDGMAN, J. P., Fauna and Flora of Norfolk; part. IX. Hymenoptera: Chrysididæ and Aculeata. (Transactions of the Norfolk and Norwich Naturalist Society. Vol. II. Part. V. 1879.)

B.—N, J., Notes on various Insects; with further explanatory observations, by W. E. SHUCKARD. — On the Habits of Chrysididæ. (The Entomological Magazine. V. 1838, pag. 477—479; 481—483.)

BORMANS, A. DE, Notes sur les Chrysidides des environs de Bruxelles. (Annales de la société entomologique de Belgique. Compt.-rendu. Sér. III. 1887. Nro 83—84, pag. XX—XXIII.)

CHAPMAN, ALG., On the œconomy of the Chrysides parasitic on Odynerus spinipes. (The Entomologists Monthly Magazine. VI. 1869—70, pag. 153—158.)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Costa, A., Ricerche entomologiche sopra i Monti Partenii. Napoli, 1858, pag. 18.

Costa, A., Nuovi studii sulla Entomologia della Calabria ulteriore. Napoli, 1863, pag. 69–70. (Estratta dal Vol. I. degli Atti della R. Accademia delle Scienze.)

Costa, A., Relazione di un viaggio per l'Egitto, la Palestina e le coste della Turchia asiatica per ricerche zoologiche. (Atti della R. Accademia delle Scienze Fisiche e Matematiche. Vol. VII. Nro 2. Napoli, 1878, pag. 3, 8, 11, 16, 17.)

Costa, A., Relazione di un viaggio nelle Calabrie per ricerche zoologiche, fatte nella state del 1876. (Atti della R. Accademia delle Scienze Fisiche e Matematiche. Vol. IX. Nro 6. Napoli, 1882, pag. 56.)

Costa, A., Notizie ed osservazioni sulla Geo-Fauna Sarda. Memoria prima. (Atti della R. Accademia delle Scienze Fisiche e Matematiche. Vol. IX. Nro 11. Napoli, 1882, pag. 24.) — Memoria seconda (Ibid. Sér. 2. tom. I. 1883, pag. 65.) — Memoria terza. (Ibid. Sér. 2. tom. I. 1884, pag. 36.)

Cuní y Martorell, M., Excursion entomológica y botanica á la Cerdaña española (Cataluña) (Anales de la Sociedad española de Historia Natural. X. 1881. Himenópteros, pag. 377.)

Dalla Torre, K. und Kohl, Fr. Fr., Die Chrysiden und Vesparien Tirols. (Berichte des naturwissenschaftlich-medizinischen Vereines in Innsbruck. VIII. 1877. Hft I. 1879, pag. 52—67.)

De Stefani-Perez, Th., Raccolte imenotterologiche sui monti di Renda e loro adiacenze. (Il Naturalista Siciliano. V. 1886. Estratto pag. 4; 14.)

De Stefani-Perez, Th., Catalogo sinonimico delle specie citate nel corpo delle note. (Il Naturalista Siciliano. VII. 1888.)

Dours, A., Catalogue synonymique des Hyménoptères de France. Amiens, 1874, pag. 117–121.

Fairmaire, Léon, Hyménoptères de Gabon. (Thomson, J., Archives entomologiques. Tom. II. Paris, 1858, pag. 263.)

Frauenfeld, G., Dritter Beitrag zur Fauna von Dalmatien. Hymenoptera von Giraud. (Verhandlungen der zoologisch-botanischen Gesellschaft in Wien. XI. 1861, pag. 103.)

Frey-Gessner, E., Verzeichniss der mir aus der Schweiz bekannt gewordenen Chrysiden. (Mittheilungen der Schweizerischen entomologischen Gesellschaft. Bd. IV. Hft 10. 1877, pag. 577—578.)

Friese, A., Beitrag zur Hymenopterenfauna des Saalthals. (Zeitschrift für Naturwissenschaften. LVI. 1883, pag. 199—200.)

Frivaldszky, J., Állattani kirándulásaim Orsova, Mehádia és Korniaréva vidékein. (Magyar orvosok és természetvizsgálók XVI. Herkules-fürdőben tartott nagygyűlésének Munkálatai. Pest, 1873, pag. 235.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Frivaldszky, J., Adatok Temes- és Krassómegye faunájához. Data ad faunam Hungariæ meridionalis comitatuum Temes et Krassó. (Magyar Tudományos Akadémia mathematikai és természettudományi Közlemények. Dissertationes mathematicæ et physicæ. Ab Academia scientiarum Hungarica editæ. Vol. XII. 1875/6. Budapest, 1876. pag. 350.)

Funk, Die Sphegiden und Chrysiden aus der Umgebung Bambergs. (Viertel-Bericht der naturforschenden Gesellschaft zu Bamberg. 1859, pag. 60—61.)

Gasperini, R., Notizie sulla Fauna Imenotterologa Dalmata. (Estratto dal' Annuario Dalmatico. 1887, pag. 19—20.)

Gerstaecker, A., Baron Carl Claus von der Decken's, Reisen in Ost-Africa. III. Band. II. Abtheilung. Gliederthiere, bearbeitet von A. Gerstaecker. Leipzig und Heidelberg, 1873, pag. 342.

Ghiliani, V., Insetti di Sicilia. (Atti dell' Accademia Gioënia in Catania. XIX. 1842, pag. 21—24).

Giraud, J., Note sur un Hyménoptère nouveau du genre Ampulex trouvé aux environs de Vienne. (Verhandlungen der zoologisch-botanischen Gesellschaft in Wien. VIII. 1858, pag. 446.)

Giraud, J., Mémoire sur les Insectes qui habitent les tiges séches de la Ronce. (Annales de la société entomologique de France. Sér. 4. tom. VI. 1866, pag. 492—494.)

Goureau (Colonel) Le, Note sur les Hyménoptères qui se trouvent dans l'intérieur des tiges de la Ronce. (Annales de la société entomologique de France. Sér. 3. tom. VI. 1858. Bullet. pag. XLI.)

Gribodo, G., Le Crociere dell' Yacht «Corsaro» del capitano armatore Enrico d'Albertis. (Annali del Museo Civico di Storia naturale di Genova. XVIII. 1883, pag. 689.)

Guérin-Méneville, F. E., Note sur la tribu des Chrysididæ. (Revue Zoologique. 1839, pag. 342.)

Herman, O., A mezőség. II. A mező-záh-tóháti, továbbá méhesi, baldi és mezősályi tósorozat természetrajzi, jelesen állattani szempontból tárgyalva. (Erdélyi Múzeum-egylet Évkönyvei. VI. 1871—73. Kolozsvár, 1872, pag. 66.)

Hevitson, W. C., Note on the Economy of Hedychrum, with Note by E. Newman. (The Entomological Magazine. V. 1837, pag. 77—78.)

Imhoff, L., Catalogus Piezatorum (Hymenopterorum) circa Basileam, nec non in aliis Helvetiæ regionibus repertorum. (Silbermann, Revue Entomologique. V. 1837, pag. 192.)

Kawal, H., Entomologische Notizen aus Kurland. (Stettiner entomologische Zeitung. XVI. 1855, pag. 260—261.)

Kawal, K., Beiträge zur Kenntniss der Hymenopteren-Fauna Russlands. Hymenoptera Chrysidiformia. (Bulletin de la société impériale des Naturalistes de Moscou. XXXVIII. 1865. Nro I. pag. 302—303.)

Kirchner, L., Catalogus Hymenopterorum Europæ. Vindobonæ, 1867, pag. 206—210.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

KLUG, Fr., Versuch einer systematischen Aufstellung der Insectenfamilie Chrysididæ. (Monatsbericht der Berliner Academie. 1839, pag. 1—2.)

LABOULBÉNE, A., Chrysis ignita parasita Ptosimæ novemmaculatæ (Annales de la société entomologique de France. Sér. 2. tom. VIII. 1849. Bulletin, pag. XXVIII.)

LABOULBÉNE, A., Note sur l'Anthrax sinuata et la Chrysis ignita parasites des Odynères. (Annales de la société entomologique de France. Sér. 3. tom. VI. 1858. Bulletin, pag. CXII—CXIII.)

LATREILLE, P. A., Histoire naturelle des Fourmis. Paris, 1802, pag. 320. (Chrysis ignita L. parasita Philanthi trianguli Fabr.)

LATREILLE, P. A.. Habitudesdu Parnop és incarnat (carnea). (Annales du Museum d'Histoire naturelle. XIV. 1809, pag. 413.)

LICHTENSTEIN, J., Observations sur deux espéces de Chrysides. (Annales de la société entomologique de France. Sér. 5. tom. III. 1873, Bulletin, pag. XV.)

LICHTENSTEIN, J., Die Französiche Chrysiden und ihre Wirthe. (Természetrajzi Füzetek [Naturhistorische Hefte] I. 1877, pag. 92; 127.)

LICHTENSTEIN, J. (anonym), Observations sur les insectes de groupe des Chrysides (contra Abeille). (Le Naturaliste. I. Nro 12, 15 sept. 1879, pag. 92.)

LICHTENSTEIN, J., Un dernier mot sur les Chrysides. (Le Naturaliste. I. Nro 18, 15 decembre, 1879, pag. 138.)

LUCAS, H., Note sur la Chrysis ignita trouvée parasite dans un nid d'Odynerus spinipes. (Annales de la société entomologique de France. Sér. 2. tom. V. 1847. Bulletin, pag. XC—XCII.)

MAGRETTI, P., Sugli Imenotteri della Lombardia. Memoria prima. (Bulletino della Società entomologica Italiana. XIII. 1881, pag. 70; 93—95.)

MAGRETTI, P. Nota d'Imenotteri raccolti dal Signor Ferdinando Piccioli nei dintorni di Firenze. (Bulletino della Società entomologica Italiana. XVI. 1884, pag. 104—105.)

MAGRETTI, P., Resultati di raccolte imenotterologiche nell' Africa orientale. (Annali del Museo Civico di Storia naturale di Genova. Ser. 2. tom. I. 1884. pag. 534—536.)

MAGRETTI, P., Nel Sudán orientale. (Atti della Società Italiana di scienze naturali. V. XXVII. 1884.)

MARSCHALL, T. A., Catalogue of British Hymenoptera; Chrysididæ, Ichneumonidæ, Braconidæ and Evaniidæ. London, 1872, pag. 1—5.

MIDDENDORFF, A. T., Reise in den äussersten Norden und Osten Sibiriens. Bd. II. Zoologie. Theil I. Wirbellose Thiere, bearbeitet von W. F. ERICHSON. St.-Petersburg, 1851, pag. 64.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Meyer-Dür, R., Weitere Beiträge zur Schweizerischen Hymenopteren-Kunde. Notiz über das Vorkommen von Chrysis auripes Wesm. (Mittheilungen der Schweizerischen entomologischen Gesellschaft. I. 1872. Heft 2, pag. 36.)

Mocsáry, A., Adatok Biharmegye faunájához. Data ad faunam Hungariæ orientalis comitatus Bihar. (Magy. Tud. Akad. mathematikai és természettudományi Közlemények. Dissertationes mathematicæ et physicæ. Ab Academia scientiarum Hungarica editæ. X. Budapestini, 1873, pag. 188.)

Mocsáry, A., Zur Hymenopteren-Fauna Siebenbürgens. (Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften in Hermannstadt. XXIV. 1874, pag. 119.)

Mocsáry, A., Adatok Zemplén- és Ungmegye faunájához. Data ad faunam Hungariæ septentrionalis comitatuum Zemplén et Ung. (Magy. Tud. Akad. mathematikai és természettudományi Közlemények. Dissertationes mathematicæ et physicæ. Ab Academia scientiarum Hungarica editæ. XIII. 1875, Budapestini, 1876, pag. 167.)

Mocsáry, A., Bihar- és Hajdúmegye hártya-, két-, reczés-, egyenes- és felröpüi. Hymenoptera, Diptera, Neuroptera, Orthoptera et Hemiptera Hungariæ comitatuum Bihar et Hajdú. (Ibid. XIV. 1876/7. Budapestini, 1876, pag. 44—45.)

Mocsáry, A., Újabb adatok Temesmegye hártyaröpü faunájához. Data nova ad faunam Hymenopterologicam Hungariæ meridionalis comitatus Temes. (Ibid. XVI. 1879, pag. 5.)

Mocsáry, A., Zur Biologie einiger Chrysiden. (Entomologische Nachrichten. V. 1879. Nro 7, pag. 92—93.)

Mocsáry, A., Characteristische Daten zur Hymenopteren-Fauna Siebenbürgens. (Természetrajzi Füzetek. VIII. 1884, pag. 221—222.)

Mocsáry, A., Délmagyarország állattani tekintetben. (Helyrajzi Emlékmü a magyar orvosok és természetvizsgálók 1886. évi augusztus 22-ikétől 26-dikáig Buziás-Temesvárott megtartott XXIII. vándorgyülésére. Temesvárott, 1886, pag. 139.)

Perris, Ed., Notice sur les habitudes et les métamorphoses de l'Eumenes infundibuliformis Oliv. (Annales de la société entomologique de France. Sér. 2. tom. VII. 1849, pag. 185.)

Perris, Ed., Nouvelles excursions dans les Grandes-Landes. (Annales de la société Linnéenne de Lyon. Sér. 2. tom. IV. 1857, pag. 155.)

Riggio, G. et De Stefani-Perez, T., Sopra alcuni Imenotteri dell' Isola di Ustica. (Il Naturalista Siciliano. VII. 1888, pag. 149.)

Rogenhofer, A. F. und Kohl, Fr. Fr., Hymenoptera, Hautflügler des Gebietes von Hernstein in Niederösterreich und der weiteren Umgebung. (Sonder-Abdruck aus Dr. G. Beck's «Fauna von Hernstein in Niederösterreich». II. Theil. II. Halbband. Wien, 1885, pag. 34—35 [214—215]).

Rosenhauer, W. G., Die Thiere Andalusiens, nach dem Resultate einer Reise zusammengestellt. Erlangen, 1856, pag. 375.

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Ruthe, J. Fr. und Stein, J. E. P. Fr., Die Sphegiden und Chrysiden der Umgegend Berlins. (Stettiner entomologische Zeitung. XVIII. 1857, pag. 316.)

Sichel, J., Liste des Hyménoptères recueillis en Sicile par M. E. Bellier de la Chavignerie. (Annales de la société entomologique de France. Sér. 3. tom. VIII. 1860, pag. 751.)

Sickmann, Fr., Beiträge zur Hymenopteren-Fauna der Insel Spiekerooge. (Abhandlungen des naturwissenschaftlichen Vereins zu Bremen. IX. 1885, pag. 280—281.)

Siebke, H., Enumeratio Insectorum Norvegicorum. Fasc. V. P. I. Christiania, 1880, pag. 73—75.

Török, J., Debreczen rovarfaunájának ismertetése. III. Hártyaröpűek Hymenoptera. (Magyar orvosok és természetvizsgálók Rimaszombatban tartott XII. nagygyülésének Munkálatai. Pest, 1868, pag. 328.)

Walckenaer (Baron), C. A. de, Mémoire pour servir à l'Histoire naturelle des Abeilles solitaires, qui composent le genre Halicte. Paris, 1817, pag. 42.

Westwood, J. O., Notice of the Habits of Odynerus Antilope. (Transactions of the Entomological Society of London. I. 1835, pag. 78—80.)

Westwood, J. O., An Introduction to the modern classification of Insects, founded of the natural habits and corresponding organisation of the different families. 2. Vol. London, 1839—40. — Tom. I. pag. 176—179.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from
UNIVERSITY OF MICHIGAN

RECENSIO CRITICA OPERUM DE SPECIEBUS CHRYSIDIDARUM TRACTANTIUM.

Chrysididæ iis, qui antiquitus de historia naturali scripserunt, ignotæ fuisse videntur; ecquidem in voluminibus eorum, quæ percurrere licuit, ne vestigium quidem earum invenire potui.

Primus, qui Chrysididarum mentionem fecit, fuit divus LINNÆUS in opere, quod «Systema Naturæ» inscripsit, quodque anno 1735 primo in lucem prodiit. Unicam tantum speciem commemorat: *Apem ignitam* nempe. Nec plures affert, quum anno 1746 «Faunam Suecicam» primo ederet. Sed cum idem opus anno 1761 secundo procuderetur, uni illi Chrysididarum speciei quattuor aliæ accesserunt. Jam tum quinque his speciebus nomen *Chrysis* imposuit, quamquam genus ipsum nonnisi in editione duodecima «Systematis Naturæ» notis suis et characteribus descripsit, ita tamen, ut *Cleptem* sub nomine *Sphex* reliquerit.

Proximus succedit SCOPOLI. In «Entomologia Carniolica», quam anno 1763 publici juris fecit, tres affert Chrysididas, easque sub genere *Sphex* comprehendens *ignitam*, *nobilem* et *violaceam* nuncupat. Utraque posterior denominatio tempore prior est et recentioribus præferenda. In opere, cui titulus «Annus quintus historico-naturalis» (1772) est, addit quartam, Hungariæ septentrionalis incolam e regione urbis Chemnicii eamque *Chrysidem hungaricam* nominat.

DE GEER anno 1771 duas tantum Chrysididas novit. — FORSTER in opusculo «Novæ species Insectorum» eodem anno duas species Hispaniæ incolas descripsit: *Chrysidem cyanochrysam* et *cyanuram*. Prius nomen speciem indicat, quæ sine exemplari typico dubia est; alterum magnificam illam denotat, in plurimas similitudines transfiguratam et per totam orbis terrarum partem diffusam, quæ etiam num *Stilbum splendidum* Dhlb. nominatur.

FABRICIUS in opere primo (Systema Entomologiæ, 1775) 15 (13), in «Speciebus Insectorum» 17 (15), in «Mantissa Insectorum» 22 (19), in «Entomologia systematica» 26 (22), in «Supplemento Entomologiæ systematicæ» 5 (4) novas, et demum in «Systemate Piezatorum» anno 1804 iam 43 (33) Chrysididas descripsit. Descriptiones iusto quidem breviores sunt, sed quæ temporibus illis satis conveniant. Dahlbomus inter alia etiam eo optime de Entomologia meruit, quod Fabricii species has accurato examini subiecit et secundum exemplaria typica studiose percensuit.

SULZER anno 1776 in opere magnifice illustrato «Abgekürzte Geschichte der Insekten» duas tantum habet Chrysididas, quarum unam, speciem illam pulcherrimam,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

quæ usque ad recentissima tempora *Stilbum calens* Fabr. nominatur, ut *Chrysidem nobilem* delineatione et pictura ita illustravit, ut primo intuitu iam facillime cognoscatur.

Villers, qui anno 1789 Linnæi Entomologiam, Faunæ suecicæ descriptionibus auctam, edidit, 14(13) Chrysididas attulit; cum *Gmelin*, anno 1792, iam de 30(28) speciebus mentionem faceret.

Rossi anno 1790 11, Schrank teste «Fauna Boica» anno 1802 7 Chrysididas noverant. Panzer in «Faunæ Insectorum Germaniæ initiis» 20(17) species profert, quas delineatione et pictura ita illustravit, ut facillime cognoscantur.

Olivier in «Encyclopédie méthodique» anno 1790 inter alia novas quoque species aliquot descripsit, quas sat facile cognoscas. Nomina ab ipso imposita iure, quod prioritatis dicimus, aliis præferenda sunt, quæ res auctores recentiores penitus latuisse vel attentionem ipsorum efugisse videtur.

Chrysididis quoque curam maiorem primus adhibuit Christ, qui anno 1791 iam 32(24) species descripsit partemque earum depinxit. Descriptiones sat bonæ sunt, species nonnullæ facile agnoscuntur. Unde mirandum, opus eximium usque ad recentissima tempora ita latuisse, ut neque auctores patriæ communis vinculo coniuncti illud pro merito estimarint nec accuratiore studio perscrutati sint.

Nec meliore fortuna usus est Lepeletier, qui anno 1806 primus faunam Chrysididarum Gallicam elaboravit et 45(39) species descripsit magnamque earum partem depinxit. Clarissimus Dom. Abeille magno suo merito post annos demum 73 nonnullas Lepeletieri species in sua iura restituit.

Geoffroy (1762), Walckenaer (1802), Latreille (1805—9) et Lamarck (1817) species novas non descripserunt; et Fourcroyi (1785) species difficile cognoscuntur.

Spinola multorum serie annorum et in variis publicationibus numerosas sat bene descripserat species, quæ tamen Dahlbomo ex parte ignotæ manserunt.

Faunam Chrysididarum Angliæ, anno 1837, Shuckard primus elaboravit synonymisque colligendis sedulam navavit operam. Descriptiones satis bonæ sunt et inter species ab ipso allattas duæ prioritatis iure gaudent. Anno 1862 Smith eandem retractavit faunam denuoque percensuit, quin tamen Shuckardi opus multo superaret.

Chrysididas haud numerosas Belgii, anno 1839, Wesmael recensuit. Faunam Algeriæ, varietate iucundam, anno 1849 Lucas contexuit eamque magno studio et amore pertractavit. Species huius auctoris maxima ex parte eximie depictas facile agnovi; nonnullæ tamen mihi dubiæ vel ignotæ manent. Virorum Galliæ doctorum erit præ aliis, eas iugeniosa sedulitate scrutari et describere.

Brullé et Guérin-Méneville plurimas species vulgaverunt e variis orbis terrarum partibus collectas, quarum magnam partem mihi cognoscere contigit. Non eadem fortuna usus sum, quod attinet ad species novas a Klugio in opere «Symbolæ physicæ» descriptas. Descriptiones enim tam breves sunt et lacunosæ, ut deficientibus exemplaribus typicis neque pictæ earum imagines cognitionem satis certam efficere possint.

Anno 1853 species haud paucas Förster in lucem protulit, qui maximam earum partem ex Hungaria ab Emerico Frivaldszky determinationis causa acceperat. Lucu-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

bratio Försteri opus Dahlbomianum uno anno antecessit ideoque in multis ius prioritatis sibi vindicat, ad quod auctores hucusque parum attendisse videntur. Descriptiones eius eximiæ sunt et species facillime cognoscuntur; specimina eius typica, quæ magna parte in collectione Musæi Nationalis Hungarici asservantur, in elaborando hoc opere præ oculis habere potui.

Dahlbom iam anno 1829 in describenda fauna Chrysididarum Suecica versabatur, et postea quoque magno horum animalium amore tenebatur. Anno 1854 descriptionem huius familiæ peculiarem, monographiam dicimus, primus edidit, eoque opere præstantissimo summam gloriam sibi conciliavit. Animo alacri, maxima cum diligentia et studio systema condidit, characteres selegit, omnes species sibi cognitas accurate descripsit et singulas, ex quibus corpus Chrysididarum componitur, partes eximie delineandas curavit. Unde satis mirari vix possum, quod vir, qui tantam diligentiam et fervorem animi ad hoc opus attulit, ea, quæ apud exteras gentes viri doctissimi de hac re literis consignaverant, penitus neglexerit. Ita enim scripsit, ut lucubrationes Forsteri, Christi, Olivieri, Lepeletieri, Sayi, Shuckardi, Brulléi, Guérin-Ménevillei, Klugii, Lucasi, Försteri aliorumque ne per summos quidem apices attingeret. Quo factum est, ut species non paucas iam cognitas tamquam novas describeret. Scribendi modum secutus est officii plenum. Ubique citat nomina in litteris Musæorum et virorum doctissimorum, sæpissime tamen Musæum Spinolæ et denominationes Klugii in Musæo Berolinensi, quæ sine descriptione nullius valoris sunt. Ex quo tamen ne coniicias, eum omnes species novisse, quas Spinola et Klug re vera descripserant. Sed in his etiam erroribus opus præstantissimum est viamque ostendit, qua nobis in persequendo Chrysididarum studio procedendum sit.

Schenck eam sibi laudem promeritus est, quod multum contulit etiam ad cognitionem faunæ Chrysididarum Germaniæ; quod minime dici potest de Lamprechto, cuius commentarii non sunt nisi compilatio, eaque satis infirma ex operibus Försteri, Dahlbomi et Schenckii et ex parte interpolatio faunæ cum datis falsis tam quoad originem specierum, tam quoad biologiam, quæ ille a Rudowo accepisse fertur. 89 species adfert tamquam Germaniæ incolas, e quibus re vera tantum 58 tamquam huius regni cives considerandæ sunt.

Species, quas exoticas dicimus, plurimas illustravit etiam Smith secundum exemplaria Musæi Britannici, sed descriptionibus ita ieiunis, ut difficillime cognoscantur. Ob regulas nimium severas Musæi, quod modo commemoravi, specimina typica percensere non potui ideoque nonnisi paucas licuit in lucem proferre et denuo describere. Ad reliquas quod attinet, virorum Angliæ doctorum erit, eas perscutari et iustis descriptionibus illustrare.

Ad faunam Chrysididarum imperii ingentis Russici Eversmann et lucubrationibus plurimis et eximie coloratis Radoszkovszky multa conferebant provinciasque vastissimas antea penitus ignotas multa cum benevolentia illustraverunt. — Si mihi contigerit, hoc opere veram Chrysididarum imaginem exhibere, tunc Clariss. Dominus Rado-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

szkovszky optime de hac re meritus est, qui specimina sua et Eversmanni typica mihi benevolentissime tradidit lustranda.

Chevrieri opus magna cum diligentia et amore rei elaboratum est; idemque dicendum etiam de monographia, quam dicimus, Frey-Gessneri, quod opus multum contulit ad cognitionem Chrysididarum Helvetiæ. Non mediocre habet meritum auctor Clarissimus etiam in eo, quod species Tournieri, mihi ex parte mysticas, manifestas reddidit; quas Tournier retractationi severæ subiicere noluit literasque a me et ab Abeille ad ipsum datas silentio prudenti pressit.

Anno 1870 Thomson Chrysididas Sueciæ denuo breviter recensuit.

Walkeri descriptiones nullius sunt valoris, tum quia nimium breves sunt et species solummodo characteribus familiæ illustrantur, tum ideo vel maxime, quia præter colorem ne unam quidem notam essentialem commemoravit, ut qui Dahlbomi opus nunquam viderit. Tales vero descriptiones, quæ nonnisi synonymiam augere valent, e re literaria penitus eliminandæ essent.

Piæ memoriæ vir: Lichtenstein multum contulit etiam ad biologiam Chrysididarum et anno 1876 phalangibus Dahlbomianis ingeniosissime illas denominationes impossuit, quas ut subgenera in magna hac cohorte optime conservandas censemus.

Species non paucas vulgavit exoticas etiam Gribodo monographiamque Chrysididarum, quarum studio præcipue tenebatur, conscribere instituit; sed quominus consilium exequeretur, valetudine tenui hucusque impeditus est.

Faunam Chrysididarum Galliæ magnificam anno 1879 Abeille de Perrin bono cum sucessu denuo lustravit multumque contulit etiam ad cognitionem Algeriæ: species plurimas novas vel minus cognitas describens aliasque Lepeletieri et Lucasii in sua iura restituens. In synonymia explicanda tamen, præsertim quoad species Försteri, non satis feliciter elaboravit. — Eodem tempore etiam Marquet species Gallicas brevi conspectu synoptico exhibuit.

Novas Chrysididarum species sane multas, Americæ septentrionalis incolas, plus minusve præcise descripserunt: Say, Haldeman, Cresson, Patton, Norton, Provancher, quas anno 1885 Aaron maxima ex parte secundum specimina typica revisioni severæ subiecit. Opus hoc, summa fide elaboratum ad determinationem specierum huius orbis terrarum partis maxime difficilem, optimum est. Tantum optandum fuisset, ut auctor species Cressoni de insula Cuba quoque non satis complete descriptas in suum opus assumsisset. — Novas Chrysididarum species aliquot Americæ septentrionalis incolas nuperrime Cameron descripsit.

Recentissime Robertus du Buysson summo studio navavit operam cognitioni Chrysididarum et nova quædam satis feliciter protulit e fauna Galliæ. Eximie descripsit tum species Gallicas, tum sat multas ab Abeille præsertim in Syria collectas et commentariis suis multum contulit ad faunam harum provinciarum melius illustrandam. — Gogorza quoque bono cum successu lustravit faunam Chrysididarum Hispaniæ et De-Stefani Siciliæ.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Facere non possum, quin auctoribus maximas hoc loco referam gratias, quarum benevolentia mihi contigit, ut speciminum typicorum partem aliquam videre possem.

Novas Chrysididarum species paucas descripserunt præterea viri Clarissimi: CAMERON, COQUEBERT, COSTA, COURTILLER, DONOVAN, DOFOUR et PERRIS, GERMAR, GERSTÆCKER, GIRAUD, GRADL, KIRBY, LICHTENSTEIN, MONTROUSIER, PALLAS, SAUNDERS, SCHMIEDEKNECHT; aliique ad cognitionem geographicam vel ad biologiam specierum conferebant data eximia, ita ut de huius amabilis scientiæ familia iam veram et satis plenam habeamus notitiam.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Familia: CHRYSIDIDAE LEACH.*

1. CHARACTERES FAMILIAE NORMALES.

Insecta Hymenoptera parasitica: colore plerumque metallice splendido, elegantissimo; corpore cataphracto, magnitudine mediocri, parvo aut minuto, semicylindrico, in periculo in globolum contractili vel convolubili; antennis geniculatis, in sexu utroque 13-articulatis, ori insertis; oculis integerrimis; metanoto (genere *Amisega* Cam. excepto) utrinque angulo postico-laterali vel dentiformi vel mucroniformi; alis quattuor membranaceis planis, anticis cellulis 2—6 completis stigmateque distincto, posticis pauperrime venosis, omnino absque cellulis; abdomine sessili, e segmentis tantum 2—5 conspicuis constructo, segmento tertio serie punctorum anteapicali apud maximam partem instructo, ano aut integro, exciso, angulato, dentáto, serrato vel serrulato, feminarum tubulo plerumque visibili rectractili stylifero armato; ventre, præsertim post mortem, propter viscera exsiccata, *Cleptinis* exceptis, planiusculo vel concavo et subfornicato.

2. DISTRIBUTIO GEOGRAPHICA, VIVENDI MODUS ET DIFFERENTIA SEXUS.

De *distributione* Chrysididarum *geographica* per omnes orbis terrarum partes iam in Præfatione commemoravimus.

Quod ad *vivendi modum* attinet, Chrysididæ omnes vitam agunt parasiticam. Ova deponunt feminæ pallida elliptica in nidos Hymenopterorum** e familiis Specidarum, Vespidarum solitariarum et Apidarum genuinarum pariter solitariarum nidificantium, quæ omnes in collibus, fossis, muris locisqe argillosis, sabulosis et arenosis nec non in parietibus, sæpibus ligneis et cæspiticiis truncisque arborum emortuarum vermise-

* Clarissimus Dominus Abeille propter euphoniam «Chrysidæ» scribendum voluit. Sed secundum legem receptam nomina familiarum derivantur a radice genitivi cum terminatione «idæ». — Chrysis habet genitivum Chrysidis; ergo grammatice «Chrysididæ» scribendum est.

** Laboulbénei observationem enim (Annal. Soc. Ent. France. Sér. 2. tom. VIII. 1849. Bullet. pag. XXVIII.) *Chrysidem ignitam* Linn. etiam *Ptosimæ novemmaculatæ* Fabr. (Coleopteron) parasitam esse, ego dubiam et præpropero iudicio innixam existimo; facile enim fieri potuit, ut nutrix quædam, cuius parasita fuerat *Chrysis ignita*, cellulas *Ptosimæ novemmaculatæ* iam relictas inhabitaverit.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

catis, in fissura et hiatu rupis, soli expositis, vel in ramis aridis Rubi, in gallis Hymenopterorum relictis testisque vacuis Molluscarum terrestrium nidos suos construunt. Femina sæpissime circa tales nidos insidiatur, occasionem ovis deponendis idoneam exspectans, quum mater soboli sollicita alimenti congerendi causa nidum reliquerit. Larva Chrysididarum apoda subvermiformis pallida e larva nidificantis succrescit et secundum Lepeletieri aliorumque observationes larva parasitica ex ovo non prius exit, quam quum larva matris genuinæ fere suam iam magnitudinem habeat; tunc enim ad eius tergum subrepit succumque lente extrahit, ita, ut non prius moriatur, quam larva parasitica ad suum incrementum iam fere pervenerit. In pupa nuda aut folliculata metamorphosim completam annuam mox subit; sed statum hunc diutius retinet et sæpius in eodem perhiemat.

Ab hac regula exceptionem præbent feminæ generis *Cleptes*, quæ ova sua, more Ichneumonidarum, in larvas *Nematinarum* deponunt, intra quorum corpora larvæ *Cleptium* vitam agunt vere parasiticam et larva nutrix non prius moritur, quam tempore illo, quum metamorphosim subeundi causa larva *Nemati* se in terram occultaret.

Species Chrysididarum nonnullæ ova sua non semper in cellulas unius certæ speciei, sed sæpius in cellulas variarum specierum, generum et familiarum deponunt. Et quia insecta hæc variæ magnitidinis sunt, individua quoque unius speciei magnitudine, colore et non raro etiam in sculptura paulisper variant. — Species quædam generatione duplici gaudent.

Chrysididæ iam inde ab ineunte vere usque ad auctumnum inveniuntur quidem, sed species tamen pleræque apud nos mensibus Maio-Julio volitant. Diebus apricis, tempore antemeridiano inde a hora decima usque ad horam tertiam promeridianam, antennas eximie vibrantes et celeriter cursitantes, præsertim circa tales locos inveniuntur, ubi nutrices nidificant, vel plantarum, præcipue umbelliferarum, flores et folia in sylvis, lucis et nemoribus, pratis, campis et hortis quoque frequentant, nectare victitantes. Adtactæ vel terrefactæ corpus in globulum ita convolvunt, ut caput et pedes inter mesopleurarum lobos et ventris fornicem fere tota abscondantur; periculo autem præterito celerrime auffugiunt. Femina insuper etiam tubulo retractili stylifero se defendere conatur. In copula tantum rarissime deprehenduntur.

Sexum utrumque apud Chrysididas ab invicem non raro difficile est dignoscere, quod apud reliquas Hymenopterorum familias iam primo intuitu animadvertatur. Sæpius inter marem et feminam tanta est coloris differentia, ut sexus ad invicem pertinere haud iudicarentur. Sexus uterque antennas 13-articulatas habet; quum articuli antennarum apud omnia fere Hymenoptera numero inæquales sint. Nulla porro differentia est inter sexus — generibus *Amisega? Cleptes*, *Heterocælia*, *Allocælia?* et *Parnopes* exceptis — quoad numerum segmentorum abdominalium; quum reliqui Hymenopterorum mares regulariter segmento uno plure glaudeant. Mas tamen generaliter brevior et angustior est tubuloque stylifero annulato semper destitutus. Femina plerumque maior ac robustior, ano tubulo stylifero annulato retractili sæpissime visibili et usque ad dimidium, totam vel ultra corporis longitudinem extensili munita.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

3. LOCUS CHRYSIDIDARUM IN SYSTEMATE ET ADNOTATIONES GENERALES.

Chrysididæ Hymenopteris Terebrantibus adnumerantur, quamvis Aculeatis magis approximantur, quam reliquæ Hymenopterorum familiæ, et quidem non tantum propter bene evolutum prothoracem, sed etiam propterea, quia feminæ tubulo annulato stylifero retractili munitæ et trochanteres quoque earum uniarticulati sunt (Hymenoptera monotrocha Htg.), prout hoc in omnibus Hymenopteris Terebrantibus videre est; quum Hymenoptera Aculeata trochanteribus biarticulatis (Hymenoptera ditrocha Htg.) gaudeant. Familia Chrysididarum igitur duorum Subordinum connexiva considerenda est et re vera Chrysididæ a nonnullis Hymenopteris Aculeatis inseruntur.

Chrysididæ nomen suum a colore quam maxime vario, elegantissimo, plerumque metallico, splendido acceperunt, quibus tantum Aves magnificæ iucundæque Americæ meridionalis, Trochilidæ nempe, pares et comparandæ sunt. Color enim omnis, in magnifica natura existens, in Chrysidibus reinvenitur; qua de causa iusto Insectis pulcherrimis adnumerantur.

Chrysididæ colore metallico et alis pauperrime venosis Chalcididis, colore metallico Halictis et Apibus Specidibusque quibusdam regionum tropicarum quoque similes sunt; sed forma et numero segmentorum abdominis, numero articulorum antennarum, tubulo feminarum et cellulis alarum ab illis facile distinguuntur, prouti etiam a Dipteris: alis tantum duabus præditis vel penitus destitutis, cum apud Chrysididas alas semper quattuor invenimus.

Chrysididarum species nonnullæ colore et nonnunquam etiam in sculptura parum variant; quapropter illas numerose colligere et transitum diligenter perscrutari necesse est. Determinatio ex his causis nonnunquam difficilis est et quidem tanto magis, quia species nonnullæ bene distinctæ aliis valde similes sunt. Species tales apud diversos Auctores vel sub uno eodemque nomine et eadem species sub variis nominibus descriptæ sunt, qua de causa nomen Auctoris semper exponendum erit. Non raro varietates tamquam distinctas species et sexus unius speciei sub duobus nominibus descriptas invenimus.

4. PARTES CORPORIS CHRYSIDIDARUM.*

Corpus: oblongum, ovato-oblongum, ovatum aut ovato-rotundatum, glabriusculum, pilosum aut pubescens, punctatum aut punctulatum, rarius in locis certis læve ac politum, convexum vel semicylindricum vel subhæmisphæricum, in *Cleptinis* subcylindricum.

Caput: thorace plerumque latius aut eiusdem latitudinis, superne transversum. — *Mentum:* corneum, semicylindricum, basin versus plerumque angustatum. — *Ligula:*

* Maxima ex parte secundum Dahlbom.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

membranacea, parva, conica, tantum in genere *Parnopes* magis dura longissima tenuis subfiliformis apiceque bifida. — *Maxillæ :* corneæ, plerumque mediocres, processibus duobus : interiore brevi acuto, exteriore maiori rotundato-obtuso ciliatoque ; in genere *Parnopes* maxillarum processus sunt longissimi tenues acuminati, secundum longitudinem plicati. — *Palpi :* graciles, plurium *maxillares* quinquearticulati, *labialibus* 2—3 articulatis longiores ; in *Parnope* sunt maxillares et labiales biarticulati brevissimi, setarum brevium rigidarum instar obsoletissimi. — *Mandibulæ :* magnitudine et crassitie variantes plerumque trigonæ, subtus nonnihil excavatæ, apice 1—3 crenatæ vel denticulatæ. — *Labrum :* parvum ; aliis subsemilunatum, aliis lineare et obtusum, plerumque absconditum, margine apicali plus minus ciliatum. — *Clypeus :* transversus, brevis vel mediocris, raro productus, disco plerumque longitudinaliter convexus et utrinque immersus. — *Antennæ :* filiformes, approximatæ, in vivis fortiter vibratiles, in mortuis nonnihil curvæ vel plus minus involutæ, scapus maximus conicus, pedicellus plerumque brevis. — *Oculi :* laterales ovati plus minus exserti. — *Facies :* inter orbitarum et clypei basin pro scapis quiescentibus plurimis immersa, et sæpius ibidem subtilissime transverse-striata ; quæ plerumque ampla impressio *cavitas facialis* nominatur. — *Frons* et *vertex :* depresso-convexa vel convexo-depressa. — *Stemmata* seu *ocelli :* in vertice vel triangulariter vel arcuatim disposita. — *Margo occipitalis :* prothoracem versus aliis muticus, aliis angulatus, aliis subspinoideo productus.

Thorax : subcylindricus, plus minusve convexus, antice arcuato-obtusus vel truncatus, postice truncatus. — *Mesonotum :* suturis longitudinalibus, medianis duabus plerumque reliquis distinctioribus. — *Scutellum* et *postscutellum :* mutica, convexa, conica vel mucronata. — *Metanotum :* rugulosum, reticulatum vel coriaceum. — *Pectus :* coriaceum ; *mesopleura* utrinque in angulum vel lobum characteristicum arcuatum vel triangularem efformata.

Pedes : cursorii mediocres, pilosi vel pubescentes. — *Trochanteres :* inæqualiter conici. — *Femora :* compresso-fusiformia. — *Tibiæ :* conico-cylindricæ, nonnunquam intus excavatæ, aliis muticæ, aliis rigidæ setulosæ, aliis spinulosæ ; tibiarum anticarum singula *calcare* unico, tibiarum posteriorum singula *calcaribus* duobus armatæ. — *Tarsorum articuli :* subfiliformes, nonnunquam parum compressi. — *Unguiculi* tarsorum : infra aut mutici, aut unidenticulati, serrati vel pectinulati.

Alæ : quoad longitudinem latitudinemque mediocres, at venarum et cellularum pauperes ; *anticæ :* plerumque tantum ; præbent cellulas completas, scilicet *costalem*, *medialem* et primam *submedialem ; cellula radialis* quidem adest, at apice sæpissime aperta nec nisi rarius vel rarissime ibidem clausa. *Cellularum cubitalium* et *discoidalium* tantummodo vestigia obsoleta vel obseletissima per venulas rudimentarias vel cœcas inchoata sub lente observantur. *Venæ :* in ala antica sunt : costalis, postscostalis, medialis, analis, venula transverso-medialis, venula transverso-submedialis, stigma et vena radialis, omnes *distinctæ ; rudimentariæ* sunt vena cubitalis et vena discoidalis. — In *ala postica* tantum unica adest cellula, scil. costalis angusta et obsoleta ; venæ eiusdem

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

alæ sunt: costalis, postscostalis, medialis, analis nec non setulæ rigidæ recurvæ regionis stigmaticalis.

Abdomen: thoraci adhærens ovale vel ovatum vel rotundato-subquadratum aut subhæmisphæricum, supra convexum, rarissime depressiusculum; subtus planum et marginatum, post mortem concavum et subfornicatum, in *Cleptinis* supra subtusque convexum.

De anatomia interna abdominis mariumque genitalibus Clarissimus Dominus Radoszkovszky sequentia scripserat (Horæ Soc. Ent. Rossicæ. XXIII. 1888, pag. 3—4).

«L'abdomen des véritables Chrysides* se compose de 8 segments. Les 3 premiers segment dorsaux et les 3 segments ventraux sont visibles (excepté la femelle de *Parnopes*, qui posséde 4 segments visibles), tandis que les autres se trouvent cachés intérieurement.

Chez les femelles les segments intérieurs, excepté le 4^{me} dorsal et le 4^{me} ventral, les segments 5^{me}, 6^{me}, 7^{me} et 8^{me} sont, proprement dits, dorsaux; il sont seulement la faculté de s'enrouler, entourant l'oviscape. Chaque segment intérieur est muni en bas des appendices, qui servent à fixer les segments, quand l'insecte les tire en dehors, pour former une espèce du tube. L'oviscape est accompagné de chaque côté d'un stylet et d'une baguette. Cette forme est générale pour tous les Chrysides.

Chez les mâles les segments intérieurs dorsaux different, par leur contour, de segments ventraux: nulles traces des appendices, ni aucune jonction entre les segments voisins, — chaque segment reste immobile.

Généralement ches tous les Hyménoptères, quand il sont ramollis, si l'on presse l'extrémité de l'abdomen chez les mâles, on peut facilement faire sortir l'armure copulatrice en dehors. Chez les mâles des Chrysides cela n'arrive jamais: leur armure ne possède pas cette rétractilité et reste constamment fixée sur sa place primitive. Pour détacher l'armure du mâle chez les Chrysides, quand l'insecte est ramolli, il suffit de relever avec une aiguile le bord du troisième segment ventral et de détacher ensemble des segments intérieurs: entre ces segmentes on trouvera l'armure. Après cette opération on abaisse sur sa place le bord relevé du troisième segment et de telle façon en conserver intact l'exemplaire examiné. Pour examiner des espèces de petite taille, il faut avoir de bons yeux et la certaine souplesse dans les doigts; pour cette cause j'ai été obligé de renoncer à l'examiner les Chrysides de trop petite taille.

Généralement chez tous les Hyménoptères au moment d'accouplement l'armure du mâle, à cause de sa rétractilité, sort de l'extrémité de l'abdomen, pour saisir l'extrémité de l'abdomen de la femelle; et comme l'armure des mâles chez les Chrysides est privée de cette retractilité, elle ne peut pas sortir on dehor de son abdomen. Je dois supposer, que chez les Chrysides pendant l'accouplement l'oviscape de la femelle, avec ses segments intérieurs en forme de tarrière, sort de l'extrémité de l'abdomen, pour

* Si l'on voudra groupper les genres de la tribu des Chrysides d'appès la forme de leurs armures copulatrices, il faudra expulser de cette tribu le genre *Cleptes*; par ce que ni le contour général d'armure, ni les parties composantes dans ce genre n'ont rien de commun avec les Chrysides. (Rad. l. c.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

s'introduire dans la place, où le mâle découvre son armure, pour saisir avec les forceps l'extrémité du tube, où est placé l'oviscape.

L'armure des mâles chez les Chrysides se compose des parties suivantes:

I. d'appareil préparatif.
II. du forceps.
III. de la pièce basilaire.
IV. du couvercle génital.

I. *L'appareil préparatif* se compose: *a)* de deux crochets; *b)* du fourreau. La forme des *crochets* est variable pour les differentes espèces et souvent si caractéristique, qu'elle peut servir même pour le définition des espèces. Sur la surface supérieure des crochets on voit le *fourreau*, une membrane transparente, qui est liée ensemble et pour cela un peut pas être détachée sans destruction des crochets.

II. *Le forceps* se compose des pièces suivantes (l'armure de *Chrysis ignita*): α) la branche; β) la volsella; γ) la tenette. La *branche* du forceps forme une seule pièce avec sa base; elle est large, mais elle peut différer par la forme de son bord supérieur et intérieur et de son extrémité. La *volsella* est assez large. Elle est reunie avec sa *tenette*, rarement par ses dimensions présentant des particularités.

III. La pièce basilaire paraît être générale.

IV. La contour du couvercle génital paraît être général; mais sa forme change par les dimensions de la largeur et de longueur.»

Conspectus subfamiliarum:

1. Pronotum quadratum, longitudine latius, antice leniter angustatum, mesothorace brevius. Metanotum utrinque inerme, seu dente postico-laterali nullo. Abdomen e quattuor (an in sexu utroque?) segmentis constitutum. Subfam. I. *Amiseginae* mihi.
2. Pronotum antice angustatum rotundatumque, sulco arcuato-transverso in duas quasi partes divisum. Unguiculi tarsorum infra sub medio unidenticulati. Alæ anticæ cellula mediali apice oblique-truncata, discodiali iam distincta, iam indistincta. Abdomen supra subtusque convexum, segmentis conspicuis 4 (♀) vel 5 (♂), segmenti ultimi dorsalis margo apicalis multicus vel dentatus. Subfam. II. *Cleptinae* Aaron.
3. Pronotum oblongum. Unguiculi tarsorum infra unidentati. Abdomen, in femina solum cognita, segmentis tantum duobus conspicuis, segmenti ultimi margo apicalis rotundatus et edentatus. Subfam. III. *Allocoelinae* mihi.*
4. Pronotum transverso-subquadratum. Unguiculi tarsorum infra serrati vel pectinulati. Alæ anticæ cellula mediali apice: introrsum angulato-emarginata, extrorsum stigma versus acuminata, discoidali et submediali nulla vel indistincta. Abdomen

* Animal non vidi nescioque an hanc subfamiliam loco apto collocaverim, vel illa post *Parnopinas* erit ponenda? Secundum characteres quam maxime incomplete descriptos illud *Cleptinis* magis proximum, quam *Parnopinis*, iudicavi.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

segmentis cataphractis conspicuis tribus, supra convexum, subtus concavum et subfornicatum, segmenti ultimi dorsalis margo apicalis in centro plerumque excisus vel truncato-emarginatus, rarius (solum in subgenere *Philoctetes)* subinteger vel subsinuatus, vix incisus. ... ... Subfam. IV. *Ellampinae* mihi.

5. Pronotum transverso-subquadratum. Unguiculi tarsorum infra pectinulati, multidentati, circa medium denticulati vel apice bifidi. Alæ anticæ cellula mediali latere apicali: oblique- vel arcuato- vel angulato-emarginata, propter venulam transverso-medialem vel arcuato- vel angulato-inflexam, discoidali sat distincta. Abdomen segmentis cataphractis conspicuis tribus, supra convexum, subtus concavum et subfornicatum, segmenti ultimi dorsalis margo apicalis integer, rarissime undulatus, vel lateribus plus-minusve distincte angulatus. ... ... Subfam. V. *Hedychrinae* mihi.

6. Pronotum transverso-subrectangulum, margine postico vel transverso vel emarginato-arcuato. Unguiculi tarsorum infra mutici seu inermes. Alæ anticæ cellula mediali latere apicali vel oblique secta vel oblique et leniter arcuato-emarginata, propter venulam transverso-medialem vel oblique sectam vel oblique et leniter arcuato-inflexam, discoidali — præter genus *Chrysogona* — semper distincta. Abdomen segmentis cataphractis conspicuis tribus, supra convexum, subtus aut planiusculum, aut concavum et subfornicatum vel fornicatum; segmento ultimo dorsali serie punctorum anteapicali plerumque instructo, margine apicali mutico, undulato, angulato, dentato, serrato vel serrulato. ... ... Subfam. VI. *Chrysidinae* mihi.

7. Maxillæ et labium abnormia: ligula et maxillarum processus longissima, producta in rostrum tenue, filiforme, promuscidem Apum simulans, in quiete sub pectore reflexum. Pronotum transverso-rectangulum. Alæ anticæ cellula discoidali distincta. Unguiculi tarsorum infra mutici. Abdomen segmentis cataphractis conspicuis 3 (♀) vel 4 (♂), supra depresso-convexum, subtus aut planiusculum aut subfornicatum, segmenti ultimi margo apicalis serrulatus. ... ... Subfam. VII. *Parnopinae* Aaron.

*Conspectus generum.**

I. Abdomen an supra subtusque convexum vel concavum aut subfornicatum ?? e quattuor segmentis constitutum (an in sexu utroque?) — promotum quadratum ... ... *Amisega* Cam. (1).

II. Abdomen supra subtusque convexum, apud feminam e segmentis quattuor, apud marem e quinque constitutum; pronotum sulco arcuato-transverso in duas quasi partes divisum.

a) Segmenti dorsalis ultimi margo apicalis muticus ... ... *Cleptes* Latr. (2).

aa) Segmenti dorsalis ultimi margo apicalis dentatus ... ... *Heterocoelia* Dhlb. (3).

* In hoc conspectu generum, characteres nonnulli subfamiliarum repetuntur quidem, sed solum ex ea causa, ut genera eo facilius inveniantur.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

III Abdomen subtus, præsertim post mortem, concavum et subfornicatum vel planiusculum, in sexu utroque plerumque e segmentis tantum tribus, rarissime (apud feminam unius generis solum cognitam) tantum e duobus, vel in uno genere e 3 (♀) vel 4 (♂) segmentis constitutum; pronotum in duas partes sulco arcuato-transverso non divisum.

b) Labium et maxillæ normalia; abdomen e segmentis 2—3 constitutum.

c) Abdomen in solum cognita femina e segmentis tantum duobus (detecto mare forsan e tribus?) constitutum . . . . . *Allocoelia* mihi (4).

cc) Abdomen in sexu utroque semper e segmentis tribus constitutum; unguiculi tarsorum infra serrati, pectinulati, denticulati vel inermes seu mutici.

d) Abdominis segmentum dorsale tertium sine serie-anteapicali; unguiculi tarsorum infra serrati, pectinulati vel denticulati.

e) Abdominis segmentum dorsale tertium in centro marginis apicalis plerumque excisum vel truncato-emarginatum, rarius, solum in subgenere *Philoctetes,* subintegrum vel subsiniatum, vix incisum. *Ellampus* Spin. (5).

ee) Abdominis segmentum dorsale tertium in margine apicali vel integerrimum, rasissime undulatum, vel lateribus angulatum.

f) Abdominis segmentum dorsale tertium lateribus non angulatum; venula transverso-medialis plerumque angulatim curvata.
Holopyga Dhlb., Mocs. (6).

ff) Abdominis segmentum dorsale tertium lateribus plus minusve distincte angulatum; venula transverso-medialis leniter curvata.
Hedychrum Latr., Mocs. (7).

dd) Abdominis segmentum dorsale tertium plerumque cum serie anteapicali; unguiculi tarsorum infra mutici seu inermes.

g) Postscutellum liberum, h. e. sub scutello non ulla parte absconditum; caput plerumque non rostratum, tantum rarissime productum.

h) Abdominis segmenti dorsalis tertii margo apicalis eximie prominens, pellucidus submembranaceus aut subcoriaceus, adeoque aliter compositus quam ipsum segmentum. *Spintharis* Klug, Dhlb. (8).

hh) Abdominis segmenti dorsalis tertii margo apicalis normalis h. e. leviter, licet ad maximum mediocriter prominulus et sæpissime non aliter constructus quam ipsum segmentum.

i) Antennæ, pedes et calcaria antica (adminimum in femina solum cognita) difformia . . . . . *Pleurocera* Guér. (10).

ii) Antennæ, pedes et calcaria normalia.

k) Corpus angustum, gracile; alæ anticæ (venula transverso-discoidali prima deficiente) cellula discoidali incompleta
Chrysogona Först. (9).

kk) Corpus plerumque non augustum, nec gracile; alæ anticæ cellula discoidali completa. . . . *Chrysis* Linn., Mocs. (12).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

gg) Postscutelli tota pars basalis sub scutello abscondita et solum pars apicalis mucronis validi exarati instar procedens; caput rostratum.

Stilbum Spin. (11).

bb) Labium et maxillæ abnormia: ligula et maxillarum processus longissima, in rostrum tenue filiforme producta; abdomen in feminis e segmentis tribus, in maribus e quattuor constitutum, segmento dorsali tertio sine serie-anteapicali.

Parnopes Fabr. (13).

Animadversio. - Reliqua Chrysididarum genera: *Omalus* Dhlb.,[1] *Diplorrhos* Aar.,[2] *Notozus* Först.,[3] *Philoctetes* Ab. Buyss.,[4] *Hedychridium* Ab.,[5] *Pyria* Lep. et Serv.,[6] *Polyodontus* Rad.,[7] *Brugmoia* Rad.,[8] *Euchroeus* Latr.[9] et *Spinolia* Dhlb.[10] tempore vetere et recenti condita, tamquam talia, ego delenda esse censeo. — In Hymenopterologia enim, ubi characteres generici de systemate alarum, de habitu externo et structura corporis præsertim desumuntur: longitudo articulorum antennarum, spinæ mesopleurarum, postscutellum productum, abdominis apex reflexus, margo apicalis dentatus, denticulatus vel serrulatus, femora vel tibia dilatata, situs et numerus dentium unguiculorum — sunt solum characteres quam maxime idonei ad species a simillimis recte cognoscendas, vel ut illæ facilioris conspectus causa in subgenera vel in sectiones dividentur, non tamen ad nova genera condenda satis apti.

[1] *Omalus*, Dhlb. Hym. Europ. II. 1854. p. 26. — — «Abdominis segmentum dorsale tertium in centro marginis apicalis excisum, excisura libera nec unquam marginata.»

[2] *Diplorrhos*, Aar. Transact. Amer. Ent. Soc. XII. 1885, p. 216. — «Just above the snout-like truncated projection of the apex of third segment is a conical projection, forming the apex of a fold which extends on each side just above the apical and lateral margins.»

[3] *Notozus*, Först. Verh. nat. Ver. preuss. Rheinl. X. 1853, p. 331. — «Caput antennarum flagello elongato, filiformi. Thorax postscutello plus minus acuminato, producto. Pedes femoribus anticis basi plerumque extus rectangulatim dilatatis, tarsorum articulo ultimo unguiculis serratis. Abdomen segmento tertio apicem versus valde angustato, apice ipso reflexo.»

[4] *Philoctetes*, Ab. Buyss. Revue d'Entom. VI. 1887, p. 170. — «Abdominis tertio segmento leniter undulato atque in medio marginis apicalis subintegro vel subsinuato, sed non inciso, marginella ultima subscariosa; ut in Apibus, tibiis posterioribus dilatatis, tarsorum unguibus tridentatis.»

[5] *Hedychridium*, Ab. Annal. Soc. Linn. Lyon. XXVI. 1879, p. 26 et 35. — «Crochets des tarses portant une dent perpendiculaire vers leur milieu et terminés par un seul ongle.»

[6] *Pyria*, Lep. et Serv. Encycl. Méth. Ins. X. 1825, p. 494. — «Dans les *Pyria* et les *Chrysis*, dit M. Spinola (Annal. Soc. Ent. France. VII. 1838, p. 447), l'épistome est plus large que long, tronqué très-près de la base des mandibules et quelquefois même un peu échancré. On distinguera ensuite les *Pyria* des *Chrysis* par les deuxième et troisième articles des antennes égaux en longueur et par le quatrième, beaucoup plus long que le troisième et le plus long de tous, si l'on en excepte le premier. Dans les *Chrysis* et dans la plupart des autres groupes, le troisième article est toujours plus long que le deuxième et souvent il est le plus long de tous.» (Brullé, Hym. IV. 1846, p. 18.)

[7] *Polyodontus*, Rad. Fedts. Reise in Turkest. Hym. Chrysid. 1877, p. 25. — «Postscutellum liberum margine undulato. Corpus ut in Chrysidibus normalibus constructum Abdominis segmento dorsali tertio convexo margine apicali confluente et apice dentibus undecim spinoideis armato.» (Lingua russica in versione latina.)

[8] *Brugmoia*, Rad. Fedts. Reise in Turkest. Hym. Chrysid. 1877, p. 26. — «Abdominis segmento dorsali tertio margine anali dentibus longioribus spinoideis æqualibus pellucidis armato.» (Lingua russica in versione latina.)

[9] *Euchroeus*, Latr. Dhlb. Hym. Europ. II. 1854, p. 363. — «Abdominis segmenti dorsalis margo analis dentibus conspicuis inæqualibus et maioribus et minoribus lacero-serratus; mesopleuræ apice bispinosæ.»

[10] *Spinolia*, Dhlb. Hym. Europ. II. 1854, p. 365. — «Abdominis segmenti dorsalis tertii margo analis denticulis minutis microscopicis æqualibus concinne serrulatus et spinosissimus; mesopleuræ apice inermes.»

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Subfamilia I. AMISEGINAE mihi.

Pronotum quadratum, longitudine latius, antice leniter angustatum, mesothorace brevius. Metanotum utrinque inerme, seu dente postico-laterali nullo. Abdomen e quattuor (an in sexu utroque ?) segmentis constitutum.

Genus I. AMISEGA. Cam.

Biolog. Central-Americ. Hym. p. 457. (1888).

(etymologia incerta et obscura).

«Antennæ 13-jointed, inserted immediately over the mouth. Eyes large, parallel, reaching near to the base of the mandibles, and almost to the back of the head. Prothorax quadrate, broader than long, slightly narrowed in front and shorter than the mesothorax. Parapsidal furrows complete. Postscutellum simple, not projecting. Metathorax and median segment with a gradual slope to the apex, and without teeth or projections of any kind; a marginal furrow runs down the centre and on either side of the metanotum. Abdomen with four segments, the basal two segments large and subequal, the apical segment small. Marginal cellule elongated, complete.

This genus agrees with *Cleptes* in having the face convex, without an antennal groove, and in the form of the abdomen; but it differs in having the prothorax broader than long and not much narrowed in front, as well as being shorter than the mesothorax, and in having the metathorax rounded and not angled laterally.

I include in *Amisega* a single species from the State of Panama.» (Cameron l. c.)

Animadversio. — Genus, a vocabulo obscuro nihilque significanti, characteribus tam incompletis conditum est, ut re vera mirandum sit, tam multarum publicationum auctorem ita scribere posse. Nullam enim facit mentionem: de distributione venarum, sexu, convexitate ventris notisque aliis, qui characteres in Hymenopterologia in generibus recenter constitutis silentio præteriri non possunt, ita, ut primo intuitu dubium fere iustum oriatur, speciem forsan ad Chalcididas solum pertinere. Et quod ego animal in systema meum Chrysididarum assumsi, ad hoc me duæ solum moverant expressiones: antennæ nempe 13-articulatæ et cellula marginalis elongata completa, quibus characteribus Chalcididæ non gaudent. Genus igitur novum Chalcididas cum Chrysididis coniungere videtur. Illud tamen Cleptinis nullo modo inserendum est, quamvis Auctor dicat: «*Cleptes* is the only genus included hitherto in this subfamily; but the characters given for the group by Aaron will have to be altered if *Amisega* is to be included in it.» — quia Clariss. Dom. Aaron subfamiliam: *Cleptinae* characteribus sequentibus (Transact. Amer. Ent. Soc. XII. 1885, pag. 210) illustravit: «Face entirely convex. Prothorax as long, or longer than wide, and longer than the mesothorax, with a distinct arched suture crossing its anterior portion. Metanotum almost equally elevated with the other portions, giving the dorsum of the thorax the appearance from above of four distinct parts except the prothorax. Abdomen convex beneath, the lateral margins not extending beyond the surface of the venter. Segments of the tergum 4 and 5.» — qui characteres tamen a genere *Amisega* maxima ex parte alieni sunt. Virorum igitur huius amabilis scientiæ eruditorum erit, genus hoc novum characteribus iustis de novo illustrare.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

1. **Amisega cuprifrons** CAM.

Amisega cuprifrons, Cam. Biolog. Central.-Americ. p. 457, n. 1, tab. XX. fig. 2, 2a. (1888.)

«Viridis, antennis, abdomine pedibusque nigro-cæruleis, capite cupreo; capite, pro- mesothoraceque punctatis; alis fumatis.

Long. 9 millim.

Head strongly punctured, sparsely covered with long black hairs. Pronotum more strongly and coarsely punctured; the prosternum shining, obscurely punctured. Mesonotum not so strongly punctured as the pronotum, the centre more finely than the sides; mesopleuræ and sternum coarsely punctured. Metanotum almost impunctate, except at the sides; median segment with scattered, shallow, indistinct punctures; metapleuræ excavated, impunctate. Abdomen glabrous above; the ventral surface (especially at the apex) bearing long black hair and finely punctured; the upper surface obsoletely punctured. Legs stout, covered with pale hair, which is longest on the coxæ; the latter are punctured. The pro- and mesothorax have coppery tints; the metathorax has a decided bluish tinge.»

Patria: Panama (Bugaba).

Subfamilia II. CLEPTINAE AARON.

Transact. Amer. Ent. Soc. XII. p. 210. (1885).

Pronotum antice angustatum rotundatumque, sulco arcuato-transverso in duas quasi partes divisum. Unguiculi tarsorum infra sub medio unidenticulati. Alæ anticæ cellula mediali apice oblique-truncata, discoidali iam distincta, iam indistincta. Abdomen supra subtusque convexum, segmentis conspicuis 4 (♀) vel 5 (♂), segmenti ultimi dorsalis margo apicalis muticus vel dentatus.

Conspectus generum:

1. Abdominis segmenta dorsalia, præter maris quintum, ad invicem subæqualia, tertii margo apicalis muticus --- --- --- --- --- --- --- --- --- *Cleptes* LATR.
2. Abdominis segmenta dorsalia: secundum maximum, primum mediocre, reliqua abbreviata, tertii margo apicalis dentatus --- --- --- --- --- --- *Heterocoelia* DHLB.

Genus II. CLEPTES LATR.

Hist. nat. III. p. 316. (1802) et XIII. p. 235, gen. 358. (1805). — DHLB. Hym. Europ. II. p. 10, gen. 1. (1854).

(*κλέπτης, ου, ὁ* = fur; erat enim opinio, larvam Chrysidis præ larva nutricis alimentum furavisse seu comedisse.)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Genus: prothorace et abdomine facile cognoscitur.

Corpus: plerumque mediocre, rarius magnum, longum, ellipticum, proportionaliter angustum, raro crassum.

Caput: transversum, orbiculatum, pronoto latius; *frons:* convexa, raro depressa, planata, nunquam pro scapis quiescentibus fossulata, tantum sulculo mediano tenuiter impressa. *Mandibulae:* breves, robustæ, late-trigonæ, subtus excavatæ, apice tridenticulatæ. *Antennae:* longiusculæ, subrobustæ, filiformes vel subsetaceæ.

Thoracis pronotum: colliforme, capite angustius, antice arcuato-obtusum. *Mesonotum:* pronoto brevius, transversum, suturis longitudinalibus 4 plerumque distinctis. *Scutellum:* pronoto paulo brevius, convexo-depressum vel subconvexum. *Postscutellum:* breve. *Metanotum:* transversum, subcubicum, supra planatum et vario modo concinne sculpturatum, postice truncatum.

Alae: mediocres, plurimis apicem abdominis vix attingentibus; *anticae:* cellulis 5 distinctis: costali, mediali, primo submediali et discoidali clausis adeoque completis, radiali lanceolato-ovata apice aperta vel clausa; *venis:* costali, postcostali, mediali, anali, stigmate et radiali firmis, reliquis fere rudimentariis; *posticae:* cellulis — præter costalem — omnino carent.

Pedes: pilosi; *unguiculi tarsorum:* infra inter apicem et centrum unidenticulati.

Abdomen: ovatum vel late-ovatum, depresso-convexum, segmenta dorsalia, præter maris quintum, ad invicem subæqualia, ultimo sine serie punctorum anteapicali. Quoad genitalia maris Cl. Dom. Radoszkovszky sequentia scripserat: «Par la forme des armures ce genre diffère de tous les genres Chrysidiformes. La tenette est fixée vers l'extrémité de la volsella; la forme des crochets est bien différente avec son extrémité; et la forme du couvercle génital n'a rien de commun avec les Chrysis.» (Horæ Soc. Ent. Rossicæ. XXIII. 1888, pag. 61.

Generis *Cleptis* iam 27 cognoscimus species: 19 e regione palæarctica, 5 Americæ septentrionalis et 3 Americæ meridionalis incolas. — Dahlbomus tantum 6 noverat species.

*

I. *Corpus testaceum et nigrum; alae parte apicali fortiter fumatae vel superiores solum fumeo-bifasciatae.*

2. Cleptes xanthomelas n. sp.

Submagnus, elongatus, nitidus: testaceus, pedibus (tarsorum articulis quattuor ultimis fuscis exceptis) et abdominis segmentis: dorsalibus primo et secundi lateribus basalibus duobusque ventralibus fere totis concoloribus; capite nigro-æneo, sat dense fortius, lateribus parum rugosiuscule-punctato* medioque inde a stemmate antico fon-

* *Animadversio.* — In examinandis speciminibus microscopio simplici (loupe) usus sum, quod res circiter quadruplo auget. Unde in cælatura punctaturaque diiudicandis huius augmenti ratio habenda est.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

gitudinaliter canaliculato; antennis crassiusculis, nigris, fusco-puberulis, flagelli articulo primo subfusco; pronoto in medio longitudinaliter sulcato, intra marginem posticum serie punctorum transversa; mesonoti lobis et scutello parum elevato convexoque fulvescentibus sparsim punctatis, metanoti disco undique acute marginato carinis duabus subparallelis rugisque transversis instructo, supra per margines acutos cordiformi medioque carinato, dentibus postico-lateralibus longis, subrectis, acutiusculis; abdomine segmentis: primo lævi, 2—4 piceis, mitidissimis, parte basali sat dense concinne punctulatis, apicali lævi, terebra sat longa, fusca; capite thoraceque supra parce nigro-, pleuris, abdomine pedibusque albido-pilosis; mandibulis tridentatis; alis nigro-pilosis parte basali lutescenti-hyalinis, venis piceis, parte apicali fortiter fumatis. — ♀; long. 9 mm.

Clepti fasciato Dhlb. similis et affinis esse videtur; sed capite et thorace supra alisque nigro-pilosis, metathoræe et pleuris testaceis, alis haud fumeo-bifasciatis, sculptura alia metanoti, abdominis segmento tertio sine macula testacea, terebra fusca, satis superque distinctus.

Patria: Brasilia (Blumenau, Musæum Nationale Hungaricum et Musæum Cæsareum Vindobonense!).

3. **Cleptes fasciatus** Dhlb.*

Cleptes fasciata, Dhlb, Dispos. p. 1, n. 2. ♀, (1845); Hym. Europ. II. p. 12, n. 1. ♀. tab. I. fig. 1 ♀. (1854).

Descriptio secundum auctorem.**

«Maxima 3 1/2 lin. decimal. longa, robusta, cinereo-hirta, testacea annulo antennarum abdominisque basi et maculis lateralibus concoloribus; capite, metanoto clathrato abdominisque dorso nigris; alis subhyalinis, anticis fumeo-bifasciatis.

Observ. Species sui Generis gigantea. Caput sparse cinereo- et griseo-hirtum, quæ hirsuties etiam in pedibus et in ala antica abundanter obvenit. Caput nigro-æneum punctato-rugulosum; vertex et frons depressa, parumper immersa. Oculi magni prominuli. Antennarum scapus validus piceus uno latere testaceus, margine apicali infra prominulo; pedicellus et articulus proxime sequens testacei uno alterove latere infuscati; reliqua pars antennæ nigra. Mandibulæ ante apicem nigro-piceæ. Palpi fusci. Thorax et pedes rufo-testacei. Pronotum et dorsulum crasse et subcrebre punctata, superficie scabriuscula l. subasperula, scutellum nitidum sparse punctatum. Metathorax et pleurarum vitta nigro-picea; postscutellum tubere discoidali transverso compressiusculo

* Quia secundum meam opinionem, e lingua græca in latinam nec minima mutatione accepta nomina substantiva et propria, genus suum originale etiam in lingua latina retinent. *Cleptes* et *Parnopes* in lingua græca generis masculini sunt: ergo talia manere debent etiam in lingua latina.

** In hac Monographia species a me visæ characteribus illustratæ sunt; illæ vero, quæ mihi in natura ignotæ manserunt, in variis linguis textu originali citantur, ita ut ad colendam huius amabilis scientiæ familiam, necessitas librorum aliorum haud remaneat. — Monographia enim hæc omnia in se continet, quæ in literatura gentium universali de his animalibus conscripta fuerant — excepta forsan publicatione Radoszkovszkyi propter figuras de marium genitalibus.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

rectangulo obtusiusculo; metanotum irregulariter cubicum, supra clathratum: lineis elevatis transversis, obliquis et longitudinalibus invicem concurrentibus, areas nitidas angulatas maiores et minores includentibus, postice in truncatura carinulis discoidalibus 3 æqualiter remotis, interstitiis oblique striatis; anguli postico-laterales maximi mucronoidei inæquales prismatico-conici obtusi. Alæ subhyalinæ, colore testaceo nonnisi parumper tinctæ venis firmis piceis, stigmate crasso lanceolato-elliptico; vena radiali ab origine et medium crassa et distinctissima, tum abrupte desinente et tantummodo vestigium tenue et obsoletum suæ præsentiæ offerente; fasciæ fumeæ 2 in ala antica adsunt: una infra basin alæ perobsoleta, — altera a stigmate in marginem posticum ducta lata distincta saturata; antice in hoc fascia currit linea hyalina lenissime arcuata (a stigmate in discum), vestigium et viam venæ cubitalis non explicatæ indicans. Abdomen politum nitidissimum segmentis primo et secundo inpunctatis, tertio et quarto sparse punctatis; segmentum primum pallide testaceum margine apicali nigro-piceo; secundum et tertium nigro-picea, basi utrique macula laterali magna testacea; quartum totum nigro-piceum; tubulus analis robustus testaceus; venter parte basali testaceus, parte apicali nigro-piceus. Pedes lutei aut rufo-testacei, tarsis apice fuscis.»

Patria: Brasilia.

II. *Corpus in feminis (et etiam in cognitis maribus) cyaneo-, violaceo- et viridi-variegatum* (solum in *Clept. alieno* Patt. fronte et abdomine nitore aureo).

1) *Alae superiores late brunneo-fasciatae; scutellum rufo-aurantiacum.*

4. **Cleptes Aurora** SMITH.

Cleptes Aurora, SMITH, Transact. Ent. Soc. Lond. p. 452, u. 7. ♀. (1874).

«Female. — Length 4 lines. Variegated with blue, purple and green; the scutellum of a reddish-orange; the metathoracic spines, the base of the aldomen, and the basal joint of the intermediate and posterior tarsi, white; the anterior wings hyaline, brown at their base, and with a broad fascia of the same colour beyond the base of the stigma. Head and thorax very closely and strongly punctured; the scutellum smooth, shining and very convex; the postscutellum produced into a prominent, obtuse, conical tubercle; the abdomen smooth and shining; the coxæ, trochanters, and base of the femora beneath, whitish. The vertex and mesothorax purple; the metathorax greenish, and the abdomen with purple tints in certain lights.»

Patria: Brasilia (Ega).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

2) *Alae supriores non fasciatae; scutellum non rufo-aurantiacum.*

5. **Cleptes purpuratus** CRESS.*

Cleptes purpurata, CRESS. Transact. Amer. Ent. Soc. VII. Monthly Proceed. p. 10. ♀. (1879). — AAR. Transact. Amer. Ent. Soc. XII. p. 211. ♂♀. (1885.)
Cleptes americana, CRESS. Transact. Amer. Ent. Soc. VII. Monthly Proced. p. 10. ♂♀. (1879). (nec. Prov.)

«The collection contains five specimens of the larger form (purpurata) 7—6 mm. long, from Vancouver's Island (Mr. Cressons type), Washington Territory and Southern California; nine specimens of the smallest form (americana), 5·5 mm. long from Nevada, and three specimens of the amalgamating form, intermediate in size, from Washington Territory. Othervise all these forms do not differ. ♂♀.» (Aaron l. c.)

Patria: America septentrionalis.

6. **Cleptes alienus** PATT.

Cleptes aliena, PATT. Canad. Entom. XI. p. 66. ♀. (1879.). — AAR. Transact. Amer. Ent. Soc. XII. p. 211. (1885.)

Descriptis secundum Patton:

«♀. Length 6 mm. Blue-green, the blue tinge more pronounced upon the median thoracic piece and the second and third segments of the abdomen; the head golden in front, the flagellum and the tibiæ within blackish, the tarsi fuscous. Thinly clothed with erect black hairs, the disk of the three basal segments of the abdomen glabrous. Wings subhyaline, the principal nervures black. The pointed tip of the abdomen piceous, with a golden reflection; the abdomen polished, very delicately punctured. Metathoracic spines moderate, sharp. Discoidal cell complete, appendiculated, the tip of the appendiculation connected with the bulla distinct; radial cell closed indistinctly. Head finely punctured; thorax strongly punctured, disk of mesothorax and scu-

* Conspectus specierum generis *Cleptes* Americæ septrientonalis secundum Aaron sequens est:

Color metallic green, blue, or purple, or with reflections of all these colors.
Head and thorax the same general color as the abdomen.
General color of the body blue, with purple and green reflections, femur dull, with little of the metallic color of the body, tibia with little or no metallic, about as in the tarsi. Wings evenly infuscated. *purpurata* CRESS.
General color of the body emerald-green, with little or no purple or blue, except of the postscutellum. Femur and tibia strongly colored with metallic green, in contrast with the tarsi, which is luteous at base, fuscous apically. Wings subhyaline.
Face and abdomen with golden reflections ... *aliena* PATT.
Face and abdomen without distinct golden reflections ... *insperata* AAR.
Head and thorax green, the abdomen metallic black with some slight green, purple and blue reflections. *Americana* PROV.
Color elegant metallic ruby and golden with some green (appearing generally red) ... *speciosa* AAR.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

tellum polished and sparse punctured, metathorax reticulated, the upper surface with seven longitudinal carinæ.

Como, Wyoming; S. W. Williston. This is the first species of the genus recorded form North America.» (Patton l. c.)

«There is one male specimen from Montana in the collection which agrees with Mr. Patton's description almost exactly, except that the tarsi are luteous, fuscous only at the apex, the posterior tibiæ only, with black on the inside, and the color is probably less blue, with a little stronger golden reflection. I feel very positive that this specimen, together with a series to show the variations, will prove identical with Patton's *aliena*.» (Aaron l. c.)

Patria: America septentrionalis.

7. **Cleptes Americanus** Prov.

Cleptes Americana, Prov. Natur. Canad. XII. p. 304. ♀. (1881); Faun. Ent. du Canada. Hym. p. 583. ♀. (1883) (nec Cress.).
Cleptes Provancheri, Aar. Transact. Amer. Ent. Soc. XII. p. 212. ♂♀. (1885).

«Before me are seven specimens ♂♀ from Canada (two specimens, one of which is Provancher's type), Colorado and Washington Territory 5—6 mm. long.

The color is emerald-green on the head and thorax with or without bluish reflections; abdomen blackish shining, with green reflections on the margins. Wings subhyaline, tibia with some greenish reflections outwardly; otherwise, and with the tarsi, varying from luteous to fuscous.» (Aaron l. c.)

Patria: America septentrionalis.

8. **Cleptes insperatus** Aar.

Cleptes insperata, Aar. Transact. Amer. Ent. Soc. XII. p. 212. ♀. tab. VI. fig. 1—2. (1885).

«Emerald-green, with more or less slight blue and purple reflections, rather sparsely and evenly punctured. Wings subhyaline on the centre, in places infumated. Tarsi luteous, rest of legs largely green outwardly; 6—6·5 mm. long. ♀.

Montana, four specimens; between *purpurata* and *aliena*.»

Patria: America septentrionalis.

III. *Caput et thorax in maribus cognitis* (et in Clepte Putoni etiam in femina) *cyanea vel cyaneo-, violaceo- et viridi-variegata, rarius fronte et vertice mesonotoque nitore viridi-subaureo; thorax in feminis reliquis niger, rufo-testaceus, viridis et cyaneus vel ex parte solum auratus.*

1) *Abdomen non cupreo- vel aureo-maculatum, nec totum auratum; sed rufo-testaceum, viride vel cyaneum et piceum, lateribus tamen nonnunquam parum violaceo-cupreo vel aeneo micantibus.*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Conspectus synopticus specierum huius subsectionis.

a) *Feminae.*

1 (2). Capite et mesonoto nigro-aeneis, prothorace rufo-testaceo ... *nitidulus* FABR.

2 (1). Capite thoraceque aliter coloratis.

3 (4). Capite, pro- et mesonoto cum scutello postscutelloque auratis plus minusve ignitis vel cupratis; pronoti parte postica intra marginem posticum serie punctorum transversa; metathorace vel viridi-cyaneo vel aeneo-viridi; alis anticis in medio apiceque fasciatim fumosis; pedibus vel rufo-testaceis unicoloribus cum coxis trochanteribusque, vel femoribus omnibus tibiisque posterioribus nigro-æneis ... ... *semiauratus* LINN.

4 (3). Pronoti parte postica intra marginem posticum serie punctorum transversa nulla; alis anticis in medio apiceque fasciatim non fumosis.

5 (6). Capite et mesonoto violascenti- vel virescenti-æneis; pronoto, scutello postscutelloque viridi- vel igneo-auratis; metathorace nigro, opaco, lateribus nonnunquam ænescentibus; abdominis segmento dorsali primo fere lævi ac polito, punctis tantum aliquot subtilissimis microscopicis; pedibus fusco-testaceis, tibiis anticis et tarsis rufescentibus ... ... *Chyzeri* n. sp.

6 (5). Capite igneo-aurato, vertice circa stemmata macula magna nigro-ænea; pro- et mesonoto, scutello postscutelloque igneo-auratis; metathorace cyaneo; abdominis segmento dorsali primo valde dense subtilissime punctulato; pedibus rufo-testaceis, duobus anterioribus cyaneo-viridibus, posticis brunneis, non metallicis. *Radoszkovszkyi* n. sp.

b) *Mares.*

1 (6). Tibiis tarsisque omnibus rufo-testaceis.

2 (3). Abdominis segmento dorsali tertio margine apicali violaceo- vel viridi-cyaneo; femoribus quoque rufo-testaceis, posterioribus intus macula elongata viridi-cyanea; pronoto valde subtiliter sparsim punctato ... *semicyaneus* TOURN.

3 (2). Abdominis segmento dorsali tertio margine apicali nigro-piceo; femoribus cyaneo-viridibus; pronoto sat sparsim fortius punctato.

4 (5). Capite thoraceque læte-cyaneis plus minusve virescentibus vel violascentibus; pronoto supra subdepresso, parte postica intra marginem posticum serie punctorum transversa; metanoto irregulariter ruguloso; alis anticis apicem abdominis attingentibus ... ... *semiauratus* LINN.

5 (4). Capite thoraceque læte-viridibus nitore viridi-aureo; pronoto convexo, parte postica intra marginem posticum serie punctorum transversa nulla; metanoto reticulato; alis anticis apice abdominis multo brevioribus ... ... *fallax* n. sp.

6 (1). Tibiis non vel solum anticis rufo-testaceis.

7 (12). Abdominis segmentis dorsalibus tantum primo et secundi basi vel maxima parte basali rufo-testaceis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

8 (9). Tibiis omnibus metallicis; abdominis segmentis dorsalibus secundo tertioque marginibus nigris, parte reliqua cum quarto quintoque metallice viridibus; alis hyalinis, brevibus ... ... *Pérezi* Gog.

9 (8). Tibiis anticis rufo-testaceis, posterioribus brunneis vel fusco-nigris.

10 (11). Corpore sat robusto, læte-cyaneo parumque violascenti; metanoto æneo-nigro, reticulato; abdominis segmentis dorsalibus: secundo margine apicali, tertio quartoque nigro-piceis; femoribus posticis nigro-æneis; aliis anticis apice abdominis longioribus ... ... *Diana* n. sp.

11 (10). Corpore elongato; capite thoraceque æneo-viridibus, splendidis, fronte, pronoti disco et mesonoti lobo medio nitore viridi-aureo; metanoto cyaneo, irregulariter sat crasse rugoso; abdominis segmentis dorsalibus: secundi margine apicali, tertio quartoque nigro-piceis, 3—4 lateribus æneo-micantibus; femoribus posterioribus brunneis; alis anticis apice abdominis multo brevioribus. *Radoszkowszkyi* n. sp.

12 (7). Abdominis segmentis dorsalibus duobus primis et tertii maxima parte rufo-testaceis.

13 (14). Capite cyaneo nitore viridi; pronoto sat lato regulariter dense profundeque punctato; alis fumatis nitore nigro ... ... *consimilis* Buyss.

14 (13). Capite læte-cyaneo plus minusve violascenti; pronoto minus lato convexo, dense, sed minus crasse punctato; alis sordide-hyalinis apicem abdominis non attingentibus ... ... *nitidulus* Fabr.

*

9. **Cleptes nitidulus** Fabr.

Ichneumon nitidulus, Fabr. Ent. Syst. II. p. 184, n. 211. ♀. (1793). — Coqueb. Illustr. Icon. Ins. Dec. I. p. 19, tab. IV. fig. 5. ♀. (1799).

Cleptes nitidula, Fabr. Syst. Piez. p. 154, n. 2. ♀. (1804). — Latr. Hist. natur. XIII. p. 236, n. 2. ♀. (1805). — Lep. Annal. du Mus. Hist. nat. VII. p. 119, n. 2. ♀. (1806). — Panz. Faun. Ins. Germ. fasc. 106, tab. 11. ♀. (1809). — Latr. Gen. Crust. et Ins. IV. p. 44. ♀. (1809). — Lam. Anim. sans vertébr. IV. p. 127, n. 2. ♀. (1817). — Dhlb. Exercit. Hym. p. 25, n. 2. ♀. (1831). — Schuck. Ent. Mag. IV. p. 159, n. 2. ♂♀. (1837). — Wesm. Bullet. Acad. Brux. VI. p. 169, n. 2. p. ♀. (1839). — Blanch. Hist. nat. III. p. 298, n. 2. ♀. (1840). — Dhlb. Dispos. p. 1, n. 2. ♀. (1845); Hym. Europ. II. p. 13, n. 2. ♀. (1854). — Schck, Nass. Jahrb. XI. p. 70, n. 39. ♂♀. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 62. ♂♀. (1858). — Chevr. Chrysid. du Léman, p. 121. ♂♀. (1862). — Smith, Entom. Annual, p. 84. (1862). — Taschb. Hym. Deutschl. p. 149. ♂♀ (1866). — Schck, Progr. Gymn. zu Weilb. p. 14, n. 32. ♂♀. (1870). — Thoms. Opusc. Entom. II. p. 102, n. 1. ♂♀. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 16. ♂♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 156. (1879). — Lampr. Goldwesp. Deutschl. p. 6, n. 3. ♂♀. (1881). — Heyd. Ber. Senkenb. Naturf. Ges. p. 252, n. 24. (1882). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 7. (genit. maris) (1888).

Cleptes thoracica (Laporte), Guér. Icon. regn. anim. II. p. 421, tab. 68, fig. 11. ♀. (1844.)

Cleptes nitidulus, Mocs. Chrys. faun. Hung. p. 19 et 79. ♂♀. (1882). — Frey, Chrys. Helvet. p. 28 et 30. ♂♀. (1887).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Sexus ab invicem colore valde differunt.

Submediocris vel mediocris, capite thoraceque supra parce nigro-, subtus cum abdomine pedibusque albo-pilosis; facie convexa, sat sparsim punctata, medio canaliculata, canalicula usque ad stemma anticum producta (in mare sæpius obsoleta); pronoto convexo, sat dense punctato, intra marginem posticum serie punctorum transversa nulla; metanoto irregulariter crassius rugoso, dentibus postico-lateralibus minutis, subacutis; abdomine ovato, depresso-convexo, segmentis dorsalibus duobus primis et tertii parte basali rufo-testaceis, huius parte apicali et reliquis nigro-piceis; alis sordide-hyalinis, venis fuscis, anticis apice abdominis multo brevioribus.

Femina: capite et mesonoti lobis nigro-æneis splendidis; antennarum flagelli articulis duobus vel tribus primis, prothorace, coxis anticis, trochanteribus, geniculis, tibiis tarsisque rufo-testaceis, nonnunquam parum infuscatis; scapo vel brunneo vel antice rufo, flagelli articulis reliquis fuscis; scutello, postscutello, metathorace cum mesopleuris cyaneis plus minusve virescentibus; femoribus omnibus brunneis; abdominis segmentis dorsalibus: primo lævi ac polito, secundo valde dense subtilissime, reliquis dispersius fortiusque punctulatis; alarum tegulis brunneis. — Long. 5—5½ mm.

Mas: capite et thorace læte-cyaneis plus minusve violascentibus; antennis fuscis, scapo cyaneo-viridi; coxis ac trochanteribus femoribusque cyaneis vel virescenti-cyaneis, femoribus posticis postice nigro-piceis; tibiis anticis rufo-testaceis, reliquis nigro-fuscis, externe cyanescentibus, tarsis fusco-rufis; abdominis segmentis dorsalibus: primo sparsim, secundo tertioque densius, quarto fortius dispersiusque punctulatis, 3—4 lateribus et quinto ænescentibus; alarum tegulis cyaneis, postice ænescentibus. — Long. 6—6½ mm.

Femina: capite et mesonoti lobis nigro-æneis, prothorace pedibusque maxima ex parte rufo-testaceis, iam facile cognoscitur. — Mas vero, a maribus simillibus: a *Cl. semicyaneo:* abdominis segmento dorsali tertio margine apicali nigro-piceo pedibusque aliter coloratis; a *semiaurato:* pronoto convexo, metathorace sine carinis tribus longitudinalibus, abdominis segmentis dorsalibus fortius evidentiusque punctulatis, trochanteribus tibiisque posterioribus non rufo-testaceis et alis anticis apice abdominis multo brevioribus; a *fallaci:* capite thoraceque læte-cyaneis, vertice et mesonoti lobis haud viridi-auratis, trochanteribus tibiisque posterioribus non rufo-testaceis; a *Diana:* pronoto convexo, metanoto cyaneo (non æneo-nigro), abdominis segmento dorsali tertio parte basali quoque rufo-testaceo, alis anticis apice abdominis brevioribus; a *consimili:* corpore non robusto et alis non fumatis; a *Radoszkovszkyi:* capite thoraceque læte-cyaneis, abdominis segmentis dorsalibus nitidis, tertio parte basali quoque rufo-testaceo, femoribus et tibiis posterioribus trochanteribusque omnibus non brunneis, optime distinguendus.

«*Armure.* La branche du forceps nue, très-grande; son bord supérieur est partagé en deux parties par une forte échancrure. Volsella richement garnie de poils.» (Rad. Horæ Soc. Ent. Rossicæ. XXIII. 1888. tab. I. fig. 6a, 6b, 6c, 6i.)

Patria: Europa fere tota.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

10. **Cleptes consimilis** Buyss.

Cleptes consimilis, Buyss. Revue d'Entom. VI. p. 198, n. 36. ♂. (1887).

«Corps d'assez grande taille, robuste, couvert de poils assez longs, peu serrés, dressés, brun noirâtres en dessus, cendrés en dessous, roussâtres sur l'abdomen. Premier article des antennes, cuisses, tête et avant-corps bleus avec quelques reflets verts; seconde article des antennes légèrement bronzé en dessus, les autres noirs à fine pubescence roussâtre; seconde article non cylindrique mais légèrement renflé; troisième article d'un tiers de sa longueur plus long que le quatrième. Tête médiocre, à ponctuation uniforme, assez serrée et profonde, sillon longitudinal de la face peu profond; clypeus non émarginé au milieu. Pronotum assez large, régulierèment ponctué comme la tête, sans ligne de points à sa base; le reste du thorax à ponctuation moins serrée et moins profonde. Ecailles bleues à la base, bronzées sur les bords; côtés du mesosternum (épimères) régulièrement ponctués comme la tête et le pronotum; angles postico-latéraux du metanotum très-courts et obtus; tibias et tarses de la première paire de pattes testacés; tibias et tarses des autres paires plus ou moins d'un noir brunâtre, à pubescence très serrée, griseâtre. Ailes regulièrement enfumées, à teinte noire et non brun roussâtre, comme chez le *Cl. nitidula* Fabr. Abdomen ovale ou ovale-oblong, peu déprimé, a ponctuation fine et serrée: premier et seconde segments rouge-testacé, le troisième en partie rouge-testacé à la base, noir sur le reste, les quatrième et cinquième noirs avec quelques légers reflets violacé-cuivrés (à peine visibles sur les côtes); ventre rouge-testacé, les trois derniers segments noirs avec quelques rares reflets cuivrés. — Long. 7 mm.

J'ai pris deux exemplaires du *Cl. consimilis* dans les environs du Vernet, commune de Broût-Vernet (Allier), sur les ombelles de *Peucedanum cervaria* Lap., les 21 et 31 juillet 1887.

On distingue cette espèce du *Cl. ignita* Fabr. ♂ par sa taille plus robuste, sa tête plus épaisse, sa ponctuation plus serrée, son pronotum plus court et plus large, par ses taches feu qui font défaut sur les derniers segments abdominaux, et enfin par le seconde article des antennes qui est légèrement renflé et le troisième plus allongé. D'un autre côté, sa taille grande et robuste, sa ponctuation profonde et serrée, la couleur de ses pattes etc., le séparent du *Cl. nitidula* Fabr. ♂.»

Patria: Gallia.

11. **Cleptes Radoszkovszkyi** Mocs.

Cleptes Radoszkovszkyi (Mocs.), Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 7. ♂♀. (1888).

Sexus ab invicem colore valde differunt.

Mediocris, elongatus, supra parce nigro-, subtus cum abdomine pedibusque albopilosus: pronoto intra marginem posticum serie punctorum transversa (in mare obsoletiore); metanoto cyaneo, irregulariter sat crasse rugoso, dentibus postico-lateralibus minutis, subobtusis.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Femina: capite igneo-aurato, vertice circa stemmata macula magna nigro-ænea; facie planiuscula, sat crasse subrugoso-punctata, medio canaliculata, supra antennas utrinque viridi-maculata; antennarum flagello et mandibularum apice rufo-testaceis parumque infuscatis, genis sat longis; scapo, temporibus subtus, pro- et mesothorace alarumque tegulis viridi-auratis; pro- et mesonoto, scutello et postscutello læte igneo-auratis, splendidissimis; pronoto convexo, sat sparsim fortius punctato medioque longitudinaliter sulcato; mesonoto et scutello sparsim punctatis, interstitiis sat latis lævibus; abdomine rufo-testaceo, vix nitido, valde dense subtilissime punctulato, segmentis: dorsali tertio parte apicali et ultimo ventralibusque 3—4 totis nigro-piceis; geniculis, tibiis tarsisque rufo-testaceis, femoribus duobus anterioribus cyaneo-viridibus, posticis brunneis, non metallicis; alis sordide-hyalinis, venis piceis (alarum pars dimidia apicalis mutillata est). — Long. 7 mm.

Mas: capite thoraceque æneo-viridibus, splendidis, fronte, pronoti disco et mesonoti lobo medio nitore viridi-aureo; facie convexa, sat crasse parum rugosiuscule-punctata, medio canaliculata; antennis fusco-nigris, scapo æneo-viridi, genis mediocribus; pronoto subdepresso, sat dense crassius subrugoso-, mesonoto et scutello sparsim subtilius punctatis; abdomine elongato-ovali, lateribus in medio parallelis, rufo-testaceo, parum nitido, segmentis tribus primis et quarti parte basali sat regulariter punctatis, huius parte apicali dispersius fortiusque punctata, quinto fere lævi, dorsali secundo margine apicali anguste et 3—5 ventralibusque 2—5 nigro-piceis, dorsalibus tertio quartoque lateribus et quinto æneo-micantibus; geniculis, tibiis tarsisque anticis rufo-testaceis, his posterioribus fuscis, femoribus et tibiis posterioribus trochanteribusque omnibus brunneis, non metallicis, femoribus anticis solum postice coxisque omnibus æneo-viridibus, splendidis; alis sordide-hyalinis, venis piceis, alarum tegulis viridi-cupreis, anticis apice abdominis multo brevioribus. — Long. 7 mm.

Femina: colore corporis et pronoti sulco longitudinali insigni *Clept. Abeillei* Buyss. valde similis; sed minus robusta magisque elongata, facie non nigro-ænea, mesonoto et præsertim scutello multo dispersius subtiliusque punctatis, metanoto non læte-cyaneo minusve fortiter rugoso, abdominis segmentis dorsalibus multo densius et subtilius punctulatis, pleuris et pectore eiusque lateribus viridi-auratis, tibiis tarsisque rufo-testaceis, bene distincta. — Mas vero: abdomine elongato-ovali, lateribus in medio parallelis, femoribus et tibiis posterioribus trochanteribusque omnibus brunneis, non metallicis, optime distinguendus.

«*Armure*. La branche du forceps pareille à celle de l'espèce précédente (Cleptes Morawitzi Rad.), mais son extrémité plus allongée. Volsella, vue en face, est coupée en ligne droite à l'extrémité. Tenette petite, son extrémité arrondie, non pointue, comme dans l'espèce précédente. La tête du crochet est grande, de la forme de la tête d'un champignon, à trois dents; la crochet au milieu de sa longueur est muni d'un appendice en forme d'épine. Couvercle genital plus grand.» (Rad. l. c. tab. I. fig. 5a, 5b, 5c, 5i, 5k.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Patria: Caucasus; a Clar. Dom. Radoszkovszky mecum benevole communicatus et in eius honorem denominatus (Col. Rad.).

12. **Cleptes Diana** n. sp.

Mediocris, elongatus, sat robustus, læte-cyaneus parumque violascens, metathorace æneo-nigro, subobscuro; capite thoraceque supra nigro-, subtus cum pedibus abdomineque albo-pilosis; facie, præsertim in lateribus, virescenti, canalicula mediana ad stemma anticum producta sat distincta, dense subtilius punctata, subcoriacea; antennis crassiusculis, nigris, cinereo-puberulis, articulo primo æneo-viridi; genis mediocribus, viridi-auratis; pronoto modice depresso, dense crassius parum rugosiuscule-punctato, intra marginem posticum serie punctorum transversa obsoleta; mesonoto et scutello valde sparsim subtiliter punctatis, interstitiis latis lævibus, illo suturis quattuor longitudinalibus distinctis, postscutello viridi-æneo, sparsim punctato; metanoto reticulato, dentibus postico-lateralibus mediocribus sat validis, subacutis; abdomine ovali, segmentis dorsalibus: primo toto, secundo maxima parte et tertii lateribus basalibus rufo-testaceis, secundo margine apicali in medio anguste et 3—4 nigro-piceis, quinto virescenti-æneo, fere lævi; ventralibus duobus primis rufo-testaceis, reliquis nigro-piceis, 3—4 margine apicali etiam dorsalibus in medio testaceo-pellucidis, omnibus sparsim subtiliter punctatis; dorsali primo valde sparsim, secundo multo densius, 3—4 valde dense subtilissime punctulatis; femoribus viridi-æneis, tibiis tarsisque fusco-nigris, his anticis parum dilutioribus; alis parum sordide-hyalinis apice abdominis longioribus, venis fuscis, cellula radiali subcompleta, tegulis virescenti-cyaneis. — ♂; long. 7½ mm.

Colore corporis ac pedum *Clept. nitiduli* F., *consimilis* Buyss. et *Radoszkovszkyi* Mocs. maribus similis; sed metanoto æneo-nigro, supra reticulato; a *Clept. nitidulo* insuper: pronoto parum depresso fortius, mesonoto dispersius subtiliusque punctatis, abdomine ovali, segmentis dorsalibus multo densius subtiliusque punctulatis, tantum duobus primis rufo-testaceis, alis anticis apice abdominis longioribus; a *Clept. consimili*: abdominis segmentis dorsalibus tantum duobus primis rufo-testaceis, quarto nigro-piceo, sine nitore violaceo-supreo; a *Clept. Radoszkovszkyi*: corpore minus elongato, haud læte-viridi, abdominis segmentis dorsalibus multo subtilius punctulatis magisque nitidis, femoribus posterioribus non nigro-piceis, alis anticis apice abdominis longioribus, optime distinguendus.

Patria: Græcia (Cumani in præninsula Morea, Mus. Hung.).

13. **Cleptes Pérezi** Gog.

Cleptes Perezii, Gog. Anal. Soc. Espań. Hist. Nat. XVI. p. 30. n. 1. ♂. (1887).

«Cabeza y tórax azules. Punctuación de la primera formada por punctos esparcidos y disiguales, unos muy pequeños, otros más gruesos. Antenas pardas, á excepción

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

de los dos primeros artejos que son de un verde metálico oscuro. Fosita antenaria poco profunda, con un surco medio que toma su origen en el estemma central y la atraviesa en toda su longitud hasta la base del epistoma, y otros dos laterales que la limitan á los lados y se dirigen oblicuamente en la parte inferior, hacia el surco medio, sin ilegar á reunirse con él. Mandibulas robustas. Tórax de color azul intenso, con punctuación igual á la de la cabeza. Protórax sin linea de puntos grandes y profundos en la base. Mesótorax con la zona media cubierta de puntos más esparcidos y mayores que los del resto. Angulos posteriores del metatórax anchos y divergentes. Patas con las caderas y los fémures de color metálico que pasa á pardo oscuro en las tibias, los tarses testáceos. Alas cortas, hialinas, con irisaciones muy marcadas. Abdomen ovoideo, cubierto todo él de una punctuación fina é igual. El primer segmento no metálico, de color de carne; el segundo y tercero con los bordes negros y el resto verde metálico: á veces el tercio anterior del segundo segmento, de color igual al primero. Los semianillos inferiores concuerdan en su coloratión con los respectivos superiores, si bien con tonos más apagados.

Long. ♂. 12 mm.

Solo poseo en mi colección dos ♂ recogidos en el mes de Junio, sobre unas umbelas de *Thapsia*, en la Real Casa de Campo, siendo inútiles cuantas pesquisas he realizando después, á fin de encontrar nuevos ejemplares y sobre todo alguna ♀. A pesar de esto y de que el conocimiento de los dos sexos, es muy importante para la determinación exacta de las especies de este género, me parece indudable que la presente ne puede confundirse con ninguana de las conocidas. La ausencia de línea de puntos en la base del protórax, la separa perfectamente del *C. semiaurata*, al cual se aproxima por varios caracteres; la coloratión uniforme y el tamaño, no permiten confundirla, por otra parte, con el *C. nitidula* ni con el *C. afra*, que son de las restantes especies del género las más affines á ella.

Dedico esta especie al distinguido entomólogo D. Laureano Pérez-Arcas, á quien debo algunas de las especies de crisididos españoles que figuran en mi colección.»

Patria: Hispania (Madrid).

14. **Cleptes semiauratus** Linn.

Sphex semiaurata, Linn. Faun. Suec. Ed. II. p. 413, n. 1661. ♂ (1761); Syst. Nat. Ed. XII. Tom. I. Pars. II. p. 946, n. 35. ♂. (1767). — Müell. Stad. Linnées Natursyst. der Ins. V. Theil, II. Bd, p. 873, n. 35. ♂. (1775). — Schrk, Enum. Ins. Austr. p. 386, n. 781. ♂. (1781). — Vill. Linn. Ent. III. 237, n. 42. ♂ (1789). — Christ, Naturg. p. 260 ♂. (1790).

Chrysis semiaurata, Fabr. Syst. Ent. p. 359, n. 14. ♀ (1775); Spec. Ins. I. p. 357, n. 17. ♀. (1781). — Oliv. Encycl. Méth. Ins. V. p. 676, n. 21. ♀. (1790).

Vespa rufescens, Fourcr. Entom. Paris. II. p. 441, n. 29. ♀. (1785).

Ichneumon semiauratus, Fabr. Mant. Ins. I. p. 269, n. 127. ♀. (1787). — Rossi, Faun. Etr. II. p. 53, n. 790, tab. IV. fig. 1., 7. ♀. (1790). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2712, n. 200. (1792). — Fabr. Ent. Syst. II. p. 184, n. 210. ♀. (1793). — Panz. Faun. Ins. Germ.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

fasc. 51. tab. 2. ♀. (1798). — Walcken. Faun. Parisien. II. p. 68. ♀. 1802. — Illig. Rossi. Faun. Etr. Ed. II. Tom. II. p. 78, n. 790. tab. VI. fig. 1., 7. ♀. excl. *Cl. nitidulae* Fabr. syn. (1807).

Cleptes semiaurata, Fabr. Syst. Piez. p. 154, n. 1. ♀. (1804). — Latr. Hist. nat. XIII. p. 236, n. 1. ♂♀. (1805). — Lep. Annal. du Mus. Hist. Nat. VII. p. 119, n. 1. ♂♀. (1806). — Panz. Krit. Rev. II. p. 95. ♂. (1806). — Latr. Gen. Crust. et Ins. IV. p. 44. 1809). — Lam. Anim. sans vertébr. IV. p. 127, n. 1. (1817). — Dhlb. Exerc. Hym. p. 23, n. 1. ♂♀. 1831. — Shuck. Ent. Mag. IV. p. 158. n. 1. ♂♀. (1837). — Wesm. Bullet. Acad. Brux. VI. p. 168, n. 1. ♂♀. (1839). — Blanch. Hist. nat. III. p. 298, n. 1. ♀. 1840. — Dhlb. Dispos. p. 2, n. 6. ♂♀. (1845). — Brullé, Hym. IV. pl. 37, fig. 2. ♂. 1846. — Dhlb. Hym. Europ. II. p. 15, n. 3. ♂♀. tab. I. fig. 3—11. (partes corporis (1854. — Schck. Nass. Jahrb. XI. p. 71, n. 40. ♂♀. 1856. — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 545, n. 1. ♂♀. (1857. — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 62. ♂♀. (1858). — Smith, Entom. Annual, p. 82. (1862. — Chevr. Chrys. du Léman, p. 117. ♂♀. 1862. — Taschb. Hym. Deutschl. p. 149. ♂♀. 1866. — Schck, Progr. Gymn. zu Weilb. p. 14, n. 33. ♂♀. 1870. — Thoms. Opusc. Ent. II. p. 102, n. 2. ♂♀. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 16. ♂♀. 1879. — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 156. 1879). — Lampr. Goldwesp. Deutschl. p. 6, n. 2. ♂♀. (1881). — Heyd. Ber. Senk. Naturf. Ges. p. 252, n. 25. (1882).

Ichneumon splendens, Fabr. Ent. Syst. Suppl. p. 229, n. 211. ♂. 1798.

Incheumon auratus, Panz. Faun. Ins. Germ. fasc. 52. tab. 1. ♀. 1798.

Cleptes splendens, Fabr. Syst. Piez. p. 155, n. 3. ♂. (1804).

Cleptes pallipes, Lep. Annal. du Mus. Hist. nat. VII. p. 119, n. 3. pl. VIII. fig. 1. ♀. 1806. — Lam. Anim. sans vertébr. IV. p. 128, n. 3. ♀. (1817.

Cleptes auratus, Panz. Krit. Rev. II. p. 95. ♂. 1806.

Cleptes semiauratus, Mocs. Chrys. faun. Hung. p. 19 et 79. ♂♀. 1882. — Frey. Chrys. Helvet. p. 28. ♂♀. tab. III. fig. 1. ♀. (1887.

«La Guèpe dorée cuivreuse à ventre fauve et noir.» Geoffr. Ins. II. p. 384, n. 24. ♀. (1762).

Sexus ab invicem colore valde differunt.

Mediocris, elongatus, cinereo-alboque pilosus; capite pronotoque sat dense crassius, mesonoto et scutello sparsim subtilius punctatis (punctatura in mare non tam distincta); fronte canalicula mediana longitudinali usque ad stemma anticum producta; pronoto sine sulco mediano, intra marginem posticum serie punctorum transversa; metanoto carinis tribus subparallelis bene distinctis spatiisque interiacentibus irregulariter rugosis; meso- ac metapleuris subtransverse irregulariter rugulosis; metathoracis dentibus postico-lateralibus brevibus, subacutis; abdominis segmentis dorsalibus nitidis subtilissime punctulatis, duobus primis et tertii maxima parte basali supra subtusque rufo-testaceis, dorsalibus tertii margine apicali et quarto quintoque vel unicoloribus nigro-piceis (semiauratus L., splendens Fabr.) vel plus minusve viridi-cyaneis vel violascentibus (auratus Panz., pallipes Lep.), ventralibus his semper nigro-piceis.

Femina: capite, pro- et mesonoto cum scutello et postscutello auratis et plus minusve ignitis vel cupratis; pronoto convexo vel parum subdepresso; metathorace vel viridi-cyaneo (semiauratus L.) vel æneo-viridi, mesopleuris vel viridi-cyaneis vel viridi-subauratis (auratus Panz.); antennis crassiusculis fuscis et scapo vel cuprato et articulis duobus sequentibus flagelli pallidis (semiauratus L.) vel scapo fulvo et articulis tribus

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

sequentibus flagelli pallidis (auratus Panz.); pedibus vel rufo-testaceis unicoloribus cum coxis trochanteribusque (auratus Panz.), vel femoribus omnibus tibiisque posterioribs nigro-æneis (semiauratus L.); alis subhyalinis, medio et apice fasciatim fumosis, venis fuscis, tegulis pallide rufis, nitidis. — Long. 5—6½ mm.

Mas: capite thoraceque, coxis ac femoribus cyaneis plus minusve virescentibus vel violascentibus; antennis longis, crassiusculis, fusco-nigris, scapo cyaneo; pronoto subdepresso; trochanteribus, tibiis tarsisque rufo-testaceis, nonnunquam leviter infuscatis, femoribus viridi-cyaneis, posticis postice piceis; alis subhyalinis, parum sordidis, venis fuscis, anticis apice abdominis longioribus, tegulis cyaneis, nitidis. — Long. 4½—6. mm.

Femina: alis anticis medio et apice fasciatim fumosis coloreque corporis a congeneribus facile cognoscitur. — Mas vero: trochanteribus, tibiis tarsisque rufo-testaceis tantum *Clepti fallaci* similis.

Patria: Europa fere tota, inde a Lapponia (Mus. Turicense!) et Sibiria, cum Caucaso.

15. **Cleptes fallax** n. sp.

Cleptes aerosus (Tourn.), Frey, Chrys. Helvet. p. 28. ♂. (1887) sec. spec. typ. e. collect. Frey-Gessneri (nec. Först.).

Mediocris, elongatus, supra parce nigro-, subtus cum abdomine pedibusque albopilosis; læte-viridis, vertice circa stemmata, mesonoto et scutello postscutelloque nitore viridi-aureo, metanoto cyaneo-viridi vel cyaneo; facie planata, dense subtilius parum rugosiuscule-punctata, medio canaliculata, canalicula usque ad stemma anticum extensa; antennis nigris, scapo læte-viridi; genis sat longis, viridi-aureo nitentibus, articulo secundo antennarum longioribus; pronoto convexo, fortius sat regulariter minus dense punctato, intra marginem posticum serie transversa punctorum nulla; mesonoto et scutello sparsim subtilius punctatis, interstitiis lævibus; metanoto reticulato, dentibus postico-lateralibus brevibus, obtusis; mesopleuris dense subtilius rugosiuscule-punctatis; abdominis segmentis dorsalibus nitidis, duobus primis et tertii parte basali vel lateribus solum rufo-testaceis, secundi margine apicali sæpius anguste infuscato, tertii parte apicali et quarto quintoque nigro-piceis, 3—4 lateribus cyanescentibus, primo valde sparsim subtilissime vix visibiliter, reliquis distincte, 2—3 valde dense, quarto dispersius fortiusque punctulatis; ventralibus penitus concoloribus; trochanteribus, geniculis, tibiis tarsisque rufo-testaceis, his ultimis parum infuscatis, coxis femoribusque læte-viridibus, his posticis postice nigro-piceis; alis parum sordide-hyalinis, venis fuscis, tegulis viridi-cyaneis vel ænescentibus, anticis abdominis apice multo brevioribus. — ♂; long. 5—5½ mm.

Variat: facie parum dispersius fortiusque punctata, abdominis segmentis dorsalibus: primo sat distincte sparsim, reliquis quoque fortius evidentiusque punctulatis. — Patria: Sarepta (Coll. Saussurei!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Clept. semiaurati L. et *semicyanei* Tourn. colore pedum similis; sed a priore: capite thoraceque læte-viridibus nitore viridi-aureo, pronoto convexo, sat regulariter punctato, intra marginem serie punctorum transversa nulla, metanoto reticulato, punctatura abdominis fortiore, alis anticis apice abdominis multo brevioribus, est certe distinctus; *Clept. semicyaneus* vero a nostra specie: prothoracis et abdominis punctatura subtiliore, abdominis segmento dorsali tertio margine apicali violaceo- vel viridi-cyaneo, femoribus rufo-testaceis, posterioribus intus macula elongata viridi-cyanea, distinctus esse videtur.

Patria: Helvetia (Frey-Gessner!); Austria ad Vindobonam (Coll. Schultess-Rechbergi!); Hungaria centralis, in unico solum specimine inventus (Mus. Hung.).

Animadversio. Est forsan mas ad *Cleptem Chyzeri* Mocs. ?

16. **Cleptes Chyzeri** mihi.

Cleptes ignita, Chevr. Chrysid. du Léman, p. 123. ♀. (nec ♂.) 1862. sec. spec. typ. e collect. Saussurei (nec Fabr.).

Cleptes ignita Fabr. *var. Chevrieri,* Frey, Chrys. Helvet. p. 28 et 30. ♀. (1887). — Destef. Natural. Sicil. VII. p. 115 et 215. ♀. (1888).

Mediocres, elongatus, capite thoraceque supra parce nigro-, subtus pedibusque cum abdomine albo-pilosis; capite violascenti- vel virescenti-æneo, macula post stemmata violaceo-ignea; facie cum fronte sat sparsim crassius punctata, canalicula mediana subtili indistincta; antennis nigro-fuscis, scapo æneo-nigro; pronoto scutelloque vel viridi- vel igneo-auratis, splendidissimis, sparsim fortius punctatis, illo subtus violascenti, supra convexo vel parte postica in medio parum impresso, intra marginem posticum serie punctorum transversa nulla; mesonoto violaceo- vel virescenti-æneo, splendido; postscutello igneo- vel violascenti-aurato; metathorace toto nigro, opaco, lateribus nonnunquam ænescentibus, supra irregulariter reticulato, dentibus postico-lateralibus brevibus, sat validis, subobtusis; pro- et mesopleuris viridi- vel igneo-auratis, splendidissimis, supra fortius punctulatis, subtus irregulariter transverse subtiliter rugosis; abdominis segmentis duobus primis et tertii maxima parte basali rufo-testaceis, reliquis nigro-piceis, dorsalibus: primo lævi ac polito, disco punctis tantum aliquot subtilissimis microscopicis, reliquis dense subtilissime punctulatis; pedibus fusco-testaceis, tibiis anticis et tarsis rufescentibus, tubulo longo pallide-testaceo; alis sordide-hyalinis, venis fuscis, cellula radiali subcompleta, tegulis piceo-nigris, lævibus ac politis. — ♀; long. 5—8 mm.

Species, in honorem amici mei carissimi, Domini Doctoris Cornelii Chyzer, qui faunam Hungariæ septentrionalis iam tot detectionibus illustris ditavit, denominata: metathorace nigro, opaco et abdominis segmento dorsali primo fere toto lævi ac polito eximia, a congeneribus facile cognoscitur.

Patria: Helvetia (Chevr.); Hungaria septentrionalis (Mus. Hung.); Sicilia (Destef.).

Animadversio. — Speciem hanc eximiam iam ante annos novi et ita denominavi, ideoque hanc denominationem retinendam censui. A *Clepte ignito* Fabr. toto cœlo differt.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

17. **Cleptes semicyaneus** TOURN.

Cleptes semicyanea, Tourn. Annal. Soc. Entom. Belg. XXII. p. 88. ♂. (1879).

«Long. 6½ mill.

♂. Cette espèce a de grands rapports avec le ♂ de *Clept. nitidula* Fabr., mais elle s'en distingue nettement par l'extrémité de l'abdomen, qui est d'un beau bleu, par le coloris des pattes etc.

Corp finement pubescent, pubescence griseâtre, peu dense. La tête, le thorax, une bande transversale sur le troisième segment de l'abdomen, le quatrième et les suivants, ainsi que les hanches, sont d'un beau bleu vif, avec quelques reflets ou verts; les autres parties de l'abdomen, les pattes et une tache au côté interne des hanches antérieures sont d'un rouge de rouille clair; sur le côté interne des cuisses intermediaires et postérieures, l'on voit une petite tache allongée d'un beau bleu verdâtre; mandibules noires à la base, rousses à l'extrémité; les antennes sont noires, avec le premier article vert, brillant. Tête brillante, visiblement, mais éparsément ponctuée, beaucoup moins fortement et beaucoup moins densément ponctuée que chez C. *nitidula* Fabr.; au milieu, l'on voit un petit sillon longitudinal, qui part de l'ocelle antérieure et s'étend presque jusqu' à la base des antennes; ces dernières, à árticle 3 aussi long que 4—5 réunis, article 2 un peu plus court que 4. Prothorax et mésothorax très-finement et éparsément ponctués, métathorax assez grossièrement chagriné, ridé. Abdomen très-finement et éparsément ponctué, les segments 1—2 presque lisses. Ailes non enfumées.»

Patrie: Russia meridionalis (Sarepta).

2) *Abdomen aureo- vel rubro-cupreo-maculatum.*

*

Conspectus specierum huius subsectionis e regione palæartica.

a) *Feminae.*

1(2). Capite mesothoraceque nigris, nitidis, illo subviridi-tincto, prothorace læte-viridi, metathorace cyaneo-violaceo . . . . . *Afer* LUC.

2(1). Prothorace læte-aurato nitore cupreo, metathorace læte-cyaneo.

3(4). Facie violascenti-ænea, vertice læte-aurato nitore cupreo, mesonoto cum scutello postscutelloque cupreo-æneis plus minusve violascentibus . . . *ignitus* FABR.

4(3). Capite toto violaceo-æneo, solum mesonoto cupreo-æneo, scutello et postscutello viridi-auratis . . . . . var. *scutellaris* mihi.

b) *Mares.*

1(2). Corpore minuto, elongatulo; antennis piceis; clypeo truncato, brevi; alarum tegulis cyaneis. Long. 5 mm. . . . . *Syriacus* BUYSS.

2(1). Corpore mediocri vel submagno, elongato: antennis nigris, scapo et flagelli arti-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

culo primo supra læte-viridibus: clypeo apice rotundato, sat longo; alarum tegulis viridi-subauratis, postice cupreo-maculatis. — Long. 6½—8 mm.

3(4). Pronoto sat sparsim fortius, mesonoto cum scutello et postscutello adhuc dispersius punctatis, interstitiis latis lævibus; tibiis anticis rufo-testaceis; alis sordide-hyalinis . . . . . *ignitus* FABR.

4(3). Pronoto et præsertim mesonoto et scutello multo densius fortiusque punctatis, interstitiis lævibus valde angustis; tibiis anticis brunneis, externe ænescentibus; alis hyalinis . . . . . *Afer* LUC.

18. **Cleptes ignitus** FABR.

Ichneumon ignitus, Fabr. Mant. Ins. I. p. 269, n. 128. ♀. (1787). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2712, n. 201. ♀. (1792). Fabr. Ent. Syst. II. p. 184, n. 212. ♀. (1793).

Ichneumon Chrysis, Fabr. Mant. Ins. I. p. 269, n. 129. ♂. (1787) teste Dahlbom. — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2712, n. 202. ♂. (1792). Fabr. Ent. Syst. II. p. 185, n. 213. ♂. (1793).

Diplolepis chrysis, Fabr. Syst. Piez. p. 150, n. 5. ♂. (1804).

Cleptes ignita, Fabr. Syst. Piez. p. 155, n. 4. ♀. (1804). — Dhlb. Hym. Europ. II. p. 18, n. 4. ♂♀. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 545, n. 2 ♂♀. (1857). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 16. ♂♀. (1879). Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 156. ♀. (1879).

Cleptes ignitus, Mocs. Chrys. faun. Hung. p. 20 et 79. ♂♀ (1882).

Sexus ab invicem colore capitis thoracisque differunt.

Mediocris vel submagnus, elongatus, capite thoraceque supra parce nigro-, subtus cum abdomine pedibusque albo-pilosis; facie planata medioque usque ad stemma anticum longitudinaliter canaliculata; pronoto convexo, medio non sulcato, intra marginem posticum serie punctorum transversa nulla, sat sparsim fortius, mesonoto, scutello et postscutello adhuc dispersius punctatis interstitiis latis lævibus; metanoto subtiliter coriaceo-ruguloso utrinque sulco profundo latiusculo obliquo, postice triangulariter angulatim marginato, dentibus postico-lateralibus parvis, triangularibus; abdomine nitido, segmentis dorsalibus: duobus primis rufo-testaceis, tertio nigro-piceo utrinque macula magna viridi-, igneo- vel cupreo-aurea, quarto igneo- vel cupreo-aurato, apice nigro-æneo, maris quinto nigro-piceo vel parum ænescenti; primo sparsim, secundo dense subtiliter punctulatis, 3—4 sat sparsim fortius punctatis; ventralibus duobus primis rufo-testaceis, reliquis nigro-piceis, in mare plus minusve ænescentibus; alis sordide-hyalinis, venis fuscis, anticis apice abdominis brevioribus. — Long. 6½—8 mm.

Femina: facie violascenti-ænea, vertice et prothorace læte-auratis nitore cupreo, mesonoto cum scutello postscutelloque cupreo-æneis plus minusve violascentibus, mesopleuris et metathorace unicoloribus læte-cyaneis vel illis antice virescentibus; pedibus brunneis, non metallicis, geniculis, tibiarum apice tarsisque rufo-testaceis parumque infuscatis; antennarum scapo supra ænescenti, articulis reliquis fusco-rufescentibus; alarum tegulis rufo-piceis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Mas: capite thoraceque læte-cyaneis, vertice et pronoto plus minusve virescentibus; femoribus cyaneo- vel læte-viridibus, posticis postice brunneis, tibiis tarsisque anticis rufo-testaceis, tibiis externe nonnunquam ante apicem viridi-maculatis, tibiis posterioribus brunneis, geniculis, tibiarum apice tarsisque posterioribus rufo-testaceis fortius infuscatis; antennis nigris, scapo et flagelli articulo primo supra læte-viridibus; alarum tegulis viridi-subauratis, postice cupreo-maculatis.

Patria: Italia (Dhlb.); Gallia (Ab.); Austria (Dhlb.); Hungaria centralis et meridionalis, mensibus Junio-Julio in florenti Euphorbia glareosa non rarus (Mocs.); Russia meridionalis (Eversm.); Caucasus (Rad.); Armenia (Erzerum, Mus. Vindob!); Barbaria (Fabr.).

var. scutellaris mihi.

Differt a typo: clypeo subtruncato (non rotundato), vertice parum densius subtiliusque punctato; abdominis segmentis dorsalibus 2—4 quoque multo densius subtiliusque punctulatis, pedibus fortius infuscatis; femina insuper: capite toto violaceo-æneo, antennis nigro-piceis, scutello et postscutello viridi-auratis (non cupreo-æneis plus minusve violascentibus); mas: scutello viridi-subaurato. — Patria: Hungaria septentrionali-occidentalis (Mus. Hung.); Austria ad Vindobonam (Coll. Schultess-Rechbergi! et Mus. Vindob.!) — An species esset distinguenda?

19 **Cleptes Afer** Luc.

Cleptes afra, Luc. Explor. de l'Algér. Zoolog. III. p. 315, n. 361. ♀. Hym. tab. XVIII. fig. 1. ♀. (1849). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 16 et 17. ♀. (1879). — Buyss. Revue d'Entom. VI. p. 7. ♂♀. (1887).

Descriptio feminæ secundum Lucas:

«Long. 7 mm. ½, enverg. 11 mm. ¾.

Capite fortiter punctato, nigro-nitido, subviridi tincto; antennis nigro-tomentosis, infra rufescentibus, tribus primis articulis nigro-nitidis, prothorace fortiter punctato, viridi-nitido, mesothorace supra nigro-nitido, sparsim punctato, utrinque fortiter bisulcato, lateribus viridi-metallicis, metathorace fortiter granario, cyaneo-violaceo, lateribus cyaneo-violaceis; abdomine subtiliter confertimque punctulato, primis segmentis supra infraque fuscorufescentibus, tertio nigro, utrinque rubro cupreo metallico, viridi metallico variegato, quarto cupreo-metallico, lateribus viridi-nitido tinctis; corpore infra nigro-nitido; trochanteribus, femoribus tibiisque in tertio pari nigris, tibiis in secundo tertioque paribus fuscorufescentibus, omnibus tarsis rufescentibus.

Femelle. Elle vient se placer dans le voisinage du *C. semi-aurata*, avec lequel elle ne pourra être confondue à cause de la tête, du mésothorax, des premiers articles des pattes, qui sont noires, et du métathorax, qui est d'un beau bleu violacè. La tête, d'un noir brillant, légèrement teinte de vert cependant, est clairement parsemée de poils blanchâtres, avec les points qu'elle présente assez gros, profondément marqués et généralement peu serrés. Les mandibules, ainsi que les palpes maxillaires et labiaux,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

sont d'un noir roussâtre. Les antennes sont d'un noir tomenteux en dessus, roussâtres en dessous, avec les trois premiers articles d'un noir brillant et glabres. Le prothorax est d'un beau vert brillant, parsemé de points assez forts et peu serrés. Le mésothorax est d'un noir brillant en dessus, ponctué ça et lá, et présente, de chaque côté, deux sillons longitudinaux, assez profondément enfoncés; sur les parties latérales, il est d'un vert métallique, agréablement varié cependant de bleu violacé. Quant aux métathorax, qui est fortement chagriné, il est d'un bleu violacé, avec le tubercule spiniforme qu'il présente de chaque côté, légèrement teinte de vert, et les parties latérales d'un bleu violacé. Les ailes, à nervures d'un brun foncé, sont légèrement roussâtres. L'abdomen est parsemé de points assez fins et très-serrés; en dessus, les deux premiers segments sont d'un brun roussâtre; le suivant est noir, avec sa partie antérieure bordée de brun roussâtre, et les parties latérales ornées de chaque côté, d'un tache d'un rouge cuivreux métallique mélangé de vert brillant. Le quatrième segment est d'un rouge cuivreux métallique, avec les côtés teintés de vert brillant; en dessous, il est d'un noir brillant, avec les deux premiers segments de même couleur qu'en dessous, c'est-à-dire d'un brun roussâtre. La tarière est de cette couleur. Les trochanters, ainsi que les fémurs et les tibias, dans la troisième paire de pattes, sont noirs; dans les seconde et troisième paires, les tibias sont d'un roussâtre, avec les tarses des trois paires de pattes de cette dernière couleur.»

Mas: mari *Clepti igniti* simillimus; differt punctatura multo densiore et fortiore; facie valde dense subtilissime, pronoto et præsertim mesonoto et scutello multo densius fortiusque punctatis, interstitiis lævibus valde angustis, metanoto supra carinulis quattuor basalibus abbreviatis parallelis distinctis, abdominis segmentis dorsalibus primo secundoque densius fortiusque punctulatis, 3—4 densius et subtilius punctatis, tibiis anticis non rufo-testaceis, sed brunneis externe ænescentibus, tibiis posterioribus tarsisque fortius infuscatis, alis magis hyalinis vix sordidis. — Long. 7½—8 mm.

Patria: Algeria (Luc.); Syria (Nazareth, Coll. Abeillei et Buyssoni; Berytum [Beiruth], Mus. Hung.).

20. **Cleptes Syriacus** Buyss.

Cleptes syriaca, Buyss. Revue d'Entom. VI. p. 8. ♂. (1887).

«♂. Corpore minore, elongatulo; capite et antennarum scapo viridi-cyanescentibus; thorace, sterno tegulisque cyaneis; antennis piceis; clypeo brevissimo, truncato, viridi aureo; capitis lateribus facialibus antice parallelo-elongatis; prothorace angusto; alis subhyalinis; femoribus cyaneis, tibiis tarsisque fusco-brunneis, sed testaceis in pedibus anterioribus; abdominis primo secundoque segmentis rufo-testaceis, tertio aterrimo lateribus maculis auratis, quarto violaceo-aurato. Long. 5 mm.

Cette espèce est voisine (des moins pour le sexe masculin) du *Cl. ignita* Fabr. dont elle diffère par sa petite taille, la forme étroite de son corps et de son prothorax, par la ponctuation formée de points plus enfoncés, son clypeus tronqué, très court, ses yeux moins saillants, ses joues avancées et paralléles, ce qui donne à sa face une

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

forme rectangulaire. Elle diffère encore de l'espèce Fabricienne par ses ailes subhyalines, ses écailles franchement bleues, le troisième article des antennes moins allongé et enfin par l'abdomen dont le troisième segment est entièrement noir au lieu d'être roux testacé au moins dans la moitié, et le quatrième segment qui est entièrement doré avec quelques reflets violets surtout au milieu.

J'ajouterai, pour compléter la description, que l'abdomen est ovale, légérement deprimé, que les trois derniers segments du ventre sons noirs (cette couleur s'étendant un peu sur le suivant) et que les poils qui recouvrent le corps sont comme chez le *Cl. ignita* ♂ plus ou moins blanchâtres.»

Patria: Syria (Nazareth, Coll. Abeillei).

21. **Cleptes speciosus** Aar.

Cleptes speciosa, Aar. Transact. Amer. Ent. Soc. XII. p. 212. ♀. (1885).

«Elegantly colored with ruby, golden and green, the metanotum emerald-green with a slight bluish reflection, evenly and sparsely punctured, smoothest on the scutellum; abdomen black, shining on the dist, with the metallic reflections broadly on the sides and the whole of the fourt segment; wings subhyaline, or infumated; femora metallic (the anterior pair purplish in one specimen), tibia and tarsi luteous, fuscous at base and apex in one specimen; first joint of antennæ with purplish reflection; 5 mm. long. ♀.

Montana, two specimens. An elegant and very distinct species.»

Patria: America septentrionalis.

3) *Abdomen totum auratum, viridi- vel igneo-auratum.*

Conspectus specierum huius subsectionis:

1 (2). Capite thoraceque viridi-cyaneis; pronoto intra marginem posticum serie punctorum transversa; abdomine viridi-aurato, confertim punctulato, griseo-piloso; alis subhyalinis ... ... *auratus* Dhlb. ♂.

2 (1). Capite thoraceque cyaneo-viridibus; pronoto intra marginem posticum serie punctorum transversa nulla; abdomine igneo-aurata, confertim fortius punctato pilisque piceis vestito; alis fumatis... ... ... *Putoni* Buyss.

3 (4). Thorace læte-cyaneo, mesonoto viridi-subaurato, fronte verticeque viridi-auratis *orientalis* Dhlb. ♂.

4 (3). Thorace læte-cyaneo vel viridi-cyaneo, prothorace mesonotoque et capite toto igneo- vel cupreo-auratis.

5 (6). Corpore magno, robusto ac lato; pro- et mesonoto scutelloque crasse profundeque punctatis; scutello viridi-aurato, metanoto cyaneo; tarsis fuscis *orientalis* Dhlb. ♀.

6 (5). Corpore mediocri, elongato, gracili; pro- et mesonoto scutelloque sparsim minus crasse punctatis; scutello cum postscutello metanotoque et alarum tegulis concinne violascenti-cyaneis; tarsis rufescentibus ... ... *Saussurei* n. sp.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

22. **Cleptes auratus** Dhlb.

Cleptes aurata, Dhlb. Dispos. p. 2, n. 6. ♂. (1845); Hym. Europ. II. p. 20, n. 5. ♂. (1845) (nec Panz.).

« Parva 1 1/2 lin. decimal. long. viridi-cyanea, abdomine viridi-aureo, alis subhyalinis.

Obser». Caput, thorax, pedes antennaeque ut in *Cleptis semiauratae* mari picta, constructa et sculpta, sculptura tamen subtilior et caput antice paullo magis convexum. Postscutellum autem et metanotum eandem habent formam et sculpturam ac in *Cl. ignita*. Abdomen totum undique viridi-auratum, griseo-pubescens confertim punctulatum, ovatum, mediocre, ventre paullulum convexius quam dorso, segmentis dorsalibus primo apice indeterminate et secundo macula discoidali-continua (h. e. a basi in apicem ducta) subrectangula æneo-nigricantibus. Alæ hyalinæ, non sordidæ, licet propter pubescentiam ita apparent; venæ mediocris fuscæ; cellula radialis elongata ovato-lanceolata; alæ dextræ completa scil. venæ radialis apex licet obsoletus tamen marginem alæ tangit, alæ sinistræ aperta et igitur incompleta. »

Patria: Turcia (ad Bosphorum).

23. **Cleptes Putoni** Buyss.

Cleptes Putoni, Buyss. Revue d'Entom. V. p. 151. ♀. (1886); VII. p. 13. ♂. (1888).

« ♀. Corpore elongato, subparallelo; thorace, capite et antennarum scapo cyaneo-viridibus; tegulis cyaneis; prothorace postico haud uniserie ac transversaliter punctato; pedibus sternoque viridi-cyaneis; abdomine subcylindrico, omnino aurato-igneo; abdominis segmentis concoloribus, pilis crassissimis piceis sparse hirtis. — L. 8 mill.

Corps étroit allongé, subparalléle; avant-corps bleu verdâtre, de couleur très-vive; ponctuation de la cavité faciale formée de gros points enfoncés et serrés; antennes fortes, noires, à villosité roussâtre, premier article d'un beau vert bleuâtre. Punctuation égale et espacée sur le mésothorax et le prothorax, ce dernier sans ligne de points vers son bord postérieur. Écusson et postécusson bleu indigo. Ailes enfumées. Ecailles bleues. Tout le dessous du thorax de même que les cuisses et les tibias d'un vert bleuâtre; tarses brunâtres à villosité rousse. Abdomen subcylindrique, ovale-allongé, d'un beau doré feu métallique en dessus et en dessous, sans macules noires, segments tous de même couleur. Ponctuation régulière, beaucoup plus forte et plus serrée que chez les autres espèces. Oviducte noir-brun très-brillant. Ongles du genre.

Cette remarquable espèce se distingue aisément du *Cleptes semiaurata* L. par la ligne transverse de gros points qui fait complétement défaut vers le bord postérieur du prothorax et par la couleur vert-bleuâtre du premier article des antennes. Elle s'eloigne des *Cl. semiaurata* L., *nitidula* Fabr., *ignita* F. par la ponctuation plus forte et plus serrée de la cavité faciale et de l'abdomen, par la couleur doré-feu-metallique très-brillant de ce dernier, dont les segments tous concolores ne portent point de taches noires.

Le *Cleptes Putoni* ♂. est la même couleur que la femelle, mais s'en distinque par

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

sa forme plus trapue, son abdomen plus allongé, ovale; le cinquième segment abdominal est feu comme les autres.»

Patria: Galliæ montes (Basses-Alpes, Coll. Putoni et Abeillei).

24. **Cleptes orientalis** Dhlb.

Cleptes orientalis, Dhlb. Hym. Europ. II. p. 20, n. 6. ♀. tab. I. fig. 2. ♀. (1854). — Mocs. Chrys. faun. Hung. p. 21 et 79, n. 5. ♀. (1882).

Sexus ab invicem; capitis, thoracis pedumque colore differunt.

Magnus, robustus: capite thoraceque supra parce nigro-, subtus pedibusque albo-pilosis; fronte convexa, sat sparsim (in mare paulo densius) fortius punctata; lateribus faciei longitudinaliter sulcatis; pro- et mesonoto scutelloque crasse profundeque punctatis; pronoti parte postica convexa in medio parum impressa, intra marginem posticum serie punctorum transversa; mesonoto suturis quattuor longitudinalibus profundis; scutello magno, convexo-depresso; metanoto ruguloso, dentibus postico-lateralibus valde parvis, obtusis; abdomine robusto, late-ovato, splendidissimo, supra subtusque igneo- vel cupreo-aurato, basi lateribusque et maris ventre in medio viridi-resplendentibus, segmentis dorsalibus dense (in mare parum confertius) punctatis; alis sordide-hyalinis; fusco-brunnescentibus, venis firmis piceis, cellula radiali subcompleta, tegulis magnis, nigro-æneis, antice viridibus vel cyaneis. — Long. 7—8 mm.

Femina: capite igneo- vel cupreo-aurato, splendidissimo; antennarum articulis duobus primis æneis, reliquis nigris; genis mediocribus; prothorace mesonotoque cupreo-, scutello viridi-auratis, splendidissimis, postscutello cum metanoto, meso- ac metapleuris pectoreque parum virescentibus cyaneis; femoribus anterioribus, posticorum tantum parte postica, tibiisque omnibus nigro-æneis, femoribus posticis antice viridi-auratis, tarsis et tubulo longo crassoque fuscis.

Mas: capite virescenti-cyaneo, fronte et vertice viridi-auratis, splendidis; antennarum articulo primo viridi-cyaneo, secundo æneo-nigro, reliquis nigris; genis brevibus; prothorace scutelloque virescenti-cyaneis, mesonoto viridi-subaurato; postscutello cum metanoto, pleuris item et pectore femoribusque læte-cyaneis violascentibusque; tibiis viridi-cyaneis, tarsis fuscis.

Patria: Moravia penes Freiberg, a Dom. Kolazy inventus (Coll. Kolazyi,), Hungaria centralis et meridionalis, mense Julio valde rarus (Mocs.); Turcia (Dhlb.).

25. **Cleptes Saussurei** n. sp.

Mediocris, elongatus, gracilis, læte virescenti-cyaneus; capite thoraceque supra parcius nigro-, subtus cum abdomine pedibusque albo-pilosis; capite, prothorace, mesonoto abdomineque concinne igneo-auratis; scutello, postscutello, metanoto et alarum tegulis pulchre violascenti-cyaneis; facie planata sparsim fortius punctata, canalicula longitudinali tenui abbreviata a stemmate antico longe remota; antennis crassiusculis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

nigris, scapo virescenti cyaneo, articulo primo flagelli supra viridi; pronoto convexo, parte postica sine sulco longitudinali, postice intra marginem posticum serie punctorum transversa non satis distincta; vertice densius, pro- et mesonoto scutelloque multo dispersius minus profunde punctatis, interstitiis latis lævibus; metanoto irregulariter subreticulato, dentibus postico-lateralibus brevibus, subacutis; abdominis segmentis dorsalibus: primo sat sparsim, secundo tertioque densius sat concinne, quarto dispersius minus regulariter punctulatis, segmentis tribus anticis margine apicali anguste lævibus; ventre sat dense punctulato; tubulo anali haud longe exserto fusco-testaceo; pedibus viridi-cyaneis parumque violascentibus, tarsis rufescentibus; alis sordide-hyalinis, venis fuscis. — ♀; long. 6½ mm.

Magnificam hanc speciem in honorem viri illustrissimi Henrici de Saussure denominavi, qui egregiam suam Chrysididarum collectionem per benevolentiam Clarissimi Domini Frey-Gessner mihi libenter concessit lustrandam.

Patria: Russia meridionalis (Sarepta, Coll. Saussurei).

*

IV. *Caput et thorax in sexu utroque vel in maribus solum cognitis maxima ex parte igneo-cupreoque aurata; abdomen rufo-testaceum et piceum.*

*

Conspectus specierum huius sectionis.

1 (2). Facie viridi et cyanea; pronoti parte postica in medio parum impressa, intra marginem posticum serie punctorum transversa indistincta; metathorace cyaneo, dentibus postico-lateralibus subspinoideis; tibiis tarsisque rufo-testaceis *aerosus* Först. ♂.

2 (1). Facie æneo-nigra (♀) vel violascenti-cyanea (♂); pronoti parte postica in medio longitudialiter sulcata, intra marginem posticum serie punctorum transversa bene distincta; metathorace violascenti-cyaneo, dentibus postico-lateralibus sat validis subacutis; tarsis solum rufescentibus vel rufo-testaceis ... ... *Abeillei* Buyss.

*

26. Cleptes aerosus Först.

Cleptes aerosus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 329, n. 86. ♂. (1853) sec. spec. typ. in coll. Mus. Nat. Hung. — Mocs. Chrys. faun. Hung. p. 21 et 79, n. 4. ♂. (1882) (nec Tourn. Frey-Gessner).

Mediocris, elongatus, viridi-cyaneus, parce pilosus; fronte, vertice, pro- et mesonoto scutelloque cupreo-, postscutello viridi-auratis, splendidissimis; facie dense coriaceo-rugosa viridi et cyanea, genis sat longis temporibusque subtus viridi-auratis; fronte canalicula subtili usque ad stemma anticum producta; antennatum scapo viridi-cyaneo, articulis reliquis fusco-nigris; pronoto sat sparsim crasse punctato parteque postica in medio parum impressa, intra marginem posticum serie punctorum transversa indistincta; mesonoto et scutello sparsim punctatis, metanoto cyaneo, irregulariter subreti-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

culato, dentibus postico-lateralibus sat longis subspinoideis; pro- et mesopleuris viridi-æneis, supra rugoso-punctatis; abdomine rufo-testaceo, segmentis dorsalibus quattuor primis æqualiter dense punctulatis, tertio margine postico medio dilatato et quarto nigro-piceis, quinto fere lævi, virescenti; ventralibus duobus primis et tertii basi rufo-testaceis, reliquis nigro-piceis, omnibus dispersius fortiusque punctatis; femoribus pedum duorum anteriorum, posticorum solum externe, cyanescenti-viridibus, genibus, tibiis tarsisque rufo-testaceis, tibiis tamen duabus anticis externe violascentibus, posticis virescentibus; alis brevibus, dimidium abdominis solum attingentibus, sordide-hyalinis, venis fuscis, cellula radiali subcompleta, tegulis viridi-cyaneis. — ♂; long. 6½ mm.

Patria: Hungaria centralis (Mus. Hung.).

27. **Cleptes Abeillei** Buyss.

Cleptes acrosus, Tourn. Anal. Soc. Ent. Belg. XXII. p. 88. Note (1879). — Frey, Chrys. Helvet. p. 28. ♀. (est ♂) sec. spec. typ. e coll. Frey-Gessneri (1887), (nec. Först.).

Cleptes Abeillei, Buyss. Revue d' Entom, VI. p. 6. ♀. (1887); VII. p. 13. ♂. (1888) sec. spec. typ. ab. ipso auctore mihi donata.

Sexus ab invicem colore parum differunt.

Mediocris, sat robustus, virescenti-cyaneus, capite thoraceque supra nigro-, subtus cum abdomine pedibusque albo-pilosis; fronte cum vertice occipiteque, pro- et mesonoto scutelloque cupreo-igneoque, postscutello viridi-auratis, splendidissimis; collo, pleuris cum pectore cyaneis; metathorace violascenti-cyaneo; facie planata, sat dense fortius punctato-coriacea, fronte canalicula subtili usque ad stemma anticum producta; genis longis, crasse punctatis; antennis crassiusculis, scapo viridi-cyaneo vel cyaneo, flagello rufo-piceo; pronoti parte postica sparsim crasse punctata medioque longitudinaliter profunde sulcata, intra marginem posticum serie punctorum transversa bene distincta, mesonoto et scutello dispersius subtiliusque punctatis; metanoto irregulariter subreticulato, carinis sex sat distinctis abbreviatis, dentibus postico-lateralibus longis rectis subacutis, mesopleuris viride-cyaneis antice transversim rugosis; abdomine brevi, ovato, despressiusculo, segmentis duobus primis et tertii lateribus basalibus rufo-testaceis, reliquis nigro-piceis, dorsalibus primo disco in femina sparsim subtiliter punctulato, interstitiis latis lævibus, in mare sat dense punctulato interstitiis valde angustis, reliquis in sexu utroque dense sat fortiter, vertralibus dispersius, punctulatis; femoribus cyaneis, tibiis piceis, externe virescentibus, anticis intus cum tibiarum apice tarsisque rufo-testaceis plus minusve infuscatis; alis sordide-hyalinis, brevibus, dimidio abdominis non multo longioribus, tegulis piceis, antice virescentibus. — Long. 6—7 mm.

Femina: facie genisque æneo-nigris, alarum tegulis postice piceis.

Mas: facie cum genis alarumque tegulis læte-cyaneis.

Patria: Helvetia (Peney, Coll. Frey-Gessneri!); Gallia (Vernet), in floribus Peucedani cervariæ et Pimpinellæ saxifragæ, initio Augusti (Coll. Buyssoni et Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

V. *Caput et thorax in sexu utroque aurata; abdomen totum nigro-piceum.*

28. **Cleptes Morawitzii** Rad.

Cleptes Morawitzi, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 1. ♂♀. tab. III. fig. 3. ♀. (1877) sec. spec. typ. e coll. Rad.; Horæ Soc. Ent. Rossicæ. XXIII. p. 6. ♂♀. (1888).

Minutus, elongatus, parce pilosus; capite et thorace femoribusque igneo-cupreoque auratis, splendidissimis; abdomine nigro-piceo, subtilissime dense punctulato, segmento tamen primo lateribus lævibus ac politis; femoribus antice, tibiis, tarsis et antennis tubuloque feminarum longo testaceis plus minusve infuscatis; facie in medio minus profunde longitudinaliter canaliculata et cum fronte convexa sat dense subtilius, pronoto dispersius fortiusque punctatis; pronoto convexo, intra marginem posticum serie transversa punctorum nulla; mesonoto lineis quattuor longitudinalibus, lateralibus minus distinctis; mesonoto et scutello sparsim punctatis, interstitiis latis lævibus; metanoto inæqualiter fortius rugoso, subreticulato, dentibus postico-lateralibus sat longis subspinoideis; alis sordide-hyalinis, venis fuscis, cellula radiali incompleta, tegulis testaceo-brunneis. — ♀; long. 5—6 mm.

«♂. Antennæ nigræ, albo-pilosellæ; pedes aurei, tibiis tarsisque fusco-ferrugineis.»

«*Armure.* Le bord interne de la branche du forceps vers l'extrémité allongé, recourbé en dedans et garni de poils. Volsella assez forte, à l'extrémité arrondie, garnie de poils. Tenette petite, pointue vers l'extrémité. Crochet cylindrique.» (Rad. l. c. tab. I. fig. 4a, 4b, 4c, d, f, g, i, 4k.)

Patria: Turkestania (Maracanda, Taschkend et Tsardara, Coll. Rad.! et Mus. Hung.).

Genus III. HETEROCOELIA Dhlb.

Hym. Europ. II. p. 21, gen. 2. (1854.)

(ἕτερος = diversus; κοιλία = venter).

«Abdominis segmenta dorsalia: secundum maximum, primum mediocre, reliqua abbreviata, ultimum vel anale margine apicali dentatum. In ceteris a Genere Cleptes non diversum.» Alæ anticæ cellula discoidalis indistincta esse videtur.

Huius generis tantum unica species cognita est Africana.

29. **Heterocoelia nigriventris** Dhlb.

Cleptes nigriventris, Dhlb. Dispos. p. 1, n. 1. ♂. (1845).
Heterocoelia nigriventris, Dhlb. Hym. Europ. II. p. 22, n. 7. ♂. tab. I. fig. 15—16. (1854).

«Mediocris aut subparva vix 2 lin. decimal. long. piceo-nigra thorace antico tarsisque rufis; alis posticis hyalinis, anticis fumeo-fuscis albo-hyalino fasciatis.

Observ. Propter capitis formam, thoracis colorem, alas breves et abdominis pilositatem cinereum *Mutillis* parvis masculinis haud dissimilis. Corpus cano-cinereoque pubescens et pilosum. Caput subparvum pendulum ovale, totum fronte et vertice convexum, confertius punctatum, vix nitidum subopacum, nigrum fusco-pubescens. Oculi

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

parvi exserti globosi. Antennæ ad tuberculum clypealem carinatum rufum insertæ, approximatæ, robustæ, longitudine mediocres, fuscæ, articulis primo, secundo, tertio et quarto rufo-brunnescentibus; scapus prismatico-obconicus, leniter arcuatus, apice incrassatus. Mandibulæ breves robustæ subsanguineæ. Maxillæ et palpi brunnea. Prothorax et mesothorax sanguinei. Pronotum convexiusculum punctato-rugosum sulco mediano profundo continuo, antice angustius crasse marginatum, lateribus verticalibus concaviusculo-compressum. Mesonotum subplanum subtiliter coriaceum parce punctulatum: dorsuli sulci 2 mediani obliqui sat profundi crassiusculi; laterales 2 obsoleti. Postscutellum vix visibile, margine metanoti basali transverso-arcuato connatum. Metathorax irregulariter cubicus, supra latior quam infra, postice concaviusculo-truncatus, totus nigro-piceus apice rufescens. Metanotum supra subhorizontale carinulis longitudinalibus 5 distinctis et 2 obsoletis (margine utroque laterali non computato), interstitiis transverse striato-rugulosis; anguli postico-laterales crassi mucroniformes lineares inæquales obtusi; metanoti truncatura et latera coriaceo-rugulosa. Pedes fusci, articulationibus tarsisque rufis, femoribus anticis infra concoloribus. Alæ breves, medium abdominis tantum attingentes; posticæ albo-hyalinæ subtiles: venis costali gracillima et mediali robusta abrupta testaceis, ceterum avenæ. Alæ anticæ fumeo-fuscæ subviolascentes fasciis albo-hyalinis 2 amplis et ab uno margine in alterum continuis: una s. basali minus determinata, — altera cellulas medialem, submedialem, discum et cellulæ radialis basin intercedit; in hac fascia nullas venas at sub cellula submediali ramulos duos obsoletos vidi; venæ ceterum mediocres fuscæ aut rufo-brunnescentes, stigma testaceum; vena radialis elongata modice armata circ. 1/5 a margine remota cellulam ibidem apertam relinquens; in medio disci observatur linea longitudinalis subtilissima albissima (sine dubio vestigium venæ rudimentariæ), apice triramosa ramulis: infero et intermedio simplicibus, supero iterum biramuloso. Abdomen crassum ovato-conicum obtusum, convexius quam in *Clepte*, per formam et griseam sparsamque pilositatem abdomen *Mutillarum* paullulum simulans, totum nigro-piceum nitidum sparse punctulatum marginibus segmentorum apicalibus brunneo-scariosis; segmentum primum mediocre convexissimum; segmentum secundum maximum depresso-convexum, tertium, quartum et quintum s. anale submediocria at simul sumta saltem 1/4 breviora quam segmentum secundum. Segmentum anale dorsale (valvula analis dorsali) apice testaceum, triarcuato-emarginatum et hinc quadridenticulatum.»

Patria: Algeria.

Subfamilia III. ALLOCOELINAE mihi.

Pronotum oblongum. Unguiculi tarsorum infra unidentati. Abdomen, in femina solum cognita, segmentis tantum duobus conspicuis, segmenti ultimi margo apicalis rotundatus et edentatus.

Subfamilia hæc hucusque unicum tantum in se continet genus in una specie Africana.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Genus IV. ALLOCOELIA mihi.

Anthracias, Klug, Verhand. Preuss. Acad. der Wissensch. Berlin, p. 2. (1830). — Erichs. Wiegmann's Archiv für Naturg. VI. Zweit. Band, p. 278. (1840). — Smith, Transact. Entom. Soc. Lond. p. 455. (1874).*

(ἄλλος = alius ; κοιλία = venter ; venter aliter constructus.)

Characteres generis secundum Smith :

«Of this genus I have only seen a single imperfect specimen; it is destitute of wings and has only one posterior tarsus. Klug, in the «Berichte», has not given detailed generic characters, but he mentions the essential one, that of the abdomen being composed above of only two segments; beneath, four are distinctly visible, exclusive of its rectractile ovipositor; the claws of the tarsi have a single tooth beneath; the antennæ resemble those of Chrysis, the second joint being only half the length of the third, the fourth joint about equal to the second, as are all the followings joints. The insect has the exact resemblance of *Parnopes*, to which it is closely allied. In the specimen examined there is not a projecting rostrum as in *Parnopes*, but, the insect being in a mutilated condition, it may possible be broken off.»

30. **Allocoelia Capensis** Sm.

Anthracias capensis, Smith, Transact. Entom. Soc. Lond. p. 455, n. 1. ♀. (1874).

Descriptio secundum auctorem :

«Female. — Length 5 lines. Head, thorax and apex of the abdomen black, the rest ferruginous; strongly punctured. Head and thorax very coarsely, closely and deeply punctured; the eyes large and ovate; the head narrowed and rounded behind the eyes; mandibles rufo-piceous in the middle. Thorax: the prothorax oblong, flattened above and slightly concave in front; is anterior margin transverse, the lateral margins parallel anteriorly to nearly half its length, from thence obliquely inclined outwardly to the tegulæ of the wings; the metathorax truncate posteriorly, the margin of the truncation raised and acute; the tibiæ and tarsi ferruginous. Abdomen: the first segment scarcely half the length of the second, the latter with a central longitudinal carina, which becomes most elevated towards the apical margin of the segment, which is rounded and edentate; the apical third of the abdomen black, the inner margin of the black portion deeply sinuated laterally, the punctures strong, more or

* *Anthracias*, nomen a Stévenio ad unum genus Coleopterorum præocupatum (Dejean, Cat. Ed. III. p. 227. 1833) et a Redtenbachero (Fauna Austriaca. Die Käfer Ed. II. da, p. 617. 1859) characteribus illustratum, e Hymenopterologia eliminandum et Klugii, respective Smithii *Anthracias* mutandum esse censebam ; quoniam piæ memoriæ vir Klug de characteribus generis verbis tantum aliquot paucis meminit, et sic potius Smith tanquam auctor esset considerandus. Tunc autem Redtenbacher prioritate gauderet. Rejeci nomen et propterea, quia denominatio *Anthracias* e græco vocabulo ἄνθραξ = carbo, vel ἀνθρακίας = carbonarius, animali ex parte ferrugineo penitus inconveniens est.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

less confluent and oblong in form, particularly so on the disk; beneath, entirely ferruginous.»

Patria: Promontorium Bonæ Spei.

Subfamilia IV. ELLAMPINAE mihi.

(*Elampinae*, Aar. Transact. Amer. Ent. Soc. XII. p. 210. (1885) ex parte.)

Pronotum transverso-subquadratum. Unguiculi tarsorum infra serrati vel pectinulati. Alæ anticæ cellula mediali apice: introrsum angulato-emarginata, extrorsum stigma versus acuminata, cellulis discoidalis et submediali nullis vel indistinctis. Abdomen segmentis cataphractis conspicuis tribus, supra convexum, subtus concavum et subfornicatum; segmenti ultimi dorsalis margo apicalis in centro plerumque excisus vel truncato-emarginatus, rarius (solum in subgenere *Philoctetes*) subinteger vel subsinuatus, vix incisus.

Subfamilia hæc, secundum me, hucusque unicum solum in se continet genus in quattuor subgeneribus, quia transitus ex uno subgenere ad aliud ubique observatur. Absentia cellulæ discoidalis in alis anticis character huius subfamiliæ normalis est.

Genus V. ELLAMPUS Spin. Schck.

Elampus, Spin. Ins. Lig. Vol. I. p. 10. (1806) ex parte. — Schck. Nass. Jahrb. XI. p. 52. (1856) ex parte. — Chevr. Chrysid. du Léman, p. 98. (1862).
Notozus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 331. (1853) ex parte.
Omalus et *Elampus*, Dhlb. Hym. Europ. II. p. 26 et 38. (1854) ex parte.
Ellampus, Schck, Progr. Gymn. zu Weilb. p. 13. (1870). — Mocs. Chrys. faun. Hung. p. 22. (1882).
Omalus, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 17. (1879) (nec. Jur.).*
Philoctetes, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 26. (1879). — Buyss. Revue d'Entom. VI. p. 170. (1887).
Diplorrhos, Aar. Transact. Amer. Ent. Soc. XII. p. 216. (1885).

(ἐλλάμπωμαι = illucesco, fulgeo.)

Genus: corpore plerumque parvo aut minuto, raro mediocri, alis et abdominis apice facile cognoscitur.

Corpus: proportionaliter crassum, ovatum vel ovato-rotundatum aut subhæmisphæricum vel ellipticum, sæpius elongatum.

Caput: transversum, latitudine pronoti vel parum latius, *cavitate faciali* pro scapis quiescentibus plerumque profunda, subtriangulari. *Mandibulae:* subbreves aut mediocres, robustæ vel longiusculæ, sæpius falcatæ et compressæ, *extus:* convexæ vel con-

* Nomine «Omalus» piæ memoriæ vir: Panzerus primus usus est in suo *Omalo aeneo* (1805), sed characteres generis non descripsit. Post illum Jurine (1809), nomen illud non in familia Chrysididarum, sed in familia Proctotrypidarum applicuit. Et sic evitandis confusionibus nomen «Elampus» (rectius Ellampus) a Spinola datum optime conservandum censeo.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

vexo-arcuatæ, *intus :* a medio apicem versus cavæ, apice crenulato-tridentatæ. *Antennae :* tenues, longitudine mediocres, filiformes vel subsetaceæ.

Thorax : subtetrædro-cylindricus. *Pronotum :* transversum, mesonoto sæpius brevius, convexum, rarius medio parum deplanatum. *Mesonotum :* pronoto sæpius longius vel æquilongum, convexum, suturis quattuor plus minusve distinctis. *Scutellum :* convexum, plerumque latitudine pronoti convexum vel parum deplanatum. *Postscutellum :* convexum, gibbum aut gibbo-convexum, subconicum vel subhæmisphæricum aut processu mucronoideo, plerumque longo, armatum. *Metanotum :* postice truncatum vel leniter declive.

Alae : mediocres, plurimis apicem abdominis vix attingentibus; *anticae :* cellulis tantum tribus distinctis : costali, mediali et submediali prima, radiali tantum inchoata; *venis :* costali, postcostali, mediali, stigmate et radiali firmis, reliquis fere rudimenriis; *posticae :* cellulis omnino carent.

Pedes : pilosi, *femora* antica sæpius rectangulatim dilatata; *tibiae posticae :* in maribus rarius dilatatæ et intus excavatæ; *unguiculi tarsorum :* infra denticulis 3—8 armati.

Abdomen : breviter vel late-ovatum, interdum subhæmisphæricum, segmentum tertium ad centrum marginis apicalis sæpius subito coarctatum, emarginatura libera vel marginata plus minusve repleta vel non marginata, margo lateralis utrinque ante emarginaturam sæpius uni- vel biarcuatus; *tubulus* feminarum sæpius absconditus, haud visibilis. Quoad genitalia maris Cl. Dom. Radoszkovszky sequentia scripserat : «Je n'ai pas pu examiner que une seule espèce du genre *Omalus, Philoctetes* et *Elampus*. D'apres cet examen je peux constater, que le genre *Omalus* et *Philoctetes* par la forme du forceps se rapproche au genre *Holopyga* et le genre *Elampus* — au genre *Hedychrum*. Par la forme et la longueur de la volsella et de la tenette, le genre *Omalus* se rapproche au genre *Elampus*. Si l'examen des armures des autres espèces les mêmes résultats il sera évi dent, que si l'on se base sur la forme de l'armure copulatrice, le genre *Omalus* n'est pas à réunir avec *Elampus*». (Horæ Soc. Ent. Rossicæ. XXIII. 1888, pag. 8).

Generis *Ellampi* iam 68 cognoscimus species, Australia excepta, ex omni orbis terrarum parte, et quidem : e subgenere *Notozus* 27, *Diplorrhos* 1, *Ellampus* 33 et e *Philoctetes* 7. Secundum regiones : e regione palæarctica 45, æthiopica 2, nearctica 19 et neotropica 2. E regionibus : orientali et australiaca adhuc non habemus data. — Dahlbomus tantum 16 noverat species.

Genus, omnium Chrysididarum species minimas in se continens, quattuor habet subgenera, quorum conspectus sequens est :

1. Postscutellum plus minusve acuminatum, productum. Femora antica basi plerumque extus rectangulatim dilatata. Abdomen segmento tertio apicem versus sæpissime valde angustato, apice ipso reflexo. Unguiculi tarsorum infra multidenticulati (3—6) ..... *Notozus* Först.
2. Postscutellum a latere visum obtuse-acuminatum parumque productum. Femora antica et tibiæ posteriores normalia. Abdomen segmento tertio supra apicem truncatum callosumque conice productum, apicem unius reflexionis formante. Unguiculi tarsorum infra 2—3 denticulati ..... *Diplorrhos* Aaron.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

3. Postscutellum convexum, gibbum, obtuse vel subacute conicum. Femora antica et tibiæ posteriores normalia. Abdomen segmento tertio margine apicali in centro plus minusve distincte, in feminis profundius quam in maribus, excisum, apice ipso non reflexo. Unguiculi tarsorum infra multidenticulati (3—8) ... ... *Ellampus* mihi.

4. Postscutellum conicum vel subconicum plus minusve acuminatum vel subhæmisphæricum. Tibiæ posticæ marium, ut in Apibus, dilatatæ compressæque et nonnunquam intus excavatæ. Abdomen segmento tertio margine apicali leniter undulato vel rotundato, centro subintegro vel lenissime sinuato, vix inciso, marginella ultima sæpius subcariosa. Unguiculi tarsorum infra tridenticulati. (Transitus ad genus Holopyga) ... ... *Philoctetes* Ab. Buyss.

*

Subgenus I. NOTOZUS Först.

Postscutellum plus minusve acuminatum, productum. Femora antica basi plerumque extus rectangulatim dilatata. Abdomen segmento tertio apicem versus sæpissime valde angustato, apice ipso reflexo. Unguiculi tarsorum infra multidenticulati (3—6).

*

I. *Abdomen auratum: igneo-, cupreo-, aeneo- vel viridi-auratum.*

1) *Etiam caput et thorax aurata.*

31. **Ellampus pyrosomus** Först.

Notozus pyrosomus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 333, n. 88. ♂. sec. spec. typ. Mus. Nat. Hung.

Elampus chrysonotus, Dhlb. Hym. Europ. II. p. 44, n. 19. tab. III. fig. 45. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 548, n. 2. (1857).

Omalus chrysonotus, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 17. (1879).

Ellampus pyrosomus, Mocs. Chrys. faun. Hung. p. 23 et 80, n. 1. ♂ ♀. tab. I. fig. 1. (unguic.) (1882).

Parvus, sat robustus, parcius cinereo-alboque pilosus; capite thoraceque viridi-cupreoque, abdominis segmentis dorsalibus igneo- vel parum purpurascenti-auratis; antennis tenuibus, nigris, scapo et articulo primo flagelli supra ænescentibus; capite, pro- et mesonoto sat sparsim crassius minus profunde punctatis interstitiisque subtilissime punctulatis, scutello et postscutelli mucrone triangulari apice obtuso mesopleurisque punctato-reticulatis; abdominis segmentis dorsalibus dense subtiliter, in femina parum fortius, punctulatis, tertio plica marginali nigro-picea semilunata nitida, margine laterali utrinque bisinuato; ventralibus viridi-aureis, segmento secundo utrinque nigro-maculato; pedibus aureo-viridibus, tibiis externe magis auratis, tarsis fuscis; alis basi hyalinis, apice sordidis. — ♂ ♀; long. 4 mm.

Patria: Hungaria centralis et meridionalis, æstate haud rarus (Först. Mocs.); Russia meridionalis et orientalis (Sarepta, Kasan, Saratow, Rad.; provinciæ Uralenses, Eversm.); Turcia (Dhlb.).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

2) *Caput et thorax cyanea vel viridi-cyanea plus minusve violaceo picta vel tota violacea vel viridia.*

Conspectus specierum Europæarum huius subsectionis.

1 (2). Abdominis segmenti tertii emarginatura libera absque plica ... *ambiguus* DHLB.
2 (1). Abdominis segmenti tertii emarginatura plica semper instructa.
3 (8). Postscutelli mucrone subtriangulari vel triangulari, apice distincte angustiore quam in medio.
4 (7). Capite thoraceque violaceis.
5 (6). Cavitate faciali lævi ac polita; abdominis segmentis dorsalibus sat sparsim profunde punctatis interstitiis latis lævibus, tertio ante emarginaturam utrinque profunde bisinuato. — Long. 6—7 mm. ... ... *spina* LEP.
6 (5). Cavitate faciali dense transverse arcuatim striata; abdominis segmentis dorsalibus multo subtilius densiusque punctatis, tertio ante emarginaturam utrinque tantum lenissime sinuato. — Long. 4½ mm. ... ... *soror* n. sp.
7 (4). Capite thoraceque læte-viridibus; cavitate faciali transverse-striata. *bipartitus* TOURN.
8 (3). Postscutelli mucrone rectangulari vel quadrangulari, apice tam lato quam in medio.
9 (12). Capite thoraceque viridi-cyaneis vel cyaneo-viridibus parumque violascentibus; postscutelli mucrone rectangulari.
10 (11). Postscutelli mucrone apice transverse-obtuso; abdominis segmentis dorsalibus duobus primis et tertii basi sat dense subtiliter concinne punctulatis, tertio parte apicali multo fortius dispersiusque punctato, hoc carinula mediana nulla... ... ... *Panzeri* FABR.
11 (10). Postscutelli mucrone apice truncato; abdominis segmentis dorsalibus duobus primis dense inæqualiter, tertio fortius rugoso-punctatis, hoc carinula mediana sat distincta ... ... *Kohli* n. sp.
12 (9). Capite thoraceque viridibus, in locis certis nitore cyaneo violaceoque; postscutelli mucrone quadrangulari; abdominis segmento dorsali tertia crasse punctato ... ... *Sanzii* GOG.

32. **Ellampus ambiguus** DHLB.

Elampus ambiguus, Dhlb. Hym. Europ. II. p. 41, n 16. tab. III. fig. 39 40 (postscutellum et segm. anale) (1854).

Notozus ambiguus, Schck, Nass. Jahrb. XI. p. 62, n. 32. (1856). — Lampr. Goldwesp. Deutschl. p. 25, n. 84, tab. I. fig. 26. (segm. anale) (1881).

Ellampus ambiguus, Schck, Progr. Gymn. zu Weilb. p. 13, n. 29. (1870).

?*Omalus ambiguus*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18. (1879).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptio secundum Dahlbom:

«Parvus 1 ¼ lin. decimal. long. violaceus abdomine viridi-æneo-aurato, segmento tertio ante emarginaturam utrinque bisinuato, postscutello mucronato.

Observ. Individuis minoribus *Elampi Panzeri* similis; at dignoscitur: capite thoraceque totis saturate violaceis, metanoto mucrone subtriangulari h. e. apice distincte angustior quam basi, segmenti tertii emarginatura libera absque plica. — Caput et thorax tota saturate violacea antennis fuscis, pedibus viridi-cyaneis, tarsis brunneo-testaceis. Caput, pronotum, dorsulum et scutellum punctis majusculis parce adspersa. Metanotum punctato-reticulatum; mucro obtuse triangularis crasse sculptus. Pleuræ coriaceæ, confertim ac minus regulariter punctatæ. Alæ parte basali hyalinæ venis brunneis, parte apicali brunneo-fumosæ. Abdomen nitidum viridi-æneum nonnihil auratum, confertim punctulatum; segmenti tertii emarginatura subarcuata, submarginata lobis mediocribus triangularibus, margine laterali utrinque bisinuato, sinu inferiore distincto et superiore obsoleto.»

Patria: Europa meridionalis (Dhlb.); Tyrolis septentrionalis (Dalla Torre); Germania (Schck).

Animadversio. — Abeillei *Omalus ambiguus* mihi alia species esse videtur forsanque eadem est cum *Ellampo bipartito* Tourn., dicit enim auctor «corps vert clair» et apud Dahlbomum legimus «capite thoraceque saturate violaceis».

33. **Ellampus spina** Lep.

Hedychrum spina, Lep. Annal. du Mus. Hist. Nat. VII. p. 121, n. 2. tab. VII. fig. 2. (1806) (certissime secundum magnitudinem figuræ) (nec Elampus Spina Dhlb.). — Guér. Icon. regn. anim. Insect. p. 420. (1844) (excl. Hedychr. indica, Blanch. syn.).

Notozus Frivaldszkyi, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 332, n. 87. ♀. (1853) sec. spec. typ. Mus. Nat. Hung.

Elampus productus, Dhlb. Hym. Europ. II. p. 44, n. 20. tab. III. fig. 46. a—b. (postscut.) (1854) (nec Aaron). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 547, n. 1. (1857). — Rad. Horæ Soc. Ent. Rossicæ III. p. 299, n. 10. tab. II. fig. 6. (1886). — Thoms. Opusc. Ent. II. p. 103, n. 2. ♂♀. (1870). - Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 32, n. 2. (1887).

Notozus productus, Schck, Nass. Jahrb. XI. p. 67, n. 38. (1856). — Lampr. Goldwesp. Deutschl. p. 25, n. 86. (1881).

Elampus spina, Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 63. (1858).

Ellampus productus, Schck, Progr. Gymn. zu Weilb. g. 13, n. 30. (1870).

Omalus productus, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18, tab. I. fig. 1. (unguic.) (1879).

Ellampus Frivaldszkyi, Mocs. Chrys. faun. Hung. p. 24 et 80, n. 2. ♂♀. tab. I. fig. 2. (unguic.) (1882). - - Destef. Natural. Sicil. VII. p. 116. (1888).

Elampus Frivaldszkyi, Frey, Chrys. Helvet. p. 32 et 33. (1887).

Magnus, robustus, læte-cyaneus parumque violascens vel virescens, parce cinereo-alboque pilosus; civitate faciali minus profunda, lævi ac polita præsertim in femina, in maribus nonnunquam supra parum rugosiuscula; antennis longis, nigris, scapo et articulo primo flagelli supra ænescentibus; pro- et mesonoto sparsim crassius profun-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

diusque punctatis interstitiis latis lævibus; scutèllo et postscutello punctato-reticulatis; postscutelli mucrone valido obtuso subtriangulari; abdominis segmentis dorsalibus auratis nitore igneo, sat sparsim, tertio parum densius, profunde punctatis interstitiis lævibus, margine postico apicis reflexi nigro-picei late profundeque emarginato lateribusque bisinuatis; ventralibus cyaneis vel viridi-cyaneis; pedibus cyaneis, externe parum virescentibus, tarsis testaceis; alis hyalinis, anticis in medio late sordidis, tegulis nigro-piceis. — ♂♀; long. 6—7½ mm.

Patria: Suecia (Thoms.); Gallia (Lep.); Helvetia (Tourn.); Germania (Schck); Tyrolis (Dalla Torre et Kohl); Austria infer. (Coll. Handlirschi!); Hungaria centralis et meridionalis (Först. Mocs.); Russia meridionalis (Sarepta. Eversm.); Hispania (Lusitania Dhlb.; Madrid, Gogorza); Corsica (Ab.); Sicilia (Destef.).

34. **Ellampus soror** n. sp.

Ellampo spinae Lep. simillimus; sed multo minor, cavitate faciali dense transverse arcuatim striata, antennarum articulo tertio proportionaliter parum longiore, mesopleuris apice magis triangulariter productis, abdominis segmentis dorsalibus multo subtilius densiusque punctulatis, tertio ante emarginaturam utrinque tantum lenissime sinuato, alis superioribus apice dilutioribus; ab *Ellampo Panzeri* vero: postscutelli mucrone obtuse subtriangulari, apice distincte angustiore quam in medio, abdominis segmentis dorsalibus subtilius densiusque punctulatis, tertio lateribus tantum lenissime sinuatis, certe distinctus. — ♀; long. 4½ mm.

Patria: Tergestinum (Triest) Austriæ, ad littora Maris Adriatici (Mus. Vindob.!).

35. **Ellampus bipartitus** Tourn.

Notozus bipartitus, Tourn. Annal. Soc. Ent. Belg. XXII. p. 91. ♂. (1879).
Elampus bipartitus, Frey, Chrys. Helvet. p. 32 et 33. ♂. (1887).

« ♂. Corps finement et parcimonieusement pubescent; les deux premiers articles des antennes, la tête, le thorax et les pattes, à l'exception des tarses, sont d'un beau vert clair, très-brillant. Abdomen rouge doré brillant, à partir du troisième article, ainsi que les palpes, sont noirs; les mandibules et les tarses, d'un testacé un peu brunâtre. Impression faciale peu profonde, peu abruptement limitée sur les bords, ridée transversalement dans le fond; front fortement et densément ponctué les ponts gros, ronds; sommet de la tête, derrière les ocelles, moins grossièrement et beaucoup moins densément ponctué que le front, les points laissent entre eux des intervalles assez grands, lisses, brillants; pronotum assez grossièrement et densément ponctué, les points profonds, ne laissant entre eux que des intervalles étroits un peu élevés, très-brillants; mésonotum couvert d'une ponctuation analogue à celle du pronotum, mais un peu moins serrée; scutellum et postcutellum couverts de points gros, arrondis, cette punctuation très-serrée surtout sur le dernier, où elle ne laisse entre elle que des inter-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

valles très-étroits un peu saillants: postscutellum assez fortement produit en arrière; vu de profil, sa pointe dépasse la partie perpendiculaire postérieure du métathorax; il est convexe en dessus et a la forme d'un triangle allongé, arrondi à son extrémité; les flancs du mésothorax et le métathorax sont grossièrement et densement ponctués; abdomen densement et régulièrement couvert d'une ponctuation moyenne; sur les deux premiers segments, elle est un peu plus grosse et plus serrée près des bords latéraux; le troisième segment est encore plus densément et un peu plus fortement ponctué que les précédents, il est bisinué latéralement, tronqué à son extrémité, à ce point, replié, de sorte que la petite partie tronquée, vue de face, a la forme d'un croissant; cette partie est un peu concave, très lissé, brillante, noire. Cette espèce a beaucoup d'affinités avec le *Notorus bidens* Först. Mais le coloris de ces insectes est différent et la structure du troisième segment abdominal est tout autre. Chez *N. bidens* Först., les bords latéraux sont légèrement échancrés près de leur base, puis de le points, ils sont presque droits et ont un bord très-étroit, jaunâtre, transparent jusqu' au point apical tronqué; celui-ci offre, de chaque côté, un petite dent saillante. Chez *bipartitus* les bords latéraux du troisième segment sont très-visiblement et brièvement bisinués, les bords ne sont nullement transparents, pas jaunâtre, la partie apicale tronquée est plus large, et n'offre pas à chaque angle la dent caractéristique qui se voit chez *bidens* Först.; cette dernière espèce me paraît bien voisine du *N. productus* Dhlb., la structure du troisième segment est la même. — Long 7 mm.

Le *N. bipartitus* parait fort rare, car, malgré des recherches assidues, je ne lai rencontré qu'une fois en juin 1877 à Peney; sol léger, pierreux.»

Patria; Helvetia (Peney).

36. **Ellampus Panzeri** Fabr.

Chrysis scutellaris, Panz. Faun. Ins. Germ. fasc. 51. tab. 11. (1798) (nec Fabr.).

Chrysis Panzeri, Fabr. Syst. Piez. p. 172, n. 9. (1804). — Dhlb. Monogr. Chrys. Suec. p. 18, n. 17. (1829).

Hedychrum Panzeri, Panz. Krit. Rev. II. p. 104. (1806). — Guér. Icon. regn. anim. Insect. p. 420. (1844).

Elampus Panzeri, Shuck. Ent. Mag. IV. p. 176, n. 1. (1837). — Blanch. Hist. nat. III. p. 296, (1840) (exl. *Hedychrum indica* Lep. syn.). — Dhlb. Dispos. p. 5, n. 3. (1845); Hym. Europ. II. p. 45, n. 21, tab. III. fig. 47—53. b. (partes corporis) (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 548, n. 3. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 63. (1858). — Chevr. Ghrysid. du Léman, p. 112. ♂. (1862). — Smith, Entom. Annual. p. 103. (1862). — Thoms. Opusc. Ent. II. p. 103, n. 1. (1870). — Frey, Chrys. Helvet. p. 32 et 33, tab. III. fig. 10. (segm. anale) (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 8. (genit. maris) (1888).

Notozus constrictus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 336, n. 90. ♂. (1853). — Schck, Nass. Jahrb. XI. p. 84, n. 10. (1856). — Lampr. Goldwesp. Deutschl. p. 25, n. 87. tab. I. fig. 28. (segm. anale) (1881).

Notozus Panzeri, Först. Verh. nat. Ver. preuss. Rheinl X. p. 340. (1853). — Schck, Nass. Jahrb.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

XI. p. 63, n. 33. (1856). — Lampr. Goldwesp. Deutschl. p. 25, n. 89. tab. I. fig. 27. (segm ! anale) (1881).

Notozus affinis, Schck, Nass. Jahrb. XI. p. 64, n. 34. (1856). — Lampr. Goldwesp. Deutschl. p. 26, n. 89. (1881).

Notozus elongatus, Schck, Nass. Jahrb. XI. p. 65, n. 35. (1856). — Lampr. Goldwesp. Deutschl. g. 26, n. 89. (1881).

Notozus pulchellus, Schck, Nass. Jahrb. XI. p. 66, n. 36. (1856). — Lampr. Goldwesp. Deutschl. p. 26, n. 89. (1881).

Notozus minutulus, Schck, Nass. Jahrb. XI. p. 66, n. 37. (1856). — Lampr. Goldwesp. Deutschl. p. 26, n. 89. (1881).

Ellampus Panzeri, Schck, Progr. Gymn. zu Weilb. p. 13, n. 31. (1870). — Mocs. Chrys. faun. Hung. p. 25 et 80, n. 3. ♂♀. (1882).

Omalus scutellaris, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 17. (1879). — Marq. Bullet. Hist. Nat. Toulouse, p. 156. (1879).

Omalus Panzeri, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 108, tab. I. fig. 1. (unguic.) (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 245, n. 1. (1882).

Mediocris vel submagnus, elongatus, viridi-cyaneus vel cyaneo-viridis parumque violascens, parce albo-pilosus; cavitate faciali sat profunda, inæqualiter subtransverse minus fortiter rugosa; clypeo viridi-aurato; antennis tenuibus, nigris, scapo et articulo primo flagelli supra viridibus; pro- et mesonoto sparsim fortius minus profunde punctatis interstitiis lævibus, scutello et postscutelli mucrone rectangulari apice transverso obtuso non angustiore quam in medio punctato-reticulatis; abdominis segmentis dorsalibus auratis, basi et lateribus sæpissime nitore viridi, sat dense, tertio basi adhuc densius subtiliter punctulatis, illis insterstitiis lævibus, tertio parte apicali multo fortius dispersiusque punctato, margine postico apicis reflexi nigro-picei semilunatique late profundeque emarginato lateribusque bisinuatis; ventre viridi-aurato; pedibus læte-viridibus, tarsis testaceis; alis sordidis, basi late hyalinis. — ♂♀; long. 4½—5 mm.

Species: forma mucronis postscutelli tantum *Ell. Kohli* similis est.

«*Armure.* La branche du forceps large, arrondie et parsemée à l'extrémité de poils minces. Volsella plus large, que sa tenette, qui est beaucoup plus longue et médiocrement garnie de poils. Les crochets ne sont pas larges, leurs côtes paralléles.» (Rad. l. c. tab. I. fig. 8a, 8b, 8f.).

Patria: Europa tota cum Caucaso.

37. **Ellampus Kohli** n. sp.

Submagnus, elongatus, cyaneo-viridis, parcius albo-pilosus; vertice et thorace supra in locis certis violascentibus; cavitate faciali minus profunda, viridi-aurata, medio longitudinaliter canaliculata, lateribus coriaceo-rugulosa; antennis sat tenuibus, nigris, articulis duobus primis viridibus; vertice dense irregulariter punctato-subreticulato; pro- et mesonoto sat sparsim crassius punctato-subreticulatis, interstitiis lævibus ac politis; scutello et postscutello regulariter punctato-reticulatis, illo basi spatio lato lævi crassius

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

profundiusque bipunctato; postscutelli mucrone longo, rectangulari, parallelo, medio tam lato quam apice truncato; abdominis segmentis dorsalibus duobus primis viridi-, tertio cupreo-auratis, duobus primis dense inæqualiter, tertio fortius rugoso-punctatis, hoc — a latere viso — carinula mediana sat distincta, margine apicali testaceo-scarioso utrinque profunde bisinuato, centro apicis reflexi testacei semilunatique late profundeque exciso; ventre viridi-subaurato; pedibus viridibus et cyaneis, tarsis testaceis; alis sordidis, basi late hyalinis, venis fuscis, tegulis viridibus violaceo-maculatis. — ♂; long. 6 mm.

Exemplaribus maioribus *Ellampi Panzeri* Fabr. similis; sed thorace supra profundius parumque densius punctato, postscutelli mucrone longiore, apice truncato (non transverse-obtuso), abdominis segmentis dorsalibus duobus primis multo fortius profundiusque irregulariter punctatis (non punctulatis), tertio crasse rugoso-punctato, præsertim distinctus.

Patria: Tyrolis (Amras, ab amico Fr. Fr. Kohl detectus, Mus. Cæs. Vindob.).

38. **Ellampus Sanzii** Gog.

Elampus Sanzii, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 33, n. 3. (1887).

«Cabeza verde, tórax con tintas azules y verdes mezcladas, abdomen dorado. Punctuación de la cabeza gruesa, frecuente, pasando á reticular entre los ojos. Vértice y mejillas azules con ligeros reflejos violados. Antenas pardas, con los dos primeros artejos metálicos. La fosita antenaria ancha y poco profunda, con una impresión media longitudinal. Mandíbulas rojizas con el extremo más claro. Prothorax ancho, con punctuatión más fina que la de los anillos que le siguen. Mesotórax y metatórax cubiertos de puntos gruesos, esparcidos, mayores en las zonas medias de estos anillos, en las que limitan algunos espacios completamente lisos. La prolongación del posescudete grande, en forma de lámina cuadrangular y con la parte superior reticulada con cierta regularidad; el color es en la base verde metálico, como en el resto del tórax, y en los dos tercios posteriores negra. Patas verdes con reflejos metálicos; caderas anteriores normales; tarsos con las uñas provistas de tres dientes terminales en su borde inferior. Alas superiores muy ligeramente ahumadas alrededor del estigma. Abdomen dorado, con la escotadura del tercer segmento grande, de contorno semicircular; los bordes laterales del segmento sin modificación alguna. Vientre verde.

Long. 6 mm.

Bastanta afine al *Elampus scutellaris* Panzer, se distingue de él, sin embargo, con facilidad por la punctuación especial de la cabeza, por la forma de la lámina del posescudete y por la escotadura del último segmente abdominal. Del El. *productus* Dahlb., se separa aun más, no solo por la forma de la lámina del posescudete y por la coloración, sino también, por el número de dientes de las unas que terminan los tarsos. Con las restantes especies del género, no es posible la confusión en manera alguna.

Dedico esta especie á mi buen amigo el Sr. D. Maximino Sanz de Diego, que me

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ha cedido generosamente el único ejemplar que poseo, y que tantos datos me ha facilitado también para la formación de este trabajo.»

Patria: Hispania (Madrid).

39. **Ellampus nitidus** Aar.

Nolozus nitidus, Aar. Transact. Amer. Ent. Soc. XII. p. 218. ♂. (1885). — Cam. Biolog. Central-Americ. Hym. p. 458, n. 1. tab. XX. fig. 3, 3a. (1888).

«Head and thorax green, purple and blue, dull on the postscutellum, occiput, pro- and mesothorax sparsely, but almost evenly punctured; abdomen sparsely and finely punctured, elegantly colored with golden cupreous and some green reflections; venter green; femora and tibia green and blue, apical closing membrane black; wings infuscated; 3.5—4 mm. long. ♂.

Montana and California; two specimens; a most beautiful and very distinct species.» — Mexico (Cam.).

Patria: America septentrionalis.

40. **Ellampus Mexicanus** n. sp.

Mediocris, elongatus, læte-cyaneus parumque violascens, capite nonnunquam virescenti, parce cinereo-alboque pilosus; cavitate faciali minus profunda, dense subtiliter irregulariterque arcuatim striata; antennis longiusculis, nigris, scapo et articulo primo flagelli læte-cyaneis; pronoto et mesonoti lobis lateralibus dense, huius lobo medio sparsim crassius punctatis interstitiis latis lævibus; scutello et postscutello punctato-reticulatis; postscutelli mucrone valido, obtuso, apicem versus valde leniter angustato, fere rectangulari, ipso apice rotundato; metanoti dentibus postico-lateralibus sat longis, acutis, incurvis; abdominis segmentis dorsalibus auratis vel virescenti-auratis, disco et marginibus plus minusve ignitis, primo basi virescenti, duobus primis valde dense subtiliter, tertio parum fortius rugosiuscule-punctulatis, margine postico apicis reflexi nigro-picei anguste emarginato lateribusque utrinque bisinuatis; ventre pedibusque læte-cyaneis vel illo disco parum virescenti; tarsis fuscis; alis sordide-hyalinis, tegulis nigro-piceis. — ♂♀; long. 4½—5 mm.

Ellampi spinae Lep. colore simillimus; sed minor, cavitate faciali non lævi ac polita, pronoto et mesonoti lobis multo densius, lobo medio parum dispersius punctatis, postscutelli mucrone fere rectangulari, apice vix angustiore quam in medio, metanoti dentibus postico-lateralibus acutis, abdominis segmentis dorsalibus multo densius rugosiuscule-punctulatis, margine postico apicis reflexi tantum leniter emarginato, tarsis fuscis, bene distinctus.

Patria: Mexico (Anganguco, 7 specimina in Coll. Saussurei!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

II. *Abdomen viride vel viridi-cyaneum, saepius violascens vel viridi-subaureo micans.*

1) *Caput et thorax violacea vel cyanea plus minusve viridi et violaceo picta.*

*

Conspectus specierum Europæarum huius subsectionis.

1 (2). Corpore magno, 6—7 mm. longo, nigro-violaceo; abdominis dorso viridi-cyaneo, segmento tertio margine apicali incrassato et infra transverse sulcato medioque profunde bidenticulatim exciso; postscutelli mucrone triangulari *bidens* Först.

2 (1). Corpore mediocri vel submediocri, tantum 4—5 mm. longo; abdominis segmento tertio margine apicali non incrassato neque transverse sulcato, dentibus duabus acutis nullis.

3 (6). Postscutelli mucrone rectangulari seu parallelo, apice tam lato quam in medio

4 (5). Postscutelli mucrone mediocri, subtus minus excavato; abdominis segmentis dorsalibus duobus primis valde dense subtilissime minus regulariter punctulatis, tertio apice in medio brevi arcuatim emarginato ... ... *coeruleus* Dhlb.

5 (4). Postscutelli mucrone sat longo, subtus profunde excavato ideoque magis planato; abdominis segmentis dorsalibus parum crassius sparsimque concinne punctulatis, tertio apice in medio producto truncatoque ... ... *rufitarsis* Tourn.

6 (3). Postscutelli mucrone apicem versus evidenter angustato; abdominis segmentis dorsalibus nitore viridi-subaureo irregulariter crassius punctulatis *angustatus* n. sp.

*

41. **Ellampus bidens** Först.

Notozus bidens, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 335, n. 89. ♀. (1853). — Schck, Nass. Jahrb. XI. p. 83, n. 9. (1856). — Lampr. Goldwesp. Deutschl. p. 25, n. 85. (1881).

Elampus Spina, Dhlb. Hym. Europ. II. p. 41, n. 17, tab. III. fig. 41. a, 42. b. (postscutellum et segm. anale) (1854) (nec *Hedychrum spina* Lep.).

Elampus femoralis, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 547, n. 2. ♀. (1857) sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. III. p. 299, n. 12, tab. II. fig. 7. ♀. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 4, n. 8. (1877).

Ellampus bidens, Schck, Prog. Gymn. zu Weilb. p. 17, n. 31. (1870). — Mocs. Chrys. faun. Hung. p. 26 et 80, n. 5. ♀. tab. I. fig. 3. (unguic.) (1882).

Omalus superbus, Ab. Diagnos. Chrys. Nouvell. p. 2, n. II. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 18. tab. I. fig. 1. (unguic.) (1879).

Elampus bidens, Frey, Chrys. Helvet. p. 32 et 33. ♀. (1887).

Magnus, sat robustus, elongatus, nigro-violaceus, parce albo-pilosus; clypeo læte-viridi sparsim punctato; mandibularum basi, tibiarum apice tarsisque testaceis; cavitate faciali profunda, violacea, sed nonnunquam virescenti, dense subtiliter transverse-striata; antennis longis, crassiusculis, nigris, scapo et articulo primo flagelli supra viridibus; vertice circa ocellos singulos spatio lævi ac polito; occipite utrinque pronotum versus angulo acuto; pro- et mesonoto sparsim sat crasse punctatis interstitiis lævibus; vertice dense subtilius, scutello et postscutelli mucrone multo dispersius fortiusque punctato-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

reticulatis; pronoti disco subdepresso; postscutelli mucrone valido, triangulari, apice obtuso angustiore quam basi; abdominis dorso viridi-cyaneo, in marginibus apicalibus sæpius nitore viridi-subaureo, dense, in segmento tertio rugosiuscule-punctato, tertio margine apicali incrassato et infra transverse sulcato medioque semicirculariter profunde bidenticulatim exciso, lateribus sordide pellucidis leniter bisinuatis; ventre pedibusque viridibus vel parum cyanescentibus; alis sordidis, basi late hyalinis, nervis fuscis, tegulis rufo-piceis. — ♀; long. 6—7 mm.

Patria: Italia (Grib.); Gallia (Dhlb.); Germania (Först.); Helvetia (Frey-Gessner); Tyrolis (Kohl); Hungaria (Mocs.; Croatia, Korlević!); Russia orientalis (Kasan, Eversm.); Turkestania (Maracanda, Rad.); Amur (Coll. Rad.!).

42. **Ellampus rufitarsis** Tourn.

Notozus rufitarsis, Tourn. Annal. Soc. Ent. Belg. XXII. p. 90. ♂♀. (1879).

Mediocris, elongatus, cyaneus, parum virescens, parce albo-pilosus; clypeo viridi-subaurato; mandibularum basi tarsisque rufo-testaceis; cavitate faciali sat profunda, irregulariter rugosiuscula; antennis tenuibus, longis, nigris, scapo et articulo primo flagelli supra viridi-cyaneis; vertice irregulariter dense, pro- et mesonoto sat sparsim fortius punctatis interstitiis angustis lævibus, scutello et postscutelli mucrone fortius punctato-reticulatis, hoc longo, parallelo, medio tam lato quam apice (sicut in *Ell. Panzeri)* transverse-obtuso; abdominis segmentis dorsalibus cyaneo-viridibus, segmenti primi margine apicali nitore viridi-aureo, dense regulariter, tertio multo densius rugosiuscule-punctulatis, huius lateribus bisinuatis, margine apicali in medio producto truncatoque (sicut in *Ell. Panzeri)* et apice reflexo nigro-piceo emarginato; ventre, femoribus tibiisque viridi-cyaneis, alis hyalinis medio sordidis, venis fuscis, tegulis nigro-piceis antice virescentibus. — ♀; long. 4½ mm.

Mas secundum auctorem differt a femina: colore corporis toto læte-cyaneo, capite thoraceque parum dilutioribus «toutes les parties du corps sont beaucoup plus finement, plus obsolétement et plus superficiellement ponctuées; la tête, le pronotum et le mésonotum apparaissent presque lisses, l'abdomen offre un punctuation si fine, qu'il faut un fort grossissement pour l'apprécier. Malgré ces differentes, je ne puis les séparer, les autres charactères étant similaires. Trois exemplaires: 2 ♀, 1 ♂.» (An species distincta?).

Patria: Russia meridionalis (Sarepta, Tourn.) et Romania (Tultscha in Dobrutscha, Mus. Vindob!).

43. **Ellampus coeruleus** Dhlb.

Elampus coeruleus, Dhlb. Hym. Europ. II. p. 46, n. 22. (1854) (nec *Omalus coeruleus* Dhlb.).
Notozus coeruleus, Schck, Nass. Jahrb. XI. p. 83, n. 8. (1856). — Lampr. Goldwesp. Deutschl. p. 25, n. 88. (1881).
Ellampus coeruleus, Schck, Progr. Gymn. zu Weilb. p. 17, n. 32. (1870).
Omalus viridiventris, Ab. Diagnos. Chrys. Nouvell. p. 2, n. I. (1878); Annal. Soc. Linn. Lyon, XXVI. p. 18, tab. I. fig. 1. (unguic.) (1879).
Ellampus viridiventris, Mocs. Chrys. faun. Hung. p. 26 et 80, n. 4. ♂♀. (1882).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Submediocris, parcius cinereo-alboque pilosus; capite thoraceque violaceis vel cyaneis plus minusve virescentibus et violascentibus; abdomine concolore, nitore nonnunquam viridi vel viridi parum subaureo; cavitate faciali profunda subcoriaceo-rugulosa; antennis tenuibus, nigris, scapo læte-viridi; pro- et mesonoto sat sparsim minus profunde punctatis interstitiis lævibus, scutello et postscutelli mucrone rectangulari seu parallelo medio tam lato quam apice obtuso dense punctato-reticulatis; abdominis segmentis dorsalibus duobus primis valde dense subtilissime, tertio dispersius punctulatis, huius margine apicali in medio arcuatim emarginato, plica nigro-fusca semilunata, lateribus bisinuatis; ventre femoribusque viridi-cyaneis, tibiis externe magis virescentibus, tarsis fusco-testaceis; alis hyalinis, apice late sordidis, venis fuscis, tegulis rufopiceis, antice cyanescentibus. — ♂♀; long. 4—5 mm.

Speciem: apud auctorem characteribus non satis bene illustratam, colore corporis variabilem inveni.

Patria: Italia (Calabria, Costa); Gallia (Ab.); Belgium (Bormans); Germania (Dhlb. et Mus. Halense!); Tyrolis (Dalla Torre et Kohl); Austria infer. (Coll. Handlirschi!); Hungaria centralis et meridionalis (Mocs.); Russia meridionalis (Krim, Dhlb; Sarepta, Mus. Vindob!).

44. **Ellampus angustatus** n. sp.

Præcedenti simillimus; sed pro- et mesonoto fortius parumque densius punctatis, postscutelli mucrone apicem versus evidenter angustato (non parallelo), abdominis segmentis dorsalibus magis viridibus, nitore viridi-subaureo, multo fortius ac crassius punctatis et tarsis dilutioribus, mihi distinguendus esse videtur. — ♂♀.

Patria: Hungaria centralis et meridionalis (Mus. Hung.); Tyrolis meridionalis (Bozen, Coll. Schmiedeknechti!); Germania (Thuringia, Coll. Schmiedeknechti!).

45. **Ellampus Afer** n. sp.

Mediocris, robustus, parce albo-pilosus, læte-viridis, vertice post stemmata mesonotoque parum violascentibus; cavitate faciali profunda, dense subtilissime transverse-striata, subtus sublævi; antennis crassiusculis, brevibus, nigris, scapo et articulo primo flagelli supra viridibus; genis proportionaliter sat longis, mandibulis apice piceis, tridentatis; fronte dense fortius punctato-reticulata; vertice post stemmata pronotoque sparsim, mesonoto adhuc dispersius crasse punctatis, interstitiis latis lævibus, scutello antice spatio lato lævi, postice et postscutelli mucrone brevi, planato, late-rotundato posticeque subexcavato dense fortius punctato-reticulatis; mesopleuris triangulariter productis, sparsim crasse punctatis interstitiisque subtilissime punctulatis; abdominis segmentis dorsalibus viridi-cyaneis, basi violascenti, dense, sed successive fortius regulariter punctatis, tertio margine apicali sordide-pellucido medio sat profunde exciso lateribusque medio lenissime bisinuatis; ventre violascenti-cyaneo; pedibus læte-viridibus, tibiarum apice tarsisque rufescenti-testaceis; alis parum sordide-hyalinis, venis fuscis, tegulis viridibus postice cyanescentibus. — ♀; long. 4½ mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: forma mucronis postscutelli et punctatura singulari facile cognoscitur.
Patria: Africa orientalis (Mombassa Sansibariæ, Mus. Berolinense).

46. **Ellampus seminudus** Aar.*

Notozus seminudus, Aar. Transact. Amer. Ent. Soc. XII. p. 218. ♂♀. tab. VII. fig. 25. (1885).

«Blue, with green and purple reflections, rather dull; occiput smoth, with a few small punctures in groups or rows; prothorax smooth on the disc, a few scattared punctures in the middle, the anterior and lateral margins closely punctured, the posterior margin with a single even sutures and above the tegulæ; metathorax evenly and strongly punctured, dull blackish or fuscous, with very little or no metallic reflections; abdomen with the first segment partly smooth, the second very finely and sparsely punctured, the third with the punctures much langer, confluent, appearing roughened; apical projection small, almost coming to a point, the truncation circular, the closing membrana black or fuscous; wings infuscated; 3—4 teeth in the claw, 5—6 mm. long. ♂♀.

Washington Territory; four specimens.»
Patria: America septentrionalis.

* Conspectus specierum generis *Notozus* Americæ septentrionalis secundum Aaron sequens est:

Postscutellum somewhat obtusely pointed but not projecting posteriorly into a horizontal blade. *intermedius* Aar.

Postscutellum prolonged posteriorly a raised, partly separate, horizontal blade or cone.

Pro- and mesothorax mostly smoth, the former punctured only on the anterior, lateral and posterior margins, and sparsely in the middle, and the latter with sparse punctures on the sutures; lateral margins of third segment with the apical half semi-transparent, brown. *seminudus* Aar.

Pro- and mesothorax nearly evenly covered with punctures; lateral margins of third segment concolorous, with the rest of the abdomen.

Abdomen bright golden and cupreous, with brassy and green reflections, thorax green and blue. *nitidus* Aar.

Abdomen like head and thorax, from dark blue with purple reflections to emerald-green with brassy reflections.

Wings clear hyaline, not infuscated *hyalinus* Aar.

Wings infumated or infuscated.

The snout-like projection at abdominal apex with its closing membrane semi-transparent brown, and with a band of the same color before its apical margin. *versicolor* Nort.

The snout-like projection with its closing membrane black, concolored before ist apical margin.

Abdomen, in shape, ordinary; about as long and wide as most of the species of this genus and its allies; the snout-like projection also median in size.

The snout-like projection of abdomen broad, short, not projecting very distinctly beyond the line of the margins of third segment. *viridicyaneus* Nort.

The snout-like projection is longer and narrower, projecting distinctly beyond the margins of third segment. *marginatus* Patt.

Abdomen longer and narrower, the snout-like projection larger in relation to the third segment than in other species. *productus* Aar.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

47. **Ellampus hyalinus** Aar.

Notozus hyalinus, Aar. Transact. Amer. Ent. Soc. XII. p. 218. ♀. (1885).

«Entirely green, blue and purple, dull on the postscutellum; occiput pro- and mesothorax sparsely but evenly punctured; abdomen sparsely and very finely punctured; apical projection evenly rounded above, the end circular; membrane black; wings clear hyaline; 4—4.5 mm. long. ♀.

Montana and Nevada; three specimens.»

Patria: America septentrionalis.

48. **Ellampus versicolor** Nort.

Elampus versicolor, Nort. Transact. Amer. Ent. Soc. VII. p. 235. (1879).

Notozus versicolor, Aar. Transact. Amer. Ent. Soc. XII. p. 218, tab. VI. fig. 19—20. (segm. anale) (1885).

«One specimen from Dakota (the type) and one from Montana. The first is dart blue and purple with green reflections, while the Montana specimen is emerald-green with very little blue and no purple. The punctures on the abdomen less confluent and more distinct, and the roughened surface less marked than the Dakota specimen. The Montana specimen with the apical projection a little less punctured than the type; 5—5.5. mm. long.» (Aaron l. c.)

Patria: America septentrionalis.

49. **Ellampus viridicyaneus** Nort.

Elampus viridicyaneus, Nort. Transact. Amer. Ent. Soc. VII. p. 235. ♀. (1879).

Elampus coruscans, Prov. Natur. Canad. XII. p. 303. ♀. (1881); Petit. Faun. Canad. II. Hym. p. 582, n. 2. ♀. (1883).

Elampus spinosus, Prov. Natur. Canad. XII. p. 302. ♀. (1881); Petit Faun. Canad. II. Hym. p. 581, n. 1. ♀. (1883).

Notozus viridicyaneus, Aar. Transact. Amer. Ent. Soc. XXII. p. 219, tab. VI. fig. 21. (segm. anale) (1883).

«Four specimens from the localities: Massachusetts (type), Colorado and Montana, and two specimens in the collection of M. Provancher from Canada, the type of *spinosus*, and the specimen determined as *Omalus coruscans* Norton. The color is green, purple and blue, about equally distributed, except in the Colorado specimen, which has less green and more blue. Punctures on occiput pro- and mesothorax rather sparse and subeven, but in one Montana specimen the punctures are close and regular. The apical projection of the third segment is short, large, semicircular, the closing membrane black, *Spinosus*, of Provancher, does not differ, it is not so large as the specimen from Colorado, the continuation of the metallic color upon the tarsi and antennæ is a variable character and of no importance, and the spine beneath and at the apex of the

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

tibia is present in all the species; 3 and 4 teeth within the claw; 5.5—6 mm. long. (Aaron l. c.).

Patria: America septentrionalis.

50. **Ellampus marginatus** Patt.

Notozus marginatus, Patt. Canad. Entom. XI. p. 66. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 219. tab. VII. fig. 22. (segm. anale) (1885).

Elampus viridis, Prov. Natur. Canad. XII. p. 303. ♂. (1881); Petit. Faun. Canad. II. Hym. p. 582, n. 3. ♂. (1883).

«Twenty specimens in the collection from the following localities: — Canada, New Hampshire, Montana, Washington Territory, British Columbia, Colorado and California; also three specimens in Provancher's collection determined as *viridis* Cresson. Specimens vary wonderfully in color from emerald-green with golden reflections and bright blue with purple reflections to deep dull black with very little purple; apical closing membrane black; 3.5—5 mm. long.» (Aaron l. c.).

Patria: America septentrionalis.

51. **Ellampus productus** Aar.

Notozus productus, Aar. Transact. Amer. Ent. Soc. XII. p. 219. ♀. tab. VII. fig. 23 et fig. 24. (segm. anale) (1885) (nec Dhlb.).

«Long and slender; bright emerald-green with bleu and some purple reflections, duller on the postscutellum; occiput pro- and mesothorax rather sparsely but somewhat evenly punctured; abdominal punctures very close or confluent, so as to cause the surface to appear roughened; abdomen lengthened, longer than in other species, the third segment evenly tapering, comparatively less so than in other species; apical projection large, even, semicircular, the closing membrane deep brown or fuscous; wings subhyaline, fumate on the apical half, 3 teeth in the tarsal claw; 5—5.5 mm. long. ♀.

Montana; five specimens.»

Patria: America septentrionalis.

52. **Ellampus viridis** Cress.

Elampus viridis, Cress. Proceed. Ent. Soc. Philad. IV. p. 103. ♂? (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 235. (1879).

Descriptio secundum Cresson:

«Bright metallic green, the head and abdomen with a blue reflection; grossly punctured, the abdomen, except apex, smooth; scutellum armed behind with a broad, flattened, obtuse process; tarsi fulvous; wings subhyaline.

Male? — Head bright metallic green, with a deep bluish reflection, especially on

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

the face, which is broadly excavated; the punctures deep and rather close, except in the excavation of the face which is finely rugulose; mandibles pubescent, fulvous, deep blue at base; antennæ piceous, the basal joint blue-green. Thorax deeply and closely punctured, bright metallic green, the collar tinged with deep blue, the mesothorax tinged with golden; pleura, scutellum and metathorax much more closely punctured than the rest of the thorax; scutellum large, armed behind with a long, broad, flattened and obtuse process; posterior angles of the metathorax strong and acute; tegulæ piceous, slightly tinged with green. Wings subhyaline, tinged with pale fuscous, nervures fuscous. Legs blue-green, the tarsi and the extreme tips of the tibiæ fulvous. Abdomen short and broadly ovate, convex, bright metallic green with a beautiful deep blue reflection in certain lights, the two basal segments smooth and polished, minutely and sparsely punctured under a strong lens, the apical segments strongly but not closely punctured; basal segment slightly excavated on the middle; extreme apex of the abdomen truncate, the upper margins reflexed, the end somewhat circular and concave, rufo-piceous; beneath blue-green. Length 2 lines.» (Cresson l. c.).

«Basin of face not striate; the occiput and prothorax shining, with subobsolete punctures; the postscutel produced, flattened, subtruncate; the first and second segments of tergum with fine, separated punctures, the third segment roughened; claws without apparent teeth.» (Norton l. c.).

Patria: Cuba.

53. **Ellampus Gayi** Spin.

Elampus Gayi, Spin. Gay's Hist. fisica de Chile. VI. p. 413, n. 1. (1851). — Dhlb. Hym. Europ. II. p. 47. n. 23. tab. III. fig. 54—55. b. (postscutellum et segm. anale) (1854).

Descriptio secundum Dahlbom:

«Robustus 1 1/2 lin. decimal. long. cyaneus abdominis segmento tertio margine laterali utrinque unisinuato, postscutello mucronato: mucrone brevi semicirculari.

Observ. Ad magnitudinem et colorem corporis *Elampo truncato* forsitan proximus. Corpus crassiusculum, intensive cyaneum nitidum. Frons et pleuræ modice punctato-reticulata. Pronotum et dorsulum punctis maiusculis rotundis adspersa. Scutellum et metanotum saturate nigro-violacea subpurpurascentia, crasse punctato-reticulata. Postscutelli processus depresso-planus semicircularis crasse punctato-reticulatus marginatus: margine tenui subconvexo lævissimo. Antennæ et tarsi fusca; scapus et pedes viridi-cyanei. Abdomen subbreve ovatum, segmenta primum et secundum cyanea confertim distincte punctulata; segmentum tertium viridi-cyaneum crebre punctatum, margine laterali tenui fusco lævi, mox ante emarginaturam leniter unisinuato; emarginatura repleta: lobo nigro-piceo totam emarginaturam instar operculi semicircularis excipiente.»

Patria: Chile.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

2) *Caput et thorax ex parte aurato-viridia, splendida ; tarsi testacei.*

54. **Ellampus albipennis** n. sp.

Aurato-viridis, splendidus, parcius albo-pilosus; occipite, pronoto antice et suturis thoracis parum cyanescentibus; cavitate faciali profunda, subtilius subtransverse-rugosa; antennis tenuibus, articulis duobus basalibus aurato-viridibus, reliquis fuscis; vertice pronotoque crassius subrugose, mesonoto parum dispersius evidentiusque, scutello et postscutelli mucrone punctato-reticulatis, hoc sat longo, apicem versus vix attenuato, ipso apice rotundato; metathoracis dentibus postico-lateralibus sat fortibus, triangularibus; abdomine aurato-viridi, segmentis dorsalibus omnibus dense subtiliter punctulatis, tertio lateribus leniter bisinuatis, apice in medio parum producto truncatoque; ventre pedibusque aurato-viridibus, tarsis rufescenti-testaceis; alis albo-hyalinis, unicoloribus, tegulis aurato-viridibus. — Long. 4 mm.

Ellampo Mocsáryi Rad. similis et affinis; sed sculptura faciei, verticis, pro- et mesonoti alia, abdominis segmentis dorsalibus quoque densius punctulatis et alis pure albo-hyalinis, est species bene distincta.

Patria: Russia meridionalis (Sarepta, Mus. Vindob.!) et orientalis (Astrahan, Coll. Rad.! et Mus. Hung.).

55. **Ellampus Mocsáryi** Rad.

Elampus Mocsáryi, Rad. Horæ Soc. Ent. Rossicæ. XX. p. 45. ♀. (1887) sec. spec. typ. e coll. Rad.

Aurato-viridis, splendidus, parcius albo-pilosus; vertice cyanescenti, cavitate faciali profunda, lateribus longitudinaliter minus regulariter sublitissime striata, superne lævi ac polita; antennis nigris, scapo aurato-viridi; vertice, pro- et mesonoto sat sparsim punctatis, scutello postscutellique mucrone densius fortiusque punctato-reticulatis; hoc sat longo, apicem versus vix attenuato, ipso apice rotundato; metathoracis dentibus postico-lateralibus fortibus, triangularibus; abdomine aurato-viridi, segmentis dorsalibus duobus primis dense subtiliter, tertio parum fortius punctulatis, hoc lateribus sinuatis; ventre pedibusque aurato-viridibus, tarsis rufescenti-testaceis; alis hyalinis, iridescentibus, apice late parum subfumatis, tegulis aurato-viridibus. — ♀; long. 4 mm.

Patria: Mongolia (Zaïdam, Coll. Rad.!).

III. *Corpus totum cum abdomine nigra-violacea.*

56. **Ellampus Eversmanni** mihi.

Elampus ambiguus, Eversm. Bullet Soc. Nat. Moscou. XXX. Nr. IV. p. 549, n. 7. (1857) sec. spec. typ. e coll. Rad. (nec Dhlb.). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 299, n. 7. tab. II. fig. 4. (1866); Fedst. Reise in Turkest. Hym. Chrysid. p. 3, n. 6. (1877) (exclusis verbis: abdomine viridi-æneo aurato).

Nigro-violaceus, elongatus; cavitate faciali profunda, subtilissime minus distincte oblique-striata, virescenti; antennarum flagello, mandibulis tarsisque fusco-testaceis; pro-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

noti disco lævi, lateribus mesonotoque sparsim minus crasse punctatis, postscutelli mucrone triangulari, apice obtuso; abdomine nigro-violaceo, dense subtiliter punctulato, segmento tertio ante emarginaturam utrinque sinuato; alis sordide-hyalinis. — Long. 4 mm.

Statura et magnitudine *Ellampi coerulei* Dhlb.

Patria: Russia centrali-orientalis (Saratow, Eversm.!); Caucasus (Rad.); Turkestania (Osch, Rad.).

57. **Ellampus violascens** n. sp.

Nigro-violaceus, crassiusculus; clypeo et fossula supra antennas viridibus; cavitate faciali profunda, distincte, sed minus regulariter oblique-striata; mandibulis tarsisque rufo-testaceis, antennarum flagello fusco; capite supra, pro- et mesonoto sparsim sat crasse minus profunde, scutello crassius profundiusque punctatis; postscutelli mucrone subrectangulari, apicem versus tantum leniter angustato, apice rotundato; abdomine nigro-violaceo, densissime subtiliter punctulato, segmento tertio ante emarginaturam utrinque bisinuato; ventre viridi-cyaneo; alis sordide-hyalinis, venis fusco-testaceis. — ♀; long. 5 ½ mm.

Statura et magnitudine coloreque *Ellampo truncato* Dhlb. similis; sed postscutello mucronato, iam satis distinctus. — Etiam præcedenti similis; sed maior ac robustior, cavitate faciali magis distincte oblique-striata, pronoti disco non lævi, postscutelli mucrone apicem versus tantum leniter augustato et segmento tertio abdominis utrinque bisinuato, optime distinguendus.

Patria: Turkestania (Taschkend, Coll. Rad.).

Subgenus 2. DIPLLORRHOS Aar.

«Just above the snout-like truncated projection of the apex of third segment is a conical projection, forming the apex of a fold which extends on each side just above the apical and lateral margins.»

58. **Ellampus plicatus** Aar.

Diplorrhos (r. Diplorrhus) *plicatus*, Aar. Transact. Amer. Ent. Soc. XII. p. 216. ♂♀. tab. VI. fig. 18. (segm. anale) (1885).

«Color in some specimens bright green, with bluish and brassy reflections, and little, if any, purple; darkest or nearly blue on the occiput; other specimens dark blue with deep purple reflections, greenish on the punctured areas, one specimen green, with dark blue reflections, and some purple on the abdomen, and two others dark blue with purple and green, the dorsum of adomen shining black, the sides green and blue with a little purple; postscutellum as viewed laterally obtusely pointed and projecting a little posteriorly; the deep of the arcuations on margin of third abdominal segment varies in different specimens, as does also the distinct appearance of the submarginal fold; trun-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

cation of the apex as viewed laterally slightly rounded at the end, the notch very narrow, almost closed, the sides rounded, diverging; 2—3 teeth in the claw; 3.5—4.5 mm. long. ♂♀.

Montana, Colorado; nine specimens».

Patria: America septentrionalis.

Subgenus 3. ELLAMPUS mihi.

Postscutellum convexum, gibbum, obtuse vel subacute conicum. Femora antica et tibiæ posteriores normalia. Abdomen segmento dorsali tertio margine apicali in centro plus minusve distincte, in feminis profundius, quam in maribus excisum, apice ipso non reflexo. Unguiculi tarsorum infra plerumque multidenticulati (3—8).

I. *Abdominis dorsum cum capite thoraceque cupreo-aenea, nitida, segmentis dorsalibus duobus primis saepissime macula discoidali nigro-aenea.*

59. **Ellampus Horváthi** n. sp.

Ellampus Wesmaeli, Mocs. Chyrs. faun. Hung. p. 27 et 80, n. 7. ♂♀. (1882) (excl. syn.) (nec Chevr.).

Parvus, sat robustus, parcius cinereo-alboque pilosus; corpore toto cum abdomine, femoribus tibiisque et antennarum scapo cupreo-æneis; abdominis segmentis dorsalibus duobus primis macula discoidali nigro-ænea; cavitate faciali profunda, sublævi; mandibulis apice rufis; antennarum flagello nigro; pronoti parte postica mesonotoque sparsim crassius punctatis interstitiis latis lævibus; fronte densius, scutello et postscutello obtuse-conico vero dispersius punctato-reticulatis; abdominis segmento dorsali primo disco sublævi, punctis tantum aliquot valde sparsis subtilibus, secundo valde dense subtilissime, tertio subcoriaceo dispersius punctulatis, in centro marginis apicalis triangulariter minus profunde exciso lateribusque lenissime sinuatis; tarsis rufo-testaceis; alis basi hyalinis, apice late subfumatis, tegulis nigro-æneis. — ♂♀; long. 3 mm.

Variat in specimine e Sarepta, abdominis segmentis dorsalibus primis sine macula discoidali nigro-ænea.

Jucundam hanc speciem in honorem amici mei dilectissimi Geiza de Horváth, Entomologiæ cultoris celeberrimi, qui etiam faunam Hungariæ Hymenopterologicam iam tot detectionibus illustris ditavit, amicitiæ et venerationis meæ sinceræ causa, denominare optavi.

Patria: Austria inferior (Coll. Handlirschi!); Hungaria centralis et meridionalis, mense Julio sat rarus (Mocs.); Russia meridionalis (Sarepta, Coll. Schulthess-Rechbergi!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

II. *Abdominis dorsum viridi-cupreum, disco subobscurum; capite thoraceque aureo-violaceis (!), meso- et metathorace virescentibus, macula centrali fulgente aurea.*

60. **Ellampus nanus** SAUND.

Omalus nanus, Saund. Transact. Ent. Soc. Lond. p. 411. (1873).

«Aureo-violaceus, elongatulus; capite thorace, abdomineque, latitudine fere coæqualibus, punctatissimis; antennis nigricantibus; meso-metathoraceque viridescentibus, macula centrali fulgente-aurea; abdominis disco subobscuro, basi, apice, lateribusque viridi-cupreis; femoribus, tibiisque anterioribus viridi-violaceis; posticis, tarsisque omnibus, brunneis.

Long. corp. 4 mill.; expas. alar. 5 mill.

Exemplar unicum. In Mus. nostro».

Patria: Insulæ Jonicæ Græciæ.

Animadversio. — E tali descriptione animal cognosci nequit.

III. *Abdominis dorsum cum capite, thorace alarumque tegulis viridi-subaurata; post-scutello elevato subacute-conico.*

61. **Ellampus Sareptanus** n. sp.

Mediocris, elongatus, totus viridi-subauratus, parcius cinereo-alboque pilosus; cavitate faciali sat profunda, sublævi ac polita, lateribus coriaceo-rugulosa: antennis tenuibus, nigris, articulis duobus primis viridi-cyaneis; mandibulis apice rufis; fronte punctato-subreticulata, vertice et pronoto punctis sparsis minus profundis, interstitiis lævibus ac politis; mesonoti lobis lateralibus disco lævibus, lateribus et lobo medio antice posticeque valde sparsim punctatis, scutello et postscutello regulariter punctato-reticulatis, hoc elevato subacute-conico; abdominis segmentis dorsalibus: primo basi supra lævi, lateribus sparsim, secundo valde dense subtilissime punctulatis, tertio basi densissime subtilissimeque rugosiuscule-punctulato, parte apicali fortius rugoso-punctato, centro parum arcuato-exciso et utrinque leniter sinuato; segmentis ventralibus disco viridi-auratis; tibiarum apice tarsisque rufo-testaceis; alis parum sordide-hyalinis, venis fuscis. — ♀; long. 5 mm.

Species: colore corporis, forma postscutelli et punctatura mesonoti abdominisque facile cognoscitur.

Patria: Russia meridionalis (Sarepta, Mus. Cæs. Vindob.)

IV. *Abdominis dorsum cum capite, thorace alarumque tegulis viridi-aurata; postscutello elevato obtuse-conico.*

62. **Ellampus Schmiedeknechti** n. sp.

Mediocris, robustus, viridi-auratus, splendidus, parcius cinereo-alboque pilosus; scutello et postscutello abdominisque segmentis dorsalibus duobus ultimis lætius aura-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tis; cavitate faciali profunda, lævi ac polita; antennis tenuibus, nigris, scapo et articulo primo flagelli supra viridibus; pro- et mesonoto coriaceis, punctis sparsis sat magnis irregularibus minus distinctis non profundis; vertice dense minus profunde, scutello et postscutello elevato obtuse-conico fortius punctato-reticulatis; abdominis segmentis dorsalibus: primo disco sparsim, secundo dense, sed minus regulariter subtilissime punctulatis, tertio coriaceo rudius rugoso, lateribus leniter sinuatis, centro marginis apicalis in femina profunde, in mare levius triangulariter exciso; ventre, femoribus tibiisque et tarsorum articulis duobus primis supra viridi-auratis, articulis horum reliquis nigro-fuscis; alis hyalinis, apice late subfumatis iridescentibus, tegulis viridi- vel violaceo-cupreo auratis. — ♂♀; long. 4—4½ mm.

Species: colore et punctatura corporis iam facile cognoscitur.

Patria: Germania (Thuringia: Bibra penes Gumperda, mense Julio, Coll. Schmiedeknechti et Weissenfels, ab amico Friese inventus mihique donatus, Mus. Hung.).

V. *Abdominis dorsum auratum vel viridi-auratum (disco nonnihil macula vel vitta nigro-aenea); caput et thorax viridia et cyanea, saepius plus minusve violaceo-picta (solum in Ellampi aurati L. var. maculato Buyss. fronte thoraceque ex parte viridi-auratis).*

1) *Abdominis segmenti dorsalis tertii margo lateralis ante emarginaturam utrinque distincte bisinuatus.*

*

Conspectus specierum huius subsectionis.

1 (2). Postscutello convexo; pronoto regulariter fortius punctato ... ... *sculpticollis* Ab.

2 (1). Postscutello conico.

3 (4). Abdominis segmentis dorsalibus fortiter dense punctatis, tertii emarginationis lateribus in duos appendices productis («prolongés en forme de double queue») *appendicinus* Ab.

4 (3). Abdominis segmentis dorsalibus dense subtilissime irregulariter punctulatis, tertii emarginationis lateribus in appendices non productis.

5 (6). Cavitate faciali dense subtilissime irregulariter arcuatim transverse-striata; abdominis segmentis dorsalibus virescenti-auratis, duobus primis disco ænescentibus subobscuris. — Long. 3½ mm. ... ... *bidentulus* Lep.

6 (5). Cavitate faciali lævi ac polita; abdominis segmentis dorsalibus igneo-auratis splendidis. — Long 4—5 mm. ... ... *Wesmaeli* Chevr.

*

63. **Ellampus bidentulus** Lep.

Hedychrum bidentulus, Lep. Annal. du Mus. Hist. Nat. VII. p. 121, n. 3. tab. VII. fig. 4. ♂. (1806).
Elampus pusillus, Wesm. Bullet. Acad. Brux. VI. p. 173, n. 4. (1839) ex parte. — Chevr. Chrysid. du Léman, p. 108. (1862) (nec Fabr.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Elampus bidentulus, Dhlb. Hym. Europ. II. p. 39, n. 15. *var. b.* tab. II. fig. 37. a—38. (postscutellum et segm. anale) (1854). — Schck, Nass. Jahrb. XI. p. 59, n. 31. ex parte (b. et c.) (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 63. (1858). — Lampr. Goldwesp. Deutschl. p. 23, n. 80. (1881). — Frey, Chrys. Helvet. p. 32 et 33. (1887).
Elampus bidentatus, Eversm. Bullet. Soc. Nat. Moscou. **XXX.** Nro IV. p. 548. n. 4. (1857).
Elampus bidentulus var., Schck, Progr. Gymn. zu Weilb. p. 13, n. 28. (1870).
Omalus bidentulus, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18 et 23, tab. I. fig. 1. (unguic.) (1879).
Ellampus bidentulus, Mocs. Chrys. faun. Hung. p. 27 et 80, n. 6. ♂♀ (1882).

Subparvus, elongatus, viridi-cyaneus vel cyaneus verticeque post stemmata nonnunquam violascenti, parce pilosus; cavitate faciali profunda, dense subtilissime, sed irregulariter arcuatim transverse-striata; clypeo viridi-aurato; antennis nigris, scapo et articulo primo flagelli supra cyaneis vel virescentibus; vertice dense minus crasse subreticulatim, pronoto sparsim, mesonoto adhuc dispersius sat fortiter punctatis interstitiis lævibus; scutello et postscutello subacute conico-pyramidali crasse punctato-reticulatis; abdominis segmentis dorsalibus virescenti-auratis, duobus primis disco ænescentibus subobscuris, tertio sæpius parum igneo-aurato, primo disco interstitiis latis lævibus sparsim, lateribus et secundo dense subtilissime, tertio subcoriaceo parum dispersius fortiusque punctulatis, hoc in centro marginis apicalis triangulariter profunde exciso lateribusque fortius bisinuatis; ventre viridi, nigro- et cyaneo-maculato; pedibus viridibus vel cyaneo-viridibus, tarsis fuscis vel rufescentibus; alis basi hyalinis, apice late subfumatis iridescentibus, venis fuscis, tegulis nigro-piceis. — ♂♀; long. 3½ mm.

Patria: Anglia (Westw.); Gallia (Lep.); Italia (Costa); Græcia (Mus. Atheniense!); Belgium (Wesm.); Helvetia (Dhlb.); Germania (Dhlb.); Tyrolis (Dalla Torre et Kohl); Austria infer. (Coll. Handlirschi!); Hungaria (Mocs.); Polonia (Rad.); Russia (Kasan, Orenburg, Rad.; Ural, Eversm.).

64. **Ellampus Wesmæli** Chevr.

Elampus pusillus, Wesm. Bullet. Acad. Brux. VI. p. 173, n. 4. (1839) ex parte (nec Fabr.).
Elampus bidentulus, Dhlb. Hym. Europ. II. p. 39, n. 15. *var. a.* (1854). — Schck, Nass. Jahrb. XI. p. 59, n. 31. ex parte (tantum descriptio) (1856).
Elampus Wesmaeli, Chevr. Chrysid. du Léman, p. 110. (1862). — Frey, Chrys. Helvet. p. 32 et 33. (1887).
Elampus bidentulus, (Wesmæli Chevr.), Schck, Progr. Gymn. zu Weilb. p. 13, n. 28. (1870).
Omalus Wesmaeli, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18 et 22. tab. I. fig. 1. (unguic.) (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 245, n. 3. (1882).
Ellampus Wesmeli, Destef. Natural. Sicil. VII. p. 117. (1888).

Præcedenti simillimus; sed plerumque maior ac robustior magisque virescens, cavitate faciali lævi ac polita, postscutello obtuse-conico, abdominis segmentis dorsalibus igneo-auratis, certe distinctus. — ♂♀; long. 4—5 mm.

Patria: Sicilia (Destef.); Gallia (Ab. et Mus. Hung.); Græcia (Mus. Atheniense!); Belgium (Wesm.); Helvetia (Chevr.); Germania (Schck et Mus. Halense!); Austria

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

infer. (Coll. Handlirschi!); Hungaria, non rara (Mocs.); Russia meridionalis (Sarepta, Coll. Saussurei!); Sibiria (Mus. Hung.).

65. **Ellampus appendicinus** Ab.

Omalus appendicinus, Ab. Diagnos. Chrys. Nouvell. p. 2, n. IV. (1878); Annal. Soc. Linn. XXVI. p. 22. ♀. tab. I. fig. 1. (unguiculi) (1879).

«Long. 4·5 mill.

Vert blue, abdomen doré. Tête couverte de points ocellés, forts et serrés, moins gros, très-épars et irréguliers sur le vertex. Antennes noires, sauf le premier article. Pronotum ponctué comme le vertex, à points plus serrés sur les côtés. Mésonotum à points très-gros et très-rares. Côtés de la poitrine, écusson et postécusson couverts de gros points ocellés, réticulés, très-serrés. Postécusson conique. Abdomen à points fins et assez serrés, plus grossiers et aciculés sur le dernier segment; celui-ci comprimé sur les côtés, profondément échancré au bout en forme de cloche; les bords de cette incision prolongés et tronqués à leur sommet. Côtés de ce segment très-fortement bi-échancrés, le point qui sépare ces deux échancrures formant un angle obtus, il est vrai, mai vivement proéminent. Ventre vert bleuâtre. Pattes de même. Tarses d'un testacé sale. Crochets à 3 dents terminales.

Je ne connais qu'une ♀ de cette espèce, voisine du bidentulus, mais se reconnaissant aisément à l'exagération de ses charactères abdominaux. Elle vient de l'Ukraine, et m'a été donnée par M. le professeur Waga.»

Patria: Russia minor (Ukraina),

66. **Ellampus sculpticollis** Ab.

Omalus sculpticollis, Ab. Diagnos. Chrys. Nouvell. p. 2. n. III. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 21. ♂♀. tab. I. fig. 2. (unguiculi) (1879).

«Long. 5.5 mill.

Colorè comme l'*Omalus auratus*. Tête criblée de points gros et serrés, coriacée dans la cavité faciale et par devant; les deux premiers articles antennaires d'un doré brillant, les autres noirs. Pronotum ponctuè comme la tête, mais à points un peu plus forts. Mésonotum peu brillant et couvert d'une sorte de réticulation granulée très-subtile, ayant de larges points imprimés ça et là, disposés en deux lignes sur le disque, et aussi en lignes sur les côtés. Ecusson de même granulé-réticulé, marque de points gros et assez serrés vers les côtés et le bout. Postécusson modérément convexe, criblé de points plus fovéolés. Mésonotum sculpté de même. Abdomen à côtés subparallèles, beaucoup moins ovale que chez les autres *Omalus*, à points petits, mais assez profonds, bien visibles et non serrés; troisième segment à points plus gros et plus serrés, confluents et comme ruguleux sur les côtés; incision apicale triangulaire avec les côtés prolongés en angles aigus, les bords de cette incision noirs et formant comme un bour-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

relet; les côtés du troisième segment bisinués, le second sinus à peine visible. Pieds verts, brillants, tarses d'un testacé brun. Ventre vert, brillant d'or. Pubescence grise, plus forte sur la tête, le pronotum et le dernier segment. Ailes hyalines, enfumées vers le bout. Les crochets portent 4 dents terminales précédées d'une autre obtuse.

♂ Corps plus parallèle, dernier segment en triangle beaucoup plus court, côtés de l'incision moins prolongés. Ponctuation ventrale plus serrée.

Espéce des plus distinctes par sa taille, sa forme qui est plutôt celle d'une *Chrysis*, son incision abdominale particulière et surtout la ponctuation nette, régulière et forte du pronotum. J'en ai pris un exemplaire mort dans une tige de ronce en hiver; M. Ancey en a pris un second ♂ dans nos environs, et M. le Dr. Puton une ♀ à Lamalou.»

Patria: Gallia.

2) *Abdominis segmenti dorsalis tertii margo lateralis ante emarginaturam utrinque lenissime vel vix unisinuatus.*

*

Conspectus specierum huius subsectionis.

1 (4). Alis clarissime albo-hyalinis; abdominis segmentis dorsalibus duobus primis vitta mediana nigro-ænea.

2 (3). Capite thoraceque violaceis vel nigro-cyaneis; postscutello conico-obtuso; abdominis segmento dorsali secundo dense punctulato ... ... *parvulus* Dhlb.

3 (2). Thorace viridi-cyaneo, pro- et mesonoti disco virescentibus; postscutello gibbo-subhæmisphærico; abdominis segmento dorsali secundo sparsim punctulato interstitiis latis lævibus ... ... *socius* n. sp.

4 (1). Postscutello gibbo-subhæmisphærico; alis apice sordidis vel fumatis; abdominis segmentis dorsalibus duobus primis sine vitta (rarius tantum macula magna) nigro-ænea.

5 (6). Corpore plus minusve læte-viridi; vertice post stemmata, pronoti parte postica mesonotoque concinne subtiliter sat profunde valde sparsim punctulatis; abdominis segmento dorsali secundo quoque disperse punctulato ... *politus* Buyss.

6 (5). Corpore plerumque viridi-cyaneo vel cyaneo, rarius violascenti vel parum ænescenti (solum in *Ell. aurati* Linn. *var. maculato* Buyss. fronte vel etiam thorace ex parte viridi-auratis); vertice post stemmata, pronoti parte postica mesonotoque vel toto vel lobis tantum lateralibus valde sparsim irregulariter non profunde punctatis.

7 (8). Abdominis segmento dorsali secundo distincte dense punctulato *punctulatus* Dhlb.

8 (7). Abdominis segmento dorsali secundo valde sparsim punctulato vel lævi.

9 (10). Abdomine brevi, lato, longitudine fere æquilato, segmento secundo lævi, tertio in centro marginis apicalis minus profunde exciso ... ... *curtiventris* Tourn.

10 (9). Abdomine longo, latitudine fere duplo longiore, segmento secundo valde sparsim punctulato, tertio in centro marginis apicalis profunde exciso *auratus* Linn.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

a) *Postscutello conico-obtuso.*

67. **Ellampus parvulus** Dhlb.

Omalus parvulus, Dhlb. Hym. Europ. II. p. 31, n. 9. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 34, n. 4. (1887).

Parvus vel parvulus, minus robustus, violaceo-cyaneus vel nigro-cyaneus, parce pilosus; cavitate faciali sat profunda, lævi ac polita; antennis nigris, scapo viridi vel cyaneo; vertice post stemmata, pronoti parte postica et mesonoto sat sparsim fortius punctatis, hoc spatio lato longitudinali in medio lævi ac polito, scutello et postscutello gibbo-conico obtusoque punctato-reticulatis; abdominis segmentis dorsalibus igneo-auratis, primo secundoque vitta mediana nigro-ænea secundoque margine apicali concolori, primo disco fere lævi, punctis tantum aliquot subtilibus valde sparsis, lateribus et secundo concinne dense punctulatis, tertio subcoriaceo fortius punctato, in centro marginis apicalis leniter exciso, lobis mediocribus obtuse-triangularibus, lateribus vix sinuatis; ventre viridi-, cyaneo- et nigro-variegato; pedibus viridi-cyaneis, tibiis externe magis viridibus, tarsis fuscis vel rufescentibus; alis clarissime albo-hyalinis, iridescentibus, venis fuscis, tegulis nigro-piceis. — ♂♀; long. 3—3½ mm.

Ellampo punctulato Dhlb. similis et affinis; sed colore violaceo vel nigro-cyaneo, spatio lato longitudinali lævi ac polito in medio mesonoti, postscutello gibbo-conico, vitta mediana abdominis segmentis dorsalibus duobus primis punctaturaque parum fortiore magisque sparsa et alis clarissime albo-hyalinis, facile cognoscitur.

Patria: Hispania (Lusitania, Dhlb.; Madrid, Gogorza); Portugalia (Monchique, Coll. Hiendlmayri!); Insulæ Baleares (Ibiza in Pityusen, Coll. Friesei! et Mus. Hung.)

b) *Postscutello gibbo-subhaemisphaerico.*

68. **Ellampus socius** n. sp.

Parvulus, minus robustus, viridi-cyaneus, parce albo-pilosus; capite violaceo, pro- et mesonoti disco virescentibus; cavitate faciali profunda, lævi ac polita; antennis tenuibus, nigris, scapo nigro-violaceo; clypeo læte-viridi, mandibulis apice rufis; pronoti parte postica sat sparsim, mesonoti disco adhuc dispersius sat crasse punctatis, interstitiis latis lævibus; fronte cum vertice, scutello et postscutello gibbo-subhæmisphærico punctato-reticulatis; metanoti dentibus postico-lateralibus minutis, acutis; abdominis segmentis dorsalibus virescenti-auratis, primo et secundo vitta mediana et tertii basi late nigro-æneis, primo disco fere lævi, punctis tantum aliquo subtilibus valde sparsis, lateralibus et secundo sparsim, tertio dense subtiliter punctulatis, illis interstitiis sat latis lævibus, tertio in centro marginis apicalis leniter exciso, lobis late-triangularibus, lateribus vix sinuatis; ventre pedibusque viridi-cyaneis, tarsis rufescentibus; alis clarissime albo-hyalinis iridescentibus, venis fuscis, tegulis piceis, antice viridi-auratis. — ♂; long. 3½ mm.

Ellampo parvulo Dhlb. socius; sed thorace viridi-cyaneo, postscutello non conico-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

obtuso; abdominis segmentis dorsalibus virescenti-auratis, secundo sparsim (non dense) punctulato interstitiis latis lævibus. — Punctatura abdominis segmenti dorsalis secundi et alis clarissime albo-hyalinis, ab *Ellampo punctulato* Dhlb. quoque satis distinctus.

Patria: Algeria (Setif in Constantine, Coll. Saussurei!).

69. **Ellampus punctulatus** Dhlb.

Omalus punctulatus, Dhlb. Hym. Europ. II. p. 33, n. 11, tab. II. fig. 28 et 29—30 (thorax et segm. tertium) (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18, tab. I. fig. 4. (unguic.) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 156. (1879).
Elampus punctulatus, Frey, Chrys. Helvet. p. 32 et 34. (1887).
Ellampus punctulatus, Destef. Natural. Sicil. VII. p. 118. (1888).

Parvus vel parvulus, sat robustus, viridi-cyaneus, parce albo-pilosus; cavitate faciali, vertice post stemmata, pro- et mesonoti disco sæpius violascentibus; cavitate faciali profunda, lævi ac polita; antennis nigris, scapo viridi-cyaneo vel viridi; vertice post stemmata, pronoti parte postica mesonotoque sparsim minus profunde punctatis, scutello et postscutello gibbo-subhæmisphærico punctato-reticulatis; abdominis segmentis dorsalibus virescenti- vel igneo-auratis, primo disco valde sparsim, lateribus et secundo dense subtilissime, tertio parum fortius punctulatis, hoc in centro marginis apicalis leniter emarginato, lobis mediocribus obtuse-triangularibus, lateribus vix sinuatis; ventre æneo-, cyaneo-, viridi- et aureo-variegato; pedibus cyaneo-viridibus, tibiis externe magis viridibus, tarsis fuscis; alis basi hyalinis, apice sordidis, tegulis viridi-æneis. — ♂♀; long. 3—3½ mm.

Exemplaribus minutis *Ellampi aurati* Linn. similis; sed abdominis segmentis dorsalibus undique distincte dense punctulatis, tertio in centro marginis apicalis tantum leniter exciso, bene distinctus.

Patria: Gallia meridionalis (Dhlb.); Sardinia (Costa); Sicilia (Costa); Italia (Calabria, Costa); Helvetia (Frey et Mus. Hung.); Caucasus (Coll. Rad.!).

70. **Ellampus politus** Buyss.

Omalus politus, Buyss. Revue d'Entom. VI. p. 168, n. 1. ♂♀. (1887) sec. spec. typ. e coll. Buyssoni.

Parvus vel submediocris, sat robustus, plus minusve læte-viridis, splendidus, parce pilosus; capite magis cyanescenti vel circa stemmata postica violascenti; cavitate faciali sat profunda, lævi ac polita; antennis brevibus, nigris, scapo et articulo primo flagelli viridi-cyaneis; mandibulis apice piceis; fronte sat sparsim minus profunde punctata; vertice post stemmata et pronoti parte postica valde sparsim, mesonoto parum densius subtiliter punctulatis interstitiis latis lævibus, scutello et postscutello gibbo-subhæmisphærico fortius punctato-reticulatis, illo summa basi spatio lævi; abdominis segmentis dorsalibus igneo- vel pure-auratis parumque virescentibus, primo disco sublævi, punctis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

minutissimis aliquot tantum sparsis, lateribus et secundo disperse punctulatis, tertio subcoriaceo parum densius subtiliter punctato, in centro marginis apicalis minus profunde exciso lateribusque leniter sinuatis; ventralibus: primo nigro, reliquis plus minusve auratis; pedibus viridibus vel viridi-cyaneis, tarsis brunneis, unguiculis quadridenticulatis, denticulis successive minoribus, ultimo minutissimo; alis subhyalinis, apice parum fumatis, venis fuscis, tegulis nigro-æneis basi viridi-maculatis. — ♂♀; long. 3½—4½ mm.

Exemplaribus minutus *Ellampi aurati* Linn. similis; sed capite thoraceque magis viridibus, splendidis, vertice post stemmata, pronoti parte postica mesonotoque concinne subtiliter valde sparsim punctulatis, abdominis segmento dorsali tertio in centro marginis apicalis minus profunde exciso, iam satis distinctus.

Patria: Gallia (Marseille, Buyss.); Syria (Coll. Buyssoni!, Wüstneii!, Handlirschi et e Kaifa Mus. Hung.); Aegyptus (Buyss.).

71. **Ellampus auratus** Linn.

Chrysis aurata, Linn. Faun. Suec. Ed. II. p. 414, n. 1666. (1761); Syst. Nat. Ed. XII. T. I. P. II. p. 948, n. 4. (1767). — Fabr. Syst. Ent. p. 359, n. 10. (1775). — Muell. Stad. Linnée's Natursyst. der Ins. Bd. II. Theil V. p. 876, n. 4. (1775). — Fabr. Spec. Ins. I. p. 456, n. 13. (1781). — Schck, Enum. Ins. Austr. p. 388, n. 785. (1781). — Fabr. Mant. Ins. I. p. 284, n. 16. (1787). — Vill. Linn. Ent. III. p. 256, n. 4. (1789). — Rossi, Faun. Etr. II. p. 75, n. 844. (1790). — Oliv. Encycl. Méth. Ins. V. p. 675, n. 18. (1790). — Christ, Naturg. p. 399. tab. 44, fig. 4. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2746, n. 4. (1792). — Rossi, Mant. Ins. I. p. 134, n. 296. (1792). — Fabr. Ent. Syst. II. p. 242, n. 18. (1793). — Panz. Faun. Ins. Germ. fasc. 51, tab. 8. (1798). — Cederj. Faun. Ingr. prodrom. p. 167. (1798). — Schck, Faun. Boica. T. II. P. II. p. 345, n. 2200. (1802). — Walcken. Faun. Parisien. II. p. 85, n. 3. (1802). — Fabr. Syst. Piez. p. 175, n. 25. (1804). — Illig. Rossi Faun. Etr. Ed. II. Tom. II. p. 121, n. 844. (1807). — Dhlb. Monogr. Chrys. Suec. p. 16, n. 14. ♂♀. (1829).

Vespa aurata, Fourcr. Entom. Paris. II. p. 441, n. 26. (1785).

Hedychrum auratum, Latr. Hist. nat. XIII. p. 239, n. 1. (1805). — Panz. Krit. Rev. II. p. 105. (1806). — Lep. Annal. du Mus. Hist. nat. VII. p. 12, n. 1. ♂♀. (1806). — Schuck. Ent. Mag. IV. p. 184, n. 7. (1837).

Elampus auratus, Wesm. Bullet. Acad. Brux. VI. p. 171, n. 1. (1839). — Schck, Nass. Jahrb. XI. p. 54, n. 27. (1856). — Chevr. Chrys. du Léman, p. 101. ♂♀. (1862). — Lampr. Goldwesp. Deutschl. p. 23, n. 76. (1881). — Frey, Chrys. Helvet. p. 32 et 34. (1887).

Hedychrum minimum, Duf. et Perr. Annal. Soc. Ent. France. IX. p. 39, n. 20. (1840).

Omalus auratus, Dhlb. Dispos. IV. p. 5, n. 1. (1845); Hym. Europ. II. p. 26, n. 8, tab. II. fig. 17—25. (partes corporis) (1854) ex parte. — Eversm. Bullet. Soc. Nat. Moscou. Nr. IV. p. 546, n. 1. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 62. (1858). — Smith, Entom. Annual, p. 101. (1862). — Gir. Verh. Zoolog.-Botan. Gesellsch. Wien. XIII. p. 1287, n. 6. (1863). — Thoms. Opusc. Ent. II. p. 102, n. 1. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 2, n. 2. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18 et 23, tab. I. fig. 3. (unguic.) (1879). — Heyd. Ber. Senkenb. Naturf. Ges. p. 245, n. 4. (1882).

Ellampus auratus, Schck, Progr. Gymn. zu Weilb. p. 13, n. 25. (1870). — Mocs. Chrys. faun. Hung. p. 29, n. 10. ♂♀. (1882). — Destef. Natural. Sicil. VII. p. 116. (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Parvus vel submediocris, viridi-cyaneus vel cyaneus, rarius violacens vel parum ænescens, dense longius cinereo-alboque pilosus; cavitate faciali profunda, lævi ac polita; antennis tenuibus, nigro-fuscis, scapo et articulis duobus primis vel tantum primo flagelli cyaneis vel viridibus; fronte dense minus profunde punctato-reticulata: vertice post stemmata, pronoti parte postica mesonotique lobis lateralibus valde sparsim irregulariter non profunde punctatis interstitiis latis lævibus, mesonoto basi spatio lato lævi ac polito, parte postica, scutello et postscutello gibbo-subhæmisphærico fortius punctato-reticulatis; abdominis segmentis dorsalibus sæpissime rubro-auratis nitore in lateribus viridi, rarius igneo-auratis, macula discoidali sæpius in segmentis duobus primis nigro-ænea, primo in medio punctis minutis aliquot tantum bene distinctis, secundo punctis simillibus sparsis interstitiisque latis lævibus, tertio subcoriaceo densius fortiusque punctato, in centro marginis apicalis profunde exciso, emarginatura campanæ formam habens seu basi subarcuata, lateribus utrinque lenissime sinuatis; ventre plerumque viridi-aurato splendido-nigroque maculato; femoribus tibiisque et tarsorum posticorum articulo primo supra viridibus vel cyaneo-viridibus, articulis horum reliquis fuscis vel parum rufescentibus; alis basi hyalinis, apice late fortiter fumatis, venis fuscis, tegulis cyaneis vel viridi-cyaneis. — ♂♀; long. 3—4½ mm.

Patria: Europa fere tota cum Caucaso, Turkestania et Algeria (Setif in Constantine, Coll. Saussurei!).

var. triangulifer Ab.

Omalus triangulifer, Ab. Feuille Jeun. Natural. VII. p. 65, n. 1. (1877).
Omalus auratus L. *var. triangulifer*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18 et 23. (1879). — Frey, Chrys. Helvet. p. 32 et 34, tab. III. fig. 11. (segm. anale) (1887).

Typo simillimus; sed plerumque maior, emarginatura centrali marginis apicalis abdominis segmenti dorsalis tertii triangulari. Long. 5—7 mm. — Patria: Galliæ montes (Ab.); Helvetia (Frey); Hungaria septentrionalis (Mus. Hung.).

var. abdominalis Buyss.

Omalus auratus L. *var. abdominalis*, Buyss. Revue d'Entom. VI. p. 169, n. 3. (1887).

«Diffère du type par son abdomen d'un doré feu plus éclatant, et par son postécusson plus gibbeux.» — Patria: Syria.

var. virescens mihi.

Typo simillimus; sed scutello et postscutello plus minusve viridi-subauratis, abdominis segmentis dorsalibus viridi-auratis splendidis, unicoloribus vel macula discoidali nigro-ænea, secundo tertioque parum densius punctulatis, tertii emarginatura centrali triangulari, geniculis et tibiarum apice vel totis tibiis viridi-auratis, vel femoribus tibiisque læte-cyaneis, tarsis rufescentibus. Long. 3—4½ mm. — Patria: Russia meridionalis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

(Sarepta, Coll. Schultess-Rechbergi! et Saussurei!); Romania (Dobrutscha, Mus. Hung.); Hungaria centralis (Mus. Hung.).

var. Gasperinii mihi.

Typo simillimus; sed capite thoraceque nigro-cyaneis parumque violascentibus, pronoti parte postica mesonotoque toto sublævibus vix punctulatis, abdominis segmentis dorsalibus viridi-auratis, duobus primis macula discoidali magna nigro-ænea, secundo disco adhuc subtilius punctulatis. ♂♀; long. 3½—4 mm. — Patria: Dalmatia, a Dom. Gasperini detectus (Coll. Gasperinii et Mus. Hung.).

var. cupratus mihi.

Typo simillimus; sed abdominis segmentis dorsalibus nitore eleganti rubro-cuprato, duobus primis macula discoidali magna nigro-ænea, tertio emarginatura centrali minus profunde-arcuata. ♀; long. 4 mm. — Patria: Dalmatia (Mus. Hung.).

var. maculatus Buyss.

Omalus auratus L. *var. maculatus*, Buyss. Revue d'Entom. VI. p. 170, n. 4. (1887) sec. spec. typ. e coll. Buyssoni.

Typo simillimus; sed fronte solum vel etiam lateribus faciei pronotique, pleuris, sæpius etiam scutello plus minusve læte viridi-auratis, abdominis segmentis dorsalibus duobus primis macula discoidali magna nigro-ænea. Long. 3 mm. — Patria: Gallia (Buyss.); Hungaria septentrionalis (Mus. Hung.).

72. **Ellampus curtiventris** Tourn.

Omalus curtiventris, Tourn. Annal. Soc. Ent. Belg. XII. p. 88. ♂♀. (1879).

«Long. 4½—5 mill.

♂♀. Cet *Omalus* a des rapports intimes avec l'*Omalus auratus* Dahlb.; il s'en distingue par l'abdomen, qui est beaucoup plus court, relativement plus large, plus convexe, par le troisème segment de l'abdomen autrement incisé à l'extrémité, etc.

Corps parcimonieusement paré d'un pubescence très-fine, courte, grisâtre. Coloris variant chez les trois exemplaires que j'ai sous les yeux. La tête et le thorax sont d'un beau bleu, légèrement lavé de vert; le scutellum et le postscutellum sont noirs; cuisses et tibias verts, brillants; l'abdomeu est très-brillant: chez l'un des sujets, il est d'un beau rougeâtre doré, chez un autre, il est vert doré, enfin chez le troisième, il est d'un vert cuivreux foncé, presque noir sur le disque; mandibules rousses, antennes noires avec les deux premiers articles verts; tarses noirs. Tête avec l'impression faciale large, arrondie à son sommet et remontant moins haut vers les ocelles que chez *O. auratus* Dahlb.; la ponctuation du front est formée de gros points ronds, plus gros et par suite beaucoup moins nombreux que chez *O. auratus* Dahlb., le sommet de la tête derrière les ocelles est entièrement lisse. Le bord antérieur et les côtés du pronotum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

sont marqués de quelques gros points variolés, le reste de ce segment est lisse, avec quelques points ronds, larges, superficiels; le mesonotum est lisse antérieurement; il est marqué postérieurement et sur les côtés près du compartiment médian, de points peu profonds, ronds, très-grands; les autres parties du thorax sont ponctuées à peu prés comme chez O. *auratus* Dahlb., mais les points sont plus grands, moins nombreux, quoique aussi serrés. L'abdomen, vu de profil, est presque aussi haut qu'il est long, tandis que chez *auratus* Dahlb., il est presque deux fois aussi long qu'il est haut; les deux premiers segments sont lisses, le troisième offre surtout postérieurement quelques gros points, larges, épars, superficiels: il est postérieurement plus régulièrement arrondi, moins étiré en pointe que chez *auratus* Dahlb., l'incision terminale est moins ouverte, beaucoup moins anguleuse, presque parallèle sur les côtés, arrondie dans le fond.»

Patria: Russia meridionalis (Sarepta).

VI. *Abdominis segmenta dorsalia duo prima igneo- vel virescenti-aurata cum macula vel vitta mediana nigro-aenea vel nigro-coerulea, tertium viridi-cyaneum, in centro marginis apicalis minus profunde emarginatum; caput et thorax cyaneo-viridia vel ex parte viridi-aurata.*

73. **Ellampus Rudowi** Buyss.

Ellampus punctulatus, Mocs. Chrys. faun. Hung. p. 30 et 80, n. 11. ♀. (1882) (nec Dahlb.).
Omalus Rudowi, Buyss. Revue d'Entom. VI. p. 169, n. 2. ♂♀. (1887) sec. spec. typ. e coll. Buyssoni.

Parvus, sat robustus, viridi-cyaneus (in uno specimine e Sarepta thoracis dorso parum viridi-aurato), parcius cinereo-alboque pilosus; cavitate faciali profunda, dense subtilissime longitudinaliter striata; antennis tenuibus, nigris, scapo et articulo primo flagelli viridi-cyaneis; fronte, scutello et postscutello gibbo leniterque obtuse-conico punctato-reticulatis; vertice post stemmata, pronoti parte postica sat sparsim, mesonoto adhuc dispersius minus profunde punctatis interstitiis lævibus; abdominis segmentis dorsalibus duobus primis igneo- vel virescenti-auratis cum macula vel vitta mediana nigro-ænea vel nigro-cœrulea, tertio viridi-cyaneo, primo disco sublævi punctis minutis tantum aliquot valde sparsis, lateribus et secundo dense subtilissime punctulatis, tertio subcoriaceo fortius irregulariter punctato, in centro marginis apicalis minus profunde exciso, lobis mediocribus obtuse-triangularibus, lateribus lenissime sinuatis; ventre nigro-æneo vel virescenti; pedibus viridi-cyaneis, tibiis externe nonnunquam viridi-auratis, tarsis fuscis vel parum rufescentibus, unguiculis quadridenticulatis; alis sordide-hyalinis, venis fuscis, tegulis nigro-æneis, antice viridibus. — ♂♀; long. 3—3½ mm.

Statura et magnitudine sculpturaque *Ellampo punctulato* Dhlb. similis; sed cavitate faciali dense subtilissime longitudinaliter striata, abdominis segmentis dorsalibus duobus primis macula vel vitta mediana nigro-ænea vel nigro-cœrulea, tertio viridi-cyaneo.

Patria: Hungaria centralis (Mocs.); Istria (Pola, Coll. Handlirschi!); Græcia

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

(Attica, Buyss. et Mus. Halense!); Russia meridionalis (Sarepta, Coll. Schultess-Rechbergi!).

VII. *Abdominis dorsum viride, cyaneum vel viridi-cyaneum, disco nonnihil plus minusve violascens, aenescens, atro- vel nigro-aeneo-maculatum* (in *Ellampo aeneo* et *punctícollo* segmento tertio viridi-subaurato; in *Ellampi aenei var. blando* Först. totum viridi- vel cupreo-auratum). — *Corpus quoque viride, cyaneum vel viridi-cyaneum, vertice, pro- et mesonoti disco saepius violaceis* (in *Ellampi punctícollis* varietate: vertice et thorace atro-æneis, nitidis; in *Ellampi aenei var. blando:* capite antice, pronoti parte antica, scutello et metathorace pleurisque viridi- vel cupreo-auratis, vertice post stemmata, pronoti parte postica mesonotoque nigro-, violascenti- vel cupreo-æneis).

*

Conspectus specierum huius sectionis e regione palæarctica.

1 (4). Pronoti parte postica mesonotoque fere lævibus, punctis tantum aliquot valde sparsis, minutis.

2 (3). Cavitate faciali a stemmate longe remota; alis anticis parte apicali late saturate fumosis; abdominis segmento dorsali secundo sparsim subtiliter punctulato, tertio in centro marginis apicalis sat profunde exciso . . . . . *aeneus* Fabr.

3 (2). Cavitate faciali a stemmate haud longe remota; alis albo-hyalinis; abdominis segmentis dorsalibus duobus primis disco lævibus ac politis, tertio in centro marginis apicalis lenissime exciso . . . . . *imbecillus* n. sp.

4 (1). Pronoti parte postica mesonotoque plus minusve fortiter distincte punctatis.

5 (6). Cavitate faciali irregulariter coriaceo-rugosa; postscutello gibbo obtuse-conico-pyramidali; abdominis segmenti dorsalis tertii margine laterali ante emarginaturam utrinque bisinuato, ad centrum truncato-emarginato . *truncatus* Dhlb.

6 (5). Cavitate faciali lævi ac polita; postscutello gibbo-convexo vel gibbo-subconico; abdominis segmenti dorsalis tertii margine laterali ante emarginaturam utrinque lenissime vel vix unisinuato, ad centrum non truncato-emarginato.

7 (8). Mesonoti lobo medio antice lævi ac polito, postice lobisque lateralibus sparsim, illo profunde, his leviter punctatis, pronoti parte postica sparsim profunde punctato; alis apice fortiter fumosis, basi hyalinis; abdominis segmento tertio in centro marginis apicalis sat profunde triangulariter exciso *puncticollis* Mocs.

8 (7). Mesonoti lobo medio antice non lævi ac polito; pronoti parte postica mesonotoque sparsim minus fortiter profundeque punctatis.

9 (10). Antennarum articulis quinque primis cyaneis; alis sordide-hyalinis basi vix dilutioribus; abdominis segmento tertio in centro marginis apicalis tantum leniter emarginato . . . . . *similis* n. sp.

10 (9). Antennarum articulis tantum duobus primis viridibus, cyaneis vel viridi-cyaneis; alis parum sordidis vel basi hyalinis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

11 (12). Postscutello gibbo-subconico; alis apice late fumatis, basi hyalinis; abdominis segmento tertio in centro marginis apicalis triangulariter profunde exciso *pusillus* FABR.

12 (11). Postscutello gibbo-convexo; alis modice sordidis; abdominis segmento tertio in centro marginis apicalis tantum leniter exciso *Turkestanicus* n. sp.

*

a) *Abdominis segmenti dorsalis tertii margo lateralis ante emarginaturam utrinque bisinuatus.*

74. **Ellampus truncatus** DHLB.

Chrysis truncata, Dhlb. Exerc. Hym. p. 35, n. 18. (1831—33).
Elampus minutus, Dhlb. Dispos. p. 5, n. 2. (1845).
Elampus violaceus, Wesm. Bullet. Acad. Brux. VI. p. 171, n. 2. (1839) ex parte.
Notozus anomalus, Först. Ver. nat. Ver. preuss. Rheinl. X. p. 337, n. 91. ♂. (1853). — Schck, Nass. Jahrb. XI. p. 84, n. 11. (1856); Progr. Gymn. zu Weilb. p. 16. n. 30. (1870). — Lampr. Goldwesp. Deutschl. p. 24, n. 83. (1881).
Elampus truncatus, Dhlb. Hym. Europ. II. p. 42, n. 18. tab. III. fig. 43 a.—44. b. (postscutellum et segm. anale) (1854). — Schck, Nass. Jahrb. XI. p. 82, n. 7. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 549, n. 6. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 63. (1858). — Chevr. Chrysid. du Léman, p. 111. ♂♀. (1862). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 299, n. 8, tab. II. fig. 5. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 4, n. 7. (1877). — Frey, Chrys. Helvet. p. 32 et 33. (1887).
Elampus coeruleus, Thoms. Opusc. Ent. II. p. 104, n. 3. (1870).
Ellampus truncatus, Schck, Progr. Gymn. zu Weilb. p. 16, n. 29. (1870). — Mocs. Chrys. faun. Hung. p. 28 et 80, n. 9. ♂♀. (1882).
Omalus truncatus, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 18. tab. I. fig. 3. (unguic.) (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 245, n. 2. (1882).
Notozus truncatus, Lampr. Goldwesp. Deutschl. p. 24, n. 82. (1881).

Mediocris, elongatus, viridi-cyaneus vel cyaneus, parcius cinereo-alboque pilosus; vertice, pro- et mesonoti disco sæpius violaceis; cavitate faciali sat profunda, irregulariter coriaceo-rugosa; antennis tenuibus, nigris, scapo viridi-cyaneo; vertice post stemmata minus fortiter, pronoti parte postica mesonotoque fortius sparsim punctatis interstitiis latis lævibus; fronte subreticulata; scutello, postscutello pleurisque regulariter punctato-reticulatis, gibbositate metanoti obtuse-conico-pyramidali, brevi; abdomine viridi-cyaneo, plus minusve, præsertim disco, violascenti, primo in medio fere lævi, lateribus et secundo dense subtiliter punctulatis. tertio subcoriaceo magis virescenti vel viridi-subaurato fortius irregulariter punctato, ad centrum marginis apicalis truncato-emarginato, lobis magnis triangularibus, emarginatura aut lata, aut obtuse subtriangulari marginataque, lateribus utrinque bisinuatis, sinu superiore minus distincto, inferiore testaceo-scarioso et nonnihil pellucido sat profunde subarcuato; ventre læte-viridi et cyaneo; pedibus viridi-cyaneis, tarsis brunneis vel fusco-brunneis; alis anticis parte basali clare hyalinis, venis brunneis, parte apicali saturate brunneo-fumosis, tegulis nigro-æneis, lævibus. — ♂♀; long. $4^1/_2$—5 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Ellampo bidentulo Lep. similis et affinis; sed colore corporis magis cyaneo, segmento abdominis tertio emarginatura lata subarcuata marginataque, præsertim distinctus.

Patria : Suecia (Dhlb.); Scandinavia (Dhlb.); Germania (Dhlb.); Gallia (Court.); Helvetia (Chevr.); Belgium (Wesm.); Tyrolis septentrionalis (Kohl); Austria ad Vindobam (Mus. Dresdense! et Coll. Handlirschi!); Hungaria (Mocs.); provinciæ Uralenses (Eversm.); Gubernium Mosquense (Assmuss); Kasan, Kiew, Caucasus, Turkestania (Rad.); Turcia ad Bosphorum (Dhlb.); Aegyptus (Ab.).

b) *Abdominis segmenti dorsalis tertii margo lateralis ante emarginaturam utrinque lenissime vel vix unisinuatus.*

75. **Ellampus similis** n. sp.

Mediocris, elongatus, viridi-cyaneus, parcius cinereo-alboque pilosus; vertice, pro- et mesonoti disco violascentibus; cavitate faciali profunda, lævi ac polita: antennis tenuibus, nigris, scapo et articulis quattuor primis flagelli cyaneis; fronte irregulariter punctato-subreticulata; vertice post stemmata punctis tantum aliquot sparsis minus profundis, pronoti mesonotique parte postica sparsim paulo fortius punctatis interstitiis lævibus (sicut in *Ellampo aurato*), scutello et postscutello gibbo-convexo regulariter punctato-reticulatis; abdomine cyaneo-viridi, segmento secundo dorsali disco violascenti, primo in medio sublævi, lateribus et secundo sat sparsim subtiliter punctulatis, tertio subcoriaceo parum fortius irregulariter punctato, in centro marginis apicalis parum testaceo-pellucido leniter emarginato, lateribus utrinque vix sinuatis; ventre, femoribus tibiisque et tarsorum posticorum articulo primo cyaneo-viridibus, his articulis reliquis fuscis; alis sordide-hyalinis, basi vix dilutioribus, venis pallidis, tegulis violaceis, lævibus ac politis. — ♂; long. 4 1/2 mm.

Statura et magnitudine coloreque præcedenti similis; sed cavitate faciali lævi ac polita, antennarum articulis quinque primis cyaneis, pro- et mesonoti disco non tam crasse punctatis, postscutello gibbo-convexo et abdominis segmento tertio lateribus non bisinuatis, distinctus.

Patria: Hungaria (Transsilvania apud Nagy-Csűr, Mus. Hung.).

76. **Ellampus æneus** Farb.

Chrysis aenea, Fabr. Mant. Ins. I. p. 284, n. 15. (1787). — Oliv. Encycl. Méth. Ins. V. p. 675, n. 17. (1790). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2746, n. 17. (1792). — Fabr. Ent. Syst. II. p. 242, n. 17. (1793). — Panz. Faun. Ins. Germ. fasc. 51, tab. 7. (1798). — Coqueb. Illustr Icon. Ins. Dec. II. p. 60. tab. 14. fig. 9. (1801). — Fabr. Syst. Piez. p. 175, n. 24. (1804). — Dhlb. Monogr. Chrys. Suec. p. 17, n. 6. (1829).

Omalus aeneus, Panz. Faun. Ins. Germ. fasc. 85, tab. 13. ♂. (1805). — Dhlb. Dispos. p. 5, n. 2. (1845); Hym. Europ. II. p. 35, n. 13, tab. II. fig. 33. a 34. (thorax et segm. anale) (1854). — Smith, Entom. Annual, p. 102. (1862). — Thoms. Opusc. Ent. II. p. 103, n. 3. (1870). — Rad.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Fedts. Reise in Turkest. Hym. Chrysid. p. 3, n. 5. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 19. tab. I. fig. 5. (unguic.) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 156. (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 246, n. 7. (1882).

Hedychrum nitidum, Panz. Krit. Rev. II. p. 105. ♂. (1806) (excl. ♀).

Chrysis coerulea, Dhlb. Exerc. Hym. p. 33, n. 17. *var.* b. (1831—33).

Hedychrum bidentulum var. 2 -4. bidentulum, viride, aenea, Shuck. Ent. Mag. IV. p. 175. (1837).

Elampus affinis, Wesm. Bullet. Acad. Brux. VI. p. 172, n. 3. (1839). — Chevr. Chrysid. du Léman, p. 104. (1862).

Elampus chlorosoma, Luc. Expor. d'Algér. Zoolog. III. p. 311, n. 353. (1879) (teste Abeille).

Ellampus aeneus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 342. (1853). — Schck, Progr. Gymn. zu. Weilb. p. 13, n. 26. (1870). — Mocs. Chrys. faun. Hung. p. 30 et 80, n. 12. ♂♀. tab. I. fig. 4. (unguic.).

Elampus aeneus, Schck, Nass. Jahrb. XI. p. 56, n. 28. (1856). — Lampr. Goldwesp. Deutschl. p. 23, n. 77. (1881). — Frey, Chrys. Helvet. p. 33 et 35. (1887).

Elampus pygmaeus, Schck. Nass. Jahrb. XI. p. 58, n. 30. (1856). — Lampr. Goldwesp. Deutschl. p. 23, n. 79. (1881).

Omalus nitidulus, Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 156. (1879).

Mediocris, sat robustus, viridi-cyaneus vel cyaneus, parcius cinereo-alboque pilosus; vertice post stemmata, pro- et mesonoti disco sæpissime violascentibus; cavitate faciali a stemmate longe remota sat profunda, sæpius violascenti vel virescenti, lævi ac polita, lateribus dense punctato-coriacea; antennis crassiusculis, nigris, scapo et articulo primo flagelli viridibus; clypeo sæpius viridi-subaurato, mandibulis apice rufis; vertice post stemmata irregulariter sat sparsim minus profunde punctulato; pronoti parte postica mesonotoque sublævibus, punctis aliquot valde sparsis microscopicis, scutelli basi et disco spatio lævi; fronte sat dense minus fortiter, scutello sparsim crasse, postscutello gibbo-convexo fortiter punctato-reticulatis; abdominis segmentis dorsalibus viridi-cyaneis, splendidis, duobus primis disco sæpius macula magna violacea vel nigro-ænea, tertio plerumque viridi-subaurato, primo disco lævi, secundo sparsim subtilissime, tertio subcoriaceo multo densius fortiusque punctulatis, hoc in centro marginis apicalis sat profunde exciso, lobis subrotundatis, lateribus marginatis utrinque vix sinuatis; ventre læte-viridi vel viridi-aurato limbo piceo, vel toto viridi-aurato; pedibus viridibus vel viridi-auratis, tarsis fuscis vel parum rufescentibus; alis basi hyalinis, venis brunneis, apice saturate fumosis, tegulis nigro-æneis, politis, antice virescentibus vel violascentibus. — ♂♀; long. 5—6 mm.

Species: de pro- et mesonoto facile cognoscitur.

Patria: Europa fere tota, inde a Lapponia maxime meridionali, cum Caucaso Turkestaniaque et Algeria.

var. blandus Först.

Ellampus blandus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 351, n. 98. ♂. (1853).

Typo sculptura penitus similis; sed capite antice, pronoti parte antica, scutello et metathorace (postscutello nonnunquam nigro-æneo excepto) pleurisque viridi- vel cu-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

preo-auratis; vertice post stemmata, pronoti parte postica et mesonoto toto nigro-, violascenti- vel cupreo-æneis; abdominis segmentis dorsalibus viridi- vel cupreo-auratis, primis duobus macula magna discoidali nigro-ænea; ventre cupreo-, femoribus tibiisque viridi-auratis. — ♂♀; long. 5—5½ mm. — Patria: ? Europa meridionalis (Först.); Hungaria centralis (Mus. Hung.).

var. Chevrieri Tourn.

Elampus Chevrieri, Tourn. Petit. Nouv. Entom. II. p. 105. (1877). — Frey, Chrys. Helvet. p. 33 et 36. (1887).

Omalus aeneus Panz. *var. Chevrieri*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 25 et 104. (1879).

Typo simillimus; sed multo minor, 3—4 mm. longus, vertice post stemmata, pronoti parte postica, mesonoto et abdominis segmentis dorsalibus duobus primis disco atro-æneis, tarsis dilutioribus. — Patria: Gallia (Ab.); Helvetia (Tourn.); Germania (Thuringia, Coll. Schmiedeknechti!); Tyrolis (Coll. Handlirschi!); Austria (Mus. Vindob.!); Hungaria (Mocs.) — præsertim in regionibus montanis.

var. pygialis Bouiss.

Omalus æneus Panz. *var. pygialis*, Buyss. Revue d'Entom. VI. p. 170, n. 5. (1887).

«Diffèrre du type par son troisième segment blue comme les deux premiers. Notre variété a l'avant-corps moins brillant, moins lisse, et porte 4 crochets aux ongles des tarses; le type porte 5 crochets.» — Patria: Caucasus et China (Coll. Abeillei).

77. **Ellampus imbecillus** n. sp.

Parvulus, viridis, nitens, parce albo-pilosus; vertice, pro- et mesonoti disco plus minusve violascentibus; cavitate faciali profunda, lævi ac polita, violaceo-nitenti; antennis fuscis, articulis duobus primis viridi-cyaneis; fronte inæqualiter minus profunde sparsius punctato-subreticulata; vertice post stemmata, pronoti parte postica mesonotoque fere lævibus, punctis tantum aliquot valde sparsis, scutello et postscutello parum viridi-auratis fortius punctato-reticulatis, illo basi lævi, postscutello gibbo-convexo; abdominis segmentis dorsalibus cyaneo-viridibus, disco violascentibus (in speciminibus e Turkestania) vel viridibus (e Persia ortis), splendidis, segmentis duobus primis disco lævibus ac politis, lateribus et tertio solum punctatura visibili subtili valde sparsa, tertio apice in medio lenissime exciso lateribusque vix sinuatis; ventre læte-viridi et cyaneo, segmento secundo violascenti; pedibus viridibus, tarsis rufescenti-testaceis; alis albo-hyalinis, venis pallidis, tegulis violascentibus. — ♀; long. 3 mm.

Ellampo pusillo Fabr. et *Turkestanico* mihi similis et affinis; sed præter alias notas ab ambabus speciebus: abdominis segmentis dorsalibus duobus primis disco lævibus ac politis, alis pure albo-hyalinis, iam satis distinctus. — Quoad sculpturam thoracis *Ellampi aenei* Fabr. socius.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Patria: Persia (Ashabad) et Turkestania (Pendgikent ad limites Afghanistani, Coll. Rad.! et Mus. Hung.).

78. **Ellampus puncticollis** Mocs.

Ellampus puncticollis, Mocs. Entom. Nachricht. XIII. p. 291. ♂♀. (1887).

Mediocris, elongatus, viridi-cyaneus vel cyaneus, parce cinereo-alboque pilosus; vertice post stemmata, pro- et mesonoti disco, scutello postscutelloque plus minusve violascentibus; cavitate faciali profunda, lævi ac polita, viridi-aurata, lateribus faciei dense punctulato-coriaceis; temporibus subtus irregulariter subtiliterque subtransverse-striatis; antennis tenuibus, nigro-fuscis, articulis duobus primis viridi-auratis, tertio proportionaliter brevi, quarto dimidio longiore, quarto quintoque simul sumptis breviore; genis brevibus, linearibus; fronte dense subtiliter, vertice post stemmata sat sparsim valde leviter punctatis, pronoti disco punctis profundis sparsis, magnitudine inæqualibus interstitiisque latis lævibus, mesonoti lobo medio antice lævi ac polito, postice lobisque lateralibus valde sparsim, illo sat profunde, his leviter, scutello crassius subreticulatim punctatis, basi lævi, postscutello gibbo-convexo, punctato-reticulato; abdominis segmentis dorsalibus læte-viridibus, splendidis, tertio viridi-subaurato, secundo disco macula magna æneo-nigra notato, segmentis duobus primis subtilissime haud visibiliter, valde sparsim, lateribus evidentius, tertio densius evidentiusque punctulatis, hoc margine apicali anguste testaceo-pellucido, centro sat profunde triangulariter exciso, ventre viridi-subaurato; femoribus tibiisque læte-viridibus, tarsis fuscis; alis fortiter infumatis, iridescentibus, basi hyalinis, tegulis æneo-nigris, lævibus. — ♂♀; long. 5 mm.

Ellampo aeneo Fabr. similis et affinis; sed pronoti disco punctis profundis sparsis magnitudine inæqualibus, mesonoti lobo medio postice lobisque lateralibus quoque valde sparsim punctatis, non vero his partibus fere lævibus; *var. atratus* vero: coloreque ex parte atro-æneo, distinctus.

Patria: Germania (Hannover, penes Iburg a Dom. Fr. Sickmann e foliis Ribis rubri et Vitis viniferæ, mensibus Julio-Augusto stirps cum varietate simul numerose collectus; Coll. Sickmanni et Mus. Hung.).

var. atratus Mocs.

Ellampus puncticollis, Mocs. *var. atratus* Mocs. Entom. Nachricht. XIII. p. 291. (1887).

Stirpi magnitudine, sculptura coloreque ex parte similis; sed facie mesopleurisque æneo-viridibus, fronte, vertice, pro- et mesonoto, scutello, postscutello, abdominis segmento primo dorsali secundoque maxima parte atro-æneis, distinctus.

79. **Ellampus pusillus** Fabr.

Chrysis pusilla, Fabr. Syst. Piez. p. 176, n. 33. (1804).

Elampus minutus, Wesm. Bullet. Acad. Brux. VI. p. 173, n. 5. (1839) teste Ab. — Chevr. Chrysid. du Léman, p. 106. (1862).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Omalus pusillus, Dhlb. Hym. Europ. II. p. 31, n. 10. tab. II. fig. 26 -27 (thorax et segm. anale) (1854). Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 546, n. 2. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 298, n. 4, tab. II. fig. 3. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 2, n. 3. (1877). Ab. Annal. Soc. Linn. Lyon. XXVI. p. 19, tab. I. fig. 5. (unguic.) (1879). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 156. (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 246, n. 5. (1882). - Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 35, n. 5. (1887). - Rad. Horæ. Soc. Ent. Rossicæ. XXIII. p. 8. (genit. maris) (1888).

Elampus pusillus, Schck. Nass. Jahrb. XI. p. 57, n. 29. (1856). Lampr. Goldwesp. Deutschl. p. 23, n. 81, tab. I. fig. 25. (segm. anale) (1881). Frey. Chrys. Helvet. p. 32 et 34. (1887).

Ellampus pusillus, Schck, Progr. Gymn. zu Weilb. p. 13, n. 27. (1870). - Mocs. Chrys. faun. Hung. p. 28 et 80, n. 8. - Destef. Natural. Sicil. VII. p. 117. (1888).

Omalus minutus Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 156. (1879).

Parvus vel parvulus, viridis, cyaneus vel viridi-cyaneus, rarius parum violascens, parce cinereo-alboque pilosus; cavitate faciali profunda, lævi ac polita; antennis tenuibus, nigris, scapo et articulo primo flagelli viridibus, cyaneis vel viridi-cyaneis; fronte sat dense minus profunde punctato-reticulata; vertice post stemmata, pronoti parte postica mesonotique lobis lateralibus sparsim irregulariter non profunde punctatis, interstitiis latis lævibus, mesonoti parte postica, scutello nonnunquam aureo-resplendenti et postscutello gibbo-conico fortius punctato-reticulatis; abdominis segmentis dorsalibus viridibus vel viridi-cyaneis disco rarius nigro-æneo maculatis, primo disco sublævi punctis tantum aliquot microscopicis valde sparsis, lateribus et secundo sat dense subtilissime punctulatis, tertio subcoriaceo rugosiuscule, apicem sæpius viridi-auratum versus sparsim crassius punctato, margine summo sordide-testaceo, centro triangulariter profunde emarginato, supra emarginaturam breviter carinato, lobis apice angulatis et ante lobum utrinque unisinuatis; ventre violaceo, æneo vel viridi picto; pedibus viridibus vel cyaneis, tarsis fuscis vel rufescentibus; alis basi hyalinis, venis fuscis, apice late fumatis, tegulis nigro-æneis, antice sæpius virescentibus vel cyaneis. — ♂♀; long. $2^1/_2$—$3^3/_4$ mm.

Species: colore et magnitudine corporis maxime variabilis, *Ellampo aurato* Linn. sculptura valde similis et affinis; sed plerumque minor, postscutello magis gibbo-conico, abdominis segmentis dorsalibus viridibus vel viridi-cyaneis, secundo multo densius punctulato, tertio apicem versus fortius punctato, emarginatura centrali supra carinata; his notis etiam ab *Ellampi aurati* Linn. *var. virescenti* mihi, satis differt.

«*Armure.* La branche du forceps nue, s'étrécissant vers l'extrémité, qui est arrondie. Volsella assez courte, presque cylindrice. Sa tenette beaucoup plus mince et plus longue. Crochets larges; leur largeur diminue vers l'extrémité, ou ils sont pointus.» (Rad. l. c. tab. I. fig. 7a, 7b.)

Patria: Hispania (Gogorza); Sicilia (Destef.); Gallia (Ab.); Belgium (Wesm.); Germania (Dhlb.); Helvetia (Chevr.); Tyrolis (Kohl); Austria (Fabr. et Coll. Handlirschi!); Hungaria (Mocs.); provinciæ Uralenses (Eversm.); Polonia, Kasan, Saratow, Sarepta, Orenburg (Rad.); Caucasus (Coll. Rad.!); Turcia (Dhlb.); Ashabad in Persia (Coll. Rad.!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

80. **Ellampus Turkestanicus** n. sp.

Parvus, viridis, nitens, vix cyanescens, parce albo-pilosus; cavitate faciali profunda, lævi ac polita, violacea; antennis fuscis, articulis duobus primis viridi-cyaneis, vertice, scutello et postscutello crassius punctato-subreticulatis; pro- et mesonoto inæqualiter minus profunde sparsim punctatis, postscutello gibbo-convexo; abdominis segmentis dorsalibus cyaneo-viridibus, disco violascentibus, splendidis, subtilissime vix visibiliter, tertio parum evidentius punctulatis, hoc apice in medio leniter exciso; ventre viridi et cyaneo parumque violascenti, segmento secundo acute carinato; pedibus viridibus, tibiarum apice tarsisque fusco-testaceis; alis hyalinis, iridescentibus, modice sordidis, tegulis viridibus. — Long. 3 1/2 mm.

Ellampo pusillo Fabr. similis et affinis; sed vertice thoraciisque dorso vix cyanescentibus, postscutello gibbo-convexo; abdominis segmentis dorsalibus cyaneo-viridibus disco violascentibus subtilissime punctulatis, tarsis et alis dilutioribus, distinctus.

Patria: Turkestania (Taschkend, Coll. Rad.).

81. **Ellampus læviventris** Cress.*

Omalus laeriventris, Cress. Proceed. Entom. Soc. Philad. IV. p. 303. ♀. (1865). – Aar. Transact. Amer. Ent. Soc. XII. p. 214, tab. VI. fig. 5., fig. 6. (segm. anale), fig. 7. (unguiculi) (1885).
Elampus laeriventris, Nort. Transact. Amer. Ent. Soc. VII. p. 234. (1879).
Elampus cyanescens, Prov. Natur. Canad. XII. p. 303. ♀. (1881); Petit. Faun. Canad. II. Hym. p. 582, n. 4. ♀. (1883).

«From Colorado (Mr. Cresson's type), California, New-Hampshire and Canada; also the type of *cyanescens*, in M. Provancher's collection, from Canada. Three specimens from Colorado are larger than the type, one specimen intermediate. One specimen from California is darker, no green except on the face, and a slight reflection on the abdomen, intermediate in size. Three specimens from Canada and two from

* Conspectus generum subfamiliæ *Elampinae* Americæ septentrionalis secundum Aaron sequens est:

Tarsal claw with 2—6 distinct teeth between the base and apex.
The apical margin of the third abdominal segment is simply notched, rounded, not produced as seen laterally ... *Omalus.*
The apical margins of the third abdominal segment pinched on each side of the notch or emargination, forming, as viewed laterally, a snout-like projection that appears truncated.
The emargination or notch of the apex open, not filled up with a membrane.
The surface of the third segment above the apical snout-like projection even, not produced ... *Elampus.*
The surface of the third segment just above the snout-like projection produced into a cone shaped piece forming the direct apex of a fold which extends on each side just above the apical and lateral margins ... *Diplorrhos.*
The emargination or notch of the apex closed, or partly filled up by a membrane, which is excised beneath ... *Notozus.*
The apical margin of the third abdominal segment entire or broadly sinuate ... *Holopyga.*
Tarsal claw with one small perpendicular tooth in the middle ... *Hedychridium.*
Tarsal claws bifid at the apex, without inner teeth ... *Hedychrum.*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

New Hampshire also grade in size, and vary slightly in deep of color, and have the lateral margins of third segment less sinuate, with the notch not as deep; these constitute the *var. cyanescens;* thirteen specimens in all; from 4.5—5.5 mm. long.» (Aaron l. c.)

Patria: America septentrionalis.

82. **Ellampus diversus** AAR.*

Omalus diversus, Aar. Transact. Amer. Ent. Soc. XII. p. 213. ♀. tab. VI. fig. 4. (segm. anale) (1885).

«Without purple reflections, head and thorax with the smoothed areas blackish, shining, the color of antique bronze, punctured areas green; median lobe of mesothorax not strongly punctured posteriorly; abdomen polished, with green and slightly blue reflections on the lateral margins; third segment with its lateral margins short, a little sinuate, notch as deep as broad, its angles less than 90°; 2 teeth in claw; 4 mm. long. ♀.

California; one specimen.»

Patria: America septentrionalis.

83. **Ellampus coruscans** NORT.

Elampus corruscans, Nort. Transact. Amer. Ent. Soc. VII. p. 234. ♀. (1879).

Omalus corruscans, Aar. Transact. Amer. Ent. Soc. XII. p. 214. tab. VI. fig. 9. (segm. anale), fig. 10. (pro- et mesothorax et scutellum), fig. 11. (unguiculi) (1885).

Descriptio secundum Norton:

«Color blue-green, with purple reflection above, greenish beneath; wings hyaline, their apical third obscure; occiput, pro- and mesothorax and apical third of scutellum polished and covered with large subobsolete punctures; tergum polished, having minute sparse punctures, which are larger and sub-effaced on the sides; basin

* Conspectus specierum generis *Omalus* Americæ septentrionalis secundum Aaron est sequens:

Two teeth within the tarsal claw, median lobe of mesothorax not strongly punctured posteriorly.

Margin of third abdominal segment semi-transparent yellowish, broadest at apex . . . . *iridescens* NORT.

Margin of third abdominal segment not semi-transparent yellowish, but concolorous with the segment.

Smoothed areas metallic blackish (the color of antique bronze), without purple reflections; apical corners of second abdominal segment not projecting beyond, but even with the base of third segment *diversus* AAR.

Smoothed areas blue and green, with purple reflections; apical corners of second abdominal segment projecting beyond the base of third segment . . . . . *laeviventris* CRESS.

Three to six teets within the tarsal claw, median lobe of mesothorax not strongly punctured posteriorly.

Lateral margins of third abdominal segment straight or unisinuate, apex on each side notch rounded, not produced beyond line of margin, notch not forming a perfect semi-circle, but subangulated.

Notch as deep as broad, angle less than 90° . . . . . *sinuosus* SAY.

Notch much wider than deep, angle over 90° . . . . . *corruscans* NORT.

Lateral margins of third abdominal segment bisinuate, the apex on each side of the notch pointed, somewhat produced beyond the line of margin; notch forming a semi-circle . . . . *semicircularis* AAR.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

of face polished; the punctured area below postscutel produced angularly as far as the side foveola; sides of margin of third segment of tergum unisinuate, slightly pinched; claws pectinate with about five distinct teeth. — Lenght 14—25 inch.»

«Nine specimens in the collection from Canada (Norton's type), New Hampshire and one from New Mexico (Norton gives Connecticut also).

The Eastern specimens are all perfectly identical, 6.5 mm. long, while the specimen from New Mexico is 4 mm. long, the thorax with more green than the others, but with the abdomen similarly colored. Otherwise, and in the notch, it is the same.» (Aaron l. c.)

Patria: America septentrionalis.

84. **Ellampus semicircularis** Aar.

Omalus semicircularis, Aar. Transact. Amer. Ent. Soc. XII. p. 215. ♂. tab. VI. fig. 12. (segm. anale) (1885).

«Green and blue with purple reflections; head and thorax pilose, the smoothed areas not very well defined, with scattered punctures. Second joint of antennæ a little green; abdomen strongly pilose on the sides and all over the third segment; margins of third segment bisinuate, and on each side of the large semi-circular notch a little produced; median lobe of mesothorax strongly punctured posteriorly; 5 teeth in the tarsal claw; 5.5 m. long. ♂.

Colorado, one specimen; very distinct.»

Patria: America septentrionalis.

85. **Ellampus sinuosus** Say.

Hedychrum sinuosum, Say, Contrib. Maclur. Lyc. I. p. 82. (1828).
Hedychrum Janus, Hald. Proceed. Acad. Nat. Scienc. Philad. II. p. 55. (1844).
Hedycrium sinuosum, Lec. Ins. of North Amer. I. p. 384. (1859).
Elampus sinuosum (!), Nort. Transact. Amer. Ent. Soc. VII. p. 234. (1879).
Elampus purpurascens, Prov. Natur. Canad. XII. p. 303. ♀ (1881); Petit. Faun. Canad. II. Hym. p. 582, n. 5. ♀. (1883).
Omalus sinuosus, Aar. Transact. Amer. Ent. Soc. XII. p. 214. tab. VI. fig. 8. (segm. anale) (1885).

«Five specimens from Illinois (Mr. Norton's determinations), eight from Colorado and one each from Montana and California; also five specimens in Provancher's collection from Canada, one of which is the type of *purpurascens*. The specimens from Illinois, with two from Canada, have the thorax bronzed and violet, with an absence of green or blue to a more or less degree; the Western specimens and the other Canadian specimens are less bronzed and violet with green reflections, and green on all the punctured areas, but I find in this character a great tendency to vary; some specimens from Colorado, and that from California, having the punctured areas mostly blue, while in two Illinois specimens they are slightly green or blue. Several Western and Canadian

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

specimens are dull dark blue with green reflections, having but a slight tinge of violet on the abdomen, and in others with all violet reflections wanting entirely. The size of the Illinois specimens in from 3—5 mm., the Canadian 4 mm., the Western specimens from 3—6 mm. long.» (Aaron l. c.)

Patria: America septentrionalis.

86. **Ellampus Cressoni** Aar.*

Elampus Cressoni, Aar. Transact. Amer. Ent. Soc. XII. p. 215. ♂♀. tab. VI. fig. 16. (1885).

«Head and thorax with the smoothed areas dark blue with sligt purple reflections, punctured areas with green reflections; abdomen dark blue, purple and green, third segment short, abrupt; margins with a single arcuation or sinus, the snout-like projection slight, i. e. hardly extending from the ordinary line of the margins, but truncated; tarsal claws with two teeth; 3—3.5 and 4 mm. long. ♂♀.

Montana and Colorado, three specimens.»

Patria: America septentrionalis.

87. **Ellampus variatus** Aar.

Elampus variatus, Aar. Transact. Amer. Ent. Soc. XII. p. 215. ♂♀. tab. VI. fig. 13. (pro- e mesothorax ac scutellum), fig. 14—15. (segm. anale) (1885).

«In the majority of my specimens the head and thorax have the smoothed areas dark with blue and slight purple reflections; punctured areas green; abdomen dark blue with strong purple and green reflections. In other specimens the smoothed areas are dark blue with strong purple reflections, the punctured areas green, and the abdomen as above. In three specimens the smoothed areas are purple, in two of these the punctured areas purple and blue, the other specimen purple only, and the abdomen all purple with slight green reflections. Another specimen has dark, blackish blue, smoothed areas, punctured areas green, the abdomen black, with slight green reflections; third segment of abdomen tapering gradually towards its apex, tho snout-like projection strong, the margins bisinuate, the apical one deepest, a ridge above de notch caused by its sides being suddenly bent downwards. The notch in most of the specimens is broad, the sides divericate, in others it is drawn more closely together, appearing narrow and deep, with the sides almost or fully parallel; the claws with two, three and four teeth, the basal ones smallest; 4—4.5 m. long. ♂♀.

* Conspectus specierum generis *Elampus* Americæ septentrionalis secundum Aaron est sequens:

Dorsum of postscutellum as viewed laterally even, not projecting posteriorly.

Entire lateral margins of third abdominal segments arcuated, or with a single broad shallow sinus; the snout-like-prolongation of apex very shlight, abrupt ... *Cressoni* Aar.

Lateral margins of third abdominal segment with two arcuations, or bisinuate, the prolongation strong, tapering ... *variatus* Aar.

Dorsum of postscutellum, as viewed laterally, projecting a little posteriorly ... *speculum* Say.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Montana and Colorado; sixteen specimens. The divarication of the notch is most probably caused by the extension of the ovipositor, those having the divaricate notch being mostly females».

Patria: America septentrionalis.

88. **Ellampus speculum** SAY.

Hedychrum speculum, Say, Bost. Journ. Nat. Hist. I. p. 285, n. 2. ♂. (1835). — Lec. Ins. of North Amer. II. p. 730, n. 2. ♂. (1859).

Elampus speculum, Nort. Transact. Amer. Ent. Soc. VII. p. 234. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 216, tab. VI. fig. 17. (1885).

«One specimen from Illinois (Mr. Norton's type); emerald-green, with some little purple and blue: wings infuscated; postscutellum conical, a little produced; margins of third segment bisinuate; 4 mm. long; three teeth in the claw. ♂.» (Aaron l. c.)

Patria: America septentrionalis.

89. **Ellampus intermedius** AAR.

Notozus intermedius, Aar. Transact. Amer. Ent. Soc. XII. p. 218. ♂. (1885).

«Green, blue and fuscous on the dorsum of postscutellum; occiput very sparsely punctured, leaving smooth areas; prothorax with the anterior, lateral and posterior margins closely and broadly punctured, with some scattered punctures in the middle, leaving a narrow, smooth area across the middle on each side; mesothorax smooth, a double row of close punctures along the sutures, and few over the tegulæ; metathorax with large, rather divided punctures; the postscutellum not produced, but high and obtusely pointed posteriorly; abdomen with the frist and second segments finely and sparsely punctured, larger and somewhat confluent on the third segments; margins of third segment broadly semi-transparent brown on apical half, apical prolongation slender, high, the truncation, as viewed posteriorly, elliptical; the closing membrane black; wings infuscated; 4 teeth in the claws; 4 mm. long. ♂.

Montana; one specimen; very distinct, but in some of the general characters intermediate between *Elampus* and *Notozus*.»

Patria: America septentrionalis.

VIII. *Abdominis dorsum violaceum vel chalybaeum, in locis certis saepius virescens.*

1) *Caput et thorax viridia cyaneo picta, vertice, prothoracis et mesothoracis disco violaceis; segmento tertio margine apicali pallido.*

90. **Ellampus iridescens** NORT.

Elampus iridescens, Nort. Transact. Amer. Ent. Soc. VII. p. 234. (1879).

Elampus marginatus, Prov. Natur. Canad. XII. p. 304. (1881); Petit. Faun. Canad. II. Hym. p. 583, n. 6. ♀. (1883) (nec Patton).

Omalus iridescens, Aar. Transact. Amer. Ent. Soc. XII. p. 213. (1885).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptio secundum Norton:

«Face and two first joints of antennæ green; the occiput, prothorax and tergum with violet reflexions; remainder of thorax and legs cyaneous; tarsi lutei; wings hyaline, with the apical half of upper pair obscur; occiput, pro- and mesothorax, apical half of scutel and tergum polished, without punctures; basin of face and the outer orbits with delicate cross striæ; area below postscutel punctured, semicircular, wider than deep, its lower middle narrowly prolonged to the junction of the side foveolæ on the central metathoracic ridge; margin of third segment af the with a deep angulate incision, abowe which extends a transparent, slightly notched membrane; sides rather unisinuate; spurs of anterior tibiæ not pectinate.»

«Eight specimens from Canada (Provancher's types), New Hampshire, Pennsylvania and Colorado. They are all perfectly identical, except varying in size from 3.5—4.5 mm.» (Aaron l. c.)

Patria: America septentrionalis.

2) *Caput et thorax etiam violacea* (vel in *var. virenti* mihi: virescenti- vel atro-ænea).

91. **Ellampus violaceus** Scop.

Sphex Violacea, Scop. Ent. Carn. p. 298, n. 793, tab. 42, fig. 793. (1763).
Chrysis violacea, Rossi, Faun. Etr. II. p. 77, n. 848. (1790). — Christ, Naturg. p. 405. (1791). — Illig. Rossi Faun. Etr. Ed. II. tom. II. p. 123, n. 848. (1807) (nec Panz.).
Chrysis micans, Oliv. Encycl. Méth. Ins. V. p. 676, n. 24. (1790) (nec Dhlb.).
Hedychrum coerulescens, Lep. Annal. du Mus. Hist. Nat. VII. p. 122, n. 10. ♂♀ tab. VII. fig. 10. (1806). — Schuck. Ent. Mag. IV. p. 172, n. 3. (1837). — Blanch. Hist. nat. III. p. 296, n. 3. (1840).
Omalus nitidus, Panz. Faun. Ins. Germ. fasc. 97, tab. 17. ♀. (1805).
Hedychrum nitidum, Panz. Krit. Rev. II. p. 105. ♀. (excl. ♂) (1806).
Chrysis fuscipennis, Dhlb. Monogr. Chrys. Suec. p. 15, n. 13. (1829).
Chrysis coerulea, Dhlb. Exercit. Hym. p. 33, n. 17. var. a. ♀. (1831—33).
Hedychum bidentulum Lep. *var. imperiale,* Schuck. Ent. Mag. IV. p. 174, n. 8. (1837).
Elampus violaceus, Wesm. Bullet. Acad. Brux. p. 171, n. 2. (1839) ex parte. — Chevr. Chrysid. du Léman. p. 103. ♀. (1862). — Frey, Chrys. Helvet. p. 32 et 34. (1887).
Omalus coeruleus, Dhlb. Dispos. p. 5, n. 3. (1845); Hym. Europ. II. p. 34, n. 12. tab. II. fig. 31.a—32. (thorax et segm. anale) (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 547, n. 3. (1857.) — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 63. (1858). — Smith, Entom. Annual. p. 102. (1862). — Thoms. Opusc. Ent. II. p. 103, n. 2. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 3, n. 4. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 19, tab. I. fig. 6. (unguic.) (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 246, n. 6. (1882).
Ellampus praestans, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 353, n. 99. ♀. (1853).
Elampus coeruleus, Schck, Nass. Jahrb. XI. p. 82, n. 6. (1856). — Lampr. Goldwesp. Deutschl. p. 23, n. 78. (1881).
Ellampus violaceus, Schck, Progr. Gymn. zu Weilb. p. 16, n. 28. (1870). — Destef. Natural. Sicil. VII. p. 116 et 215. (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Ellampus coerulescens, Mocs. Chrys. faun. Hung. p. 31 et 80, n. 13. ♂. (1882).
«Guêpe-dorée bleue à tache noire.» Degeer, Mém. Ins. Tom. II. P. II. p. 837, n. 2, pl. 29, fig. 3—4 (1771) (excl. Chrysis bidentata L. syn.).

Sat magnus, robustus, cyaneus plus minusve violaceo-nitens, parcius cinereo-alboque pilosus; pronoti margine antico, scutello et metathorace sæpius plus minusve virescentibus; cavitate faciali profunda, lævi ac polita; antennis crassiusculis, nigro-fuscis, scapo et articulis duobus primis tertioque supra cyaneis vel parum virescentibus; fronte verticeque latis, illa concinne punctato-reticulata, hoc parcius leviter irregulariterque punctato; pronoti parte postica mesonotoque purpureo-violascenti sparsim sat profunde punctatis interstitiis latis lævibus, scutello et postscutello gibbo-subconico pleurisque crasse punctato-reticulatis; abdomine late-ovato, segmentis dorsalibus viridi-cyaneis disco eximie violascentibus, splendidis, primo disco lævi, lateribus et secundo tertioque subtilissime sparsim punctulatis, interstitiis latis lævibus, hoc in centro marginis apicalis sat profunde exciso, lobis arcuato-obtusis, lateribus utrinque leniter sinuatis; ventre læte-viridi, sæpius aureo-splendenti, limbo violaceo aut æneo-purpurascenti; femoribus tibiisque et tarsorum articulis anticis viridi-cyaneis aut cyaneo-viridibus, articulis reliquis fuscis; alis basi hyalinis, venis brunneis, apice saturate fumosis, tegulis violaceis. — ♂♀; long. 5—6 mm.

Patria: Europa tota cum Caucaso et Turkestania.

var. virens mihi.

Typo simillimus; sed capite antice et temporibus, antennarum scapo et articulis duobus primis flagelli, pronoti parte antica, metanoti et mesonoti lateribus ad alas loboque medio postice, pleuris, pedibus et abdomine ex parte plus minusve viridi- vel virescenti-æneis; vertice post stemmata, pronoti parte postica, mesonoti lateribus reliquis et lobo medio antice, scutello postscutelloque ex parte et abdominis segmentis dorsalibus duobus primis disco nigro- vel atro-æneis, splendidis. — Patria: Germania (Thuringia, Coll. Schmiedeknechti!); Caucasus (Mus. Vindob.!).

Subgenus 4. PHILOCTETES Ab. Buyss.

«Abdominis tertio segmento leniter undulato atque in medio marginis apicalis subintegro vel subsinuato, sed non inciso, marginella ultima (sæpius) subscariosa; ut in Apibus, tibiis posterioribus dilatatis, tarsorum unguibus tridentatis.

Insectes de petite taille (3 à 5 mill.), faisant le passage des *Omalus* aux *Holopyga.* Mandibules tridentées crénelées comme chez les *Omalus;* nervulation des ailes également comme chez les *Omalus,* c'est-à-dire que la première cellule discoidale et la cellule brachiale sont nulles ou indistinctes; troisième segment abdominal sinuè sur les côtés, ou léger sinus remplace l'incision; marge apicali extrême souvent subscarieuse. Ce troisième segment abdominal est déprimé à l'extrémité avant la marge; quelquefois

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

l'extrémité même est allongée et presque relevée. Postécusson fortement conique, plus ou moins aigu ou acunimé. Chez les ♂, les tibias des pattes posterieures sont dilatés, aplatis et quelquefois subcreusés, comme chez certains Apiaires.

Comme on peut le voir, ces caractères sont assez importants pour qu'il soit raisonnable de séparer ces insectes des *Omalus* et sourtout des *Holopyga* avec lesquels ils étaient compris.» (Buyss. Revue d'Entom. VI. 1887. pag. 171.)

Conspectus specierum huius subgeneris.

1 (10). Abdominis segmentis dorsalibus auratis vel cupro-auratis.
2 (7). Mesosterno cyaneo vel læte-viridi.
3 (4). Capite violaceo, cavitate faciali lævi ac polita; abdominis segmentis dorsalibus duobus primis disco macula magna nigro-ænea viridi-cyaneoque limbata, tertio margine apicali subscarioso ... ... *micans* KLUG.
4 (3). Abdominis segmentis dorsalibus sine macula nigro-ænea, tertio margine apicali non vel vix scarioso.
5 (6). Capite cyaneo, cavitate faciali leviter subrugulosa; thorace læte-viridi, metanoto cyanescenti ... ... *omaloides* BUYSS.
6 (5). Vertice violaceo, capite antice viridi-subaurato, cavitate faciali sublævi ac polita; pro- et mesonoto cum scutello postscutelloque auratis ... *Friesei* n. sp.
7 (2). Mesosterno aurato vel viridi-aurato.
8 (9). Abdomine depresso, segmento tertio caudato (terminé en queue) ... *caudatus* AB.
9 (8). Abdomine campanulato (abdomen en cloche), segmento tertio parum elongato ... ... *Tiberiadis* BUYSS.
10 (1). Abdominis segmentis dorsalibus læte-viridibus vel nigro-cyaneis.
11 (12). Capite thoraceque læte-viridibus vel parum cyanescentibus; pro- et mesonoto sparsim punctatis, postscutello conico; segmento tertio margine apicali anguste testaceo-scarioso, pellucido; tibiis posticis intus excavatis... ... *deflexus* AB.
12 (11). Capite thoraceque cyaneo-violascentibus vel nigro-cyaneis; pro- et mesonoto coriaceis, postscutello gibbo-subhæmisphærico; abdominis segmento tertio margine apicali late albo-scarioso, pellucido; tibiis posticis simplicibus ... ... *coriaceus* DHLB.

*

I. *Abdominis segmentis dorsalibus auratis vel cupreo-auratis.*

92. **Ellampus micans** KLUG.

Elampus micans, Klug, Waltl Reise nach Span. p. 90. (1835). — Silbermann, Revue Entom. IV. p. 159. (1837).
Holopyga micans, Dhlb. Hym. Europ. II. p. 55, n. 29. (1854).
Holopyga cicatrix, Ab. Diagnos. Chrys. Nouvell. p. 2, n. V. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 27. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 39, n. 8. (1887).
Philoctetes micans, Buyss. Revue d'Entom. VI. p. 172. (1887).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Parvus, elongato-ovatus, parce cinereo-alboque pilosus; capite violaceo, cavitate faciali profunda, lævi ac polita; antennis nigris, scapo violaceo vel virescenti; fronte et vertice minus crasse punctato-subreticulatis; pro- et mesonoto cum scutello postscutelloque auratis; pro- et mesonoto sat sparsim minus fortiter punctatis, scutello postscutelloque punctato-reticulatis; postscutello subconico, obtuso; pleuris, pectore et metathoracis parte postica cyaneis, nonnunquam leviter virescentibus; abdominis segmentis dorsalibus auratis nitore viridi, primo et secundo disco macula magna nigro-ænea viridi-cyaneoque limbata, valde dense subtilissime, tertio parum fortius rugosiuscule-punctulatis, margine apicali subscarioso, integro, medio lenissime sinuato; ventralibus nigro-piceis, nitidis, secundo tertioque basi utrinque leviter viridi-micantibus; pedibus violascenti-cyaneis, tibiarum apice tarsisque fusco-brunneis; alis hyalinis, venis fuscis, tegulis rufo-piceis. — ♀; long. 4 mm.

«Propria en nuestro pais de las regiones bajas y montuosas, se encuentra durante los primeros meses de la buena estación, y es fácil hallarla registrando los invólucros floridos de las euforbias.» (Gog. l. c. p. 39.)

Patria: Hispania (Andalusia, Klug; Madrid, Gogorza; Arragonia, Coll. Perézi!).

93. **Ellampus Friesei** n. sp.

Subparvus, sat robustus, viridi-cyaneus, parce cinereo-alboque pilosus; vertice nigro-violaceo, sparsim punctato; fronte facieque viridi-subauratis, cavitate faciali profunda, sublævi ac polita, violaceo-subnitenti; clypeo læte-aurato, mandibulis in medio rufis; antennis crassiusculis, nigris, scapo læte-viridi, flagelli articulo primo supra cyanescenti; pro- et mesonoto cum scutello postscutelloque auratis igneoque lavatis, mesopleuris viridi-subauratis; pronoto sat sparsim, mesonoto adhuc dispersius concinne punctatis interstitiis lævibus; scutello et postscutello conico punctato-reticulatis; abdominis segmentis dorsalibus auratis igneoque lavatis, duobus primis dense subtiliter concinne, tertio basi dense subtiliter subrugose, apicem versus fortius dispersiusque punctulatis, margine apicali in medio leniter sinuato; segmentis ventralibus læte-viridibus aureoque maculatis; femoribus tibiisque cyaneo-viridibus, tarsis fuscis; alis sordide-hyalinis, venis fuscis, tegulis piceis, antice viridi-æneis. — ♀; long. 4 mm.

Speciem hanc iucundam in memoriam itineris illius denominavi, quod amicus meus H. Friese cum Clariss. Dom. O. Schmiedeknecht ad Insulas Baleares anno 1883 fine scientifico simul susceperunt.

Patria: Insulæ Baleares Hispaniæ (Mallorca, Coll. Schmiedeknechti!).

94. **Ellampus caudatus** Ab.

Holopyga caudata, Ab. Diagnos. Chrys. Nouvell. p. 2, n. VI. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 28. ♀. tab. I. fig. 7. (unguic.) (1879).

Holopyga semi-ignita (Ab.), Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879).

Philocletes caudatus, Buyss. Revue d'Entom. VI. p. 172. (1887); VII. p. 8. ♂♀. (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Descriptio secundum Abeille:

«Long. 4 mill.

D'un beau doré cuivreux, avec la tête, les côtés de la poitrine et le métasternum bleus. Tête très convexe, couverte de gros points ocellés, plus fins sur le vertex. Antennes noires, sauf les deux premiers articles, qui sont d'un bleu noir. Pronotum à points pareils à ceux du front, mais très épars, sauf sur le sommet et sur les côtés. Mésonotum a points identiques, mais encore plus épars. Côtés de la poitrine, écusson et postécusson ponctués-réticulés très densément, sauf sur le milieu de la base de l'écusson qui est lisse. Postécusson conique, à sommet très aigu. Abdomen à points fins et serrés, beaucoup plus gros, mais épars sous le troisième segment; ce segment triangulaire, à côtés courbes; sa surface très convexe; déprimé et relevé à l'apex, qui est vert bronzé, comme doublé d'un ourlet inférieurement; cet ourlet un peu échancré au milieu. Ventre mélangé de vert, de bleu, de noir et de doré. Pattes vert-bleu métallique, avec les tarses sombres; dessous les articles à peine testacé. Tibias posterieurs un peu épaisses et convexes des deux côtés.

♂. inconnu.

Je posséde un seule femelle de Bône, qui m'a été donnée par feu Perris. Elle est très-voisine de la *Cicatrix*, dont elle diffère par le postécusson beaucoup plus aigu, le troisième segment couvert de gros points espacés au lieu d'avoir une ponctuation serrée et ruguleuse, ce segment pointu, à apex prolongé en forme de queue, et ses tibias postérieurs moins renflés.»

«♂♀. Quelques ♀ atteignent cinq millimètres. Les côtés du mesosternum (épimères) sont dorés, quelquefois avec des reflets verts, mais jamais bleu vif.» (Buysson R. E. VIII. p. 8.)

Patria: Algeria (Bône, Ab; Oran, Buyss.).

95. **Ellampus Tiberiadis** Buyss.

Philoctetes Tiberiadis, Buyss. Revue d'Entom. VI. p. 171. ♂♀. (1887).

«♂♀. Corpore subparvulo aut minuto, cupreo-aurato aut viridi-cupreo. Fronte sæpe viridi-cyanea, reticulata; vertice, cavitate faciali, scapo secundoque articulo antennarum cyaneis; pedibus viridibus, tarsis brunneis, cinereo-pubescentibus; antennis nigrescentibus. Vertice et pronoti mesonotique dorsulo punctis obsoletis mediocribus parce adspersis; pleuris reticulatis; postscutello acute conico; tegulis nigro-æneis; alis subhyalinis. Abdomine breviter lateque ovato, subhæmisphærico, non confertim ac subtilissime punctulato; tertio segmento in medio marginis apicalis subintegro, marginella subscariosa; ventre concavo, viridi-cyaneo, nigro-maculato. — Long. 3—4½ mill.

1 ♂ et 2 ♀ capturés à Tibériade (Syrie) par M. E. Abeille de Perrin.

Cette espèce est voisine du *Philoctetes micans* Klug. (Phil. cicatrix Ab.), mais s'en distingue par les côtés du mésosternum (épimères) qui sont vert-doré, le dessous de l'avant-corps et les pattes qui ont toujours une teinte verte, l'abdomen plus en forme de

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cloche, à ponctuation beaucoup plus fine et péu serrée, le troisième segment presque entier.

La couleur du *Phil. Tiberiadis* varie du doré cuivré au vert peu brillant; le vertex est toujours bleu tranchant sur le reste du corps, l'écusson et le postécusson sont fortement réticulés, ce dernier est conique aigu. Les côtés de l'abdomen et le troisième segment, l'écusson et le postécusson sont quelquefois d'un beau doré feu; le troisième segment est presque toujours plus fortement ponctué, principalement sur les bords des côtés des segments. La marge apicale de chaque segment et le plus souvent une teinte bleue et se termine par une bordure subscarieuse, noire. Chez les mâles de cette espèce, comme chez ceux des autres *Philoctetes*, les tibias des pattes postérieures sont dilatés, aplatis.»

Patria: Syria (Coll. Abeillei et Buyssoni).

96. **Ellampus omaloides** Buyss.

Philoctetes omaloides, Buyss. Revue d'Entom. VII. p. 1, n. 1. ♂. (1888).

«♂. Corps de petite taille, légèrement allongé, à pubescence grisâtre. Tête bleu indigo, front à points larges, à fond plat, assez serrés; cavité faciale très large, très peu profonde, imponctuée mais légèrement subruguleuse; antennes noirâtres avec le premier article bleu, le seconde bronzé. Thorax vert gai couvert de gros points à fond plat, subocellés, excepté sur le dorsulum du pronotum et du mesonotum où les points sont obsolétes plus petits et très épars; le milieu de la base de l'écusson est imponctué, lisse; écusson et postécusson avec de points à fond creusé, postécusson conique aigu, subacuminé; écailles noir bronzé; ailes subhyalines peu ou point enfumées; pattes vertes ou bleu verdâtre; tibias de la troisième paire de pattes postérieures élargis, aplatis, subcreusés en dessous; tarses brun noirâtre; ongles des tarses avec trois crochets de longueur croissante. Metanotum bleuissant; angles posticolatéraux un peu plus courts que le chez *Phil. deflexus* Ab. mais à pointe aiguë. Abdomen bombé principalement sur le disque du premier segment, d'un feu doré resplendissant, quelquefois un peu cuivré, à ponctuation fine et médiocrement serrée; à points un peu plus profonds et moins serrès que chez le *Phil. deflexus;* sur le tiers postérieur du troisième segment les points sont plus gros et beaucoup plus épars. Le troisième segment régulièrement arrondi en ovale ou simplement avec une petite irrégularité dans la ligne au sommet de l'apex, mais sans sinus apparent ni marge scarieuse; la bordure extrême est légèrement bleuissante et le segment est lui-même légèrement déprimé avant cette bordure. Ventre à segments vert bleuâtre bordés de noir. — Long. $3^1/_2$—4 mill.

Le *Phil. omaloides* diffère du *Phil. deflexus* Ab. par la couleur de l'abdomen, par la forme moins bombée de celui-ci, par le troisième segment abdominal parfaitement entier, par la cavité faciale qui est plus courte, moins profonde et subruguleuse au lieu d'être parfaitement lisse.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Mascara, province d'Oran; pris par M. F. Ancey sur les ombellifères en filochant dans les terrains incultes.»

Patria: Algeria.

II. *Abdominis segmentis dorsalibus laete-viridibus vel nigro-cyaneis.*

97. **Ellampus deflexus** Ab.

Holopyga deflexa, Diagnos. Chrys. Nouvell. p. 2, n. VII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 27 et 29. ♂♀. tab. I. fig. 7. (unguic.) (1879). — Grib. Annali Mus. Civ. Stor. Nat. Genova. XX. p. 392. (1884).

Philoctetes deflexus, Buyss. Revue d'Entom. VI. p. 172. (1887). — Rad. Horæ Soc. Ent. XXIII. p. 8. (1888) (genit maris).

Descriptio secundum Abeille:

«Entièrement vert très-clair, parfois tournant un peu au bleuâtre. Tête très-convexe, couverte de gros points ocellés distants les uns des autres, ces points plus fins sur le vertex. Antennes noires, sauf les deux premiers articles. Pronotum à points pareils à ceux du front, mais très-épars, sauf sur les côtés. Mésonotum à points identiques, mais encore plus épars. Côtés de la poitrine, écusson et postécusson ponctués de même, mais très-densément, sauf sur le milieu de la base de l'écusson. Postécusson conique. Abdomen à points fins et serrés, plus serrés encore et ruguleux sur le troisième segment, excepté à l'extrême bout de celui-ci, où il sont remplacés par des points médiocres et épars; ce segment triangulaire, à côtés courbes, non ou imperceptiblement bisinués; sa surface très-convexe, déprimée au sommet avec l'apex, cuivré ou doré, explanè et presque relevé. Ventre vert bleu, noir sur les côtés. Pattes d'un vert doré avec les tarses d'un testacé sombre. Tibias postérieurs très-épaisses, convexes par dessus, concaves par dessous. Ailes hyalines.

♂. troisième segment plus court, l'extrême apex comme tronquè. Ventre à ponctuation sensiblement plus serrée.

Six exemplaires de cette espèce si reconnaissable à la terminaison de l'abdomen, m'ont été généreusement donnés par M. le professeur Waga. Ils provenaient d'Egypte. Je crois en avoir vu un autre pris à Bistra par le Dr. Puton, à qui je l'avais nommè provisoirement *tibialis* à cause de ses curieux tibias, pareils à ceux de certaines Apiaires.

Cette espéce et les deux précédentes (Holopyga cicatrix, caudata) forment parmi les *Holopyga* un groupe tout à fait à part que l'on pourrait nommer *Philoctetes:* il se rapproche beaucoup des *Omalus* par l'abdomen terminé de celle sorte, qu'on croirait à une cicatrisation d'échancrure, par sa très-petite taille, par le postécusson conique et la conformation de ses tarses. De plus, les tibias postérieurs sont très-renflés et deprimés chez les deux sexes de la *Deflexa* et assez renflés chez le ♂ du *Cicatrix*, encore moins chez la *Caudata,* dont je ne connais, du reste, que la femelle.» (Abeille l. c.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«L'armure paraît être dans tous ses détails paræille à celle de l'espèce précédente.» (Omalus pusillus F.) (Rad. l. c.)

Patria: Algeria (Biskra, Ab.) et Aegyptus (Ab. et Coll. Rad.!, Mus. Hung. et Dresdense!; Cairum [Cairo] (Grib.).

98. **Ellampus coriaceus** Dhlb.

Omalus coriaceus, Dhlb. Oefvers. K. Vetensk. Acad. Förhandl. p. 105, n. 1. (1850); Hym. Europ. II. p. 37, n. 14, tab. II. fig. 35.a–36. (thorax et segm. anale) (1854).

Parvus, cyaneo-violascens vel nigro-cyaneus, parce pilosus; cavitate faciali sat profunda, lævi ac polita; antennis brevibus, crassiusculis, nigris, scapo nigro-ænescenti; fronte verticeque leniter punctato-subreticulatis; pronoti margine antico et laterali mesopleurisque coriaceis, confertim irregulariter punctatis; pronoti parte postica mesonotoque subtilisimme coriaceis, subopacis; scutello convexo, disco subtilissime coriaceo, subopaco, lateribus parce punctulato; metanoti gibbositate hæmisphærica, distincte punctato-reticulata; abdomine valde-convexo, segmentis dorsalibus nigro-cyaneis, primo disco sparsim, secundo dense subtilissime, tertio fortius dispersiusque punctulatis, segmento secundo margine summo anguste testaceo-, tertii margine apicali late albo-scarioso, pellucidis, ad centrum lenissime emarginato; ventre nigro, subopaco; pedibus nigris, parum viridi- et cyaneo-micantibus, tibiarum apice tarsisque brunneis vel rufescentibus; alis hyalinis, anticis apice saturate fumosis vel solum parum sordidis, venis fuscis, tegulis nigro-cyaneis. — ♀; long. 3½ mm.

Patria: Caffraria (Dhlb.); Sansibaria (Mombassa, Mus. Berolinense!).

Subfamilia V. HEDYCHRINAE mihi.

Pronotum transverso-subquadratum. Unguiculi tarsorum infra pectinulati, multidentati, apice et circa medium denticulati vel apice bifidi. Alæ anticæ cellula mediali latere apicali: oblique-, vel arcuato-, vel angulato-emarginata, propter venulam transverso-medialem vel arcuato vel angulato inflexam, cellula discoidali sat distincta. Abdomen segmentis cataphractis conspicuis tribus, supra convexum, subtus concavum et subfornicatum, segmenti ultimi dorsalis margo apicalis integer, rarissime sinuatus vel undulatus aut lateribus plus minusve distincte angulatus vel denticulatus.

Subfamilia hæc duo in se continet genera, quorum conspectus sequens est:

1. Abdominis segmenti tertii margo apicalis integerrimus, rarius sinuatus vel undulatus; venula transverso-medialis plerumque angulatim curvata *Holopyga* Dahlb. Mocs.

2. Abdominis segmenti tertii margo apicalis lateribus plus minusve distincte angulatus vel denticulatus; venula transverso-medialis tantum leniter curvata *Hedychrum* Latr. Mocs.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Genus VI. HOLOPYGA Dhlb. Mocs.

Hedychrum, Latr. Hist. nat. III. p. 317. (1862) ex parte. -- Dhlb. Hym. Europ. II. p. 58, gen. 6. (1854) ex parte.

Holopyga, Dhlb. Hym. Europ. II. p. 47, gen. 5. (1854) ex parte.

Hedychridium, Ab. Diagnos. Chrys. Nouvell. p. 3, n. X. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 35. (1879).

(ὅλος = integer ; πυγή = anus ; anus integer, lateribus non angulatus.)

Ad hoc genus refero omnes illas Chrysididarum species, *Hedychris* simillimas, quarum abdominis segmenti tertii margo apicalis integerrimus, rarius sinuatus vel undulatus et vena basalis (Först.) seu transverso-medialis (Dhlb.) plerumque angulatim curvata est. *Hedychra* complura Dahlbomi et aliorum huic generi inserui. Typum habemus in *Holopyga amoenula* Dhlb. (ovata Dhlb.).

Species generis *Holopyga,* hoc sensu, a *Hedychris* iam primo intuitu cognoscuntur: corpore plerumque mediocri aut minuto, abdominis segmento dorsali tertio ante marginem apicalem convexo, haud arcuato-transverso impresso, pronoto mesonoto fere æquilongo, quod in *Hedychris* evidenter longius est et species plerumque robustæ et corpulentæ sunt.

Piæ memoriæ vir: Dahlbomus novum quod condidit genus non satis clare descripsit characteresque quam maxime leves constituit. Ego situm et numerum dentium unguiculorum tamquam characteres speciei vel subgeneris aut sectionis solum considero et Dahlbomi genus ad illas tantum species restringo, quæ characteribus supradictis gaudent, prout hoc iam ipsa vox græca optime indicat. — Non me latet tamen, propter descriptionem insufficientem et non satis claram, in una aliaque specie forsan errasse et speciem re vera ad genus *Hedychrum* pertinere.

Corpus: plerumque mediocre vel parvum, proportionaliter crassum, ovatum vel ovato-rotundatum aut subovatum.

Caput: transversum, pronoto brevius; *cavitate faciali:* pro scapis quiescentibus plerumque profunda, sæpissime subtiliter transverse-striata. *Mandibulae:* crassæ, trigonæ, apice bi- vel tridentatæ, dentibus conicis approximatis, apicali maiore. *Antennae:* tenues vel crassiusculæ, longitudine mediocri, filiformes vel subsetaceæ.

Thorax: subtetraëdro-cylindricus. *Pronotum:* mesonoto fere æquilongum, convexum, rarius medio parum deplanatum. *Mesonotum:* convexum, suturis longitudinalibus nonnunquam indistinctis. *Postscutellum:* convexum vel parum gibbum, inerme seu non mucronatum. *Metanotum:* postice truncatum vel leniter declive.

Alae: mediocres, plurimis apicem abdominis vix attingentibus; *anticae:* cellulis tantum duabus distinctis: mediali et submediali prima, discoidali plerumque venulis tantum valde pallidis clausa breviterque appendiculata; *venis:* costali, postcostali, transverso-mediali, stigmate et radiali firmis, reliquis fere rudimentariis; *posticae:* cellulis omnino carent.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Pedes: pilosi; *femora* et *tibiae:* normalia: *unguiculi tarsorum:* infra denticulis 2—5 armati, dente inferiore in subgenere *Hedychridio* circa medium sito.

Abdomen: breviter- vel late-ovatum, valde convexum, segmentum tertium ante marginem apicalem rarissime tantum arcuato-transverso impressum; *tubulus feminarum:* bene visibilis, longitudine mediocris, rarius absconditus. — Quoad genitalia maris, Clariss. Dom. Radoszkovszky sequentia scripserat: «Le genre *Holopyga* diffère sans exception du genre *Hedychrum*. Chez *Hedychrum* la branche du forceps est large, volsella longue cylindrique, vers l'extrémité garnie de toutes les côtés de poils assez longs et assez forts. Chez *Holopyga* la largeur de la branche du forceps diminue graduellement vers l'extrémité. Cette partie est quelquefois très allongée; volsella est toujours plus large, avant tout vue de côté, et faiblement garnie vers l'extrémité de poils minces, qui ne sont jamais longs; tenette n'est jamais plus courte que sa volsella, mais en général elle est plus longue.» (Horæ Soc. Ent. Rossicæ. XXXIII. 1888. p. 12. Adnot.)

Generis *Holopygae* hoc sensu 61 cognoscimus species ex omni orbis terrarum parte; et quidem e subgenere *Holopyga* 30, e *Hedychridio* 31. Secundum regiones: e regione palæartica 36, æthiopica 2, orientali 3, australiaca 2, nearctica 11, neotropica 7. Apud Dahlbomum ex his 21 tantum inveniuntur species.

Genus *Holopyga,* secundum me, duo in se continet subgenera, quorum conspectus sequens est:

1. Unguiculi tarsorum infra denticulis plus quam duobus armati
Subgen. I. *Holopyga* mihi.

2. Unguiculi tarsorum infra denticulis tantum duobus armati, dente inferiore circa medium sito ... Subgen. II. *Hedychridium* Ab.

Subgenus 1. HOLOPYGA mihi.

Unguiculi tarsorum infra denticulis plus quam duobus armati.

*

I. *Corpus totum cum abdomine viridi-cyaneum, viride, cyaneum, coeruleum aut nigro-violaceum, vel his coloribus variegatum, sed nunquam auratum vel cupratum.*

99. **Holopyga curvata** Först.

Hedychrum curvatum, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 344, n. 93. (1853).

Hedychrum chloroideum, Dhlb. Hym. Europ. II. p. 66, n. 37. (1854) (excl. Lep. syn.). — Schck, Nass. Jahrb. XI. p. 81, n. 2. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 66. (1858). — Schck, Progr. Gymn. zu Weilb. p. 16, n. 24. (1870). — Lampr. Goldwesp. Deutschl. p. 20, n. 61. (1881).

Holopyga Sicheli, Chevr. Chrysid. du Léman, p. 97. (1862). — Lamp. Goldwesp. Deutschl. p. 22, n. 75. (1881).

Holopyga smaragdina, Tourn. Petit. Nouv. Ent. II. p. 105. (1877).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Holopyga chloroidea, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 28. (1879). Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879). — Gog. Anal. Soc. Espan. Hist. Nat. XVI. p. 38, n. 7. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 10. genit. maris (1888).

Holopyga curvata, Mocs. Chrys. faun. Hung. p. 35 et 82, n. 6. ♂♀. (1882). - Frey. Chrys. Helvet. p. 37 et 39, tab. III. fig. 7. (unguic.) (1887). — Destef. Natural. Sicil. VII. p. 129. (1888).

Mediocris, sat robusta, cyanea vel viridi-cyanea, rarius violascens, parce nigro-alboque pilosa; cavitate faciali profunda, dense subtilissime transverse-striata; antennis tenuibus, nigris, scapo æneseenti; pronoto et scutelli basi fortius punctatis et punctulatis, punctis nempe multo minoribus inmixtis, mesonoto cum scutelli parte postica postscutelloque crassius punctato-reticulatis; abdominis segmentis dorsalibus sæpius virescentibus, duobus primis dense sat concinne, tertio rugosiuscule-punctatis, primo basi nigro-æneo, nitido, tertio margine apicali anguste subscarioso rotundato; ventre nigro-piceo, nitido; pedibus viridi-cyaneis vel viridibus, tarsis fuscis vel rufescentibus; alis sordide-hyalinis, basi parum dilutioribus, venis fuscis, tegulis nigro-æneis. — ♂♀; long. 4—4½ mm.

Variat rarius: thorace abdominisque segmentis dorsalibus, præsertim marginibus apicalibus, plus minusve læte viridi-subauratis; sed de punctatura scutelli facile cognoscitur. — Patria: Hispania (Gog.); Gallia meridionalis (Coll. Wüstneii!); Helvetia (Wallis, Coll. Schultess-Rechbergi!); Hungaria centralis (Mus. Hung.).

«*Armure*. La branche du forceps se rétrécissant et vers l'extrémité pourvue de poils assez longs. Volsella de la forme ordinaire de *Holopyga*. Tenette mince, cylindrique. Par la forme des chrochets, one en face et de côté, l'armure de cette espèce differe de l'armure des autres espèces.» (Rad. l. c. tab. I. fig. 14a, 14b, 14i.)

Patria: Hungaria (Mocs.); Austria (Coll. Wüstneii!); Germania (Thuringia, Coll. Schmiedeknechti!); Helvetia (Chevr.); Gallia (Court.); Hispania (Gog.); Sicilia (Destef.); Græcia (Dhlb.); Turcia (Dhlb.); Algeria (Boné, Abeille).

100. **Holopyga Solskyi** Rad.

Hedychrum Solsky (!), Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 7, n. 16. ♂♀. tab. III. fig. 1. (1877) sec. spec. typ. e coll. Rad.!

Holopyga Solskii, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 9. (genit. maris) (1888).

Mediocris, robusta, tota nigro-violacea, subobscura, breviter cinereo-alboque pilosa; cavitate faciali sat profunda, dense subtilissime transverse-striata, superne non marginata: antennis fusco-nigris, articulo tertio sat longo, secundo dimidio adhuc longiore; vertice dense, minus crasse, pronoto sat sparsim fortiter punctatis, mesonoto cum scutello postscutelloque convexo fortius punctato-reticulatis; metanoti dentibus postico-lateralibus mediocribus, angustis, subacutis; abdominis segmentis dorsalibus crasse inæqualiter minus dense, secundo parte basali in medio regulariter parumque densius subtilius punctatis, primo parte truncata in medio spatio lævi ac polito, secundo sine carinula mediana, tertio margine apicali anguste sordide testaceo-pellucido; ventre

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

nigro-piceo nitido; femoribus tibiisque nigro-violaceis, tarsis fusco-rufescentibus; alis hyalinis, disco parum sordidis, venis fusco-testaceis, tegulis rufo-piceis. — ♂♀; long. 6—7 mm.

Species: de colore corporis toto nigro-violaceo punctaturaque forti et præsertim punctatura duplici segmenti secundi, facile cognoscitur.

«*Armure*. La branche du forceps pareille à celle de l'espèce précédente, mais plus forte vers l'extrémité. Volsella aussi plus forte, quoique moins longue. Tenette large, pointue à l'extrémité et parsemée de poils petits minces. Les crochets, commençant du milieu, rétrécis et pointus à l'extrémité.» (Tab. I. fig. 10a, 10b.)

Patria: Turkestania (desertum Kisilkum, Bairacum et Ferghana, Taschkent).

101. **Holopyga Mauritanica** Luc.

Hedychrum mauritanicum, Luc. Explor. de l'Algér Zoolog. III. p. 312, n. 356. Hym. tab. XVII. fig. 9. (1849).
Holopyga gloriosa Fabr. *var. mauritanica*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).

Mediocris, nigro-violacea, sat robusta, parcius albo-pilosa; cavitate faciali sat profunda, medio longitudinaliter canaliculata subtilissimeque transverse-striata; antennis fuscis, articulo primo nigro-violaceo, secundo supra virescenti vel cyanescenti, tertio quarto dimidio fere longiore; pronoto irregulariter crassius, sed minus profunde punctato interstitiisque subtiliter punctulatis; mesonoto cum scutello et postscutello metanotoque fortius punctato-reticulatis; abdominis segmentis dorsalibus nigro-violaceis dense sat regulariter punctatis, tertio margine apicali in femina profunde-arcuato, in mare medio emarginato et utrinque parum subangulato; ventre nigro-piceo, nitido; pedibus vel concoloribus vel femoribus subtus virescentibus, tarsis fuscis; alis subfumato-hyalinis, venis piceis, basali seu transverso-mediali angulatim curvata. — ♂♀; long. 7 mm.

Præcedenti similis; sed punctatura pronoti duplici multoque subtiliori et abdominis segmentis dorsalibus regulariter non crasse punctatis, satis distincta.

Patria: Algeria (Luc. et Mus. Berolinense!).

102. **Holopyga janthina** Dhlb.

Holopyga janthina, Dhlb. Hym. Europ. II. p. 50, n. 26. (1854).

«Mediocris 1 ½ vix 2 lin. decimal. long. cyanea aut viridi-cyanea capite thoraceque modice punctatis et punctulatis, abdomine concolore confertim subtiliter punctulato, alis anticis basi hyalinis ceterum ample sordidis.

var. a. Abdomine violascente.

var. b. Abdomine viridi-cyaneo.

Observ. Paullo brevior et minus robusta quam *Holop. lazulina*, a qua ceterum facile cognoscitur punctatura multo minus crassa (fere ut in *Holop. ovata* constructa),

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

abdomine unicolore (nec segmentis basi nigricantibus), alis amplius sordidis e. s. p. Venter nigro-piceus nitidissimus, parumper violascens.»

Patria: Promontorium Bonæ Spei.

103. **Holopyga Lewisi** CAM.

Hedychrum Lewisi, Cam. Proced. Manch. Lit. and Philos. Soc. XXVI. p. 8. (1887).

«Bluish-green, variegated with purple, antennæ and tarsi blackish; wings fuscous, the posterior only at the apex. Antennæ covered sparsely with a microscopic down, the scape green, bluish at base and apex, punctured. Head coarsely punctured, the frontal hollow shining, striated, the space between the antennæ impunctate, on either side of them finely punctured; mandibles blackish. Pro- and metanotum coarsely rugosely punctured, scutellum and metanotum bearing large, roundish, or angled punctures, pleural hollows striated, but not strongly; the toothed hinder edge of metanotum coarsely punctured, striolated at the base; the tooth triangular; the central part of pro- and mesonotum is bluish-purple. Abdomen shining, covered with shallow, clearly seperated punctures; the ventral surface very shining, finely punctured in the middle. The coxæ are shining and rather strongly punctured (compared to the femora), the femora are very finely punctured, and fringed with longish hair: the tibiæ much more strongly punctured; the metatarsus is bent considerably; the spurs not one third of its length, the last joint is about the length of the preceding two united. Upper medial cellule rounded at the apex (not acute), reaching beyond the commencement of the radius.

Length 6 mm.»

Patria: Japonia (Hitoyoshi).

104. **Holopyga Indica** n. sp.

Mediocris, minus rubusta, tota viridi-cyanea, parce pilosa; temporibus triangulariter productis, latis; cavitate faciali profunda, dense subtilissime transverse-striata; antennis tenuibus, nigris, scapo et articulo primo flagelli supra cyaneis; vertice circa stemmata virescenti densius parumque subtilius, mesonoto cum scutello postscutelloque fortius punctato-reticulatis; vertice post stemmata cyaneo dense irregulariter punctato et punctulato; pronoto transverso, mesonoto vix longiore, sat dense crassius irregulariter punctato interstitiisque subtiliter punctulatis; metanoti dentibus postico-lateralibus mediocribus, subacutis; abdominis segmentis dorsalibus parum virescentibus, duobus primis sat dense concinneque punctatis, interstitiis angustis lævibus, tertio irregulariter fortiusque parum subrugoso-punctato, primo basi nigro-æneo fortiusque punctato, supra spatio transverso angusto lævi ac polito, tertio margine apicali profunde-arcuatim rotundato; ventre nigro-piceo, nitido; pedibus viridi-cyaneis, tarsis fuscis; alis subfumato-hyalinis, venis fuscis, tegulis fusco-æneis. — ♀; long. 6¼ mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: de punctatura duplici verticis pronotique, iam facile cognoscitur.
Patria: India orientalis (Mus. Hung.).

105. **Holopyga orientalis** SMITH.

Hedychrum orientale, Smith, Journ. Proced. Linn. Soc. Zoology. II. p. 128, n. 1. (1858).

«Viridi-cyaneum, capite thoraceque confertissime punctulatis, abdominis segmenti tertii margine apicali arcuato integerrimo, alis subhyalinis.

Length 2½ lines. The head and thorax very coarsely punctured, the abdomen more delicately so; the abdomen of a bright green, with blue tints in different lights, the flagellum fusco-testaceous, the mandibles ferruginous at their apex; the deep concavity of the face, in which the scape rests in repose, delicately transversely striate; the tooth at the lateral angles of the metathorax acute; the abdomen nigro-æneous beneath, with a thin, short, glittering pale pubescence, the apical segment widely emarginate.»

Patria: Singapur.

106. **Holopyga purpurea** SMITH.

Holopyga purpurea, Smith, Journ. Proceed. Lind. Soc. Zoology. V. p. 68, n. 1. (1861).

«Purpurea, nitens, violaceo variegata; metathorace crasse punctatissimo; alis subhyalinis.

Length 3¾ lines. Dark blue, with tints of bright purple and green; the head, pro- and mesothorax finely punctured, the prothorax with large coarse punctures at the sides; the metathorax with large deep fossulets at the sides; wings light brown, with their base hyaline. Abdomen delicately punctured, smooth and shining; the body brillant green beneath.»

Patria: Celebes (Makassar).

107. **Holopyga insperata** n. sp.

Submagna, sat robusta, tota viridi-cyanea, parcius cinereo-alboque pilosa; cavitate faciali profunda, subtilissime transverse-striata; antennis tenuibus, nigris, articulis duobus primis viridi-cyaneis; pronoto transverso, dense, parum rugose crassius punctato punctis aliquot minoribus inmixtis, mesonoto cum scutello postscutelloque crasse profundeque punctato-reticulatis; metanoti dentibus postico-lateralibus late-triangularibus, subacutis; abdominis segmentis dorsalibus duobus primis disco dense sat crasse, lateribus et tertio fortius rugoso-punctatis, primo basi late nigro-æneo, dense, in medio supra sparsim punctato, tertio margine apicali anguste sordide pellucido centro late-triangulariter, lateribus obsolete sinuatis; ventre nigro-piceo, nitido; femoribus viridi-cyaneis, tibiis tarsorumque articulo primo supra læte-viridibus, articulis horum reliquis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

fuscis ; alis sordidis, basi subhyalinis, venis fuscis, tegulis fusco-ænescentibus. — ♂ ; long. 7 mm.

Patria : Australia (Sidney, Coll. Saussurei).

108. **Holopyga maculata** Fabr.

Chrysis maculata, Fabr. Ent. Syst. Suppl. p. 258, n. 12. ♂. (1798). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 60, tab. XIV. fig. 10. ♂. (1801). — Fabr. Syst. Piez. p. 174, n. 18. ♂. (1804).
Hedychrum maculatum, Lep. Annal. du Mus. Hist. Nat. VII. p. 122, n. 8. (1806). — Brullé, Hym. IV. p. 51, n. 1. ♂. (1846).

Descriptio huius speciei secundum Fabricium est sequens :

« Glabra viridis, nitida occipite fascia abdomine maculis dorsalibus atris, ano integro. — Habitat in Americæ Insulis Mus. Dom. Bosc. — Statura et magnitudo *C. auratae*. Caput viridi æneum, nitidum occipite facia atra. Antennæ nigræ. Abdomen æneum, macula magna ad basin singuli segmenti atra. »

Descriptio Brulléi est sequens :

« Viridi et cyaneo varium, abdominis dorso maculis duabus fuscis, alis obscuris, basi hyalinis, capite et thorace valde, abdomine tenue punctatis. Mas.

Il est bleu, avec les jambes vertes et les tarses d'un roux presque brun ; les antennes sont noires, avec les deux premiers articles verts ; la face est verte, ainsi qu'une tache sur le vertex, entre les ocelles ; une bande transversale d'un rouge violet se remarque derrière les yeux et les ocelles, dans presque toute la largeur de la tête. Le dos du prothorax est nuancé de violet au milieu et de vert sur le bord postérieur. Le lobe moyen du mésothorax est d'un violet foncé en avant, plus clair en arrière ; les flancs du mésothorax, l'écusson, le bas et les côtés du métathorax sont verts. L'abdomen est orné de reflets verts, et, sur chacun des deux premiers segments, on voit une grande tache d'un violet foncé, un peu rougeâtre ; les deux tiers postérieurs des ailes de devant sont enfumés.

La tête et le thorax sont criblés de gros points très-serrés. La fossette de la face est profonde, finement striée et marquée d'un sillon longitudinal qui se bifurque en avant. La portion antérieure et le plus ordinairement cachée, du lobe moyen du mésothorax, est finement punctuée ; les sillons interlobulaires sont très-étroits. L'abdomen est très-finement ponctué. Les crochets des tarses sont dentelés.

Longueur : 0·007.

Patria : insula Haiti Indiæ occidentalis

Animadversio. — De hac specie apud Dahlbonum (Præfatio, pag. XVI.) sequentia legimus : « *Chrysis maculata* Fabr. ... ... nostrum esse videtur *Hedychrumm Zimmermanni.* »

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

109. **Holopyga obsoleta** Say.*

Hedychrum obsoletum, Say, Boston Journ. Nat. Hist. I. p. 284, n. 1. ♀. (1835). — Lec. Ins. of North Amer. II. p. 730, n. 1. ♀. (1859). — Nort. Transact. Amer. Ent. Soc. VII. p. 237. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 222. tab. VII. fig. 26. (1885).
Hedychrum Zimmermanni, Dhlb. Dispos. p. 2, n. 1. (1845); Hym. Europ. II. p. 61, n. 32. (1854).

«Four specimens from Illinois and Pennsylvania (Jowa, Say). Front closely and vertex loosely punctured, green; occiput pro- and mesothorax polished with small, very sparse punctures, purple and blue; sides and metathorax green, with large, shallow, close punctures; postscutellum followed by or extended into a small punctured area on the metanotum, which is turn ends in a median ridge; foveolæ at sides triangular and with the extreme base of spines transversely striated; abdomen polished, very finely and sparsely punctured, deep blue and violaceous purple, with slight crimson reflections in certain lights. A very distinct species on account of the lack of punctures on certain portions; 5.5 mm. long.» (Aaron l. c.)

Patria: America septentrionalis.

110. **Holopyga aspera** Brullé.

Hedychrum asperum, Brullé, Hym. IV. p. 52, n. 3. ♀. (1846) (nec Nort., nec Aaron).

«Viridi-subcyaneum, alis obscuris, basi et medio hyalinis, capite et thorace confertim, abdomine confertim, sed tenue punctato, subruguloso. Fem.

Il est d'un vert plus ou moins nuancé de bleu sur le thorax et sur l'abdomen. Le lobe moyen du mésothorax et une partie de l'écusson sont d'un violet foncé. Les pattes et les antennes sont colorées comme dans le précédent (Hedychrum violaceum, Brullé). Les ailes sont transparentes à la base, à peu près transparentes au milieu obscures à l'extrémité, mais dans une grande étendue.

La tête et le thorax sont criblés de gros points, qui sont confluents sur le méso-

* Conspectus specierum generis *Hedychrum* Americæ septentrionalis secundum Aaron est sequens :
Occiput pro- and mesothorax with smoothed areas and sparse punctures --- --- --- --- *obsoletum* Say.
No smoothed areas, strongly and closely punctured all over the head and thorax.
Dorsum of thorax coppery red (or golden and green with red reflections in some specimens), contrasting with the head, metanotum, legs and abdomen, which are green or blue--- *cupricolle* Cress.
Dorsum of thorax about uniform in color, from blue and purple to emerald-green, not contrasting with the other parts, and if inclining to coppery or golden, the other parts have bright brassy or golden reflections.
As viewed posteriorly the postscutellum is rounded and connects with a median ridge on the metanotum; the metanotal spines have the excavation at the base anterior to the black foveolæ with cross striæ (a great variation in size, color and other minor characters, is represented in this species. See description) --- --- --- --- --- --- --- --- --- --- *violaceum* Brullé.
As viewed posteriorly the postscutellum is followed by or extended into a punctured area on the metanotum, which takes the place of the median ridge; the metanotal spines have foveolæ or punctures at the base anterior to the black foveolæ; not striated --- --- --- *continuum* Aar.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

thorax et dont les intervalles sont finement ponctués sur le prothorax. La surface de l'abdomen est parsemée de petits points très-nombreux et très-serrés, surtout ceux du troisième segment, sur lequel les intervalles qui séparent les points sont élevés et donnent à la surface de ce segment un aspect rugueux. La base de l'abdomen offre une dépression large, peu profonde ; la ligne moyenne est à peine marquée. Les crochets des tarses sont dentelés. La nervure qui termine la cellule brachiale est très-arquée, presque anguleuse, tandis qu'elle est presque toute droite dans le précédent. La fossette de la face est disposée comme dans le précédent.

Longueur : 0.008.»

Patria : America septentrionalis.

Animadversio. — Clarissimi Domini Norton et Aaron speciem hanc cum *Hedychro violacco* Brullé eandem esse opinantur. Ego, e contrario, penitus persuasus sum, ambas species distinguendas esse, et ad duo genera pertinere. Verba enim Brulléi satis clara sunt. De *Hedychro violaceo* dicit : «Les crochets des tarses sont bifides». Et de *Hedychro aspero :* «Les crochets des tarses sont dentelés. La nervure qui termine la cellule brachiale est très-arquée, presque anguleuse, tandis qu'elle est presque toute droite dans le précédent *(H. violaceo)*». Secundum hæc : *Hedychrum violaceum* pertinet ad genus *Hedychrum* et *Hedychrum asperum* ad *Holopygam.*

111. **Holopyga ventralis** Say.*

Hedychrum ventrale, Say, Exped. to the source of St. Peter's Riv. II. p. 330, n. 1. (1824). — Lec. Ins. of North Amer. I. p. 222, n. I. (1859).

Holopyga Dohrni, Dhlb. Hym. Europ. II. p. 48, n. 24. tab. III. fig. 56.a—56.b. (segm. anale) (1854).

Holopyga compacta, Cress. Proceed. Ent. Soc. Philad. IV. p. 304. (1865).

Holopyga ventralis, Nort. Transact. Amer. Ent. Soc. VII. p. 235. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 220. tab. VII. fig. 34. (unguiculi) (1885).

Hedychrum violaceum, Prov. Natur. Canad. XII. p. 301. (1881) : Petit. Faun. Canad. II. Hym. p. 580. ♂♀. (1883) (nec Brullé).

«Before me are seventy-six specimens, all with 3 or 4 teeth in the claw, among which are several specimens determined by Mr. Norton as this species, and the type specimen of Mr. Cresson's *H. compacta ;* the others are from Georgia, Illinois, Montana, Washington Territory, Colorado, California, Texas and Vancouver's Island. Among these are several well marked varieties, but the characters separating them are in no case constant, and the connecting links are numerous and gradational. These characters are as follows: bright emerald-green all over with brassy reflections, without blue or purple, to dark blue and purple with slight green reflections, and all intermediate shades; lateral margins of third abdominal segment with two slight arcua-

* Conspectus specierum generis *Holopyga* Americæ septentrionalis secundum Aaron sequens est :

Three or four teeth within the tarsal claw, the intervals between the abdominal punctures smooth *ventralis* Say.

Two teeth within the tarsal claw, the interval between the abdominal punctures with fine schallow punctures *horus* Aar.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

tions, in others the lobe is wanting and the margins with one long arcuation (also gradational); apex of third segment with a broad shallow notch, in others wanting, the apex rounded, and in most of the specimens the notch is sligth and gradational. In some few specimens the entire margin of third segment is straight and even. There is also a gradation between the third and fourth toothed claws; 4.5—7 mm. long.» (Aaron l. c.)

Patria: America septentrionalis cum insula Cuba (Coll. Rad.!).

112. **Holopyga horus** Aar.

Holopyga horus (!), Aar. Transact. Amer. Ent. Soc. XII. p. 220. ♂♀. tab. VII. fig. 35. (1885).

«Dark green, with some blue and purple, or light blue with much green and a little purple; a slight arcuation at apex of third segment; one specimen has the lateral margin slightly angulated, the others with the margin with one long arcuation, not angulated; 4.5 mm. long. ♂♀.

Montana and Nevada; four specimens.»

Patria: America septentrionalis.

113. **Holopyga vernalis** Cress.

Hedychrum vernale, Cress. Proceed. Ent. Soc. Philad. IV. p. 104. ♂. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 237. (1879).

Description secundum Cresson:

«Bright metallic green; disk of the mesothorax and of the abdomen blue; antennæ blackish; apical third of wings fuliginous.

Head bright metallic green, with a faint bluish tinge about the front, the excavation to receive the antennæ very minutely striated transversely, rest of the head deeply and very closely punctured; mandibles black, pubescent; antennæ black the two basal joint green. Thorax metallic green, deeply and very closely punctured; disk of the mesothorax more coarsely punctured, tinged with blue, extreme sides deeply concave et finely striated, the posterior angles long, acute and divergent; tegulæ blue-green. Wings subhyaline, the apical third fuliginous, base of posterior wings hyaline; nervures black. Legs green, blackish in certain lights, slightly pubescent. Abdomen short and broad, subconvex, deeply and closely punctured, more sparse and less deep on the disk; green, with a deep blue reflection, the dorsal surface deep blue; apical margin of third sepment faintly sinuate, pubescent; venter concave, bright metallic green, the basal margins of the segments more or less black. Length 3 1/2 lines.»

Patria: Cuba.

114. **Holopyga cyaniventris** Cress.

Hedychrum cyaniventre, Cress. Proceed. Ent. Soc. Philad. IV. p. 104. ♂. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 237. ♂. (1879).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Head and thorax green; mesothorax and abdomen dark blue; antennæ black; wings fusco-hyaline.

Head metallic green, with a bluish reflection on the front, deeply and very closely punctured, more finely below the front; mandibles fuscous, green at base, pubescent; antennæ blackish, the basal joint blue-green. Thorax deeply and closely punctured, green, pubescent, the mesothorax with a strong deep reflection; metathorax rugose, deeply concave on each side beneath the posterior angles, wich are rather short, acute and divergent; tegulæ green. Wings uniformly pale fuscous, the posterior wings hyaline at base; nervures fuscous. Legs green with a strong deep blue reflection, pubescent, the tarsi and the posterior femora blackish in certain lights. Abdomen short and broad convex, slightly pubescent, deep brillant green, with a beautiful purple reflection especially on the disk of the second segment; punctures deep and close, less deep on the disk of the second segment; third segment slightly tinged with green, the apical margin slightly undulate; venter concave, polished, brillant-green. Length $3^1/_4$ lines.»

Patria: Cuba.

115. **Holopyga lazulina** Dhlb.

Holopyga lazulina, Dhlb. Hym. Europ. II. p. 49, n. 25. (1854).

Mediocris, robusta, tota viridi-cyanea vel læte-cyanea, capite thoraceque supra nigro-, subtus cum abdomine pedibusque albo-pilosis; cavitate faciali profunda, dense subtiliter transverse-striata; antennis crassiusculis, nigris, articulis duobus primis viridibus; vertice densius parumque subtilius, pro- et mesonoto dispersius crasse irregulariter punctatis; pleuris, scutello et postscutello crassius regulariter punctato-reticulatis; mesonoto sine suturis longitudinalibus; metanoti dentibus postico-lateralibus fortibus, triangularibus, acutis; abdominis segmentis dorsalibus: primo densius subtiliusque, secundo tertioque dispersius crassiusque rugosiuscule-punctatis, primo basi supra cavitatem spatio transverso lævi ac polito, secundo basi late nigro-æneo, tertio ante marginem apicalem in medio parum impresso, ipso margine arcuato-integro; segmentis ventralibus viridi-cyaneis vel cyaneis, segmento tertio disco sæpius macula magna nigro-ænea; femoribus tibiisque et tarsorum articulis duobus primis supra cyaneis vel viridibus, horum articulis reliquis fuscis; alis subhyalinis, apice leviter fumatis, venis fuscis, tegulis brunneis, antice viridi-cyaneo-maculatis. — ♂♀; long. 6—7 mm.

Patria: Brasilia (Dhlb. et Mus. Hung.); Respublica Argentina (Buenos-Aires, Coll. Saussurei!; Mendoza, Mus. Halense Saxonum!).

116. **Holopyga Novaræ** n. sp.

Mediocris, robusta, tota læte-cyanea, longius cinereo-alboque pilosa; cavitate faciali planiuscula, dense punctato-coriacea; antennis crassiusculis, nigris, articulis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

duobus primis viridibus; vertice dense subtilius punctato-reticulato, pro- et mesonoto crasse punctatis. illo interstitiis subtilius punctatis; scutello et postscutello fortius regulariterque punctato-reticulatis; mesonoto suturis longitudinalibus profundis; metanoti dentibus postico-lateralibus brevibus, acutis; abdominis segmentis dorsalibus duobus primis dense subtiliter punctatis, tertio subcoriaceo sparsim leviter punctato, margine apicali centro late sinuato; segmentis ventralibus femoribus item et tibiis viridi-cyaneis, tibiis posticis intus et tarsis fuscis; alis sordide-hyalinis, basi dilutioribus, venis fuscis, tegulis cyaneis. — ♂; long. 5 1/2 mm.

Holop. lazulinae Dhlb. similis; sed minor, cavitate faciali non profunda dense subtiliterque transverse-striata; mesonoto suturis longitudinalibus profundis; corpore ubique multo subtilius punctato, abdominis segmento tertio margine apicali centro late sinuato, optime distinguenda.

Patria: Chile (e Novaræ expeditione, Mus. Vindob.!).

II. *Abdominis segmenta dorsalia viridia et cyanea; caput et thorax viridi-aurata.*

117. **Holopyga rugosa** Smith.

Hedychrum rugosa (!), Smith, Annals and Magaz. Nat. Hist. Ser. 2. tom. IX. p. 45. (1852).

«Length 3 lines. Head and thorax golden green, rugose-punctate; the eyes, antennæ and tegulæ black, the scape of the antennæ tinged with green; the tarsi rufo-piceous, the punctures on the scutellum and metathorax very large. The abdomen is green with a blue reflection, much more finely punctured than the thorax, except the sides of the basal segment which are rugose.»

Patria: India (Poona).

III. *Abdominis segmenta dorsalia viridi-cyanea et viridi-aureo submicantia; mesonotum, scutellum et postscutellum viridi-aurata.*

118. **Holopyga Mlokosiewitzi** Rad.

Hedychrum Mlokosiewitzi, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 109, n. 34. ♂. (1876) sec. spec. typ. e coll. Rad.

Holopyga Mlokosiewitzi, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 9. (genit. maris) (1888).

Mediocris, sat robusta, viridi-cyanea, parcius cinereo-alboque pilosa; mesonoto cum scutello postscutelloque viridi-auratis; cavitate faciali profunda, læte-cyanea, subtilisime transverse-striata; antennis crassiusculis, fusco-nigris, scapo cyaneo; mandibulis in medio rufis; vertice dense subtiliter inæqualiterque, mesonoto cum scutello metanotoque crasse concinne punctato-reticulatis; pronoto minus dense crasse rugoso-punctato; metanoti dentibus postico-lateralibus mediocribus, late-triangularibus; abdominis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

segmentis dorsalibus viridi-cyaneis viridi-aureo micantibus, primo disco et secundi basi dense concinne fortius punctatis, lateribus et secundi margine postico tertioque crasse profundeque sat dense rugoso-punctatis, interstitiis angustis lævibus, tertio margine apicali testaceo-scarioso arcuato-integro; ventre nigro-piceo, nitido; pedibus cyaneis vel violascenti-cyaneis, tarsis fusco-rufis; alis basi hyalinis, apice late sordidis, venis fuscis, tegulis brunneis. — ♂; long. 6 mm.

«*Armure*. L'armure par sa forme se rapproche à l'armure de l'espèce précédente (Holop. Solskii Rad.), mais la branche du forceps est presque cylindrique vers l'extrémité. Volsella nue, moins large. Tenette large, pointue, mais complètement nue, privée des traces de poils. Les crochets moins larges vers la base et plus larges vers l'extrémité.» (Rad. l. c. tab. I. fig. 11 a, 11 b.)

Patria: Caucasus (Coll. Rad.!, Fairmairei! et Mus. Hung.).

IV. *Abdominis segmenta dorsalia viridia cyaneoque tincta; thorax ex parte cupreo-ruber.*

119. **Holopyga cupricollis** Cress.

Hedychrum cupricolle, Cress. Proceed. Ent. Soc. Philad. IV. p. 305, n. 2. ♀. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 237. ♀. (1878). — Aar. Transact. Amer. Ent. Soc. XII. p. 223. (1885).

«Three specimens from Colorado (two of which are Mr. Cresson's types). Densely and rather finely punctured on the head and thorax, excepting the scutellum and postscutellum, which have the punctures larger; abdomen with the punctures a little separated, but on some portions becoming contiguous. In the types the head, sides, legs, metanotum and abdomen are emerald-green with a little blue, the entire dorsum of thorax bright coppery red, the postscutellum a little green; 7.5 mm. long. In the other specimen the median lobe of mesothorax alone coppery red, the other portions of dorsum of thorax bright golden and emerald-green with coppery reflections; front green, sides green and blue, metanotum purple and blue; occiput, legs and abdomen blue, purple and green; 6 mm. long.» (Aaron l. c.)

Patria: America septentrionalis.

Animadversio. — Speciem hanc *Holopygis* inserui, quamvis Dom. Aaron eam *Hedychrum* esse dicat, sed de segmenti tertii margine laterali et de vena basali nullam facit mentionem, an ille angulatus et hæc tantum leniter curvata sit vel non? Apud Cresson legimus: «apical segment rounded and entire.»

V. *Abdominis segmenta dorsalia: primum et secundum aurato-viridia, tertium cyaneo-viride; thorax viridi-auratus, caput cyaneo-viride.*

120. **Holopyga Bogdanovi** Rad.

Holopyga Bogdanovii, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 5, n. 10. tab. I. fig. 1. (1877).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Submediocris; capite cyaneo-viridi; clypeus brevis, virescens subtruncatus; mandibulæ antennæque nigræ; thorace viridi-aureo, scrobiculato; abdomen nitidum delicatulo punctulatum, segmentis primo et secundo aureo-viridibus, tertio cyaneo-viridi; pedes virides, tarsis brunneis; venter nigro-piceus. Statura Elampidis, assimilis *Hedychro anali.*

Long. 5 mm.»

Patria: Turkestania (vallis Sarafschan).

Animadversio. — Animal non vidi nescioque an illud forsan ad subgenus *Philoctetes* pertineat?

VI. *Abdominis omnia segmenta dorsalia aurata vel viridi-aurata vel viridi-cuprata.*

1. *Caput et thorax viridia vel cyanea, saepius viridi-subaureo picta.*

121. **Holopyga amoenula** Dhlb.

? *Chrysis edentula,* Schck, Faun. Boica. Tom. II. P. II. p. 344, n. 2197. (1802) (nec Rossi).

Holopyga amoenula, Dhlb. Dispos. p. 4, n. 1. (1845). — Mocs. Chrys. faun. Hung. p. 36 et 82, n. 7. ♂♀. tab. I. fig. 9. (ala antica) (1882). — Frey, Chrys. Helvet. p. 37. ♂♀. tab. III fig. 3. (unguic.) (1887).

Hedychrum fastuosum, Luc. Explor. de l'Algér. Zoolog. III. p. 313, n. 357. Hym. tab. 17, fig. 10. (1849). — Destef. Natural. Sicil. VII. p. 218. (1888).

Hedychrum micans, Luc. Explor. de l'Algér. Zoolog. III. p. 313, n. 358. Hym. tab. 17, fig. 11. (1849) (nec Holop. micans Dhlb.).

Ellampus generosus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 349, n. 97. (1853).

Holopyga ovata, Dhlb. Hym. Europ. II. p. 51, n. 28. (1854) ex parte, tab. III. fig. 57—61.b. (partes corp.). — Schck, Nass. Jahrb. XI. p. 82, n. 5. (1856) ex parte. — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 549, n. 1. (1857) ex parte. — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 64. (1858). — Chevr. Chrysid. du Léman, p. 93. (1862). — Schck, Progr. Gymn. zu Weilb. p. 12, n. 1. (1870) ex parte. — Thoms. Opusc. Ent. II. p. 104, n. 1. (1870). — Fedts. Reise in Turkest. Hym. Chrysid. p. 4, n. 9. (1877) ex parte. — Lampr. Goldwesp. Deutschl. p. 22, n. 75. (1881).

Holopyga ovata, var. d. (amœnula), Dhlb. Hym. Europ. II. p. 53. (1854).

Holopyga splendida, Schck, Nass. Jahrb. XI. p. 48, n. 23. (1856). — Lampr. Goldwesp. Deutschl. p. 22, n. 71. (1881).

Holopyga generosa, Schck, Nass. Jahrb. XI. p. 49, n. 24. (1856). — Lampr. Goldwesp. Deutschl. p. 22, n. 72. (1881).

Holopyga punctatissima, Schck, Nass. Jahrb. XI. p. 50, n. 26. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 64. (1858). — Lampr. Goldwesp. Deutschl. p. 22, n. 74. (1881) (nec Dhlb.).

Holopyga angustata, Schck, Stett. Ent. Zeit. XXXII. p. 255, n. 4. (1871) ex parte.

Holopyga gloriosa, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 28. (1879) ex parte.

Holopyga gloriosa var. 1. (ovata Dhlb.), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 31. (1879).

Holopyga gloriosa var. (micans Luc.), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 31. (1879).

Holopyga gloriosa var. 2. (fastuosa Luc.), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).

Holopyga gloriosa var. 4. (amœnula Dhlb.), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).

Holopyga gloriosa var. aureomaculata, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).

Holopyga gloriosa, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 37, n. 6. (1887). — Destef. Natural. Sicil. VII. p. 119 et 217. (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Submediocris vel mediocris, rarius submagna, robusta, viridi-cyanea, plus minusve virescens vel violascens, parcius cinereo-alboque pilosa; cavitate faciali profunda, dense transverse-striata; antennis crassiusculis, nigris, articulis duobus primis viridi-cyaneis vel viridibus; vertice circa stemmata dense, pronoto dispersius fortiusque rugoso-punctatis, hoc punctis minutis inmixtis; mesonoto cum scutello et postscutello crassius regulariter punctato-reticulatis; metanoti dentibus postico-lateralibus validis, triangularibus, acutis; abdominis segmentis dorsalibus igneo-auratis, sæpius plus minusve virescentibus, dense subtilius vel rarius crassius regulariter punctatis, primo basi late nigro-æneo denseque parum rugosiuscule-punctato, tertio margine apicali arcuato-integro; ventre nigro-piceo, nitido; femoribus læte-cyaneis vel virescenti-cyaneis, tibiis plerumque viridibus, tarsis fuscis vel parum rufescentibus; alis basi hyalinis, apice late sordidis, tegulis brunneis. — ♂♀; long. 5—8 mm.

Hedychri nobilis Scop. mari similis; sed characteribus genericis iam primo intuitu facile distinguenda.

Patria: Europa tota cum Sibiria (Mus. Hung.) et Turkestania (Mus. Hung.) Algeriaque, ubique frequens vel frequentissima.

Animadversio. — In opere meo: *Chrysididae faunae Hungaricae*, pag. 82. sequentia scripseram, quæ etiam hodie profiteor: «A piæ memoriæ viro: Dahlbomo ad *Holopygam ovatam* relatas illas varietates, quarum pro- et mesonotum vel etiam scutellum et postscutellum aurata vel viridi-aurata sunt, ego species distinctas considero tamdiu, donec aliquis virorum huius amabilis scientiæ eruditorum specimina talia cum exemplaribus cyaneis, viridibus vel viridi-cyaneis, ergo formis typicis, in uno eodemque nido vel in copula non observaverit.»

var. viridis Guér.

Hedychrum viride, Guér. Revue Zoolog. p. 150, n. 20. ♂. (1842) (nec Cress.).
Hedychrum numidicum, Luc. Explor. de l'Algér. Zoolog. III. p. 311, n. 353. Hym. tab. 17, fig. 8. (1849). — Destef. Natural. Sicil. VII. p. 217. (1888).

Corpore toto concinne aurato-viridi. — Patria: Andalusia (Coll. Rad.!); Algeria (Guér.).

var. punctatissima Dhlb.

Holopyga punctatissima, Dhlb. Hym. Europ. II. p. 50, n. 27. (1854).

Typo simillima; sed abdominis segmentis dorsalibus crasse profundeque irregulariter punctatis interstitiisque lateribus multo subtilius punctulatis, distincta. — Patria: Græcia (Coll. Wüstneii! et Mus. Hung.); Caucasus (Coll. Rad.!, Fairmairei! et Mus. Hung.); Romania (Mus. Hung.); Brussa (Mus. Vindob.!) et Malatia in Asia minore (Mus. Hung.); insula Rhodus (Dhlb.); Syria (Coll. Andréi!); Semsaul in Merw (Coll. Rad.!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

2) *Thorax ex parte auratus; caput cyaneum vel viridi-cyaneum.*

a) *Scutello solum aurato.*

122. **Holopyga cribata** KLUG.

Elampus cribratus, Klug, Waltl Reise nach Span. p. 90. (1835). — Silbermann, Revue Entom. IV. p. 159. (1837).

«Cyaneus, capite thoraceque, dorso cum scutello aureo, scabris, abdomine rotundato, confertim punctato, aureo.

Diese nur einmal vorhandene Art gehört zu der Abtheilung mit ganzrandiger Endspitze des Hinterleibes, und wenig oder gar nicht vorgezogenen Rückenschildschen. In der Färbung ist sie von *Hedychrum lucidulum* Lepell. durchaus nicht verschieden, die Unterschiede bestehen nur in der Sculptur; Kopf und Rückenschild sind nämlich mit grubenförmigen Eindrücken besäet, und der Hinterleib ist viel kürzer und dichter, als bei *H. lucidulum* punktirt.»

Patria: Hispania.

b) *Pronoto et mesonoto auratis.*

123. **Holopyga chrysonota** FÖRST.

Ellampus chrysonotus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 347, n. 95. ♀. (1853).
Holopyga ovata var. h. (ignicollis), Dhlb. Hym. Europ. II. p. 52, n. 28. (1854).
Holopyga varia, Schck, Nass. Jahrb. XI. p. 50, n. 25. (1856). — Lampr. Goldwesp. Deutschl. p. 22, n. 73. (1881).
Holopyga ovata var. β. (ignicollis), Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 549, n. 1. (1857).
Holopyga generosa, Schck, Progr. Gymn. zu Weilb. p. 12, n. 24. (1870) ex parte (excl. Försteri syn.).
Holopyga angustata, Schck, Stett. Ent. Zeit. XXXII. p. 255, n. 4. (1871) ex parte.
Holopyga ovata var. g. Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 4. (1877).
Holopyga ovata var. ignicollis, Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879).
Holopyga gloriosa var. b. (ignicollis), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).
Holopyga chrysonota, Mocs. Chrys. faun. Hung. p. 34 et 80, n. 3. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 37 et 38. tab. III. fig. 3. (unguic.) (1887).
Holopyga gloriosa F. *var. ignicollis*, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 37. (1887).

Cyanea vel viridi-cyanea plus minusve violascens; pro- et mesonoto abdominisque dorso subviridi- vel igneo-auratis, illis duobus sat fortiter irregulariterque punctatis, interstitiis planis evidenter punctulatis; abdominis segmentis dorsalibus dense, sed minus crasse punctatis; ventre piceo, nitido; pedibus viridi-cyaneis, tarsis fuscis; alis sordidis, basi hyalinis. — ♂ ♀; long. 5—6 mm.

Patria: Europa media et meridionalis cum Sibiria (Krasnojarsk, Mus. Hung.) et Turkestania.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

124. **Holopyga similis** Mocs.

Holopyga similis, Mocs. Term. Füz. III. p. 121, n. 8. ♂ ♀; Chrys. faun. Hung. p. 35 et 81, n. 4. ♂ ♀. tab. I. fig. 5. (unguic.) (1882).

Cyanea vel viridi-cyanea, parce pilosa; pro- et mesonoto abdominisque dorso auratis vel virescenti- vel igneo-auratis, nitidissimis; antennarum articulis duobus primis viridibus, reliquis et palpis nigris; mandibulis rufo-piceis, basi virescentibus; cavitate faciali minus profunda concinne transverse-striolata; vertice crebrius et subtilius, pro- et mesonoto densius et rudius punctato-rugosis, scutello et postscutello crasse punctato-reticulatis; abdomine sat crasse et subdisperse rugosiuscule-punctato, ventre piceo; pedibus viridibus, tarsis fuscis, unguiculis infra tridenticulatis, unguiculo ipso mediocri; alis infuscatis, basi hyalinis, nervis et tegulis nigris. — ♂ ♀; long. 5½—7 mm.

Mas: feminæ similis, tantum lobo medio mesonoti antice nigro-æneo subtiliterque dense rugosiuscule-punctato.

Præcedenti valde similis, sed plerumque paulo maior, corpore ubique fortius punctato, unguiculis infra ita tridenticulatis, sicut in *Holopyga gloriosa* F.; unguiculo ipso nempe fere dimidio breviore, quam in *H. chrysonota* Först.

Patria: Hungaria centralis et meridionalis, mensibus Julio et Augusto sat rara.

c) *Pronoto, mesonoto, scutello et postscutello auratis.*

125. **Holopyga gloriosa** Fabr.

Chrysis gloriosa, Fabr. Ent. Syst. II. p. 242, n. 14. (1793). — ? Coqueb. Illustr. Icon. Ins. Dec. II. p. 58, tab. XIV. fig. 1. (1801). — Fabr. Syst. Piez. p. 174, n. 20. (1804).

Hedychrum lucidulum, Lep. Annal. du Mus. Hist. nat. VII. p. 122, n. 11, tab. VII. fig. 6. (1806).

Ellampus inflammatus, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 348, n. 96. ♂ ♀. (1853) sec. spec. typ. Mus. Nat. Hung.

Holopyga ovata, Dhlb. Hym. Europ. II. p. 51, n. 28. var. 1. (gloriosa Fabr.) (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 549, n. 1. var. γ. (gloriosa Fabr.) (1857). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 4, n. 9, var. 1. (1877).

Holopyga Jurinei, Chevr. Chrysid. du Léman, p. 95. ♀ (1862). — Schck, Progr. Gymn. zu Weilb. p. 12. Anmerkung. (1870); Stett. Ent. Zeit. XXXII. p. 255, n. 3. (1871). — Lampr. Goldwesp. Deutschl. p. 22, n. 75. (1881).

Holopyga gloriosa F. *var.* 8. Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).

Holopyga gloriosa F. *var.* 7. (lucida Lep.), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 32. (1879).

Holopyga ovata Dhlb. *var. lucida,* Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 157. (1879).

Holopyga imperialis, Gradl, Entom. Nachricht. VII. p. 300. ♂. (excl. ♀) (1881).

Holopyga gloriosa, Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 64. (1858). — Mocs. Chrys. faun. Hung. p. 34 et 80, n. 2. ♂ ♀ (1882). — Frey, Chrys. Helvet. p. 37 et 38. tab. III. fig. 12. ♂. (segm. anale) (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 9. (genit. maris) (1888).

Holopyga gloriosa F. *var. lucida,* Gog. Annal. Soc. Españ. Hist. Nat. XVI. p. 38. (1887).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Cyanea plus minusve violascens; pronoto, mesonoto, scutello cum postscutello abdominisque dorso igneo- vel viridi-auratis, nitidissimis; pro- et mesonoto fortiter et irregulariter punctatis interstitiisque punctulatis, scutello et postscutello crasse punctato-reticulatis; abdominis segmentis dorsalibus dense, sed plerumque minus crasse punctatis; ventre piceo, nitido; pedibus cyanescenti-viridibus, tarsis fuscis; alis sordidis, basi hyalinis. — ♂ ♀; long. 5—5½ mm.

«*Armure.* La branche du forceps très allongée vers l'extrémité. Volsella et tenette de la forme de *H. difficilis.* Les crochets faiblement rétrécis au milieu, pointus à l'extrémité.» (Rad. l. c. tab. I. fig. 12a, 12b.)

Patria: Europa media et meridionalis cum Caucaso, Sibiria orientali et Turkestania, Syria (Coll. Wüstneii!) et Berberia seu terra Berberorum in Africa septentrionali.

var. Caucasica mihi.

Typo simillima; differt solum thorace abdominisque segmentis dorsalibus multo fortius dispersiusque punctatis et punctulatis (fere sicut in *Holop. amoenula* Dhlb. *var. punctatissima* Dhlb.). — Patria: Transcaucasia (Helenendorf, Mus. Vindob.!).

3) *Caput et thorax maxima ex parte aurata vel cupreo-aurata.*

a) *Metathorace laete-cyaneo.*

126. **Holopyga fervida** Fabr.

Chrysis fervida, Fabr. Spec. Ins. I. p. 456, n. 12. (1781); Mant. Ins. I. p. 283, n. 14. (1787). — Vill. Linn. Ent. III. p. 259, n. 10. (1789). — Oliv. Encycl. Méth. Ins. V. p. 675, n. 16. (1790.) — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2745, n. 16. (1792). — Fabr. Ent. Syst. II. p. 242, n. 16. (1793). — Panz. Faun. Ins. Germ. fasc. 51. tab. 6. (1798). — Fabr. Syst. Piez. p. 175, n. 23. (1804).

Hedychrum fervidum, Latr. Hist. nat. XIII. p. 240, n. 3. (1805). — Panz. Krit. Rev. II. p. 104. (1806). — Dhlb. Hym. Europ. II. p. 90, n. 52, tab. IV. fig. 78—80. (partes corp.) (1854). — Schck, Nass. Jahrb. XI. p. 45, n. 20. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 67. (1858). — Taschb. Hym. Deutschl. p. 150. (1866). — Schck, Progr. Gymn. zu Weilb. p. 12, n. 22. (1870). — Lampr. Goldwesp. Deutschl. p. 20, n. 62. (1881).

Hedychrum nitidum, Lep. Annal. du Mus. Hist. nat. VII. p. 123, n. 12, tab. VII. fig. 5. ♂. (1806).

Hedychrum Fellmannii, Luc. Explor. de l'Algér. Zoolog. III. p. 314, n. 359. Hym. tab. 17, fig. 12. (1849).

Hedychrum chalconotum, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 345, n. 94. ♀. (1853) sec. spec. typ. Mus. Nat. Hung.

Holopyga splendens, Chevr. Mittheil. Schweiz. Ent. Ges. Vol. III. Nro I. p. 44. ♀. (1869).

Holopyga fervida, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 27. tab. I. fig. 8. (unguic.) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 253, n. 26. (1882). — Mocs. Chrys. faun. Hung. p. 33 et 80, n. 1. ♂ ♀. tab. I. fig. 6. (unguic.) (1882). — Frey, Chrys. Helvet. p. 36 et 37. tab. III. fig. 6. (unguic.) (1887). — Gog. Anal. Soc. Espan. Hist. Nat. XVI. p. 39, n. 9. (1887) (excl. *Hedychr. minuto* Lep. syn.). — Destef. Natural. Sicil. VII. p. 119. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 10. (genit. maris) (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Mediocris, robusta, læte- vel in pleuris parum virescenti-cyanea, parce pilosa; vertice et pronoto viridi- vel cupreo-auratis, scutello et postscutello violascenti-cupreis; cavitate faciali profunda, violacea, subtilissime transverse-striata; antennis crassiusculis, nigris, scapo ænescenti; vertice densius, pro- et mesonoto multo dispersius minus fortiter punctatis, interstitiis latis lævibus ac politis; scutelli disco spatio lato lævi ac politissimo, parte reliqua crasse profundeque punctata; metanoto et mesopleuris crasse punctato-reticulatis; abdominis segmentis dorsalibus viridi- vel cupreo-auratis, dense subtiliter sat regulariter punctatis, basi nigro-æneis, tertio margine apicali arcuato-integro; pedibus nigro- vel cupreo-æneis, femoribus anticis postice violaceis vel viridi-auratis, tarsis fuscis; ventre nigro-piceo, nitido; alis sordidis, basi hyalinis, venis fusco-brunneis, tegulis magnis. convexis, politis, brunneo-nigris. — ♂ ♀; long. 5—6 mm.

«*Armure.* La branche du forceps plus allongée et plus mince que dans l'espèce précédente (*Holop. gloriosa* Fabr.). Volsella moins large. Tenette plus large à sa basa et plus pointue vers l'extrémité.» (Rad. l. c. tab. I. fig. 13a, 13b, 13f, 13i.)

Patria: Hispania (Oliv.); Sicilia (Destef.); Italia (Fabr.); Gallia (Latr.); Belgium (Dhlb.); Germania (Panz.); Helvetia (Chevr.); Tyrolis (Kohl); Austria (Dhlb.); Hungaria (Först.); Græcia (Mus. Atheniense!); Algeria (Luc.).

Animadversio. — Clariss. Dominus Destefani post hanc speciem sequentia scripserat: «Il mio amico sig. E. Ragusa nel mese di giugno 87 raccoglieva al bosco della Ficuzza in Sicilia un exemplare ♀ che io momentaneamente riferesco a questa specie; ma invero esse si differisce dal tipo per non lievi caratteri; trattandosi però di un solo individuo non è possible pronunziarci definitivamente. Questo exemplare si fa notare specialmente per la punteggiatura della testa, del protorace e del mesotorace; questa punteggiatura è molto marcata, fitta, ocellata, le impressioni sono ampie e tra di loro non lasciano nessuno spazio levigato, nel tipo invice la punteggiatura è più fine, spaziata e la testa, il protorace ed il mesotorace sono levigati. In questo exemplare inoltre si nota una differenza di colorito; cosi, esso ha la testa intieramente di colore bluo intenso, ed il dorso del torace è uniformemente verde soffuso di oro. — A questa varietà si adatterebbe bene il nome di *foveolata*.»

b) *Thorace toto aurato.*

127. **Holopyga miranda** Ab.

Holopyga miranda, Ab. Diagnos. Chrys. Nouvell. p. 2, n. VIII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 30, tab. I. fig. 8. (unguic.) (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 40, n. 10. (1887).

«Long. 5 mm.

Entièrement couleur feu. Tête régulièrement et également ponctuée, reticulée sur le vertex. Antennes noires, leurs deux premiers articles couleur feu. Pronotum court et etroit, ponctué-réticulé, à ponctuation double. Mésonotum régulièrement ponctué-reticulé, à points plus gros et plus serrés que ceux du pronotum. Ecusson et postécusson ponctués-reticulés de points très-gros et très-serrés, ce dernier gibbeux. Abdomen à points relativement assez marqués et assez serrés. Ventre noir, a peine ponctué. Pieds couleur feu, tarses testacés au bout. Cellule radiale incompléte.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

J'ai rapporté cette délicieuse espèce de Corse et j'eu ai vu un second sujet venant de l'Escorial, dans la collection Puton. Elle diffère des *Hedychrum cupratum* et *purpurascens* par son ventre unicolore, la sculpture du pronotum régulière et son métanotum qui n'a pas de punctuation double. Quant à *l'integrum* il rentre dans le genre *Hedychridium*. Le *purpurascens* aurait, d'aprés Dahlbom, le dorsulum brillant et la cellule radiale compléte. Il est regrettable que cet auteur ait si mal étudié le crochet des tarses. Si le *purpurascens* la fait comme *l'integrum*, nos deux espèces sont génériquement distinctes. Mais il est probable, d'apres la description des ailes, que le *purpurascens* est une *Holopyga.*» (Abeille l. c.).

Patria: insula Corsica et Hispania (Escorial).

128. **Holopyga bifrons** Ab.

Holopyga bifrons, Ab. Diagnos. Chrys. Nouvell. p. 3, n. IX. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 31. ♂. tab. I. fig. 9. (unguic.) (1879).

«Sembable au précédent (Holopyga miranda Ab.) pour la taille et la couleur, il en différe par les points suivants:

Tout le devant de la tête bleu, à partir de la crête frontale; front plus long; cavité antennaire non ponctuée, mais ridée transversalement et remontant plus près les ocelles; premiers articles antennaires bleus et non couleur feu; ponctuation du thorax plus serrée.

J'ai vu un seul ♂ de cette jolie espèce venant de Bône. Il m'a été donné par non regretté maître Perris».

Patria: Algeria.

Subgenus 2. HEDYCHRIDIUM Ab.*

Unguiculi tarsorum infra denticulis duobus tantum armati, dente inferiore circa medium sito. (Transitus ad genus *Hedychrum*.)

*

I. *Corpus totum cum abdomine viridi-cyaneum, viride, cyaneum, coeruleum vel violaceum, aut his coloribus variegatum, sed nunquam auratum vel cupratum.*

129. **Holopyga flavipes** Eversm.

Hedychrum flavipes, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 552, n. 4. ♀. (1857) sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. III. p. 301, n. 19. tab. III. fig. 10. ♀. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 7. n. 15. ♂♀.
Hedychrum Solandii, Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 65. ♀. (1858).

* Reieci hoc genus etiam propterea, quia species nonnullæ generis veri *Hedychri* dentem inferiorem ab apice valde remotum, fere circa medium habent, prout hoc in *Hedychro coelestino* Spin. optime videtur.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Holopyga bellipes, Mocs. Term. Füz. III. p. 121, n. 9. ♀. (1879); Chrys. faun. Hung. p. 35 et 81, n. 5. ♀. tab. II. fig. I. ♀. (1882).
Hedychridium flavipes, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 35 et 37. ♂♀. (1879).

Submediocris vel mediocris, sat robusta, parce albo-pilosa; cavitate faciali minus profunda, dense subtilissime transverse-striata, lateribus punctato-coriacea argenteoque pilosa, superne convexa; antennis tenuibus, articulo tertio mediocri, quarto parum longiore; genis sat longis, articulo quarto æquilongis; abdominis segmentis dorsalibus secundo tertioque carinula mediana minus distincta: alarum tegulis, femorum apice, tibiis tarsisque rufo-testaceis, his articulis ultimis infuscatis, tibiis in feminis nitore coeruleo-rufo. — Long. 5—6 mm.

Femina: corpore toto cum abdomine læte-cyaneo; cavitate faciali viridi vel cyanea; antennis fusco-rufis vel fuscis, articulis duobus primis viridibus vel cyaneis; thorace supra dense subtilius minus distincte, scutello et postscutello evidentius punctato-reticulatis; abdominis segmentis dorsalibus dense rugosiuscule-punctatis, subcoriaceis, segmento secundo disco sæpius macula magna violacea ornato, tertio apicem versus valde angustato, subtriangulari, ipso apice medio leniter sinuato; ventre vel cyaneo vel cyaneo-viridi; femoribus læte-cyaneis; alis hyalinis vel parum sordidis, venis fuscis, cellula radiali completa.

Mas: corpore toto cum abdomine viridi-cyaneo vel cyanescenti-viridi; cavitate faciali aut viridi aut viridi-aurata; antennis vel fuscis vel apicem versus rufescentibus, articulis duobus primis viridi- vel cupreo-auratis; thorace supra dense distincte punctato-reticulato; abdominis segmentis dorsalibus dense fortius rugosiuscule-punctatis, subcoriaceis (in uno specimine e Transcaucasia punctatura fortiore), segmento secundo disco macula violascenti-cyanea vel cyanea ornato et hic valde dense subtiliter punctulato (segmento primo in uno specimine Hungarico margine apicali anguste aureo-limbato), segmento tertio breviore, sed latiore, quam in femina et non tam fortiter angustato, apice in medio leniter sinuato; ventre cyaneo-viridi vel aurato-viridi; femoribus aurato-viridibus; alis subhyalinis, disco sordidis, venis fuscis, cellula radiali completa.

Species: colore cyaneo et viridi varians, tibiis tarsisque rufo-testaceis, a congeneribus facile cognoscenda.

Patria: Gallia (Court. et Coll. Perezi!); Hungaria centralis, mense Julio et initio Augusti rara (Mocs.); Russia (Samara, Rad.; Ural, Eversm.); Transcaucasia (Hellenendorf, Mus. Vindob.!); Syria (Mus. Vindob.!); Turkestania (Rad.).

130. **Holopyga Zelleri** Dhlb.

Hedychrum Zelleri, Dhlb. Dispos. p. 2, n. 2. (1845); Hym. Europ. II. p. 69, n. 39. tab. IV. fig. 63.a. (1854). — Schck, Nass. Jahrb. XI. p. 81, n. 3. (1856); Progr. Gymn. zu Weilb. p. 16, n. 25. (1870). — Lampr. Goldwesp. Deutschl. p. 20, n. 59. (1881).

Descriptio secundum Dahlbom:

«Minutum 3/4 vix 1 lin. decimal. long. viride capite thoraceque subtiliter coriaceis confertim punctulatis subopacis, abdomine subnitido confertissime subtilissime pun-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ctulato, segmenti tertii margine apicali convexo-arcuato tenuissime testaceo, alis subhyalinis.

Observ. Ad habitum valde affinis *Hedychr. minuto ;* at corpore omnium Chrysidum minutissimo toto dorso viridi, capite thoraceque subtiliter coriaceis alisque hyalinis facillime dignoscitur.

Corpus æruginoso-viride, ventre nigro-piceo politissimo et glaberrimo, tarsis pallide testaceis. Mandibulæ et antennæ normales, licet proportionaliter tenues. Caput et thorax subtiliter confertim punctulata: scutellum, postscutellum et mesopleuræ lobus parvus subreticulata. Alæ hyalinæ, apice levissime umbrosæ; tegulæ viridi-fusco-æneæ; venæ subtiles, testaceo-brunnescentes, venula transverso-medialis levissime incurva. Abdomen nonnihil nitidum, confertissime et subtilissime punctulatum.»

Patria: Germania (Silesia ad Glogoviam [Glogau], Dhlb.).

131. **Holopyga monochroa** Buyss.

Hedychridium monochroum, Buyss. Revue d'Entom. VII. p. 3, n. 4. ♀. (1888).

«♀. Corps de très petite taille, court, assez trapu, ayant la forme d'un *Hed. minutum var. infans* Ab., entièrement blue, un peu verdâtre; pubescence très fine, courte, épaisse, dressée, blanchâtre; la téte et le thorax régulièrement couverts d'une réticulation uniforme, les points à fond plan. Tête grosse, plus large que longue; yeux grands, très saillants; cavité faciale presque plane, bleu vif, ridée transversalement. Antennes brunâtres, premier article vert-doré, le seconde bronzé. Pronotum rectangulaire, transversal; aire médiane du mesonotum d'une couleur un peu plus foncée; angles posticolatéraux du métanotum à pointe longue, obtuse; côtés du mésosternum (épimères) réticulés comme le pronotum. Tarses et extrémités des tibias brun-roussâtre; ongles du genre. Écailles roussâtres avec quelques légers reflets verts; ailes légèrement enfumées, avec une petite fascie ondulée, transversale un peu plus obscure. Abdomen court, un peu déprimé, uniformément ponctué-réticulé non profondément, moins grossièrement que sur l'avant-corps; seconde segment portant sur le milieu de son disque une grande tache noire mate, touchant la base du segment, bordure apicale de ce segment subscarieux; troisième segment régulièrement arrondi en demi-circle. Ventre vert un peu bleuâtre, chaque segment largement bordé de noir, ponctuation grosse, très espacée, entremêlée de poils noirs dressés. Oviscape brun roussâtre. — Long. 3 1/2 mill.

Cette charmante petite espéce serait voisine de l'*H. Zelleri* Dhlb., mais s'en éloigne par sa ponctuation grosse et réticulée, ses ailes enfumées, sa teinte mate, non brillante, par son ventre à couleur métallique couvert be poils noirs, et enfin par ses tarses non testacés.

Il est probable que la tache noire du disque du deuxième segment abdominal puisse varier et même disparaître complètement ainsi qu'on le remarque chez l'*H. minutum* Lep.»

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Patria: Gallia? (Marseille? septembre 1880, collection F. Ancey teste Buyss.). — Tyrolis meridionalis (Kohl et Mus. Vindob.!); Hungaria centralis, mense Julio sat rara.

Animadversio. — Ad hanc descriptionem eximiam pauca tantum addere volo. Secundum meam opinionem, species verisimiliter eadem est cum *Holopyga Zelleri* Dhlb., a piæ memoriæ viro non satis bene characteribus illustrata, præsertim quoad punctaturam; et insuper in speciminibus ante me iacentibus segmentum ventrale tantum tertium nigro-piceum et tarsorum articuli antici sordide-testacei sunt.

132. **Holopyga Capensis** n. sp.

Mediocris, minus robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice, pronoto, meso- et metanoti lateribus et abdominis segmentis dorsalibus duobus primis tertiique basi subaureo-viridibus; cavitate faciali profunda, dense subtiliter transverse-striata; antennis crassiusculis, nigris, scapo supra viridi-cyaneo, subtus ænescenti; vertice dense irregulariter minus crasse, pronoto et mesonoti lobis lateralibus regulariter fortius, postscutello crasse punctato-reticulatis; mesonoti lobo medio et scutello sat crasse minus dense punctatis, interstitiis lævibus; metanoti dentibus postico-lateralibus triangularibus, acutis; abdominis segmentis dorsalibus disco sat sparsim minus fortiter punctatis lateribusque rugosiusculis, primo basi in medio excavato nigro-æneo, tertio ante marginem apicalem convexo, ipso margine arcuato-integro; segmentis ventralibus nigro-piceis, nitidis, secundo disco macula magna viridi-cyanea; femoribus cyaneis, tibiis viridibus, tarsis fusco-rufis; alis sordide-hyalinis, venis fuscis, tegulis brunneis. — ♀; long. 7 mm.

Patria: Promontorium Bonæ Spei (Coll. Andréi).

133. **Holopyga dimidiata** Say.*

Hedychrum dimidiatum, Say, Exped. to the source of St. Peter's Riv. II. p. 330, n. 2. (1824). — Lec. Ins. of North Amer. I. p. 222, n. 2. (1859). — Nort. Transact. Amer. Ent. Soc. VII. p. 237. (1879).

Hedychridium dimidiatum, Aar. Transact. Amer. Ent. Soc. VII. p. 221. tab. VII. fig. 30. (postscutellum), fig. 31. (secund. et tert. segm.), fig. 32. (unguiculi) (1885).

* Conspectus specierum generis *Hedychridium* Americæ septentrionalis secundum Aaron est sequens:

A triangular punctured area below the postscutellum ending in a short median ridge, foveolæ on each side diagonal.

Pro- and mesothorax with close punctures, all of about equal and medium size; postscutellum continuing into the area and not divided from it except by a slight projection. As viewed laterally the apex of the second segment is raised considerably above the base of the third segment ... *dimidiatum* Say.

Pro- and mesothorax with close fine punctures interspersed with sparse, large, shallow punctures; postscutellum somewhat divided by its margin from the area. As viewed laterally the apex of the second segment is nearly even with the base of the third ... *viride* Cress.

Postscutellum connected directly with a median ridge on the metanotum; foveolæ on each side transverse, striated ... *coeruleum* Nort.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Thirteen specimens from Delaware, Illinois, Virginia, Colorado, Sout California, Montana and Washington Territory. The five Eastern specimens all have a decided bluish shade, with as much green and some purple reflections. The Western specimens have a decided green color with less blue and some purple; dorsum of abdomen in some specimens dull blackish, purple, the same shade of color as across the extreme base of the segments beneath the overlaping of the preceding segments. One specimen is entirely emerald-green with brassy reflections, no blue, and a touch of golden on the scutellum. On the metanotum, below and contiguous to the postscutellum, a small, triangular, punctured area, pointed below and continuing into a median ridge above the extreme base of the abdomen. On each side of this triangular, punctured area are long, shallow, diagonal foveolæ, roughened, or with substriæ, and generally of a darker color.»

Patria: America septentrionalis.

134. **Holopyga viridis** Cress.

Hedychrum viride, Cress. Proceed. Ent. Soc. Philad. IV. p. 306, n. 3. ♀. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 238. (1879) (nec Guér.).
Hedychridium viride, Aar. Transact. Amer. Ent. Soc. XII. p. 221. (1885).

«Thirty-nine specimens from Colorado (the types), Montana, Dakota, Washington Territory, California and Utah. The color is generally emerald-green with brassy reflections; in some specimens the abdomen is darker with blue reflections, in others the blue is predominating with purple and green reflections; very closely allied to *dimidiatum*; differs in having the margin of the postscutellum dividing it from the following punctured area on the metanotum, in the punctures, and in the base of the third segment being nearly even with the apex of the second. In some specimens the third segment is subconical, but this character, together with the striated basin of face and the density of the abdominal punctures is inconstant, an in some specimens one or more of these characters approach *dimidiatum*.» (Aaron l. c.)

Patria: America septentrionalis.

135. **Holopyga cœrulea** Nort.

Hedychrum coeruleum, Nort. Transact. Amer. Ent. Soc. VII. p. 239. ♀. (1879).
Hedychridium coeruleum, Aar. Transact. Amer. Ent. Soc. XII. p. 222, tab. VII. fig. 33. (postscutellum) (1885).

«Two specimens from Dakota and Montana. The type is dark blue with green and blue on the thorax, mostly purple on the abdomen, the other is lighter blue with much green and little purple. On the metanotum, below and connected with the postscutellum, a median ridge, on each side of which is a branching transverse ridge directed towards the metasternal spines. Between the transverse ridges and the poste-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

rior margin of the postscutellum are longitudinal striæ, longer laterally, and below these, on each side of the median ridge, a triangular, slightly roughened space.» (Aaron l. c.)

Patria: America septentrionalis.

136. **Holopyga Guatemalensis** Cam.

Hedychridium guatemalense, Cam. Biolog. Central-Americ. Hym. p. 459, n. 2. tab. XX. fig. 4, 4.a. (1888).

«Green, with bluish and golden reflections. Head and thorax coarsely rugosely punctured, the scutellum and metanotum more strongly than the mesonotum; the central part of the metanotum narrowed towards the apex; the sides of this central part with a distinct margin, and raised above the edges of the metanotum, which are roughened by irregular striæ, and not coarsely punctured; the sides project at the apex into an acute triangular projection; the mesopleuræ are coarsely rugosely punctured; the metapleuræ are deeply excavated, smooth, shining, and impunctate. Abdomen shining; the base concave; the first and second segments are closely punctured; the third segment is more strongly punctured, especially behind, and is depressed round the extreme apex; the latter is slightly incised in the middle; the second segment is large, bluish in the middle and at the base; the ventral surface is sparsely punctured, and keeled down the middle. The legs are sparsely convered with rather long white hair; the hind coxæ are finely punctured; the hind tibiæ are grooved and rather rough on the outer side; the apical joints of the tarsi are blackisch; the claws have a single median tooth, much smaller than the terminal. The front is moderately hollowed, keeled down the centre and transversely striated. The mandibles are black. Looked at from above the head in front is transverse and nearly so behind; the ocelli are placed almost in the centre.

Length 9 millim.»

Patria: Guatemala (Zapote, Panzos).

137. **Holopyga miliaris** Cam.

Hedychridium miliare, Cam. Biolog. Central-Americ. Hym. p. 459, n. 3. tab. XX. fig. 5, 5.a. (1888).

«Head concave in front and behind; the front deeply excavated, the excavation reaching near to the ocelli, and shining; at the top smooth, the lower half transversely striated and keeled down the centre; mandibles and palpi brownish; the ocelli are placed nearer the frontal excavation than the occiput. The head and pronotum are rugosely punctured, the mesonotum much more strongly so; the scutellum, mesopleuræ, and metanotum are still more strongly punctured; the pro- and metapleuræ are deeply excavated, smooth, and shining. The sides of the metathorax at the apex project into a blunt, shining, impunctate, knob-like point. Abdomen closely punctured, the sides of

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

the first and third segments more strongly than the second (especially the latter towards the apex); the third segment has a short, shining, impunctate furrow immediately before the apex in the centre; the ventral surface is shining and punctured, but not strongly so. The hind coxæ and femora are punctured; the four hind tibiæ are furrowed and bear some large scattered punctures; the apical joints of the tarsi are brownish.

Length 8 millim.

A smaller insect than *H. guatemalense*, and easily known from it by the apex of the abdomen not being notched, and by its having a short, broad, and deep furrow in the centre. In both species the postscutellum is as in *H. dimidiatum* (Say) and *H. viride* (Cresson); in all four there is a triangular punctured area below the postscutellum.»

Patria: Guatemala (San Gerónimo).

138. **Holopyga torosa** n. sp.

Magna, robusta, viridi-cyanea, capite thoraceque supra nigro-, subtus cum abdomine pedibusque albo-pilosis; cavitate faciali profunda, læte-viridi, dense subtiliter transverse-striata; clypeo et mandibularum basi concoloribus, his apice nigris; antennis longis, nigris, articulis tribus primis quartoque supra læte-viridibus; vertice irregulariter punctato subreticulato; pronoti disco crasse profundeque punctato et punctulato, lateribus cum mesonoto et scutello postscutelloque et mesopleuris triangulariter productis subtusque acute marginatis crasse punctato-reticulatis; metanoti dentibus postico-lateralibus longis, subacutis; abdomine viridi-cyaneo, segmentis dorsalibus duobus primis basi violascenti-cyaneis, primo basi in medio lateribusque spatio lato supra angusto transverso lævi ac polito; primo dense crassius, secundo disco sparsim crasse punctatis, hoc interstitiis latis lævibus ac politis; secundi lateribus tertioque fere dimidio adhuc longiore crassius rugoso-punctatis, huius margine apicali profunde arcuato, centro parum sinuato; segmentis ventralibus, femoribus et tibiis tarsorumque articulis duobus primis supra viridibus et cyaneis, horum articulis reliquis fuscis; alis sordide-hyalinis, venis piceis, tegulis nigro-æneis, antice viridi-cyaneo-maculatis. — ♀; long. 8 mm.

Species: corpore magno, robusto, mesonoto suturis longitudinalibus indistinctis, punctatura thoracis abdominisque, facile cognoscitur.

Patria: Brasilia (Mus. Dresdense).

139. **Holopyga difficilis** Spin.

Hedychrum difficile, Spin. Gay's Hist. fisica y polita de Chile. VI. p. 411, n. 1. ♂. (1851). — Dhlb. Hym. Europ. II. p. 63, n. 34. ♂. (1854).

Holopyga difficilis, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 9. (genit. maris) (1888).

Mediocris, parum elongata, cyanea, modice virescens vel violascens, cinereo-alboque pilosa; cavitate faciali profunda, dense subtiliter transverse-striata, lateribus

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cum fronte verticeque et pronoti lateribus punctato-rugulosis; antennis tenuibus, nigris, scapo cyanescenti, flagelli articulo primo supra virescenti; pronoti disco sparsim crasse punctato; mesonoto sine suturis longitudinalibus cum scutello postscutelloque et mesopleuris crasse punctato-reticulatis; metanoti dentibus postico-lateralibus brevibus, acutis; abdominis segmentis dorsalibus læte-viridibus vel segmento primo parum cyanescenti, primo basi spatio transverso sat lato lævi ac polito, supra dense, lateribus sat sparsim punctato, interstitiis lævibus ac politis, secundo quoque irregulariter punctato: disco sat dense, lateribus multo dispersius, tertio minus dense punctato (punctatura tamen in mare magis regulari), tertio arcuato-integro, segmentis omnibus in femina carinula mediana (in mare minus distincta), duabus posticis abbreviata instructis; segmentis ventralibus viridi-cyaneis, lateribus violascentibus, late lævibus ac politis, in mare segmento ultimo apice nigro-æneo; pedibus viridibus vel cyaneo-viridibus, tarsis fusco-rufescentibus; alis hyalinis, venis piceis, tegulis brunneis vel piceis. — ♂♀ : long. 6—6½ mm.

«*Armure*. Par la forme de la branche du forceps ressemble à *Om. pusillus*: on voit à l'extrémité quelques poils. Volsella est presque cylindrique, garnie à l'extrémité de poils. Tenette un peu plus longue, retrécie vers l'extrémité. Les chrochets moins larges.» (Rad. l. c. tab. I. fig. 9a, 9b, 9f, 9i.)

Patria: Chile (Spin., Coll. Rad.!, Mus. Vindob.! et Hung.).

140. **Holopyga suturalis** n. sp.

Mediocris, sat robusta, viridi-cyanea, parcius cinereo-alboque pilosa; mesonoti lobis lateralibus viridi-subaureo nitentibus; cavitate faciali planiuscula, dense punctato-coriacea; antennis crassiusculis, nigris, scapo cyaneo, articulo primo flagelli supra viridi; vertice dense, minus crasse punctato-subreticulato; pronoto et mesonoti lobis lateralibus crassius punctato-rugosis; scutello crasse sat sparsim punctato, punctis aliquot minutis inmixtis; mesonoti lobo medio et postscutello sat crasse punctato-reticulatis; mesonoto suturis longitudinalibus profundis; metanoti dentibus postico-lateralibus brevibus, acutis; abdominis segmentis dorsalibus cyaneo-viridibus, nitidis, dense subtiliter sat regulariter, tertio parum rugosiuscule-punctatis, secundo carinula mediana minus distincta, tertio arcuato-integro, centro lenissime sinuato; ventralibus viridi-cyaneis, nitidis, sparsim pilosello-punctatis, lateribus violascentibus lævibus ac politis; femoribus et tibiis tarsorumque articulo primo concoloribus, horum articulis reliquis fuscis; alis parum sordide-hyalinis, venis piceis, tegulis cyaneis sparsim punctulatis. — ♀ ; long. 6 mm.

Præcedenti similis; sed cavitate faciali non transverse-striata, mesonoto suturis longitudinalibus distinctis, punctatura thoracis abdominisque alia, satis superque distincta.

Patria: Chile (Mus. Hung.; mihi a Clariss. Domino Fairmaire donata).

Animadversio. — Forsan ad hoc subgenus pertinet etiam *Hedychrum carinulatum*, Spin. Gay's Hist. fisica y politica de Chile. Tom. VI. p. 411, n. 2. ♂. (1851); quod tamen propter descri-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ptionem insufficientem sine specimine typico cognosci nequit. Nullo modo tamen eadem est species ac hæc nova.

II. *Abdominis segmenta dorsalia duo prima virescenti-cuprea, tertium cyaneum; caput et thorax infra cyanea, supra viridi-cuprata.*

141. **Holopyga analis** Dhlb.

Hedychrum anale, Dhlb. Hym. Europ. II. p. 70. n. 40. (1854) (excl. Degeeri syn. in Præfatione, p. XVI.).

Hedychridium anale, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 35. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 45, n. 15. (1887).

Descriptio secundum Dahlbom:

«Submediocre 1 4/5 lin. decim. long. capite thoraceque infra cyaneis supra viridi-cupratis, abdominis segmentis primo et secundo cupreo- l. subroseo-auratis, tertio cyaneo: summo margine tenuissimo pallido pellucido, pedibus basi cyaneo-viridibus apice castaneis, alis anticis sordide hyalinis.

Observ. Habitu non dissimilis speciebus quibusdam generis *Spintharis,* sed ano mutico mox dignotum; ab affinibus per segmentum tertium cyaneum facillime distinctum.

Caput rotundato-triangulum angulis temporalibus magnis, infra cyaneum, frons concolor. Vertes amplus punctato-rugosus, vix reticulatus, viridi-cupratus. Stemmata exserta majuscula in arcum disposita. Oculi magni ovati exserti. Frons lævis plana, subtiliter coriacea, cærulea, apice nonnihil argenteo-sericea. Antennæ breviusculæ sub-angustæ, scapus cyaneo-virescens, flagellum nigro-fuscum pubescens. Clypeus brevissimus inæqualis virescens, ad centrum marginis apicalis impresso-subtruncatus. Mandibulæ nigræ, medio atque toti palpi læte brunnescentes. Totum pectus cyaneum nitidissimum fere absque sculptura. Dorsum thoracis crasse punctatum rugosum rotundato-subreticulatum viride; pronotum, dorsulum, scutellum et postscutellum viridi-cuprata; mesopleuræ virides subclathratæ. Abdomen confertim punctatum nitidum at non splendidum, cano puberulum; segmenta primum et secundum læte viriscenti-cuprea l. potius roseo-aurata, illud basi et hoc apice viridi-nitida; segmentum tertium cyaneum, ante marginem apicalem linea obsoleta et disco macula obsoleta viridibus; punctatura segmentorum anticorum fortior quam segmenti tertii, hoc etiam minus nitidum; in segmento secundo ad certum situm luminis lineola mediana plana subpolita observari potest. Coxæ et femora viridi-cyanea; trochanteres nigro-brunnei; genua, tibiæ tarsique testaceo-brunnea; tibiæ macula viridi-fusca. Alæ anticæ sordide hyalinæ, disco præsertim sordidae; posticæ hyalinæ. Venter valde fornicatus nigro-piceus.»

«Se encuentra con la especie anterior *(Hedychr. minutum Lep.),* en las flores de las compuestas. No es tan abundante en nuestra región como parece serlo en otras localidadas.» (Gog. l. c.)

Patria: Hispania (Lusitania, Dhlb.; Madritum, Gog.); Peninsula Iberica (Ab.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

III. *Abdominis segmentum primum dorsale violaceum, margine apicali utrinque viridi-aureo; secundum auratum, parte basali in medio macula magna nigro-aenea, lateribus obsoletius viridi-aureo tinctis; tertium cupreo-auratum; caput totum et thorax maxima ex parte aurata.*

142. **Holopyga plagiata** Mocs.

Hedychrum plagiatum, Mocs. Magy. Akad. Term. Értek. (Dissertationes physicæ Academiæ scientiarum Hungaricæ). XII. Nr. 11, p. 14, n. 17. ♂. (1883).

Parva, parce cinereo-pubescens; capite purpurascenti-, pro- et mesonoto cum scutello, mesopleuris item supra et abdominis segmentis dorsalibus posticis cupreo-auratis; ore et antennarum scapo, collo, prothorace subtus, mesopleurarum parte infera antice viridibus, his parte apicali cyaneis; cavitate faciali transverse-strigosa, vertice et mesonoto subtilius, pronoto et scutello crassius punctato-rugosis; metathorace et coxis omnibus violaceis; abdominis segmentis dorsalibus dense minus crasse inæqualiter rugoso-punctatis, segmento primo violaceo, margine apicale utrinque viridi-aurato, secundo parte basali in medio macula magna nigro-ænea, lateribus obsoletius viridi-aureo cincta, ornato, parte reliqua huius segmenti et tertio cupreo-auratis, ventre nigro-piceo; femoribus anticis et tibiis omnibus viridibus, illis posterioribus violaceis, tarsis et antennarum flagello fuscis; alis sordide-hyalinis, venis fusco-testaceis, tegulis viridi-æneis. — ♂; long. 5 mm.

Patria: Asia minor (Brussa, Mus. Hung.).

IV. *Abdominis segmenta dorsalia rubro-aurata leviter violascentia; caput et thorax cyanea, supra cavitatem facialem maculis tribus et scutello viridi-auratis.*

143. **Holopyga scutellaris** Tourn.

Hedychrum scutellare, Tourn. Mittheil. Schweiz. Ent. Ges. V. p. 309. (1878).

«Long. 7 mm.

Tête d'un beau foncé, marquée au dessus de l'impression faciale de trois taches d'un vert doré brillant, disposées transversalement. Thorax bleu comme la tête; pronotum orné antérieurement de deux taches d'un vert bleuâtre; métanotum un peu lavé sur les compartiments latéraux et sur les flancs, d'un vert brillant, bleuâtre; scutellum d'un beau vert doré, tranchant sur le fond des téguments voisins. Abdomen carminé, légèrement violacé; ventre noir; cuisses d'un beau bleu; tibias verts, leur extrémité et tarses testacés. Antennes noires. Tête assez fortement et très densément ponctuée, à l'exception de l'impression faciale, qui ne l'est que très obsoletement. Thorax très densément et assez fortement ponctué, ponctuation subconfluente, à l'exception du scutellum et du métathorax ou la ponctuation est plus grosse, plus grande et quoique serrée, nullement confluente; sur le metathorax elle est encore plus grosse, mais plus

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

profonde que sur le scutellum. Abdomen assez finement et assez densément ponctué sur les segments 1 et 2, plus grossièrement, mais pas plus densément sur le troisième ou elle est transversalement confluente; au milieu des seconde et troisième segment, l'on voit une très fine carène longitudinale lisse, elle est mieux accusée près de la base du seconde segment. Ailes transparentes, un peu enfumées à l'extrémité.

Au premier aspect, cette espèce ressemble au *Chrysis scutellaris*, dont elle rappelle exactement le coloris; par la fine carène qu'elle posséde sur les seconde et troisième segment abdominaux elle doit prendre place dans la Section II., Division 2. Subdivision 1. du tableau synotique de Dahlbom auprès de l'*Hedychrum incrassatum* Spin. Deux exemplaires, récoltés a Syracuse, Sicile; par Mr. Frey-Gessner.»

Patria: Sicilia.

V. *Abdominis omnia segmenta dorsalia aurata vel cuprata, plus minusve viridi-resplendentia.*

1) *Caput et thorax viridia vel cyanea, saepius viridi-subaureo picta.*

144. **Holopyga sculpturata** Ab.

Hedychridium sculpturatum, Ab. Feulle Jeun. Natur. VII. p. 65, n. II. (1877); Annal. Soc. Linn. Lyon. XXVI. p. 36 et 39. (1879). — Frey, Chrys. Helvet. p. 40 et 41. (1887).

Mediocris, robusta, cyanea vel viridi-cyanea, sæpius fronte et vertice, pronoto et mesonoti lateribus, scutello et mesopleuris plus minusve viridi-subaureo pictis, parcius cinereo-alboque pilosa; cavitate faciali minus profunda, dense subtilissime transverse-striata, lateribus dense minus fortiter, fronte et vertice, pro- et mesonoto cum scutello mesopleurisque fortius, sed parum dispersius, postscutello adhuc crassius punctato-reticulatis (punctatura in speciminibus minutis non tam regulari); antennis crassiusculis, nigris, scapo viridi-cyaneo; pronoto longo, mesonoto longiore, antice in medio parum impresso; metanoti dentibus postico-lateralibus mediocribus, acutis; abdominis segmentis dorsalibus igneo-auratis, dense plus minusve crasse subrugoso-punctatis, primo basi late nigro-æneo, tertio convexo, margine apicali arcuato-integro; ventre nigro-piceo, nitido, densius punctulato (in uno specimine e Caucaso igneo-maculato); femoribus viridi-cyaneis, postice sæpius nigro-æneis, tibiis viridibus vel cyanescentibus, geniculis, tibiarum apice tarsisque rufo-testaceis; alis sordidis, basi hyalinis, venis pallide-fuscis, tegulis fuscis vel brunneis. — ♂♀; long. $4^1/_2$—$5^1/_2$ mm.

Species, capitis thoracisque colore et punctatura abdominis parum variabilis: de sculptura capitis thoracisque et de geniculis, tibiis tarsisque rufo-testaceis, a congeneribus facile cognoscitur.

A *Hedychro nobili* Scop. (lucidulo Fabr.) et *longicolle* Ab. vena basali seu transverso-mediali angulatim curvata et abdominis segmento dorsali tertio margine integro, lateribus nempe non angulatis; a *Holopygae amoenulae* Dhlb. exemplaribus minutis vero: geniculis, tibiarum apice tarsisque rufo-testaceis, unguiculis infra circa medium unidenticulatis, iam satis distincta.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Patria: Gallia (Ab.); Helvetia (Frey-Gessner et Mus. Hung.); Austria infer. (Coll. Handlirschi!); Hungaria centralis (Mocs.); Russia meridionali-orientalis (Astrachan, Mus. Hung.); Caucasus (Mus. Hung.).

2) *Caput et thorax aeneo-purpurascenti-violacea.*

145. **Holopyga purpurascens** Dhlb.

Hedychrum purpurascens, Dhlb. Hym. Europ. II. p. 85, n. 48. (1854). – Schck, Nass. Jahrb. XI. p. 81, n. 7. (1856); Progr. Gymn. zu Weilb. p. 16, n. 26. (1870). – Lampr. Goldwesp. Deutschl. p. 21, n. 68. (1881).

Descriptio secundum Dahlbom:

«Robustum subparvum vix 2 lin. decimal. long. capite thoraceque æneo-purpurascenti-violaceis, abdominis dorso igneo-aurato, pronoto coriaceo subopaco sparse crasse punctato, mesonoto nitido subcrasse punctato, alis hyalinis cellula radiali completa.

Observ. Valde similis *Hedychro cuprato;* at facile dignoscitur: corpore crassiore, capite latiore, vertice non coriaceo sed nitido et distincte punctato, dorsulo nitido distinctius punctato, pedibus non aureis sed viridi-æneis, alarum cellula radiali completa, colore capitis thoracisque æneo-purpurascenti-violaceo etc.

Corpus sparse cano-pilosellum. Vertex et orbita pone oculos nitida distincte modice punctata l. punctulata. Frontis punctura subreticulata. Facies subconcaviusculo plana punctulato-coriacea, secundum longitudinem medianam subtiliter transverse strigosa. Antennæ robustæ nigro-fuscæ, scapus viridi-æneus. Clypeus depresso-convexus politus semilunatus. Mandibulæ æneæ, basi macula virescente, apice piceo-brunneæ. Pronotum rite transverso-rectangulum antice sulcu transverso, in sulci centro foveola rotundata; maxima pars pronoti punctis rotundatis majusculis adspersa. Mesonotum nitidum depresso-convexum crebre punctatum et punctulatum; dorsulum suturis longitudinalibus: lateralibus obsoletis antice abruptis, medianis profundis continuis nonnihil curvis. Postscutellum et mesopleuræ lobus mediocris regulariter punctato-reticulata. Pedes æneo-virides l. viridi-ænei: tibiis apice, calcaribus tarsisque testaceis. Alæ hyalinæ tegulis æneis, venis tenuibus fuscis, venula transverso-mediali fortiter arcuato-inflexa, cellula radiali completa. Abdomen mediocre, late ovatum, apice fortissime arcuato-integerrimum, dorso igneo-auratum et subtiliter confertim punctulatum. Venter politissimus sparse pilosello-punctulatus nigro-piceus, segmento secundo macula centrali mediocri viridi-aurata.»

Patria: Germania (Silesia ad Glogoviam [Glogau] die 16. Augusto a Cel. Zeller detecta).

3) *Caput et thorax viridi-aenea.*

146. **Holopyga integra** Dhlb.

Chrysis integra, Dhlb. *var. c.* Exercit. Hym. p. 35, n. 20. (1831—33).
Hedychrum cupreum, Dhlb. Dispos. p. 3, n. 4. (1845).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Hedychrum integrum, Dhlb. Hym. Europ. II. p. 86, n. 49, tab. IV. fig. 76. (thorax et abdomen) (1854). — ? Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 67. (1858). — Thoms. Opusc. Ent. II. p. 105, n. 3. (1870). — Lampr. Goldwesp. Deutschl. p. 20, n. 66. (1881).
Hedychridium integrum, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 38. (1870).

Parva, robusta, æneo-virens, parce cano-pilosa; fronte cum vertice, pronoti parte postica et mesonoto scutelloque cupreo-æneis; cavitate faciali planiuscula, viridi-cyanea vel cyanea, subtiliter et confertim transverse-striata; antennis tenuibus, fuscis, scapo ænescenti; clypeo nitido, viridi, apice truncato; mandibulis virescenti-æneis, apice late rufo-testaceis; vertice sat sparsim punctato; pronoto punctulato-coriaceo, lateribus et parte postica punctis maiusculis minus profundis rotundatis adspersis, antice sulculo obsoleto; mesonoto cum scutello sparsim sat crasse, sed minus profunde irregulariter punctatis, interstitiis lævibus ac politis, illo suturis quattuor longitudinalibus bene distinctis; postscutello viridi, punctato-reticulato; metanoti dentibus postico-lateralibus mediocribus, acutis; abdominis segmentis dorsalibus cupreo-auratis parumque virescentibus, valde dense subtilissime, tertio parum fortius punctulatis, hoc margine apicali arcuato-integro; ventre nigro-piceo, nitido; pedibus æneis, nonnihil viridi-nitentibus, longius albido-pilosis, tibiis apice calcaribusque et tarsis rufo- vel fusco-testaceis; alis subhyalinis, apice leviter sordidis, venis fusco-testaceis, tegulis brunneis. — ♀; long. 4. mm.

A *Holopyga cuprata* Dhlb., punctatura mesonoti simili: thorace abdomineque totis non cupreo-igneis distincta.

Patria: Europa borealis (Dhlb.); Suecia (Thoms. et Mus. Vindob.!); Helvetiæ montes (Ab.); Tyrolis (Dalla Torre et Kohl); Austria inferior (Coll. Handlirschi!); ? Gallia (Court.); Gubernium Mosquense (Assmus).

4) *Caput et thorax maxima ex parte aurata vel cupreo-aurata.*

*

Conspectus specierum huius subsectionis.

1 (4). Abdominis segmento dorsali secundo carinula mediana distincta, secundo tertioque vel solum tertio margine apicali incrassato.

2 (3). Margine apicali segmentorum dorsalium secundi tertiique incrassato; vertice viridi, in regione stemmatum aureo-ænescenti; alarum tegulis cyaneis.
ahenea Dhlb.

3 (2). Margine apicali segmenti dorsalis tertii solum incrassato; vertice fere toto viridi, nec nisi obsoletissime in regione stemmatum cupreo-nitidiusculo; alarum tegulis testaceis ... ... *incrassata* Dhlb.

4 (1). Abdominis segmento dorsali secundo sine carinula mediana distincta, secundo tertioque vel solum tertio margine apicali incrassato.

5 (8). Corpore mediocri, 6—7 mm. longo.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

6 (7). Antennarum flagello rufo-brunneo vel fusco-testaceo; segmentis ventralibus viridi-auratis vel auratis nigroque pictis ... ... *heliophila* Buyss.
7 (6). Antennis ventreque nigris, sine nitore metallico ... ... *Buyssoni* Ab.
8 (5). Corpore minuto aut parvo, tartum 3—4½ mm. longo.
9 (18). Postscutello et metathorace cyaneis.
10 (11). Tibiis tarsisque totis rufo-testaceis, illis duabus anterioribus externe in medio leviter viridi-aureo, posticis apice intus fusco-nigro maculatis *femorata* Dhlb.
11 (10). Tibiis non totis, sed solum apice rufo-testaceis.
12 (15). Pronoti disco sine punctulis nonnulis rotundatis.
13 (14). Pro- et mesonoto cum scutello dense subtilissime minus distincte punctulato-reticulatis, subcoriaceis ... ... *reticulata* Ab.
14 (13). Pro- et mesonoto dense fortius sat regulariter, scutello adhuc crassius punctato-reticulatis, non subcoriaceis ... ... *Algira* n. sp.
15 (12). Pro- et mesonoto coriaceo-rugosis cum punctulis sparsis maiusculis rotundatis.
16 (15). Fronte cum vertice, pronoti parte postica, mesonoto item cum scutello viridi-cupreoque auratis, subnitidis; vertice et pronoti parte postica concinne violascentibus, huius parte antica cyanea; corpore robusto ... ... *iucunda* n. sp.
17 (16). Fronte cum vertice, pro- et mesonoto cupreo-auratis, subobscuris, scutello viridi-cupreoque aurato; corpore minus robusto ... ... *coriacea* Dhlb.
18 (9). Postscutello aurato vel viridi-aurato; metathorace cyaneo.
19 (20). Tibiis tarsisque, ventre item et tegulis rufo-testaceis, tibiis posticis intus ante apicem nigro-maculatis ... ... *elegantula* Buyss.
20 (19). Tibiis solum apice rufo-testaceis vel totis cupratis; ventre nigro-piceo, nitido, segmento secundo macula viridi-aurata.
21 (22). Pro- et mesonoto scutelloque coriaceo-rugosis, punctis sparsis maioribus minoribusque inmixtis; alarum tegulis nigro-æneis; femoribus tibiisque læte- vel cyanescenti-viribus ... ... *ardens* Coqueb.
22 (21). Pronoto et dorsulo coriaceis, opacis, illo crasse, hoc modice sparsim punctatis; alarum tegulis cupreo-æneis; femoribus tibiisque cupreo splendidissimis *cuprata* Dhlb.

*

147. **Holopyga ahenea** Dhlb.

Hedychrum aheneum, Dhlb. Hym. Europ. II. p. 72, n. 41. (1854).
Hedychrum callosum, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 108, n. 33. ♂. tab. II. fig. D. E. (1876) sec. spec. typ. e coll. Rad.
Hedychridium aheneum, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 35. (1879).

Submediocris, sat robusta, læte-cyanea, parcius cinereo-alboque pilosa; vertice, pro- et mesonoto cupreo-auratis parumque virescentibus, scutello et mesopleuris viridi-subauratis; cavitate faciali cyanea, dense punctulato-coriacea, superne convexa, non marginata; antennis crassiusculis, fuscis, argenteo-puberulis, scapo infra fusco, supra

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cyaneo-virescenti, articulo secundo flagelli mediocri, tertio fere duplo longiore; clypeo subaurato, genis brevibus; vertice thoracisque dorso dense minus fortiter punctato-reticulatis; pronoti impressione mediana obsoleta, truncatura viridi-cyanea, mesopleuris subclathratis; pectore toto, lateribus scutelli et metathorace cum postscutello læte-cyaneis; abdominis segmentis dorsalibus rubro-cupreo-auratis lateribus viridi resplendentibus, primo basi viridi-subaurato, omnibus dense sat fortiter punctato-rugosis subreticulatis, secundo carinula mediana distincta et cum margine apicali incrassato cohærente per impressionem subtransversam subarcuatam figuram ancoræ fere simulante, tertio ante marginem apicalem transverse subarcuatim impresso, centro carinula abbreviata rudimentaria diviso, ipso margine apicali undato-incrassato, summo margine tenuiter pallide subpellucidulo; ventre nigro-piceo nitidissimo, disco utrinque viridi-maculato; pedibus cyaneo-viridibus parumque subauratis, genibus, tibiarum apice et tarsis testaceis; alis parum sordide-hyalinis, venis brunneis, tegulis cyanneis. — ♂: long. 4—4½ mm.

Species, propter sculpturam valde singularis: abdominis segmento dorsali secundo longitudinaliter carinato per impressionem transversam subarcuatam figuram ancoræ fere simulante et tertio quoque ante marginem apicalem transverse subarcuatim impresso, ipso margine apicali undato-incrassato, a congeneribus facile cognoscitur.

Patria: Græcia (Syra, Rad!); Russia australis (Dhlb.); Caucasus (Rad.).

148. **Holopyga incrassata** Dhlb.

Hedychrum incrassatum, Dhlb. Hym. Europ. II. p. 73, n. 42, tab. IV. fig. 63. b—c. (abdomen) (1854). *Hedychridium incrassatum*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 35. (1879). — Destef. Natural. Sicil. VII. p. 102. (1888).

Descriptio secundum Dahlbom:

»Robustum 1½ lin. decimal. long. supra viride leviter aureo-micans, abdominis segmento secundo carinula mediana subcontinua, segmento tertio carinula mediana brevissima antice abrupta et obliterata, margine apicali: segmenti secundi mutico, segmenti tertii incrassato.

Observ. Maxime affinis et similis *Hedychro aheneo;* at corpore magis viridi, tegulis testaceis; segmenti secundi margine apicali mutico nec incrassato, segmento tertio apice carinula mediana distincta, ut diversa species certissime facillimeque dignoscitur.

Caput omnino ut in *Hedychro aheneo* sculptum et coloratum; at vertex fere totus viridis, nec nisi obsoletissime in regione stemmatum cupreo-nitidiusculum. Thorax etiam eandem picturam et sculpturam habet, quam ad *Hedychr. aheneum* iam descripsimus; ea solum differentia, quod pictura aurata obsoletior et pronoti impressio mediana distinctior obveniunt. Abdomen quoque sculptura et pictura *Hedychri ahenei* simillima gaudet; at *Hedychri incrassati* segmentum secundum margine apicali muticum (nec ut in *H. aheneo* incrassatum); segmentum tertium apice fortius incrassatum, saturate viridi-cupreum: e centro eiusdem marginis excurrit carinula mediana in discum segmenti

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

ducta. Alæ hyalinæ; tegulæ et venæ fusco-testaceæ; venula transverso-medialis modice arcuato-inflexa; ceterum quod pedes et ventrem attinet, ulla differentia inter *Hedychrum aheneum* et *Hedychrum incrassatum* (non) existit.»

Patria: Sicilia (Dhlb.); Gallia (Ab.).

149. **Holopyga heliophila** Buyss.

Hedychridium heliophilum, Buyss. Revue d'Entom. VI. p. 172, n. 7. ♀. (1887).

Mediocris, robusta, viridi-subaurata, parcius cinereo-alboque pilosa; vertice thoracisque dorso plus minusve cupreo-aurato irroratis, illo dense subtilius, hoc crasse profundeque punctato-subreticulatis punctis aliquot minutis sparsis inmixtis; genis fere nullis; cavitate faciali profunda, punctato-coriacea, lateribus albo-sericea; pronoto longo, transverso, longitudine mesonoti; postscutello regulariter punctato-reticulato; metanoti dentibus postico-lateralibus mediocribus, acutis; abdomine viridi-subaurato, segmentis dorsalibus plus minusve concinne cupreo- vel rubro-cupreo-auratis, crasse profundeque subrugoso-punctatis, tertio convexo, apice arcuato-integro testaceo-scarioso; ventre viridi-aurato vel aurato nigroque picto; antennarum scapo, femoribus tibiisque externe viridi-auratis, genibus, tibiarum apice tarsisque et mandibularum basi rufo-testaceis, tibiis subtus rufo-brunneis; antennis crassiusculis, rufo-brunneis vel fusco-testaceis; alis hyalinis, apice parum obscurioribus, venis pallide-testaceis, tegulis testaceis viridi-maculatis. — ♀; long. 6—7 mm.

Holopygae amoenulae Dhlb. (ovatæ Dhlb.) eiusque varietatibus similis; sed thorace et præsertim abdomine multo fortius profundeque subrugoso-punctatis, cavitate faciali haud transverse-strigosa, genibus et tibiarum apice tarsisque rufo-testaceis, ventre non nigro-piceo et unguiculis infra circa medium unidenticulatis, certe alia est species. — Nec ad ullam speciem ex Algeria descriptam referenda. Species enim illæ: *Holopyga viridis* Guér. (numidica Luc.), *micans* Luc. et *fastuosa* Luc., quæ sane tamquam *Holopygae amoenulae* Dhlb. varietates considerantur, ventrem nigro-piceum et non viridi-auratum vel auratum habent.

A præcedentibus duobus colore capitis thoracisque ex parte corporeque maiore, satis distincta.

Patria: Algeria (Buyss.. Coll. Rad.! et Mus. Hung.).

150. **Holopyga Buyssoni** Ab.

Hedychridium Buyssoni, Ab. Revue d'Entom. VI. p. 173, n. 8. ♀. (1887).

♀. Cette espèce est très voisine de l'*Hed. minutum var. coriaceum* Dahlb., dont elle diffère par la taille plus forte (6 mill.), les antennes et le ventre entièrement noirs, sans aucun reflet métallique, la cavité faciale plus profonde et bleu vif, l'occiput bleu verdâtre, la teinte générale franchement doré-feu (non brillant et non cuivré), enfin par l'avant-corps rendu terne par une ponctuation subcoriacée-reticulée. Un léger reflet bronzé s'étend sur le disque de l'abdomen.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

N'ayant sous les yeux qu'un seul exemplaire pris par moi à Marseille, et connaissant en outre la grande variabilité de l'*Hed. minutum* Lep., je ne donne mon espèce qu'avec certain doute. Je suis heureux de pouvoir la dédier à mon cher ami M. Robert du Buysson, en souvenir des charmantes relations qui se sont établies entre nous à l'occasion des Chrysides.»

Patria: Gallia (Marseille).

151. **Holopyga reticulata** Ab.

Hedychridium minutum Lep. *var. reticulatum*, Ab. Diagnos. Chrys. Nouvell. p. 3, n. XIV. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 36 et 40. (1879).

Parvula, sat robusta, cyaneo-viridis, parce pilosa; vertice, pronoti parte postica, mesonoto cum scutello cupreo-auratis parumque ignitis; cavitate faciali planiuscula, dense subtilissime transverse-striata, lateribus punctulato-coriacea; vertice, pro- et mesonoto scutelloque dense subtilissime minus distincte punctulato-reticulatis, subcoriaceis; abdomine igneo-aurato, dense subtilissime punctulato; femoribus tibiisque læte-viridibus, his apice tarsisque rufo-testaceis; alis hyalinis, concinne viridescentibus. — ♂; long. 3 mm.

Holopygae coriaceae Dhlb. similis; sed pronoti disco sine punctulis nonnullis rotundatis et cum mesonoto et scutello parum ignitis dense subtilissime, minus distincte punctulato-reticulatis, subcoriaceis, splendidis (non vero punctulato-coriaceis. cupratis, subobscuris) et alis magis concinne iridescentibus, species mihi a Clariss. Domino R. du Buysson donata, satis distincta esse videtur.

Patria: Gallia (Lorgues, Ab.; Vernet, Buyss. et Mus. Hung.).

152. **Holopyga Algira** n. sp.

Parva, sat robusta, cyaneo-viridis, parce albo-pilosa; vertice et scutello viridi-, pro- et mesonoto cupreo-auratis, postscutello cum metathorace læte-cyaneis; cavitate faciali sat profunda, dense subtilissime transverse-striata, lateribus punctulato-coriacea; antennis crassiusculis, nigris, scapo ænescenti; vertice subtilius minus distincte, pro- et mesonoto dense fortius sat regulariter, scutello et postscutello adhuc crassius regulariterque punctato-reticulatis; metanoti dentibus postico-lateralibus sat validis, acutis; abdominis segmentis dorsalibus roseo-cupreo-auratis, primo virescenti, basi late nigro-æneo denseque punctato, omnibus dense subtiliter parum rugosiuscule-punctulatis; ventralibus nigro-piceis, nitidis, segmento secundo macula magna viridi-aurata; femoribus viridi-cyaneis, tibiis magis viridibus, posticis postice brunneis, apice et tarsis pallide rufo-testaceis; alis hyalinis, venis fuscis, tegulis brunneis. — ♂; long, 4 1/2 mm.

Patria: Algeria (Setif, Coll. Saussurei),

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

153. **Holopyga iucunda** n. sp.

Parva, sat robusta, viridi-cyanea, parce pilosa; fronte et vertice, pronoti parte postica, mesonoto item cum scutello viridi-cupreoque auratis; macula verticis et pronoti parte postica violascentibus; postscutello metanotoque læte-cyaneis; cavitate faciali et pronoto antice viridi- vel læte-cyaneis, illa planiuscula, dense punctulato-coriacea, lateribus argenteo-pilosa; antennis tenuibus, nigris, scapo viridi; vertice, dense subtiliter minus distincte, postscutello fortius regulariter punctato-reticulatis, pro- et mesonoto coriaceo-rugosis punctulis sparsis maiusculis rotundatis, scutello crasse punctato et punctulato; abdominis segmentis dorsalibus viridi-auratis, basi viridi-cyaneis, secundo disco macula ignita vel cuprata sæpius infuscata notato, omnibus valde dense subtilissime punctulatis; ventre nigro-piceo, nitido, segmento secundo disco viridi-aureo-maculato; femoribus tibiisque viridi-auratis, tibiarum apice tarsisque rufo-testaceis; alis subfumatis, iridescentibus, venis fuscis, tegulis nigro-æneis. — ♂♀; long. 4—4½ mm.

Holop. ardenti Coqueb. simillima; sed vertice et pronoti parte postica concinne violascentibus, postscutello cum metanoto læte-cyaneis (non vero postscutello aurato vel viridi-aurato), abdominis segmentis dorsalibus magis viridi-auratis, secundo disco macula ignita sæpiusque infuscata notato, præsertim distincta.

Patria: Hungaria centralis, mense Junio in 9 exemplaribus conformibus inventa; Austria inferior (Coll. Handlirschi!).

154. **Holopyga coriacea** Dhlb.

Hedychrum coriaceum, Dhlb. Hym. Europ. II. p. 88, n. 50. (1854). — Schck, Nass. Jahrb. XI. p. 46, n. 21. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro. IV. p. 551, n. 3. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 67. (1858). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 301, n. 16, tab. III. fig. 9. (1866). — Schck, Progr. Gymn. zu Weilb. p. 12, n. 19. (1870). — Lampr. Goldwesp. Deutschl. p. 20, n. 64. (1881). — Mocs. Chrys. faun. Hung. p. 40 et 82, n. 4. (1882).

Hedychridium minutum Lep. *var. coriaceum*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 36. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879).

Hedychridium coriaceum, Frey. Chrys. Helvet. p. 41 et 42. (1887).

Hedychridium minutum, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 44, n. 14. (1887).

Parva, minus robusta, cyanea plus minusve virescens, vertice pro- et mesonoto cupreo-, scutello viridi-cupreoque auratis, postscutello metanotoque læte-cyaneis; cavitate faciali concaviusculo-plana, subtilissime dense minus distincte transverse-striata, lineola mediana elevata; antennis crassiusculis, nigro-fuscis, scapo nigro-æneo; vertice, pro- et mesonoto confertim punctulato-coriaceis, subobscuris; pronoto margine antico concaviusculo-depresso æneo-viridi, sulculo mediano longitudinali postice abrupto, disco punctulis nonnullis rotundatis non profundis, subnitidis, hinc inde adsperso; scutello postice viridi-limbato rugosiuscule-punctato et punctulato; metanoto

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

punctato-reticulato; abdominis segmentis dorsalibus igneo-cupreoque auratis, confertissime subtiliter punctulatis; ventre nigro-piceo, nitido, unicolori vel segmento secundo viridi-maculato; pedibus viridi-cyaneis, tibiis apice, calcaribus tarsisque rufo-testaceis; alis sordide-hyalinis, venis fusco-brunneis, tegulis nigro-æneis. — ♂♀; long. 4 mm.

Species: vertice, pro- et mesonoto cupreo-auratis, subobscuris et pronoti punctatura, facile cognoscitur.

Patria: Hispania (Gog.); Italia (Dhlb.); Gallia (Court.); Germania (Schck); Austria (Rogenhofer et Kohl et Coll. Handlirschi!); Hungaria, mense Junio sat rara (Mocs.); Russia (Spassk, Orenburg, Rad.; Ural, Eversm.); Finlandia (Dhlb.).

155. **Holopyga femorata** Dhlb.

Hedychrum femoratum, Dhlb. Hym. Europ. II. p. 90, n. 51. ♀. (1854) sec. spec. typ. e Museo Vindob. — Schck, Nass. Jahrb. XI. p. 82, n. 9. (1856); Progr. Gymn. zu Weilb. p. 16, n. 27. (1870) (ex Dhlb.). — Lampr. Goldwesp. Deutschl. p. 20, n. 65. (1881) (ex Schenck).

Hedychridium gratiosum, Ab. Diagnos. Chrys. Nouvell. p. 3, n. XI. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 37. (1879).

Hedychrum gratiosum, Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879).

Parva, viridi-cyanea, minus robusta, parce pilosa; facie, postscutello metanotoque læte-cyaneis; fronte viridi-subaurata, vertice, pro- et mesonoto cum scutello cupreo-auratis; collo et scutelli lateribus posticis virescentibus; cavitate faciali minus profunda, dense subtilissime transverse-striata, lateribus punctulato-coriacea; antennis tenuibus, nigris, scapo nigro-æneo; vertice, pro- et mesonoto dense punctulato-coriaceis, rugosiusculis, parum splendidis; pronoto punctulis nonnullis rotundatis non profundis adsperso; scutello et postscutello punctato-reticulatis; mesopleuris viridi-auratis; abdominis segmentis dorsalibus rubro-cupreo-auratis, segmento primo postice et secundi basi macula sat magna nigro-ænea notatis, segmentis omnibus confertim distincte fortius punctulatis; ventre fusco-testaceo, nitido; femoribus viridi-auratis, tibiis tarsisque rufo-testaceis, illis duabus anterioribus externe in medio leviter viridi-aureo-, posticis apice intus fusco-nigro-maculatis, tarsorum articulis ultimis infuscatis; alis subfumato-hyalinis, parum iridescentibus, venis fuscis, venula transverso-mediali subangulatim curvata, tegulis fusco-rufis. — ♀; long. 3½ mm.

Holop. coriaceae Dhlb. valde similis; sed mesopleuris viridi-auratis, abdominis segmentis dorsalibus punctatura multo fortiore magisque regulari, primo secundoque nigro-æneo-maculatis, femoribus viridi-auratis, tibiis cum tarsis rufo-testaceis, optime distinguenda.

Secundum Abeille (verisimiliter in mare): frons est violacea, cavitas facialis virescens et segmentum dorsale primum solum nigro-maculatum.

Patria: Austria (ad Vindobonam, Dhlb.); Hungaria centralis (Mocs.); Gallia (Toulouse, Marq.).

Animadversio. — Mystica hæc species auctoribus omnibus fallaciosa mensit. Specimen typicum Dahlbomi, mihi a Clarissimo Domino Rogenhofer e Musæo Cæsareo Vindobonensi benigne trans-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

missum, est exemplar immaturum et non satis coloratum forsanque e nido excerptum? Descriptio ergo Dahlbomi, præsertim quoad colorem abdominis, maxima ex parte falsa est. — Domino Ludovico Biró, Hymenopterologiæ cultori assiduo, contigit hanc speciem ad Budapestinum, mense Augusto, in duobus exemplaribus conformibus invenire, quæ cum *Holopyga* (Hedychrum) *rosea* Rossi nihil habent simillitudinis. Domini Schenck et Lamprecht animal non viderunt; Abeille et ego pro tali *Holopygae roseae* varietatem habuimus. Veram *Holopygam femoratam* Abeille sub nomine *Hedychridium gratiosum* descripserat, cum errore calami: maculam nigro-æneam in segmento primo (pro secundo) esse; nec est species *H. ardenti* Coqueb. varietas: sculptura thoracis et colore postscutelli penitus diversis.

156. **Holopyga elegantula** Buyss.

Hedychridium elegantulum, Buyss. Revue d'Entom. VI. p. 173, n. 9. ♀. (1887) sec. spec. typ. e coll. Buyssoni.

Minuta, virescenti-cyanea, parce pilosa; fronte et vertice, pro- et mesonoto scutelloque viridi-cupreoque lavatis; collo, scutelli lateribus postscutelloque viridi-auratis; cavitate faciali sat profunda, subtilissime denseque transverse-striata; antennarum articulis: primo æneo-metallico, 3—4 rufis, reliquis brunneis; vertice dense subtiliter, scutello et postscutello fortius dispersiusque punctato-reticulatis, pro- et mesonoto subcoriaceis, inæqualiter subrugoso-punctatis; abdominis segmentis dorsalibus purpurascenti-cupreis parumque viridi-lavatis, segmento primo parum fortius dispersiusque, 2—3 valde dense subtilissime punctulatis; femoribus viridi-auratis, genibus, tibiis tarsisque, ventre item et tegulis rufo-testaceis; tibiis posticis intus ante apicem nigro-maculatis, articulis tarsorum ultimis infuscatis; alis sordide-hyalinis, venis fuscis. — ♀; long. 4½ mm.

Holop. femoratae Dhlb. simillima; sed maior, magis robusta, antennarum articulis 3—4 rufis, reliquis brunneis, postscutello viridi-aurato (non cyaneo), abdominis segmentis dorsalibus purpurascenti-cupreis multo densius magisque subtilius punctulatis, secundo disco sine macula nigro-ænea, distincta.

Patria: Gallia (Montpellier).

157. **Holopyga ardens** Coqueb.

Chrysis ardens, Coqueb. Illust. Icon. Ins. Dec. II. p. 59, tab. XIV, fig. 7. (1801).

Hedychrum minutum, Lep. Annal. du Mus. Hist. nat. VII. p. 122, n. 6, tab. VII. fig. 9. ♂. (1806). — Dhlb. Hym. Europ. II. p. 82, n. 46, tab. IV. fig. 72. (thorax et abdomen) (1854). — Schck, Nass. Jahrb. XI. p. 81, n. 6. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 551, n. 2. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 301, n. 15, tab. III. fig. 8. (1866). — Schck, Progr. Gymn. zu Weilb. p. 12, n. 20. (1870). — Thoms. Opusc. Ent. II. p. 105, n. 4. (1870). — Lampr. Goldwesp. Deutschl. p. 21, n. 70. (1881).

Chrysis integra, Dhlb. Monogr. Chrys. Suec. p. 16, n. 15. (1829); Exerc. Hym. p. 35, n. 20. var. a. b. (1831—33).

Hedychrum ardens, Shuck. Ent. Mag. IV. p. 172, n. 4. (1837). — Guér. Icon. regn. anim. Ins. p. 419, tab. 68, fig. 10. (1844). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 66. (1858). — Chevr. Chrysid. du Léman, p. 83. ♂ ♀ (1862). — Mocs. Chrys. faun. Hung. p. 40 et 82, n. 5. (1882). — Destef. Natural. Sicil. VII. p. 122. (1888).

Hedycrum ardens, Wesm. Bullet. Acad. Brux. VI. p. 170, n. 2. (1839).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Hedychrum integrum, Dhlb. Dispos. p. 3, n. 5. (1845).
Hedychrum carinulatum, Schck, Nass. Jahrb. XVI. p. 177. var. (1861).
Hedychridium minutum, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 36 et 39. (1879). - Heyd. Ber. Senkenb. naturf. Ges. p. 248, n. 12. (1882) (excl. var. coriaceum Dhlb).
Hedychridium ardens, Frey, Chrys. Helvet. p. 40 et 41. (1887).

Parva, robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice, pronoti parte postica, mesonoto item cum scutello igneo-cupreoque, postscutello sæpissime viridi-auratis; fronte et pronoti parte antica mesopleurisque læte-viridibus, metathorace cyaneo, lateribus nonnunquam virescentibus; cavitate faciali minus profunda, dense subtilissime punctato-coriacea argenteoque pilosa; antennis crassiusculis, fuscis, scapo viridi-æneo; fronte verticeque densius, sed subtilius, mesopleuris et postscutello sparsim crassius regulariter punctato-reticulatis; pro- et mesonoto scutelloque coriaceo-rugosis, punctis sparsis maioribus minoribusque inmixtis; metanoti dentibus postico-lateralibus validis, acutis; abdominis segmentis dorsalibus igneo-cupreoque auratis, valde dense subtilissime punctulatis, primo basi late nigro-æneo, secundo disco rarius macula magna nigro- vel virescenti-ænea; ventre nigro-piceo, nitido, segmento secundo viridi-aureo-maculato; pedibus læte- vel cyanescenti-viridibus, tibiarum apice tarsisque rufo-testaceis; alis sordide-hyalinis, venis fuscis, tegulis nigro-æneis. — ♂ ♀; long. 4—4½ mm.

Patria: Europa fere tota. — Secundum Dahlbom etiam in Mexico inventa est.

var. homeopathica Ab.

Hedychridium minutum var. homeopathicum, Ab. Diagnos. Chrys. Nouvell. p. 3, n. XIII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 36 et 39. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879).

«Abdomen à point assez gros, corps extrêmement petit, verdâtre.» — Patria: Gallia, Helvetia (Ab.).

var. infans Ab.

Hedychridium minutum var. infans, Ab. Diagnos. Chrys. Nouvell. p. 3, n. XII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 36 et 40. (1879).

«Abdomen un tache noire sur son disque. — Abdomen à ponctuacion assez forte. Couleur générale verdâtre.» — Patria: Gallia.

158. **Holopyga cuprata** Dhlb.

Hedychrum cupratum, Dhlb. Hym. Europ. II. p. 84, n. 47. ♀. tab. IV. fig. 74. (thorax et abdomen) (1854). — Lampr. Goldwesp. Deutschl. p. 21, n. 67. (1881).
Hedychridium cupratum, Frey, Chrys. Helvet. p. 40 et 42. (1887).

Descriptio secundum Dahlbom:

«Subparvum vix 2 lin. decimal. long. supra totum cupreo-igneum: fronte, thoracis margine antico et postico pectoreque viridibus; pronoto et dorsulo coriaceis opacis;

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

illo crasse, hoc modice sparse punctatis, pedibus aureo-nitidibus, alis subsordide hyalinis, in cellula radiali subcompleta fumosis.

Observ. ♀. Corpus ut in *Hedychro minuto* constructum. Caput griseo-pilosellum. Vertex cupreus, æneo-maculatus, punctato-subrugulosus. Frons viridi-subaurata, nitida coriaceo subrugulosa. Antennæ mediocres fuscæ; scapus e cupreo resplendens. Clypeus l. medio viridis et utrinque virescenti-aureus l. totus cupreus. Mandibulæ nigro-piceæ, ante apicem late brunneæ, basi cupreæ. Palpi fusci. Thorax sparse griseo-pilosellus. Pronotum irregulariter coriaceo-rugulosum: pars antica humilior viridis, ad centrum marginis antici foveola profunda nigro-ænea, — pars postica paullulum elevatior aureo-cuprea punctis crassiusculis adspersa. Mesonotum punctis et punctulis adspersum. dorsulum coriaceo-subopacum, scutellum nitidum. Postscutellum conspicue punctato-reticulatum viridi-auratum; mesopleuræ simillime sculptæ et pictæ; reliquæ thoracis partes subaureo-virides. Abdomen igneo-cupreum nitidissimum sparse griseo-pilosellum subtiliter punctulatum. Venter inæqualiter concaviusculus nitidus parce pilosello-punctulatus nigro-piceus, segmento secundo utrinque macula maxima viridi-aurea. Pedes griseo-pilosi, aureo-virides, femora et tibiæ ad certum situm luminis a colore cupreo splendidissima observantur. Alarum tegulæ cupreo-æneæ nitidæ; venæ firmæ nigro-piceæ; venula transverso-medialis arcuato-inflexa.»

Patria: Italia, Helvetia (Dhlb.).

VI. *Abdomen roseo-testaceum vel roseo-ferrugineum, supra nonnunquam plus minusve violascens vel rarius virescens; caput et thorax cyanea plus minusve viridi vel viridi-aureo picta.*

159. **Holopyga rosea** Rossi.

Chrysis rosea, Rossi, Faun. Etr. II. p. 75 tab., 8, fig. 7. (1790); Mant. Ins. I. p. 132, n. 290. (1792). — Dhlb. Exercit. Hym. p. 31, n. 14. (1833).

Chrysis Lampas, Christ, Naturg. p. 405, tab. 45, fig. 7. (1791).

Chrysis rufa, Panz. Faun. Ins. Germ. fasc. 79, tab. 16. (1801).

Hedychrum roseum, Lep. Annal. du Mus. Hist. Nat. VII. p. 123, n. 13. ♂. tab. VII. fig. 7. (1806). — Shuck. Ent. Mag. IV. p. 173, n. 6. (1837). — Blanch. Hist. nat. III. p. 296, n. 2. (1840). — Dhlb. Dispos. p. 2, n. 3. (1845); Hym. Europ. II. p. 93, n. 53. (1854). — Schck, Nass. Jahrb. XI. p. 46, n. 22. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr IV. p. 552, n. 5. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 67. (1858). — Chevr. Chrysid. du Léman, p. 89. ♂ ♀. (1862). — Smith, Entom. Annual. p. 100. (1862). — Taschb. Hym. Deutschl. p. 150. (1866). — Schck, Progr. Gymn. zu Weilb. p. 12, n. 21. (1870). — Thoms. Opusc. Entom. II. p. 104, n. 2. (1870). — Lamp. Goldwesp. Deutschl. p. 19, n. 58. (1881). — Mocs. Chrys. faun. Hung. p. 41 et 82, n. 6. ♂. tab. I. fig. 8. (unguic.) (1882). — Destef. Natural. Sicil. VII. p. 121. (1888).

Hedychrum rufum, Panz. Krit. Rev. II. p. 104. (1806).

Chrysis Rosae, Dhlb. Monogr. Chrys. Suec. p. 13, n. 11. ♀. (1829).

Hedycrum roseum, Wesm. Bullet. Acad. Brux. VI. p. 169, n. 1. (1839).

Hedychrum Erschovi, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 6, n. 13. tab. I. fig. 2. ♀. (1877) sec. spec. typ. e coll. Rad.!

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Hedychrum suave, Tourn. Mittheil. Schweiz. Ent. Ges. V. p. 308. ♀. (1878).
Hedychridium roseum, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 35. (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 249, n. 13. (1882). — Frey, Chrys. Helvet. p. 40 et 41. (1887). — Buyss. Revue d'Entom. VII. p. 13. (1888).
Hedychridium roseum Rossi *var. femoratum,* Ab. Annal. Soc. Linn. Lyon. XXVI. p. 36. (1879).
Hedychrum femoratum, Mocs. Chrys. faun. Hung. p. 42 et 82, n. 7. ♀. var. (1882) (nec Dhlb.).

Cyanea vel viridi-cyanea, rarius violascens; cavitate faciali minus profunda, dense subtiliter transverse-striata; antennis nigro-fuscis, scapo cyanescenti vel ænescenti; fronte cum vertice, pro- et mesonoto confertim punctato-subreticulatis, scutello postscutelloque crassius punctato-reticulatis; abdomine sæpissime roseo-testaceo vel roseo-ferrugineo, supra plus minusve violascenti, rarius virescenti, concinne punctulato; alis sordidis, basi hyalinis tegulis fusco-brunneis.

Species: magnitudine, punctatura coloreque quam maxime variabilis. Sunt enim specimina: inde a 3—5½ mm. longa, vertice thoraceque supra uberius æneo pictis, scutello lætius viridi-subaurato, tarsis fuscis, vel cum geniculis tibiarumque apice testaceis, thorace abdomineque iam densius subtiliusque, iam dispersius fortiusque punctatis, abdomine plus minusve violaceo tincto. — *Hedychrum suave* Tourn., quam maxime incomplete descriptum: de cavitate faciali aliisque characteribus essentialibus nulla facta mentione, cum *Holopyga rosea* eandem esse speciem vel solum eius varietatem iudico.

Patria: Europa tota cum Caucaso et Turkestania.

var. chloropyga Buyss.

Hedychridium roseum var chloropyga, Buyss. Revue d'Entom. VII. p. 13. ♀ (1888).

«Abdomen couleur de clair à teinte métallique violacée, troisième segment entièrement (ou partiellement en forme de macule) d'un vert franc à reflets bleu violacé. — Patria: Gallia (Broût-Vernet).

var. nana Chevr.

Hedychrum nanum, Chevr. Mittheil. Schweiz. Ent. Ges. III. p. 266. (1870).
Hedychridium nanum, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 36. ♂. (1879).
Hedychridium roseum var. nanum, Buyss. Revue d'Entom. VII. p. 13. ♀. (1888).

«Abdomen entièrement violet métallique.» (Buyss. l. c.) — Patria: Helvetia (Chevr.); Gallia (Buyss.).

Genus VII. HEDYCHRUM Latr. Mocs.

Hedychrum, Latr. Hist. nat. III. p. 317. (1802) ex parte. — Dhlb. Hym. Europ. II. p. 58, gen. 6. (1854) ex parte.
Holopyga, Dhlb. Hym. Europ. II. p. 47, gen. 5. (1854) ex parte.

(ἡδύχρους = grate coloratus, delectans.)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Hoc genus restingo ad species Chrysididarum, Holopygis simillimarum, solum illis, quarum abdominis segmenti tertii margo apicalis lateribus plus minusve distincte angulatus et vena basalis (Först.) seu transverso-medialis (Dhlb.) leniter tantum et non angulatim curvata est. Typum habemus in *Hedychro nobili* Scop. (lucidulo Fabr.) et *rutilanti* Dhlb.

Corpus : plerumque magnum, latum ac robustum, rarius mediocre, ovatum vel ovato-rotundatum.

Caput : transversum, pronoto multo brevius ; *cavitate faciali :* pro scapis quiescentibus plerumque profunda, in speciminibus mihi cognitis semper transverse striata. *Mandibulae :* apice bi- vel tridentatae, dentibus conicis, approximatis, apicali maiore. *Antennae :* crassiusculæ, longitudine mediocri, filiformes vel subsetaceæ.

Thorax : subtetraëdro-cylindricus. *Pronotum :* mesonoto multo longius, convexum, rarius medio parum deplanatum. *Mesonotum :* convexum, suturis longitudinalibus distinctis. *Postscutellum :* convexum vel parum gibbum, inerme seu non mucronatum. *Metanotum :* postice truncatum vel leniter declive.

Alae : plerumque latae, plurimis apicem abdominis vix attingentibus ; *anticae :* cellulis tantum tribus distinctis : mediali, submediali prima et discoidali, hæc posterior plerumque venulis tantum pallidis clausa longiusque appendiculata, radiali rudimentaria ; *venis* : costali, postscostali, transverso-mediali, stigmate et radiali inchoata firmis, reliquis fere rudimentariis ; *posticae* : cellulis omnino carent.

Pedes : pilosi ; *femora* et *tibiae* normalia ; *unguiculi tarsorum :* infra plerumque fissi vel rarius bidentati, dente inferiore circa medium sito (Hedychrum cœlestinum Spin.), fere sicut in subgenere *Hedychridio.*

Abdomen : plerumque late-ovatum, valde convexum, segmentum tertium ante marginem apicalem plus minusve distincte arcuato-transverso impressum ; *tubulus feminarum* : bene visibilis, longitudine mediocris vel sat longus, rarissime absconditus

Generis *Hedychri* hoc sensu 27 cognoscimus species ex omni orbis terrarum parte ; et quidem : e regione palæaretica 18, æthiopica 2, orientali 1, australiaca 1, nearctica 4, neotropica 2. *Hedychrum coelestinum* Spin. duas inhabitat regiones : palæarcticam nempe et æthiopicam. — Apud Dahlbomum ex his tantum 11 invenimus species.

*

1. *Corpus totum nigro-violaceum, cyaneum, coeruleum aut viride, vel his coloribus variegatum, sed nunquam auratum vel cupratum* (solum in *Hedychro continuo* Aar. nitore cupreo).

160. **Hedychrum cœrulescens** Shuck.

Hedychrum coerulescens, Shuck. Ent. Mag. IV. p. 172, n. 3. (1837) excl. syn. (nec Lep.). — Rad. Horæ Soc. Ent. Rossicæ XXIII. p. 11. (genit. maris) (1888).

Hedychrum chalybaeum, Dhlb. Hym. Europ. II. p. 64, n. 35. (1854). — Schck, Nass. Jahrb. XI. p. 81, n. 1. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 65. (1858). — Schck,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Progr. Gymn. zu Weilb. p. 16, n. 23. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 33. (1879). — Lampr. Goldwesp. Deutschl. p. 20, n. 60. (1881).

Holopyga chalibaeus (!). Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879) (excl. Tourn. syn.).

Mediocre, sat robustum, læte-cyaneum, thorace et abdomine supra nonnunquam parum virescentibus, parcius nigro-, pedibus albo-pilosis; cavitate faciali dense transverse-striata; antennis crassiusculis, nigris, scapo et articulo primo flagelli supra viridi-cyaneis; clypeo viridi-aurato; vertice, pro- et mesonoto densius, scutello parum dispersius punctato-reticulatis, postscutello fere cribrato-punctato; pronoto transverso, mesonoto parum longiore, metanoto dentibus postico-lateralibus mediocribus, acutis, divarricatis; abdominis segmentis dorsalibus duobus primis disco regulariter concinne minus crasse, lateribus et secundi margine postico fortius punctatis, tertio dense subrugoso-punctato, ante marginem posticum linea arcuato-transversa impresso, ipso margine apicali anguste subscarioso, centro rotundato lateribusque obtuse-angulato; ventre nigro-piceo, nitido; femoribus tibiisque læte-cyaneis, tibiarum apice tarsisque rufo-testaceis vel solum rufescentibus; alis sordide-hyalinis, basi subhyalinis, venis fuscis, tegulis brunneis. — ♂; long. 6 mm.

«*Armure.* Le bord intérieur de la branche du forceps faiblement découpé vers le milieu. Volsella pareille à celle de l'espèce précédente (*Hedychr. simile* Mocs.). Tenette plus large vers sa base; sa longueur égale à la longueur de la volsella.» (Rad. l. c. tab. I. fig. 16a, 16b, 16i.)

Patria: Gallia (Court, et Mus. Hung.); Hispania (Rad.); Germania (Dhlb. et Mus. Halense Saxonum!); Russia meridionalis (Dhlb.).

161. **Hedychrum simile** mihi.

Hedychrum cyaneum, Mocs. Horæ Soc. Ent. Rossicæ. XXIII. p. 10. ♂. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 11. (genit. maris) (1888) (nec Brullé).

Mediocre, læte-cyaneum parumque violascens, parce pilosum; antennarum articulis duobus primis concoloribus, reliquis nigro-fuscis; genis fere nullis; cavitate faciali profunda, viridi-cyanea, valde subtiliter transverse-striata; vertice, pro- et mesonoto densius, scutello dispersius fortiusque punctato-reticulatis, postscutello cribrato-punctato; pronoto transverso, mesonoto parum longiore, metanoti dentibus postico-lateralibus mediocribus, acutis, divarricatis; abdominis segmentis dorsalibus nigro-cyaneis parumque violascentibus, 1—2 disco dense subtiliter, tertio multo subtilius dispersiusque punctatis, margine apicali sat fortiter calloso, utrinque angulo minuto obtuso; ventre nigro-piceo, nitido; tarsis fuscis; alis sordide-hyalinis, venis fuscis, tegulis brunneis. — ♂; long. $7^1/_2$—8 mm.

Hedychro coerulescenti Shuck. simile et affine; sed maius ac robustius, thorace supra fortius, abdominis segmentis dorsalibus multo subtilius et hoc sparsius punctatis, margine apicali sat fortiter calloso, tarsis obscurioribus, certe alia est species.

«*Armure.* La branche du forceps large, au bout arrondie; son bord interne faiblement découpé. Volsella cylindrique, vers l'extrémité un peu grossie et garnie de poils

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

longs. Sa tenette large, nue, presque de la longueur de la volsella, pointue à l'extrémité.» (Rad. l. c. tab. I. fig. 15a, 15b.)

Patria: Sibiria orientalis (Coll. Rad.! et Mus. Hung.); China borealis (Ta-tschian-sy, Mus. Hung.).

162. **Hedychrum metallicum** Dhlb.

Hedychrum metallicum, Dhlb. Hym. Europ. II. p. 68, n. 38. (1854).

«Parvum 1¹/₄ lin. decimal. long. viride, nonnihil cyaneo-pictum, vertice pronoto et dorsulo nitidioribus sparse punctulatis, abdomine polito sparse subtilissime punctulato, segmentorum marginibus basalibus nigro-æneis, segmenti tertii margine apicali convexo-arcuato, alis hyalinis.

Observ. Affinis *Hedychro chloroideo var. b.*: sed corpore minore et magis metallice splendente, abdomine polito subtilissime sparse punctulato, segmentorum marginibus basalibus nigro-æneis, alis hyalinis etc. mox distinguendum.

Corpus parvum robustum subtiliter cinereo-pubescens. Caput nitidum sparse punctulatum, quemadmodum ut in *Hedychro chloroideo* formatum, cyaneum scapis concoloribus, fronte viridi. Antennarum flagella longiuscula nigro-fusca. Mandibulæ apice brunnescentes. Thorax modice convexus. Pronotum et dorsulum nitidiora sparse punctulata læte viridia; dorsuli suturæ subtiles distincte 4, laterales antice abbreviatæ rectæ, medianæ continuæ basi arcuatæ; lobus dorsuli intermedius basi area parva transversa subsemilunata nigro-ænea, subtilissime punctulata. Scutellum, metanotum et mesopleuræ lobus magnus modice punctato-reticulata viridi-cyanea. Sternum cyaneum. Pedes cyaneo-virides, calcaribus tarsisque brunneo-testaceis. Alæ hyalinæ, ad costam cellulæ radialis parumper sordidæ, tegulis et venis fusco-brunneis; cellula medialis profunde angulato-emarginata, versus stigma obtuse apiculata propter venulam transverso medialem profunde obtusangulo-inflexam. Abdomen proportionaliter rotundato-ovatum, basi transversum, margine apicali convexo-arcuatum, dorso modice convexum politum a colore metallico-viridi splendidum atque sparse subtilissime punctulatum, segmentis basi fasciola angusta subsemilunata nigro-ænea. Segmentum tertium totum æqualiter convexum; margo apicalis summus tenuissime nigro-brunneus opacus et ad utrumque latus nonnisi quam obsoletissime minutiosissimeque angulatus. Venter nitidissimus piceo-niger.»

Patria: Finlandia (Dhlb.).

163. **Hedychrum coelestinum** Spin.

Hedychrum coelestinum, Spin. Annal. Soc. Ent. France. VII. p. 454, n. 11. (1838). — Dhlb. Hym. Europ. II. p. 60, n. 31. (1854). — Rad. Horæ. Soc. Ent. Rossicæ. XXIII. p. 11. (genit. maris) (1888).

Cymura splendida, Dhlb. Dispos. p. 4, n. 1. (1845).

Hedychrum stilboides, Walk. List. of Hym. coll. by Lord in Egypt. p. 9, n. 36. ♂♀. (1871).

Submagnum vel magnum, latum ac robustum, totum cyaneum vel virescenti-cyaneum (in specimine e Delagoa Bay parum viridi-subaureo nitens), fusco-alboque pilo-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

sum; cavitate faciali profunda, dense transverse-striata; antennis crasiusculis, fusco-nigris, articulis duobus primis viridi-cyaneis; genis mediocribus, sublinearibus, vertice sat dense fortiterque punctato-subreticulato; pronoto transverso, mesonoto parum longiore, parte postica in medio cum mesonoto scutelloque sat sparsim irregulariter fortius punctatis, interstitiis lævibus; pronoto antice et lateribus subrugoso-punctatis, mesopleuris et postscutello punctato-reticulatis; metanoto dentibus postico-lateralibus validis, acutis, divarricatis; abdominis segmentis dorsalibus sat dense et concinne, sed irregulariter minus fortiter, tertio parum crassius punctatis (punctatura maris ubique parum fortiore), primo basi triangulariter sat late exciso, spatio supra lævi ac polito, tertio ante marginem posticum linea arcuato-transversa minus distincta, ipso margine apicali centro sinuato lateribusque acute-denticulato; segmentis ventralibus in mare viridi-cyaneis, in femina segmento tertio nigro-piceo, nitido; unguiculis tarsorum infra in medio unidenticulatis (fere sicut in subgenere *Hedychridium*); alis fortiter fumatis, disco parum subhyalinis, venis fuscis, tegulis violascenti-cyaneis. — ♂♀; long. 7—9 mm.

Species: de punctatura verticis thoracisque et unguiculis facile cognoscitur.

«*Armure*. La branche du forceps moins large que dans les espèces précédentes (*Hedychr. simile* Mocs. et *coerulescens* Shuck.). Volsella plus large et plus longue que sa tenette. Tenette courte, arrondie à l'extrémité. Crochets rétrécis vers le milieu.» (Rad. l. c. tab. II. fig. 17 a, 17 b.)

Patria: Aegyptus (Spin., Coll. Saussurei! et Mus. Hung.); Africa meridonali-orientalis (Delagoa Bay, Mus. Berolinense!); Promontorium Bonæ Spei (Dhlb., Mus. Vindob.! et Coll. Andréi!).

Animadversio. — Species secundum Dahlbom etiam Russiam meridionalem et Turciam ad Bosphorum inhabitat, quod ego in dubium vocare aussus sum; illa enim tempore recenti in locis laudatis non est inventa, sed solum in Africa. Species igitur Africana e fauna Europæa expellenda est.

164. **Hedychrum cyaneum** Brullé.

Hedychrum cyaneum, Brullé, Hym. IV. p. 52, n. 4. ♂. (1846).
Hedychrum janthinum, Dhlb. Hym. Europ. II. p. 62, n. 33. (1854)

Descriptio secundum Dahlbom:

«Mediocre 2 lin. decimal. long. capite thoraceque supra æneo-virescentibus crebre modice punctato-reticulatis, subtus viridi-cyaneis, abdomine nigro-violaceo purpurascente, margine apicali obtusangulo scarioso-albido, alis hyalinis apice sat fumosis.

Observ. Structura et sculptura affinis et similis *Hedychro roseo*. Mandibulæ et antennæ normales. Clypeus transverso-subsemilunatus. Facies et infera pagina capitis cyanea. Frons et vertex æneo-virides. Pronotum et dorsulum viridi-ænea crebre modice punctato-reticulata. In pronoto fovea mediana perobsoleta. Scutellum dorsulo concolor at punctis majoribus sparsis. Postscutellum et mesopleuræ lobus normalis crasse punctato-reticulata viridia; reliquæ thoracis partes cyaneæ. Pedes cyanei, parum virescentes, tarsis brunneo-testaceis. Alarum tegulæ et venæ fusco-brunneæ; venula transverso-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

medialis angulato-inflexa, hinc cellula medialis latere apicali angulato-emarginata. Abdominis dorsum crebre punctulatum segmentis primo viridi-cyaneo, sècundo et tertio nigro-violaceis purpureo-resplendentibus, tertii margine apicali tenuiter scarioso-albido obtusissime et latissime subtriangulari. Venter piceo-niger violaceo-micans, perparce piloso-punctatus».

Patria: Promontorium Bonæ Spei Africæ meridionalis (Brullé, Dhlb.).

165. **Hedychrum timidum** DHLB.

Hedychrum timidum, Dhlb. Hym. Europ. II. p. 65, n. 36. (1854).

«Subparvum 1 1/2 lin. decimal. long. viride: vertice thoracisque dorso nitidis confertim modice punctulato-reticulatis, abdominis segmenti tertii margine apicali utrinque angulo minutissimo obsoletissimo, alis basi hyalinis tum sordidis.

Observ. Valde similis et affinis *Hed. chalybaeo*, a quo tamen facile dignoscitur: corpore paullulum minore toto viridi, antennarum flagellis basi testaceis, capite thoraceque nonnihil nitidis, thorace minus depresso, punctatura thoracis forte minus crassa nec tam arcte conferta quam in *Hedychro chalybaeo*, ventre viridi-cyaneo, segmenti tertii margine apicali convexius arcuato etc. — Corpus parvum, totum punctulato-reticulatum. Mandibulæ rufo-brunneæ, basi nigro- et viridi-pictæ. Antennarum scapi cyanei, flagella basi rufo-testacea, tum fusca. Scutellum, metanotum et mesopleuræ lobus normalis crasse punctato-reticulata. Pedes virides, genubus, tibiarum apicibus tarsisque brunneo-testaceis; alarum tegulæ et venæ his concolores, tegularum basis virescens; venula transverso-medialis modice arcuato-inflexa. Abdomen cyaneo-viride subtiliter sparse punctulatum, segmenti tertii uterque angulus apicali-lateralis minutissimus obsoletissimus vix nisi difficile detegendus.» .

Patria: Bengalia.

166. **Hedychrum flammulatum** SMITH.

Hedychrum flammulatum, Smith, Journ. Proceed. Linnean Soc. Zoology. III. p. 26, n. 1. (1859).

«H. viridi-purpureo lavatum; capite thoraceque fortiter, abdomine delicatule punctatis; alis fuscis basi hyalinis.

Legth 3 lines. Bright green; the vertex, two oblique stipes on the prothorax, meeting in the centre of its anterior margin, a broad longitudinal stripe on the disk of the mesothorax, and the sides of the scutellum and postscutellum deep purple. Abdomen: the middle of the basal segment, the second and third segments at their base, broadly purple; the apical margin of the third tinged with purple; wings subfuscous, with their base hyaline. The head and thorax coarsely and closely punctured, the abdomen finely so; the tarsi with the claws unidentate.»

Patria: Celebes.

Animadversio. — Nescio, an speciem loco apto collocaverim, vel illa Holopygis, subgeneri Hedychridio, esset inserenda? Expressio enim «the tarsi with the claws unidentate» non satis clara est.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

167. **Hedychrum violaceum** Brullé.

Hedychrum violaceum, Brullé. Hym. IV. p. 51, n. 2. ♂. (1846). — Nort. Transact. Amer. Ent. Soc. VII. p. 238. (1879) (excl. Hed. aspero Brullé syn.). — Aar. Transact. Amer. Ent. Soc. XII. p. 223, tab. VII. fig. 27. (postscutellum), fig. 28. (unguiculi) (excl. *Hed. aspero* Brullé syn.). — Cam. Biolog. Central-Americ. Hym. p. 458, n. 1. (1888) excl. *Hed. aspero* Brullé syn.

Hedychrum Wiltii, Cress. Proced. Ent. Soc. Philad. IV. p. 305, n. 1. ♂. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 237. (1879).

Hedychrum Louisianiae, Nort. Transact. Amer. Ent. Soc. VII. p. 238. ♂. (1879).

Descriptio secundum Brullé est sequens :

«Cyaneo-viride, abdomine subviolaceo, alis obscuris, basi hyalina, capite et thorace confertim, abdomine tenue punctatis. Mas.

Il est d'un vert bleuâtre, avec l'abdomen d'un bleu violet et les lobes moyens du mésothorax d'un vert assez brillant. Les antennes sont noires, à l'exception du premier article; les tarses et l'extrémité des jambes, surtout de celles de devant, sont d'un roux brun. Les ailes sont enfumées, avec la moitié antérieure environ tout à fait transparente et le milieu moins foncé que l'extrémité.

La tête et le thorax sont assez fortement ponctués; les points de l'abdomen sont très-petits et plus écartés. La fossette antennaire est peu étendue, striée en travers et marquée d'un gros point violet à la partie supérieure. Les sillons interlobulaires du mésothorax sont très-étroits. La base de l'abdomen est un peu échancrée et sa ligne moyenne très-légèrement indiquée. Les crochets des tarses sont bifides.

Longueur : 0,010.»

«I have before me sevently-eight examples of this species, among which are Mr. Cresson's type of *Wiltii*, Mr. Norton's type of *Louisianae*, and his determinations of *violaceum* and *asperum*, which are undoubtedly correct. The variation in size of the races of this species is most remarkable, and relatively to the named forms is as follows: *Wiltii*, 13.5—10.5 mm. Kansas, Nebraska, Colorado; *Louisianae*, 10.5—8 mm. Louisiana, Georgia, Texas, Colorado, Washington Territory, Mexico; *Asperum*, 7—5 mm. Canada, Maine, New Hampshire, Pennsylvania, New Jersey, Delaware, Virginia, Georgia, Montana, Dakota, Washington Territory, Colorado, California, Vancouver's Island, Mexico; *Parvum*, 5—4 mm. long from Montana.

It will be seen from the above that the localities have nothing to do with the establishment of varieties, and even the forms here given, founded only on relative size, are of little or no value, simpli because the gradation throughout is equal and absolutely intact. *Violaceum* (= asperum) is the medium and representative form. Other slight variations are noticeable, which take place entirely irrespective of size or locality, these are the posterior margin of postscutellum being uneven, or rather broken, larger or smaller abdominal punctures, a polished space down the middle of first and second segments, sinuated or angulated margin of third segment, etc. The color as varies in all the form from emerald-green with brassy reflections to deep blue and purple and very little green. The North-eastern specimens are all dark blue with purple and green,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

with one exception from Canada (Provancher's collection), which is dark green with a little blue. In the Southern and Western specimens those with dark green and little blue predominate with the blue specimens from every locality. The student will as first readily separate *Wiltii* from the others form in his collection, and he will series to show the inconstancy of characters, it appears so remarkably different. There was, seemingly, good reason for Mr. Cresson to describe *Wiltii* as distinct from *violaceum*, its then only described ally, as it is twice the size apparently. On the other hand there is no difference between the type of *Wiltii* and the type of *Wiltii* and the type of *Louisianiae*, except the latter being 3 mm. shorter and of a dark green and blue instead of blue and purple and green. The character in Mr. Norton's key as separating these two as species is not a correct one. *Wiltii* should come under the same heading as *Louisianiae*, viz: «postscutellum connecting abruptly with the short dividing ridge of the metathorax». (Aaron l. c.) — Mexico (Cam.).

Patria: America septentrionalis.

Animadversio. — Vide meam adnotationem apud *Holopygam asperam* Brullé.

168. **Hedychrum continuum** Aar.

Hedychrum continuum, Aar. Transact. Amer. Ent. Soc. XII. p. 224. ♂ ♀. tab. VII. fig. 29. (postscutellum) (1885).

«One specimen emerald-green with brassy reflections and no blue, one specimen with the thorax green and blue, the abdomen blue and purple, three specimens darker green with brassy reflections and more or less blue, and another almost entirely dull purple, a little blue on the abdomen, closely punctured on the thorax; abdomen with the larger punctures rather separated, with smaller punctures between, appearing roughened in some specimens; posterior portion of the metanotum below the postscutellum evenly and finely punctured, no median dividing ridge, the postscutellum sligtly overhangs the metanotum. In the emerald-green specimen the narrow, smoothed margin of the postscutellum continues around ist apex, dividing it from the punctured metanotum; lateral margins of the third abdominal segment straight; apex with a broad, shallow sinus in some specimens; 3—4 mm. long. ♂ ♀.

Newada, California, Washington Territory; six specimens.»

Patria: America septentrionalis.

169. **Hedychrum nigropilosum** n. sp.

Mediocre, sat robustum, totum viridi-cyaneum vel cyaneo-viridi; capite, thorace, abdomine pedibusque longius nigro-pilosis, tibiarium lateribus tarsisque solum albo-pubescentibus; cavitate faciali sat profunda, dense transverse-striata; antennis tenuibus, fusco-nigris, articulis duobus primis viridibus; vertice dense, pro- et mesonoto scutelloque parum dispersius, postscutello fortius punctato-reticulatis; pronoto transverso,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

mesonoto parum longióre, metanoto dentibus postico-lateralibus sat robustis, acutis; abdominis segmentis dorsalibus duobus primis dense concinne subtiliter, tertio rugosiuscule-punctatis, hoc ante marginem apicalem linea arcuato-transversa impresso, ipso margine apicali centro parum sinuato, lateribus obtuse-angulatis; segmentis ventralibus viridi-cyaneis, marginibus nigro-piceis, nitidis; pedibus cyaneo-viridibus, tarsis fuscis; alis subfumato-hyalinis, basi parum dilutioribus, venis fuscis, tegulis nigro-æneis, antice cyanescentibus. — ♂; long. 6 mm.

Species: corpore longius nigro-piloso, a congeneribus iam facile cognoscenda.

Patria: America septentrionalis (British Columbia, Mus. Vindob.!; Mariposa in California, Mus. Lugdunense Batavorum!).

170. **Hedychrum Cressoni** Nort.

Hedychrum Cressoni, Nort. Transact. Amer. Ent. Soc. VII. p. 239. ♀ (1879).

«Color green, changing into blue-black at apex of and across mesothorax, and at base of each segment; bright green beneath; a violaceous stipe connecting the summit of eyes back of the ocelli; basal half of wings hyaline, apical half clouded, darkest near stigma; the three basal joints of antennæ, venter and legs green; base of face shining, polished near antennæ, the upper third with cross striæ; head and prothorax covered with coarse, separated pits, closer on the head; scutel continued in the form of a frustrum of a cone beyond the ordinary polished foveolæ on each side; basin at base of second abdominal segment abrupt, nearly as wide as segment, polished; tergum covered with small distinct punctures across the apex of each segment, and coarser ad sides; margin of third segment lightly notched, and very obtusely bent ad sides; inner margin distinctly hollowed, with a defined basin from the noth half across the segment; claws with a strong inner tooth and a distinct tooth at base. Length 48 inch.»

Patria: Mexico.

Animadversio. — Cameron speciem hanc (Biolog. Central-Americ. Hym. p. 459, n. 1. (1888) ad subgenus *Hedychridium* pertinere dicit.

171. **Hedychrum Brasilianum** Dhlb.

Hedychrum brasilianum, Dhlb. Hym. Europ. II. p. 59, n. 30, tab. IV. fig. 62. (segm. anale) (1854).

«Magnum, robustum 3 lin. decimal. long. cyaneum parum virescens ventre nigro-piceo, confertim punctatum, pronoti margine antico foveola centrali, abdominis segmenti tertii angulo apicali-laterali obtuso sinubus levibus.

Observ. Habitu et sculptura *Hedychro lucidulo* majori maxime affine. Corpus latum cyaneum parum viridi-resplendens. Mandibulæ apice piceæ. Clypeus punctis maioribus adspersum. Cavitas facialis mediocris, a stemmatibus sat remota, confertim transverse striata; ceterum totum caput confertim punctato-subreticulatum. Thorax latus omnino in *Hedychro lucidulo* constructus, totus dorso pleurisque confertim punctato-subreticula-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

tus, punctis pronoti et dorsuli modicis, — scutelli metanoti pleurarumque magnis et crassis. Pedes cyaneo-virides largiter cinereo-pilosi; tibiæ posticæ angulatæ; calcaria tota tarsique apice testaceo-brunnea. Alarum venæ nigro-brunneæ; venula transverso-medialis intus lenissime arcuata. Abdominis dorsum confertim: basi punctulatum et apice punctatum; segmenti tertii margo apicalis brunneus leniter trisinuatus; sinus uterque lateralis terminatur ad angulum obtusum. Venter nigro-piceus nitidissimus segmentis ultimo et penultimo disco punctatissimis.»

Patria: Brasilia.

172. **Hedychrum neotropicum** n. sp.

Mediocre, sat robustum, cyaneo-viride, capite thoraceque supra nigro-, subtus cum abdomine pedibusque breviter albo-pilosis; mesonoti lobo medio antice et abdominis segmentis dorsalibus duobus primis disco cyanescentibus; cavitate faciali profunda, dense subtiliter transverse-striata; antennis crassiusculis, nigris, articulis duobus primis viridi-cyaneis; vertice, pro- et mesonoto scutelloque dense sat crasse, postscutello multo crassius sat regulariter punctato-reticulatis; scutelli basi in medio spatio minuto lævi; metanoti dentibus postico-lateralibus fortibus acutis; abdominis segmentis dorsalibus primo disco et secundi parte basali late concinne subtiliter punctulatis, parte reliqua cum tertio crasse subrugoso-punctatis, hoc ante marginem apicalem arcuato-transverso impresso, ipso margine apicali arcuato-integro, lateribus obtuse-angulatis; ventre nigro-piceo, nitido, segmento secundo parte apicali in medio viridi-cyaneo-maculato; pedibus cyaneo-viridibus, tarsis fuscis; alis subfumato-hyalinis, venis fuscis, tegulis brunneis. — ♂; long. 7 mm.

Species: de punctatura duplici abdominis segmentis dorsalibus duobus primis, facile cognoscitur.

Patria: Brasilia (Neu-Frieburg, Mus. Hallense Saxonum).

II. *Abdominis segmenta dorsalia violaceo-purpureo-aurata, segmento tertio margine apicali sordide-testaceo in medio exciso; caput et thorax aenea violaceoque tincta.*

173. **Hedychrum Frivaldszkyi** n. sp.

Magnum, latum ac robustum, parce pilosum; capite thoraceque æneis violaceoque tinctis; cavitate faciali profunda, violacea, dense subtilius transverse-striata; antennis tenuibus, rufo-testaceis, articulo tertio mediocri, quarto vix dimidio longiore, quarto quintoque simul sumptis breviore; genis fere nullis, linearibus; vertice parum densius, thorace cum scutello dispersius cribrato-punctatis; postscutello parum gibbo, scrobiculato; metanoti angulis postico-lateralibus fortibus, acute-triangularibus; mesopleuris crasse profundeque punctatis; abdominis segmentis dorsalibus violaceo-purpureo-auratis, duobus primis sparsim sat profunde, tertio densius subrugose-punctatis, interstitiis latis lævibus, primo basi in medio triangulariter late exciso lævi ac polito, tertio depresso-convexo margine apicali sat late sordide-testaceo, centro mediocriter, lateribus profunde

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

arcuatim excisis acuteque denticulatis; ventre nigro-piceo, nitido, pedibus cyaneis, geniculis, tibiarum apice tarsisque rufo-testaceis; alis subhyalinis, apice late fumatis, venis fuscis, tegulis rufo-brunneis. — ♂; long. 9 mm.

Species magnifica: in honorem Præsidis mei dilectissimi, Johannis Frivaldszky, scientiarum naturalium cultoris eximii, observantissime denominata.

Patria: territorium Maris Caspii (Krasnowodsk, a Clariss. Dom. Ferdinando Morawitz mihi donatum, Mus. Hung.).

III. *Abdominis segmenta dorsalia aenea cupreoque lavata; caput et thorax nigro-violacea.*

174. **Hedychrum semiviolaceum** n. sp.

Mediocre, elongatum; capite thoraceque subopacis nigro-violaceis parcius nigro-, abdominis segmentis dorsalibus æneis cupreoque lavatis splendidis cinereo-pilosis; cavitate faciali profunda, violacea, dense subtiliter transverse-striata, medio canaliculata; clypeo, mandibulis antennarumque scapo-æneo-nigris, flagello fusco-nigro, cinereo-pubescenti, huius articulo secundo mediocri, tertio dimidio adhuc non longiore, tertio quartoque simul sumptis multo breviore; vertice densius subtiliusque, thoracis dorso parum dispersius crassiusque punctato-reticulatis, postscutello convexo, metanoti dentibus postico-lateralibus mediocribus, acutis; mesopleuris sculptura thoracis, subtus parum emarginatis, postice striatis; abdominis segmentis dorsalibus æneis cupreoque lavatis, duobus primis dense subtiliter regulariterque punctatis, secundo carinula mediana nulla, tertio valde subtiliter denseque rugoso-punctato, ante marginem apicalem linea transversa impresso, margine apicali ad utrunque latus angulo minuto obsoleto, obtusiusculo; ventre piceo, nitido; femoribus, tibiis alarumque tegulis æneo-nigris, tarsis rufescentibus; alis sordide-hyalinis, venis pallide-fuscis, vena transverso-mediali leniter curvata, cellula radiali valde incompleta. — ♂; long. 6 mm.

Species cum *Holopyga purpurascenti* (Hedychro purpurascenti Dhlb.) multum similitudinis habere videtur; sed maior, abdominis segmentis dorsalibus non igneo-auratis, segmento tertio margine apicali ad utrinque latus angulato, alis sordide-hyalinis cellulaque radiali incompleta etc. iam satis distincta.

Patria: Hungaria centralis et Austria ad Vindobonam, species rara (Mus. Hung.).

IV. *Abdominis segmenta dorsalia (cum capite thoraceque tolis) cupreo-aurata parumque viridi-aureo micantia vel rubro-cupreo-aurata; pedes posteriores postice cum tarsis et ventre saturate carnea vel fusco-testacea.*

175. **Hedychrum Cirtanum** Grib.

Hedychrum cupreum, Rad. Horæ Soc. Ent. Rossicæ. VI. p. 303. ♀. (1869) sec. spec. typ. e coll. Rad. (biologia, sine descriptione) (nec *Hedychrum cupratum* Dhlb.).

Hedychrum cirtanum, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 338, n. 18. ♂ ♀. (1879). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 12. (genit. maris) (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Magnum, robustum, parce pilosum, cupreo-auratum parumque viridi-aureo-micans vel totum rubro-cupreo-auratum; pedibus posterioribus postice cum tarsis et ventre saturate carneis vel fusco-testaceis, illis antice aureo-micantibus; cavitate faciali profunda dense transverse-striata, superne convexa, non marginata; antennis tenuibus, fusco-rufescentibus, articulo primo cupreo-aurato, sequentibus duobus vel tribus rufis, tertio longitudine mediocri, quarto parum longiore; genis brevibus, articulo secundo antennarum æquilongis; vertice thoracisque dorso crasse regulariter punctato-reticulatis; pronoto longo, transverso, metanoti dentibus postico-lateralibus acutis spinoideis, postscutello conico-gibbo; abdominis segmentis dorsalibus concinne minus dense crassius punctatis interstitiis lævibus, primo basi late triangulariter exciso, nigro-æneo, secundo sine carinula mediana distincta, tertio ante marginem transversim leniter impresso, ipso margine rotundato et utrinque angulato; alis apice sordide-hyalinis, basi subhyalinis, tegulis testaceis. — ♂ ♀ ; long. 7—9 mm.

« *Armure.* Les deux côtés (internes et externes) de la partie allongée de la branche du forceps sont parallèles, l'extrémité arrondie et richement garnie de poils minces, longs. Volsella cylindrique. Tenette rapelle par sa forme la tenette du *Hedychr. rutilans,* mais elle est plus longue. Crochets allongés, de la longueur, dépassant un peu la branche du forceps. » (Rad. l. c. tab. II. fig. 19a, 19b.)

Species sui generis elegantissima: colore corporis iam facile cognoscitur.

Patria: Algeria (Grib.; Coll. Rad.! et Saussurei!).

V. *Abdominis segmenta dorsalia igneo-purpurata (feu grenat); caput et thorax supra aureo-cuprea, thorax subtus viridi-cyaneus.*

176. **Hedychrum sculptiventre** Buyss.

Hedychrum sculptiventre, Buyss. Revue d'Entom. VII. p. 2, n. 2. ♂. (1888).

« ♂. Corps d'assez grande taille, trapu, couvert de poils gros, raides, dressés, noir brunâtre. Tout l'avant-corps doré-cuivré, couvert de gros point profonds, serrés, mais nullement ruguleux ni confluents. Tête relativement petite; clypeus vert-doré, peu gibbeux, presque imponctué; cavité faciale évasée sur les côtés, obovale, vert-doré, brillante, dorée transversalement. Antennes noires, premier article bronzé; pronotum allongé, rectangulaire, avec un petit sillon partant du milieu du bord antérieur. Côtés du mésosternum (épimères) doré-cuivre comme le dorsulum, ponctués-réticulés, à points ocellés, au centre du côté lui-même se trouve un petit espace couvert de petits points peu profonds. Postécusson arrondi-convexe grossièrement réticulé; angles postico-latéraux du metanotum doré-cuivré, à pointe fine aiguë, longue et divariquée; écailles brun obscur légèrement metallique à la base; ailes fortement enfumées d'une manière régulière avec un petit éclairci au milieu. Tout le dessous du thorax vert bleuâtre; pattes bleu un peu verdâtre, tibias vert un peu doré, tarses et extrémités des tibias roussâtres, pubescence blanchâtre. Abdomen d'un beau feu grenat, court, de la longueur du

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

thorax seul: premier segment très court, à ponctuation profonde, médiocre et serrée; seconde segment grand, à ponctuation plus grosse et espacée; troisième segment court, couvert de points gros et serrés, angles latéraux obtus, noirâtres ainsi que toute la bordure du segment qui est régulièrement arrondi transversalement. Ventre noir, un peu brunâtre, couvert de gros points assez serrés, réguliers, entremêlés de longs poils épars, dressés et noirâtres. — Long. 7 mill.

Cette belle espèce diffère de l'*Hed. virens* Kl. par son coloris, par sa ponctuation non ruguleuse et régulière, par le sillon du pronotum, la ponctuation du ventre entièrement noir, etc.»

Patria: Algeria (Oran, Coll. Ancey).

VI. *Abdominis segmenta dorsalia igneo-, vertex, pro- et mesonotum maculaque scutelli cupreo-igneoque aurata, huius parte reliqua cum metanoto, pleuris pectoreque laete-cyaneis.*

177. **Hedychrum Szabói** n. sp.

Hedychrum lucidulum F. *var. c.* (capite igneo-aurato), Dhlb. Hym. Europ. II. p. 78, n. 45. ♀. (1854) (excl. *Hedychro ardenti* Latr. syn.). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 550. var. *β.* (excl. syn.) (1857). — Ab Annal. Soc. Linn. Lyon. XXVI. p. 34. (1879).

Subparvum vel mediocre, robustum, parce pilosum, læte-cyaneum; vertice, pro- et mesonoto maculaque sat magna scutelli cupreo-igneoque auratis; cavitate faciali profunda, viridi-cyanea, subtiliter transverse striata, clypeo aurato-viridi; antennis crassiusculis, nigro-fuscis, articulis duobus primis cyaneis, tertio longitudine mediocri, quarto parum longiore; vertice, pro- et mesonoto scutelloque dense subtilius, postscutello fortius dispersiusque punctato-reticulatis; abdominis segmentis dorsalibus igneo-auratis, primo basi nigro-æneo, 1—2 concinne dense subtiliter punctulatis, hoc carinula mediana nulla, tertio subtilissime minus distincte punctulato, ante marginem apicalem linea transverse-arcuata impresso, ipso margine apicali ad utrinque latus obsoletius angulato; ventre nigro-piceo, nitido; femoribus tibiisque cyaneis, geniculis, tibiarum apice tarsisque fusco-rufis; alis sordide-hyalinis, basi dilutioribus, venis pallide-fuscis, venula transverso-mediali leniter curvata, tegulis brunneis. — ♀; long. 6 mm.

Patria: Austria (Mus. Hung.); Silezia (Dhlb.); Germania (Berolinum, Dhlb.; Gumperda in Thuringia, Coll. Schmiedeknechti!); montes Pyræneici Galliæ (Ab); Sicilia (Dhlb.); Russia (Ukraine, Ab.; campi Orenburgenses, promontorium Uralense et Sibiria orientalis, Eversm.).

Animadversio. — Varietatem hanc Dahlbomi, tam late diffusam et *Hedychri nobilis* Scop. *(luciduli* Dhlb.) feminæ, præter verticis scutellique colorem sculptura penitus similem, ego cum specie sequenti distinguendas esse censeo et in honorem Illustrissimi viri J. Szabó, sectionis tertiæ Academiæ scientiarum Hungaricæ Secretarii, Geologi celeberrimi, summæ meæ venerationis et gratitudinis causa denominare optavi. Species eximia verisimiliter est etiam Hungariæ incola.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

VII. *Abdominis segmenta dorsalia et thoracis solum pronotum igneo-cupreoque aurata, pars reliqua corporis cyanea vel viridi-cyanea.*

178. **Hedychrum aureicolle** n. sp.

Hedychrum lucidulum, Dhlb. Hym. Europ. II. p. 78, n. 45. *var. a.* ♀. tab. IV. fig. 64—71 (partes corporis) (1854).

Exemplaribus minutis feminæ *Hedychri nobilis* Scop. simile; sed vertice circa stemmata macula magna aurea, solum pronoto igneo-cupreoque aurato punctaturaque abdominis regulari et fortiore, species vel adminimum tamquam varietas eximia, mihi distinguenda esse videtur.

Species cum *Chryside aureicolle* Ab. multum habet similitudinis.

Patria: Asia minor (Mus. Hung.); insula Rhodus (Dhlb.).

VIII. *Abdominis segmenta dorsalia aurata vel viridi-aurata.*

1) *Caput et thorax violascenti-cyanea.*

179. **Hedychrum semicyaneum** n. sp.

Mediocre, sat robustum, violascenti-cyaneum, parce pilosum; cavitate faciali profunda, subtiliter transverse-striata, antennis tenuibus, nigro-fuscis, articulo primo æneo, tertio mediocri, quarto parum longiore; vertice, pronoto transverso longo ac lato mesonotoque sat sparsim crasseque, scutello adhuc dispersius sat crasse punctatis, interstitiis lævibus, postscutello punctato-reticulato; abdomine igneo-aurato, segmentis dorsalibus: primo basi profunde excavato nigro-æneo, supra sparsim crassius punctato, interstitiis lævibus, secundo tertioque parum dispersius subtiliusque punctatis, hoc ante marginem apicalem linea transverso-aurata impresso, ipso margine apicali anguste nigro-æneo ad utrinque latus angulato; ventre nigro-piceo, nitido; pedibus violascenti-cyaneis, geniculis, tibiarum apice tarsisque fusco-rufis; alis sordide-hyalinis, basi dilutioribus, venis pallide-fuscis, vena transverso-mediali leniter curvata, tegulis fusco-rufis. — ♀; long. 7½ mm,

Hedychri nobilis Scop. mari, *virenti* Dhlb. et *luculento* Först. similis; sed capite thoraceque violascenti-cyaneis sculpturaque alia, certe distinctum.

Patria: Turkestania (Taschkend, Mus. Hung.).

2) *Caput et thorax cyanea vel viridi-cyanea.*

*

Conspectus specierum huius subsectionis.

1 (4). Fronte pilis brevibus nigris vestita.

2 (3). Corpore mediocri; pronoti margine antico in medio non sulcato; abdominis segmentis dorsalibus igneo-cupreoque auratis, dense subtilius punctatis. Long. 5—6 mm. ... ... *Gerstaeckeri* Chevr.

3 (2). Corpore magno, lato ac robusto; pronoti margine antico in medio sulcato; abdo-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

minis segmentis dorsalibus concinne viridi-auratis, dense fortius punctatis, primo margine apicali tenuiter purpureo-limbato. Long. 8 mm. ... ... *luculentum* FÖRST.

4(1). Fronte pilis albidis vestita.

5(6). Corpore mediocri, $4^1/_2$—$5^1/_2$ mm. longo; alis anticis apice leviter fumatis *longicolle* AB.

6(5). Corpore magno, lato ac robusto, 8—10 mm. longo; alis anticis apice fortiter fumatis.

7(8). Fronte pilis brevibus vestita; pro- et mesonoto sat crasse parum rugosiuscule punctatis ... ... *Phoenix* BUYSS.

8(7). Fronte pilis longis vestita; pro- et mesonoto crassius irregulariter punctatis *virens* DHLB.

*

180. **Hedychrum Gerstæckeri** CHEVR.

Hedychrum Gerstaeckeri, Chevr. Mittheil. Schweiz. Ent. Ges. III. p. 47. ♂ ♀. (1869). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 33. ♂ ♀. (1879). — Mocs. Chrys. faun. Hung. p. 39 et 82, n. 2. ♂ ♀. (1882). — Heyd. Bericht Senkenb. Naturf. Ges. p. 248, n. 11. (1882). — Frey, Chrys. Helvet. p. 43 et 45. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 121. (1888).

Hedychrum obscurum, Tourn. Mittheil. Schweiz. Ent. Ges. V. p. 308. (1878) sec. spec. typ. teste Frey-Gessner.

Sexus uterque exemplaribus minutis marium *Hedychri nobilis* Scop. simillimus; sed vertice et pronoto pilis multo brevioribus densibusque vestitis; pro- et mesonoto minus regulariter parumque subtilius punctato-reticulatis; a *Hedychro longicolle* Ab. vero: punctatura thoracis abdominisque subtiliori, pilis frontis et verticis brevioribus nigris (non albidis), satis distinctum. — ♂ ♀; long. 5—6 mm.

Patria: Hungaria (Mus. Hung.); Tyrolis (Gries, Mus. Vindob.!); Germania (Heyden); Helvetia (Chevr.); Gallia (Ab.); Sicilia (Destef.).

181. **Hedychrum longicolle** AB.

Hedychrum longicolle, Ab. Feuille Jeun. Natural. VI. p. 65, n. III. (1877); Annal. Soc. Linn. Lyon. XXVI. p. 33 et 34. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 157. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 43, n. 13. (1887). — Destef. Natural. Sicil. VII. p. 121. (1888).

Sextus uterque pariter exemplaribus minutis marium *Hedychri nobilis* Scop. simillimus; sed pilis frontis thoracisque albidis (non nigris), præsertim distinctus. — ♂ ♀; long. $4^1/_2$—$5^1/_2$ mm.

Patria: Hispania (Madrid, Gog.); Sicilia (Destef.); Gallia et Italia (Ab.); Tyrolis (Bozen, Mus. Vindob.!); Hungaria septentrionalis, rarum (Mus. Hung.); Amasia Asiæ minoris (Mus. Dresdense!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

182. **Hedychrum Phœnix** Buyss.

Hedychrum Phoenix, Buyss. Revue d'Entom. VII. p. 2, n. 3. ♀. (1888).

« ♀. Corps de grande taille, allongé, robuste, couvert d'une fine et courte pubescence blanchâtre. Tout l'avant-corps vert bleuâtre, couvert de points réguliers assez gros, un peu confluents, ruguleux sans être très serrés. Tête grosse; clypeus assez bombé sur le disque, ponctué; cavité faciale subrectangulaire, allongée, assez profonde, brillante, ridée transversalement. Antennes noirâtres, premier article bronzé à reflets verts. Pronotum convexe, allongée, trapéziforme, les côtés convergents un peu en avant; aire médiane du mesonotum d'une teinte plus bleue. Côtés du mesosternum (épimères) uniformement couverts d'une très grosse réticulation régulière. Postécusson arrondi-convexe, réticulé comme les côtés du mesosternum; angles postico-latéraux du metanotum à pointe, longue, fine, aiguë, divariquée. Pattes vertes, tarses et extrémités des tibias roussâtres; écailles brun noirâtre, à reflets métalliques à leur base. Ailes très fortement enfumées d'une manière uniforme avec un petit éclairci au milieu. Abdomen allongé, un peu plus long que le thorax, d'un beau feu doré; ponctuation grosse, profonde mais uniformément espacée; troisième segment regulièrement arrondi, angles des côtés spinoïdes, scarieux, subhyalins comme la bordure extrème de tout le segment; un léger sinus se trouve à l'apex. Ventre entièrement noir sombre, couvert de points irréguliers, le plus grand nombre plus petits que chez l'*H. sculptiventris*; le dernier segment est légèrement caréné et porte un fort crochet. — Long. 10 mill.

Cet insecte se distingue de l'*H. virens* Kl. par son abdomen franchement feu-doré, pur sa ponctuation thoracique régulière et la couleur du ventre sans macule verte. »

Patria: Syria (Tiberias [Tabarich], Coll. Abeillei).

183. **Hedychrum virens** Dhlb.

Hedychrum virens, Dhlb. Hym. Europ. II. p. 74, n. 43. ♂ ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 33. (1879). - - Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 42, n. 11. (1887).

Magnum, latum ac robustum, cyaneum vel viridi-cyaneum, parcius longe albido-pilosum; cavitate faciali profunda, dense subtiliter transverse-striata; antennis nigro-fuscis, scapo et articulo primo flagelli supra viridibus vel æneis, tertio longitudine mediocri, quarto quintoque simul sumptis æquali; genis fere nullis; mandibulis rufo-brunneis, basi cyanescentibus; clypeo margine apicali gibbo, utrinque transverse concaviusculo-impresso; vertice dense irregulariter minus profunde, scutello et postscutello mesopleurisque crasse profundeque punctato-reticulatis; pronoto longo, transverso cum mesonoti disco crassius irregulariter punctatis; metanoti dentibus postico-lateralibus validis, acutis; abdominis segmentis dorsalibus igneo-, rarius subviridi-auratis, primo basi late triangulariter exciso nigro-æneo, duobus primis crasse profundeque fere cribrato-, tertio densius parumque subtilius punctatis, hoc ante marginem apicalem

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

linea arcuato-transversa impresso, ipso margine apicali in medio parum sinuato lateribusque utrinque angulo dentiformi munito; ventre nigro-piceo, nitido, densius minus profunde punctato; pedibus viridi-cyaneis vel cyaneis, femoribus et tibiis posterioribus intus, geniculis item et tibiarum apice tarsisque rufo-brunneis; alis fortiter fumatis, basi subhyalinis, venis fuscis, tegulis brunneis, antice virescentibus. — ♂ ♀; long. 8—9 mm.

Patria: Austria (Styria, Mus. Vindob.!); Græcia (Mus. Hung.; Macedonia, Mus. Halense Saxonum!); Russia meridionalis (Dhlb.; Sarepta, Coll. Saussurei!); Italia (Ab.); Lusitania (Dhlb.).

var. Caucasicum mihi.

Differt a typo: statura magis robusta, capite thoraceque plus minusve viridi-subauratis, abdominis segmentis dorsalibus fortius punctatis, primo basi igneo-aurato (non nigro-æneo), excisura triangulari eiusque lateribus spatio transverso lato lævi ac polito. ♂; long. 9 mm. — Patria: Transcaucasia (Helenendorf, Mus. Vindob.!).

184. **Hedychrum luculentum** Först.

Hedychrum luculentum, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 343, n. 92. ♀. (1853) sec. spec. typ. Mus. Nat. Hung.

Magnum, latum ac robustum, læte-cyaneum, parum virescens; cavitate faciali profunda, dense subtiliter transverse-striata, clypeo subaurato-viridi; antennis tenuibus, nigro-fuscis, scapo et articulo primo flagelli supra modice cyaneis, huius articulo secundo sat longo, sequentibus duobus simul suptis longitudine æquali; fronte breviter denseque nigro-pilosa; pronoto transverso, longo ac lato, antice in medio sulcato; vertice dense minus profunde et crasse irregulariter, pro- et mesonoto scutelloque dispersius et crassius magisque regulariter, postscutello adhuc fortius punctato-reticulatis; abdominis segmentis dorsalibus concinne viridi-auratis, splendidis, primo basi triangulariter late exciso nigro-æneo, margine apicali tenuiter purpureo-limbato, omnibus dense, lateribus crassius tertioque subrugose-punctatis, secundo carinula mediana abbreviata lævi, tertio ante marginem apicalem linea transverso-arcuata impresso, margine apicali rotundato ad utrumque latus leniter angulato; ventre nigro-piceo, nitido; pedibus violascenti-cyaneis, tarsis fusco-rufis; alis sordide-hyalinis, apice late subfumatis, iridescentibus, venis fuscis, vena transverso-mediali leniter curvata, tegulis rufescentibus basi cyaneis. — ♀; long. 8 mm.

A *Hedychro virenti* Dhlb., magnitudine æquali, differt: capite thoraceque læte-cyaneis, pilis frontis brevibus, nigris, vertice thoracisque dorso non tam crasse et profunde, et hoc magis regulariter punctato-reticulatis, abdomine concinne viridi-aurato multo densius subtiliusque punctato, margine apicali medio non emarginato dentibusque lateralibus non tam fortibus. — A *Hedychro nobili* Scop. (quocum Clar. Dom. Abeille æqale esse suspicabatur, pag. 98), præter sexum diversum: magnitudine, colore ex parte, abdominis punctatura multo fortiore magisque regulari, iam satis superque distinctum.

Patria: Italia (Först.) et insula Candia (Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

3) *Caput et thorax in maribus viridia et cyanea, in feminis pro- et mesonotum igneo-cupreoque aurata.*

185. **Hedychrum nobile** Scop.

Sphex Nobilis, Scop. Ent. Carn. p. 297, n. 792. ♀. tab. 42, fig. 792. ♀. (1763).
Chrysis (secunda), Schæff. Icon. Ins. Ratisbon., Vol. I. P. I. tab. LXXIV. fig. 7 et 8. (1766).
Chrysis lucidula, Fabr. Syst. Ent. p. 358, n. 9. ♀. (1775); Spec. Ins. I. p. 456, n. 11. ♀. (1781); Mant. Ins. I. p. 283, n. 13. ♀. (1787). — Vill. Linn. Ent. III. p. 258, n. 9. ♀. (1789). — Rossi, Faun. Ent. II. p. 76, n. 847. ♀. (1790). — Oliv. Encycl. Méth. Ins. V. p. 675, n. 15. ♀. (1790). — Christ, Naturg. p. 398. ♀. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. P. I. P. V. p. 2745, n. 15. ♀. (1792). — Fabr. Ent. Syst. II. p. 242, n. 15. ♀. (1793). — Panz. Faun. Ins. Germ. fasc. 51, tab. 5. ♀. (1798). — Schrk, Faun. Boica. Tom. II. P. II. p. 344, n. 2198. ♀. (1801). — Coqueb. Illust. Icon. Ins. Dec. II. p. 59, tab. XIV. fig. 4. ♀. (1801). — Walcken. Faun. Parisien. II. p. 85, n. 2. ♀. (1802). — Fabr. Syst. Piez. p. 174, n. 21. ♀. (1804). — Panz. Schæfferi Icon. Ins. Ratisbon. p. 90. (1804). — Illig. Rossi Faun. Etr. Ed. II. P. II. p. 123, n. 847. ♀. (1807). — Dhlb. Monogr. Chrys. Suec, p. 12, n. 9. ♀. (1829). — Zett. Ins. Lapp. p. 434. (1840).
Chrysis nobilis, Schrk, Enum. Ins. Austr. p. 388, n. 784. ♀. (1781). — Christ, Naturg. p. 400. tab. 44, fig. 5. ♀. (1791). — Schrk, Faun. Boica. Tom. II. P. II. p. 344. n. 2198. ♀. (1802) (nec Sulz.).
Vespa carbunculus, Fourcr. Entom. Paris. II. p. 440, n. 24. ♀. (1785).
Vespa viridis, Fourcr. Entom. Paris. II. p. 441, n. 28. ♂. (1785).
Chrysis regia, Fabr. Ent. Syst. II. p. 243, n. 19. ♂. (1793). — Panz. Faun. Ins. Germ. fasc. 51, tab. 9. ♂. (1798). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 60. tab. XIV. fig. 8. ♂. (1801). — Walcken. Faun. Parisien. II. p. 85, n. 4. ♂. (1802). — Fabr. Syst. Piez. p. 175, n. 26. ♂. (1804). — Dhlb. Monogr. Chrys. Suec. p. 13, n. 10. ♂. (1829).
?*Chrysis edentuta*, Schrk. Faun. Boica. Tom. II. P. II. p. 344, n. 2197. ♂. (1802) (nec Rossi).
Hedychrum lucidulum, Latr. Hist. nat. XIII. p. 239, n. 2. ♀. (1805). — Panz. Krit. Rev. II. p. 104. ♀. (1806). — Lep. Annal. du Mus. Hist. nat. VII. p. 122, n. 9. ♀. (1806). — Shuck. Ent. Mag. IV. p. 171, n. 2. ♀. (1837) (excl. Chr. fervida Panz. syn.) — Labr. und Imh., Insect. der Schweiz. (1842). — Lep. Hym. tab. 37, fig. 5. ♀. (1845). — Dhlb. Hym. Europ. II. p. 78, n. 45. ♂ ♀. tab. IV. fig. 64.a—71. (1854) (excl. var. a etc. et *Hed. ardenti* syn.). — Schck, Nass. Jahrb. XI. p. 43, n. 19. ♂ ♀. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 550, n. 1. (1857) (excl. var. β et syn.) — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 66. (1858). — Smith, Entom. Annual, p. 97. ♂ ♀. (1862). — Chevr. Chrysid. du Léman, p. 79. ♂ ♀. (1862). — Taschb. Hym. Deutschl. p. 150. ♂ ♀. (1866). — Thoms. Opusc. Ent. II. p. 104, n. 1. ♂ ♀. (1870). — Schck, Progr. Gymn. zu Weilb. p. 11, n. 17. ♂ ♀. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 6, n. 12. ♂ ♀. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 33. ♂ ♀. et 34. ex parte (1879). — Lampr. Goldwesp. Deutschl. p. 21, n. 69. tab. I. fig. 24. ♂ ♀. (segm. anale) (1881). — Heyd. Ber. Senkenb. Naturf. Ges. p. 248, n. 10. ♂ ♀. (1882). — Mocs. Chrys. faun. Hung. p. 38 et 82, n. 1. ♂ ♀. tab. I. fig. 7. (unguic.) (1882). — Frey, Chrys. Helvet. p. 43 et 44. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 42, n. 12. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 122. ♂ ♀. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 12. (genit. maris) (1888).
Hedychrum regium, Lep. Annal. du Mus. Hist. nat. VII. p. 122, n. 4. ♂. (1806). — Panz. Krit. Rev. II. p. 105. (1806). — Shuck, Ent. Mag. IV. p. 171, n. 1. ♂. (1837). — Blanch. Hist. nat. III. p. 296, n. 1. ♂. (1840). — Luc. Explor. de l'Algér. Zoolog. III. p. 311, n. 354. ♂. (1849).
Hedychrum alterum, Lep. Annal. du Mus. Hist. nat. VII. p. 122, n. 5. ♂ ♀. tab. VII. fig. 8. (1806).
Hedychrum aulicum, Spin. Annal. Soc. France. Sér. 2. tom. I. p. 129, n. XVII. (1843).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Hedycrum tucidulum, Wesm. Bullet. Acad. Brux. VI. p. 170, n. 3. ♀. (1839).
Hedycrum regium, Wesm. Bullet. Acad. Brux. VI. p. 171, n. 5. ♂. (1839).
Hedychrum longipilis, Tourn. Petit. Nouv. Entom. II. Nr. 265. p. 106. ♂. (1877).
Hedychrum japonicum, Cam. Proceed. Manch. Lit. and. Philos. Soc. XXVI. p. 7. (1887).
«La guêpe dorée à corcelet mi-parti de rouge et de vert.» Geoffr. Ins. II. p. 382, n. 19. ♀. (1762).
«La guêpe dorée à corcelet vert et derniers anneaux du ventre lisses.» Geoffr. Ins. II. p. 383, n. 21. ♂. (1762).

Sexus ab invicem colore valde differunt.

Mediocre vel submagnum, sat robustum; capite thoraceque nigro-, abdomine cum pedibus albo-pilosis; cavitate faciali profunda, dense transverse-striata; antennis crassiusculis, scapo et articulo primo flagelli supra viridi-cyaneis; vertice dense, pro- et mesonoto parum dispersius, scutello et postscutello sparsim regulariter punctato-reticulatis; pronoto transverso, mesonoto parum longiore; metanoto dentibus postico-lateralibus sat fortibus acutis; abdominis segmentis dorsalibus igneo-auratis, primis duobus dense regulariter minus fortiter punctatis, tertio multo subtilius rugosiuscule-punctato, ante marginem posticum linea arcuato-transversa impresso, ipso margine apicali ad utrumque latus obtuse-angulato; ventre nigro-piceo, nitido; pedibus cyaneis et viridibus, nonnunquam violascentibus, tarsis fuscis; alis basi subhyalinis, apice fortiter fumatis, vena basali seu transverso-mediali leniter curvata, tegulis brunneis, antice virescentibus vel cyanescentibus. — Long. 4—8 mm.

Femina: capite thoraceque cyaneis vel viridibus vel viridi-cyaneis, vertice sæpius macula viridi-subaurata, pro- et mesonoto igneo-cupreoque auratis.

Mas: capite thoraceque totis cyaneis vel vel viridibus vel viridi-cyaneis, vertice rarius macula viridi-subaurata.

Femina: pro- et mesonoto igneo-cupreoque auratis tantum *Holopygae chrysonotae* Först. et *similis* Mocs. socia est; sed vena basali seu transverso-mediali tantum leniter (non angulatim) curvata et abdominis segmento dorsali tertio ante marginem posticum linea arcuato-transversa, ipso margine apicali ad utrumque latus angulato, differt. — Mas vero: a *Hedychro virenti* Dhlb. statura plerumque minore, capite thoraceque supra nigro-pilosis, pro- et mesonoti punctatura regulari, abdminis segmentis dorsalibus multo subtilus punctatis, tertio margine apicali in medio vix sinuato multoque breviter piloso; a *Holopyga amoenula* Dhlb., colore simillima: characteribus genericis supra allatis, iam primo intuitu facillime distinguendus.

«*Armure.* La branche du forceps quoique est allongée, mais elle va en se rétrécissant vers l'extrémité et est densement pourvue de poils fins, qui ne sont pas longs. Volsella cylindrique, longue. Tenette conique, d'un grandeur mediocre.» (Rad. Horæ Soc. Ent. Rossicæ. XXIII. 1888. Tab. II. fig. 20a, 20b, 20i.)

Patria: Europa tota cum Caucaso, Sibiria, Turkestania, Mongolia centrali (Coll. Rad.!), (Japonia?) et Algeria, ubique sui generis frequentissima. — In collectione eximia Clariss. Dom. Saussure adest specimen unicum femineum ex America, patria vel falsa, vel animal forsan navibus invectum.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Animdaversio. — De *Hedychro japonico* Cam. Clariss. auctor sequentia scripserat : «Very nearly related to *H. lucidum* (!); differing from it in the head, thorax, and antennæ being almost glabrous ; in the more slender antennæ ; in the prothorax being longer comparated to the part of mesothorax in front of the scutellum, in the projecting hinder edge of the metanotum being stouter, in the abdomen being longer compared to the thorax, in the fifth tarsal joint being as long as the preceding joints united ; in the second joint being about one half longer than the third, and in the thorax being entirely green». — Ego characteres hos in uno specimine masculino, eximiæ collectionis Dom. Saussure, e Japonia orto, non invenio exemplarque a speciminibus maximis *Hed. nobilis* Scop. tantum punctatura thoracis parum densiore differt. Et quia auctor ne mentionem quidem de sexu facit, speciem adinterim delendam esse censeo. Si autem detecta femina, illa a *Hedychri nobilis* Scop. femina colore differret, tunc species restituenda erit.

4) *Caput et thorax maxima ex parte cuprata vel viridi-cuprata* (in *var. viridi-aurato* tota viridi-aurata).

186. **Hedychrum rutilans** Dhlb.

?*Vespa cuprea*, Fourcr. Entom. Paris. II. p. 441, n. 27. (1785).

?*Hedychrum fervidum*, Lep. Annal. du Mus. Hist. nat. VII. p. 122, n. 7. ♀. (1806). — Shuck. Entom. Magaz. IV. p. 172, n. 5. (1837) (nec Fabr.).

Hedycrum fervidum, Wesm. Bullet. Acad. Brux. VI. p. 170, n. 4. (1839).

Hedychrum rutilans, Dhlb. Hym. Europ. II. p. 76, n. 44. (1854). — Schck, Nass. Jahrb. XI. p. 81, n. 4. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire III. p. 66. (1858). — Chevr. Chrysid. du Léman, p. 85. ♂ ♀. (1862). — Schck, Propr. Gymn. zu Weilb. p. 41, n. 18. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 7, n. 14. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 33 et 34. (1879). — Lampr. Goldwesp. Deutschl. p. 20. n. 63. (1881). — Heyd. Ber. Senkenb. Naturf. Ges. p. 247, n. 9. (1882). — Mocs. Chrys. faun. Hung. p. 39 et 82, n. 3. ♂ ♀. (1882) (excl. Christi syn.). — Frey, Chrys. Helvet. p. 43 et 44. ♂ ♀. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 11. (genit. maris) (1888).

Hedychrum lucidulum var. Schck, Nass. Jahrb. XI. p. 43, n. 19. (1856).

Hedychrum viridiaureum, Tourn. Petit. Nouv. Entom. II. Nr. 165, p. 106. (1877).

Hedychrum incrassatum, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 5, n. 11. ♂. (1877) sec. spec. typ. e coll. Rad. (nec Dhlb.).

Mediocre vel submagnum, sat robustum, læte-cyaneum, rarius viridi-cyaneum vel viridi-subauratum ; capite thoraceque supra breviter fusco-, subtus cum abdomine pedibusque longius albo-pilosis ; vertice, pro- et mesonoto et scutelli disco rubro-cupreo-, vel virescenti-cupreo-auratis ; vertice ad stemma singulare spatio minuto viridi-aureo sublævi ac polito ; cavitate faciali læte-cyanea vel parum virescenti-cyanea, dense transverse-striata ; antennis crassiusculis, fusco-nigris, scapo cyanescenti vel virescenti ; vertice dense minus crasse, pro- et mesonoto crassius dispersiusque irregulariter, metathorace crasse regulariterque punctato-reticulatis, scutello crassius rugoso-punctato interstitiisque subtiliter punctulatis ; pronoto transverso, mesonoto parum longiore, metanoti dentibus postico-lateralibus mediocribus, acutis, divarricatis ; abdominis segmentis dorsalibus igneo-auratis, lateribus sæpius virescentibus, primo basi late triangulariter exciso nigro-æneo, disco et segmento secundo concinne sat fortiter, tertio dispersius irregulariterque punctatis, hoc interstitiis sat latis microscopice punctulatis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

ante marginem apicalem linea arcuato-trasversa impresso, ipso margine apicali centro parum sinuato lateribusque angulo dentiformi munito; ventre nigro-piceo, nitido; pedibus viridi-cyaneis, tarsis rufescentibus; alis subfumato-hyalinis, venis fuscis, tegulis piceis, antice virescentibus vel cyanescentibus. — ♂ ♀; long. 5—8 mm.

Species: a *Hedychro nobili* Scop. facile distinguitur: pilis frontis brevioribus, fuscis, abdominis segmento dorsali tertio dispersius punctato interstitiis sat latis, lateribus angulo dentiformi (non obtuso) munitis.

«*Armure.* La branche du forceps très large. Volsella longue, grossie au bout. Tenette très court, conique.» (Rad. l. c. tab. II. fig. 18a, 18b, 18i.)

Patria: Europa media et meridionalis cum Caucaso, Sibiria (Irkutzk, Mus. Hung.), Turkestania et Mongolia centrali (Nan-ti-scha, Coll. Rad. !), regnoque Maroccano (Tanger, Coll. Fairmairei!) in Africa septentrionali.

var. viridi-auratum mihi.

Differt a typo: vertice thoraceque supra mesopleurisque viridi-aûratis, abdominis segmentis dorsalibus quoque magis viridi-auratis, secundo tertioque cupreo-micantibus. — Patria: Algeria (Setif, Coll. Saussurei!) et regnum Maroccanum (Ab.) Africæ septentrionalis.

Subfamilia VI. CHRYSIDINAE mihi.

(*Chrysidinae*, Aar. Transact. Amer. Ent. Soc. XII. p. 211 (1885) (ex parte).

Pronotum transverso-subrectangulum, margine postico vel transverso vel emarginato-arcuato. Unguiculi tarsorum infra mutici seu inermes. Alæ anticæ cellula mediali latere apicali vel oblique secta vel leniter arcuato-emarginata, propter venulam transverso-medialem vel oblique sectam vel oblique et leniter arcuato-inflexam, cellula discoidali — præter genus *Chrysogona* Först. — semper distincta. Abdomen segmentis cataphractis conspicuis tribus, supra convexum, subtus aut planiusculum, aut concavum et subfornicatum vel fornicatum; segmento ultimo dorsali serie punctorum transversa anteapicali plerumque instructo, margine apicali integro, undulato, angulato, dentato, serrato vel serrulato.

Subfamiliæ hæc 5 in se continet genera, quorum conspectus sequens est.

1. Abdominis segmenti dorsalis tertii margo apicalis pellucidus membranaceus aut subcoriaceus (non crustaceus) adeoque aliter compositus quam ipsum segmentum ... ... *Spintharis* Klug Dhlb.

2. Corpus parvum, gracile, sublineare; alæ anticæ cellula discoidali incompleta ... ... *Chrysogona* Först.

3. Antennæ, pedes et calcaria antica abnormia ... ... *Pleurocera* Guér.

4. Postscutelli tota pars basalis sub scutello abscondita et solum pars apicalis mucronis validi instar procedens; caput rostratum ... ... *Stilbum* Spin.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

5. Corpus plerumque non parvum nec gracile; postscutellum liberum; caput in plurimis non rostratum, tantum rarissime productum; alæ anticæ cellula discoidali completa ... ... *Chrysis* LINN MOCS.

Genus VIII. SPINTHARIS Klug Dhlb.

Spintharis, Klug, Symb. phys. Dec. V. tab. 45, fig. a—b. (1845) ex parte. — Dhlb. Hym. Europ. II. p. 350, gen. 8. (1854). — Tourn. Annal. Soc. Ent. Belg. XXII. p. 100. Observation. (1879).
(σπινθήρ, ῆρος = scintilla, igniculi.)

Corpus: submediocre aut parvum, proportionaliter robustum, elliptico-sublineare, obtusum, fere sicut in *Hedychro* vel *Holopyga* formatum.

Caput: mediocre aut transversum, suborbiculatum, aut longitudinale et rotundato-triangulum; *cavitate faciali:* pro scapis quiescentibus minus profunda, punctulato-coriacea vel subtiliter transverse-striata, subrectangularis, superne marginata. *Mandibulae:* mediocres, falcatæ, margine anteriore ante apicem unidenticulatæ. *Antennae:* breves, tenues, filiformes.

Thorax: aut ovato-subquadratus aut quadrato-cylindrico subconicus.

Alae: mediocres; *anticae:* cellulis plerumque tribus tantum completis: costali, mediali et discoidali prima; submediali prima et secunda iam completis iam subcompletis: radiali incompleta; *posticae:* cellulis omnino carent.

Pedes: pilosi, normaliter constructi.

Abdomen: fere ut in *Hedychro* constructum, subbreve, obtusum, rotundato-subquadratum, modice convexum; margine apicali a reliquorum huius familiæ generum abberante non crustaceo et opaco, sed subcoriaceo aut submembranaceo, sordide-albo- vel albo-pellucido, imo margine integro vel microscopice denticulato aut centro emarginato; *tubulus feminarum:* bene visibilis.

E genere *Spintharis* iam 6 cognitæ sunt species; etquidem: e regione palæarctica 3 et 2 e regione æthiopica. Unius speciei patria ignota est. — Dahlbomus tantum tres noverat species.

*

Conspectus specierum synopticus.

1 (4). Abdominis segmento dorsali tertio margine apicali arcuato-integro.

2 (3). Corpore læte-viridi, splendido, vertice, mesonoti lobo medio scutelloque aureo-micantibus; ventre nigro; genibus, tibiis tarsisque dilute-ferrugineis, tibiis antice parum viridi tinctis; abdominis segmento dorsali tertio margine apicali microscopice subtiliter denticulato ... ... *pallipes* TOURN.

3 (2). Corpore æneo-viridi, pronoti lateribus mesonotoque parum viridi-subauratis; ventre viridi et cyaneo; genibus, tibiarum apice tarsisque sordide-albis; abdominis segmento dorsali tertio margine apicali lateribus utrinque angulatis ... ... *vagans* RAD.

4 (1). Abdominis segmento dorsali tertio margine apicali emarginato.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

5 (10). Mesopleuris inermibus; abdomine igneo-aurato, segmento dorsali tertio margine apicali uni-emarginato.

6 (9). Corpore viridi- vel læte-cyaneo, vertice, pro- et mesonoto scutelloque viridi- vel igneo-auratis.

7 (8). E centro venæ radialis in alis anticis excurrit ramulus obliquus tenuis distinctus in discum alæ; emarginatura marginis apicalis segmenti tertii subanguste-arcuata subprofunda, angulo vel lobo utrinque acute-triangulari ... *chrysonota* DHLB.

8 (7). Alarum anticarum vena radialis sine ramulo obliquo; emarginatura marginis apicalis segmenti tertii levi et triangulari, lobo arcuato-obtuso utrinque instructa ... ... *destituta* DHLB.

9 (6). Corpore subigneo- vel cupreo-aurato, cavitate faciali solum viridi-aurata; abdominis segmento dorsali tertio margine apicali centro minus profunde late-triangulariter exciso; lobis arcuatis, lateribus utrinque sinuatis *deaurata* n. sp.

10 (5). Mesopleuris apice utroque bispinosis; corpore viridi-cupreo et viridi-æneo; abdomine viridi-æneo, segmento dorsali tertio margine apicali triemarginato et sic quadridentato ... ... *singularis* SPIN.

*

187. **Spintharis pallipes** TOURN.

Spintharis pallipes, Tourn. Annal. Soc. Ent. Belg. XXII. p. 99, ♂ ♀. (1879).

«Long. 4—4½ mm.

♂ ♀. Au premier aspect un *Spintharis* ressemble assez bien à une *Holopyga;* mais, en étudiant la structure de l'abdomen, l'entomologiste éclairé ne peut pas se tromper.

Corps très-brièvement et finement pubescent de gris; tout le corps et les cuisses d'un vert clair, brillant, un peu doré par places, surtout sur le sommet de la tête près des ocelles, sur le compartiment médian du mésonotum et sur le scutellum; antennes noires à la la base, brunes à l'extrémité, le premier article est un peu verdâtre; mandibules noires, rouges â la pointe; genoux, tibias et tarses d'un rouge de rouille clair, les tibias ont sur leur tranche antérieure une très-faible teinte verte; le ventre est noir; le bord de la marge apicale du troisième segment est étroitement d'un blanc-jaunâtre, très-transparent, presque entier ou si finement denticulé qu'il faut un fort grossissement pour l'apprécier. Tête grosse; impression faciale large, occupant tout l'espace compris entre les yeux; mais elle est peu haute, son niveau supérieur atteignant environ les deux tiers de la hauteur des yeux, son fond imponctué, presque lisse, n'offrant que quelques très-fines rides transversales; sommet de la tête, joues et thorax grossièrement, pas très-densément ponctué, ponctuation un peu plus grosse et un peu plus serrée sur le bord postérieur du seconde et sur tout le troisième segment; sur ce dernier, les intervalles entre les points sont très-étroits, tandisque, sur les deux précedents, ils sont un peu plus larges, surtout sur le premier; partout ils sont lisses, brillants; écaillettes des ailes noirâtres, ailes un peu enfumées, nervures brunes.»

Patria: Russia meridionalis (Sarepta).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

188. **Spintharis vagans** Rad.

Chrysis vagans, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 11, n. 17. ♀. tab. I. fig. 3. ♀. (1887) sec. spec. typ. e coll. Rad.

Submediocris vel minuta, tota viridis, subobscura, sat robusta, parcius cinereo-alboque pilosa; cavitate faciali sat profunda, dense subtilissime punctato-coriacea, argenteo-sericeo-pilosa, medio longitudinaliter canaliculata, superne transverse-marginata; antennis brevibus, sat tenuibus, ferrugineis, vel fusco-ferrugineis, articulis duobus primis viridibus, tertio valde brevi, secundo adhuc parum breviore, quarto subæquali; genis proportionaliter longis, antennarum articulis 3—4 simul sumptis æquilongis; occipite, pronoti truncatura antica metathoraceque sublus parum violascentibus; vertice thoracisque dorso sat sparsim crassius punctato-reticulatis; pronoto sat longo, transverso-rectangulo, antice in medio vix impresso; postscutello convexo, basi in medio foveato; metanoti dentibus postico-lateralibus brevibus, robustis, acutis; mesopleuris apice utroque exciso-bidentatis; abdominis segmentis dorsalibus convexis, 2—3 imo basi nigro-æneis, primo basi nigro-violaceo, sulco mediano tenui sublævi, secunda carinula mediana abbreviata minus distincta, 1—2 sat sparsim, tertio densius parum rugosiuscule-punctatis interstitiisque hic illic subtilius punctulatis, tertio serie anteapicali violascenti, foveolis subparvis et maioribus subrotundis minus numerosis, margine apicali sat late membranaceo sordide-albo-pellucido arcuato-integro, lateribus iuxta initium seriei anteapicalis obtuse-angulatis; ventre viridi et violaceo vario, segmento secundo basi utrinque nigro-maculato; tibiis tarsisque viridibus, geniculis, tibiarum apice tarsisque sordide-albis, femoribus tibiisque posterioribus postice brunneis; alis hyalinis, venis fusco-testaceis, cellula radiali lanceolata subcompleta, tegulis viridibus, externe violascentibus. — ♀; long. 5—6 mm.

Patria: Turkestania (vallis Sarafschan et mons Karak); Syria (Coll. Wüstneii! et Mus. Hung.).

189. **Spintharis chrysonota** Dhlb.

Spintharis chrysonota, Dhlb. Hym. Europ. II. p. 351, n. 196. (1854).

Submediocris, robusta, viridi-cyanea vel læte-cyanea, parcius cinereo-alboque pilosa; vertice, pro- et mesonoto scutelloque viridi- vel igneo-auratis; occipite, pronoti truncatura antica et suturis cyaneis vel virescenti-cyaneis, postscutelli disco et pleuris viridi-aureo-maculatis; fronte subangusta, cavitate faciali profunda, viridi vel cyanea, sublævi, disco et lateribus sparsim punctatis viridi-aurea, superne crenulatim transverse marginata, margine utrinque arcuato-deflexo; antennis brevibus, brunneis vel testaceis, scapo viridi vel viridi-cyaneo, articulo secundo flagelli brevi, tertio fere æquali; clypeo transverso, brevi, aurato-viridi vel cuprato, confertim subtiliter punctulato, apice area triangulari polita lævi picea; mandibulis piceis, apice rufis; genis linearibus, fere nullis; vertice dense punctato-subreticulato circa stemma anticum parum impresso, impressione virescenti; pronoto fortius, mesonoto antice in medio pariter impresso pleurisque parum subtilius profunde punctato-subreticulatis; metanoti dentibus postico-lateralibus robustis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

acutis; abdomine thorace fere breviore, rotundato-quadrato, dorso convexo, igneo-aurato, lateribus et basi parum virescentibus, æqualiter crasse minus dense parum sub-rugulose-punctatis, interstitiis angustis impunctatis, tertio supra seriem modice calloso, foveolis profunde immersis parvis, rotundis, numerosis, viridi subauratis, margine apicali testaceo-scarioso, supra — præsertim in medio — nitore igneo-aurato, centro sub-anguste arcuato et subprofunde emarginato, angulo seu lobo utrinque acute-triangulari; ventre nigro-violascenti maculis transversis arcuatis viridibus aut viridi-cyaneis; femoribus viridi-cyaneis vel cyaneis, posterioribus postice brunneis, tibiis anticis externe viridi-auratis, posterioribus brunneis, geniculis, tibiarum apice et tarsis testaceis, non-nunquam parum infuscatis; alis hyalinis vel subhyalinis, venis piceis, cellula radiali lanceolata incompleta, e centro venæ radialis ramulo obliquo tenui distincto in discum alæ excurrente, tegulis piceis vel brunneis. — ♂; long. 6 mm.

Patria: Africa meridionalis (Promontorium Bonæ Spei, Dhlb.) et meridionali-orientalis (Port Natal, Mus. Cæs. Vindob.!).

Animadversio. — Ramulus obliquus tenuis in discum alæ anticæ excurrens in specimine, quod e benevolentia Clariss. Dom. Rogenhofer e Musaæo Cæs. Vindobonensi vidi, rudimentarius seu non satis distinctus est. Dahlbom de sexu non facit mentionem, sed expressio illa, quam apud *Spintharem destitutam* Dhlb. legimus: «Præcedenti ita simillima, ut tamquam illius mas facile existimari posset» feminam indicat. Non est ergo impossibile, quod ramulus ille apud feminam distinctus, apud marem rudimentarius vel plane evanescens et *Spintharis destituta* Dhlb. re vera eius mas sit: marginis apicalis forma parum variabili.

190. **Spintharis deaurata** n. sp.

Submediocris, robusta, subigneo- vel cupreo-aurata, parcius cinereo-alboque pilosa; cavitate faciali cum clypeo viridi-auratis, illa minus profunda, subtiliter coriacea, lateribus punctulata et dense cinereo-pilosa, superne triangulariter marginata, margine ramulum brevem ad stemma anticum demittente areamque profunde impressam viridi-auratam et antice in medio parum productam includente; clypeo transverso, brevi, dense punctulato, apice area triangulari lævi picea; genis fere nullis; mandibulis piceis medio rufescentibus (antennæ desunt); vertice, pro- et mesonoto, scutello, postscutello convexo et mesopleuris inermibus fere æqualiter crassius punctato-reticulatis; pronoto antice in medio parum impresso; abdomine thoracis longitudine, dorso convexo, segmentis æqualiter crasse, parum rugosiuscule-punctatis, interstitiis angustis impunctatis, tertio brevi, supra seriem vix calloso, foveolis profunde immersis, numerosis, rotundis, magnitudine inæqualibus, margine apicali testaceo-scarioso supra nitore subviolaceo, centro minus profunde late-triangulariter exciso, lobis arcuatis, lateribus utrinque sinuatis; ventre igneo-aurato nigroque maculato; femoribus viridi-auratis cupreoque lavatis, geniculis, tibiis tarsisque testaceis, tibiis externe parum coccineo-rufis vel brunneis; alis subhyalinis, venis fuscis, cellula radiali lanceolata incompleta, tegulis cupreo-auratis. — ♂; long. 6½ mm.

Patria: ignota, sed verisimiliter Africa meridionalis (Mus. Cæs. Vindob.).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

191. **Spintharis destituta** Dhlb.

Spintharis destituta, Dhlb. Hym. Europ. II. p. 352, n. 197. ♂. (1854).

«Subparva 2½ lin. decimal. long. confertim tenuiter punctata supra viridi-aurea, subtus viridi-cyanea, mesopleuris inermibus, abdominis segmenti dorsalis tertii margine anali uni-emarginato: emarginatura centrali levi (non profunda) triangulari, utrinque lobo leniter arcuato-obtuso, vena radiali libera (ramula destituta).

Observ. Præcedenti *(Sp. chrysonotae)* ita simillima, ut tamquam illius mas facillime existimari posset; at sequentes duæ notæ, me saltem iudice, *Spinth. destitutam* ut diversam speciem satis determinant, scil. 1) alarum anticarum vena radialis omnino caret ramulo illo obliquo, quem apud *Spinth. chrysonotam* distinctum (licet tenuem) vidimus; 2) emarginatura marginis analis (abdominis segmenti dorsalis tertii) levis (nec profunda) et triangularis, atque utrinque instructa lobo arcuato-obtuso.»

Patria: Promontorium Bonæ Spei.

192. **Spintharis singularis** Spin.

Chrysis singularis, Spin. Annal. Soc. Ent. France. VII. p. 452, n. 10. ♀. (1838).
Spintharis singularis, Dhlb. Hym. Europ. II. p. 353, n. 198. ♀. (1854).

Descriptio secundum Dahlbom:

«Subparva 2 lin. decimal. long. confertim modice punctata viridi-cuprea aut viridi-ænea, ventre igneo, femoribus posterioribus antice concoloribus; antennis ex parte, genubus tibiis tarsisque pallide testaceis; mesopleuris utroque apice bispinosis; abdominis segmenti dorsalis tertii margine anali tri-emarginato et quadridentato.

Observ. Corpus robustum, statura fere *Hedychri luciduli* parvi. Caput longiusculum rotundato-triangulum; vertex latus confertim punctatus viridi-cupreus; oculi rotundati valde prominuli; cavitas facialis angusta longiuscula rectangularis punctulata viridis albo-sericea, superne marginata: margine omnino ut in *Chryside pulchella* constructo; antennæ mediocres, scapus viridi-cupreus, pedicellus virescens, flagellum testaceum fusco-maculatum; clypeus longitudinalis subtrapezinus viridi-cupreus, carinula mediana levi, basi utrinque foveatus, disco convexus, superficie totus politissimus splendidus punctis paucis, margine apicali transverso nigro-æneo; mandibulæ albo-testaceæ, basi viridi-ænescentes, margine cupreo-aneo. Thorax robustus tetraëdro-cylindricus crasse punctato-reticulatus viridi-æneus; pronotum utrinque, dorsuli area media, scutellum et metanoti anguli postico-laterales cuprata, hi (anguli) mediocres ad formam *Chrysidis Wahlbergi* nonnihil similis; mesopleuræ scutello concolores utroque apice bispinosæ, spinis proportionaliter robustis subconicis emarginatura mediocri separatis; sternum viride; femora viridi-cuprata, posteriora antice igneo-aureo splendissima, genua tibiæ tarsique testaceæ; alæ hyalinæ, venis mediocribus aut subtenuibus brunnescentibus, cellula radiali ovato-lanceolata incompleta apice late aperta, vena radiali (libera, ramulo destituta) apice longe remota a costa. Abdomen mediocre rotundato-subrectangulum,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

longitudine capitis thoracisque simul sumptorum, dorso modice convexum et crebre modice punctatum, punctis maxime regularibus omnibus orbiculatis, viridi-æneum, nonnihil vergens in cupreum, lineola mediana subelevata ad certum situm luminis in segmento secundo observanda; segmentum dorsale tertium mediocre, secundo vix ad dimidium brevius, disco nonnihil transverse immersum, ante seriem paullo incrassatum, apice quasi auctum margine anali amplo cartilagineo l. submembranaceo lacteo; series ante-apicalis in basi huius marginis posita pulcherrima foveolis mediocribus, orbiculatis, numerosis circ. 24, omnibus distinctis et pellucidis; margo analis (segm. tertii) latiusculus convexo-depressus, emarginaturis triarcuatis, scil. unica apicali-centrali et duabus subbasali-lateralibus, dentibus triangularibus subspinoideis 4, scil. 2 subbasali-lateralibus et 2 apicali-centralibus (scil. ad emarginaturam centralem utrinque uno); summus finis huius marginis subtilissime scariosus.»

Patria: Aegyptus.

Genus IX. CHRYSOGONA Först.

Verh. nat. Ver. preuss. Rheinl. X. p. 327. (1853). -- Tourn. Annal. Soc. Ent. Belg. XXII. p. 98. (1879).

(χρύσεος = aureus; γῶνος = angulus.)

Corpus: parvum, gracile, sublineare, fere sicut in exemplaribus minutis *Chrysidis cyaneae* L. formatum.

Caput et *thorax:* ut in *Chrysidibus* normalibus; *postscutellum:* quoque iam convexum vel parum gibbo-convexum, vel mucronatum.

Alae: proportionaliter mediocres; *anticae:* cellulis tantum duabus completis: costali nempe et mediali, discoidali propter venulas obliteratas vel pallidas imcompleta, radiali iam completa, iam incompleta, apice parum aperta; *posticae:* cellulis omnino carent.

Pedes: pilosi, normaliter constructi.

Abdomen: fere ut in *Chrysidibus* constructum, segmento tertio serie punctorum transversa, margine apicali forma variabili: integro, obtuso, flexuoso vel denticulato; *tubulus feminarum:* plerumque bene visibilis.

E genere *Chrysogona* iam 8 cognoscimus species; etquidem: e regione palæaretica 3, æthiopica 1, australiaca 1, nearctica 2 et e neotropica 1. E regione orientali adhuc non habemus data. — Ex his apud Dahlbomum sub generis nomine *Chrysis* 3 solum invenimus species.

Animadversio. — In speciminibus quidem nonnulis huius generis venulæ cubitalis et transverso-discoidalis prima sæpius obsoletæ et rudimentariæ vel pallidæ videntur, aream seu cellulam tamen completam non efficiunt. In Hymenopterogia, ubi characteres generum de distributione cellularum et venarum præsertim desumuntur, circumstantiam hanc præterire non potui, et quidem tanto magis, quia hoc in speciebus iam octo observatur. — Species septem huius generis exemplaribus minutis *Chrysidis cyaneae* L. valde similes sunt; sed areis alarum superiorum discoidalibus primis apertis statim cognoscuntur.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Conspectus specierum synopticus.

1 (12). Postscutello convexo.

2 (3). Corpore viridi subcoerulescenti; abdominis segmentis dorsalibus auratis confertim punctatis, ano obtuso . . . . . *gracillima* FÖRST.

3 (2). Corpore et abdominis segmentis dorsalibus unicoloribus: viridibus vel cyaneis parumque violascentibus.

4 (7). Cavitate faciali subtiliter punctulato-coriacea.

5 (6). Cavitate faciali superne acute marginata; abdominis segmenti tertii margine apicali forma nonnunquam variabili: plerumque arcuato centro leniter sinuato et utrinque acute dentato . . . . . *pumila* KLUG.

6 (5). Cavitate faciali superne non marginata; abdominis segmenti tertii margine laterali leniter flexuoso seu quadri-angulato . . . . . *soluta* DHLB.

7 (4). Cavitate faciali subtiliter transverse-striata.

8 (9). Cavitate faciali superne non marginata, fronte convexa; abdominis segmenti tertii margine apicali tridentato subtriangulari . . . . . *Bohemanni* DHLB.

8 (9). Abdominis segmenti tertii margine apicali arcuato-integro.

10 (11). Cavitata faciali superne triangulariter acute marginata; abdominis segmentis dorsalibus duobus ultimis parte basali et secundi fascia anteapicali lata abbreviata læte-cyaneis, secundo tertioque coriaceis valde dense subtilissime rugosiuscule-punctulatis . . . . . *Frey-Gessneri* n. sp.

11 (10). Cavitate faciali superne arcuatim marginata, margine medio parum flexuoso: abdominis segmentis dorsalibus cyaneis, primis duobus margine apicali virescentibus, omnibus æqualiter minus dense fortius punctatis . . . *verticalis* PATT.

12 (1). Postscutello mucronato.

13 (14). Cavitatis facialis margine ramos quattour longitudinales ad verticem demittente, ramis lateralibus abbreviatis, internis duobus aream insignem formantibus; mucrone postscutelli sat longo, subtus planato . . . . . *Saussurei* n. sp.

14 (13). Cavitatis facialis margine sine ramis distinctis; mucrone postscutelli brevi, subtus non planato . . . . . *armata* n. sp.

*

I. *Postscutellum convexum.*

193. **Chrysogona gracillima** FÖRST.

Chrysogona gracillima, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 328, n. 85. ♂. (1853). — Schck, Nass. Jahrb. XI. p. 78. (1856); Progr. Gymn. zu Weilb. p. 15, n. 10. (1870).
Chrysis gracillima, Lampr. Goldwesp. Deutschl. p. 16, n. 41. (1881).

«Viridis, subcoerulescens, abdomine aureo, parum micante, confertim punctato, segmenti primi interstitiis punctis crebris minoribus; ano obtuso; pedibus viridibus tarsis fuscis; alis hyalinis, nervis fuscis, area radiali clausa, radio leviter curvato.

♂. 5 mm.

Kopf und Mittelleib dieser sehr ausgezeichneten Art wie bei *Chrysis ignita* gefärbt,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

also tiefgrün, hin und wieder, besonders auf dem Scheitel, am Hinterhaupt, auf dem Mittellappen des Mittelbrustrückens und auf dem Hinterbrustrücken blaugrün mit einem schwachen violetten Schein. Der Hinterleib goldglänzend, aber der Glanz durch die sehr dichte Punktirung stark gemässigt. Die Fühler schwarzbraun, der Schaft grün, an der Spitze goldglänzend. Auch das Stielchen sammt dem ersten Geisselglied haben diesen Goldglanz. Auf der Stirn findet sich nur eine sehr schwache Spur einer Querleiste, während bei *Chrysis ignita* diese Querleiste immer deutlich ist. Die Wangen eng mit scharfer Leiste, welche hoch hinauf geth. Der Mittelleib grob und dicht punktirt, die Zwischenräume mit feinem Pünktchen. Beine grün mit schwarzbraunen Tarsen. Flügel wasserhell; das Geäder bräunlich, die Unterrandader duckler, die Grundader etwas blasser, fast gelblich. Die Radialzelle ganz geschlossen und der Radius schwach gekrümmt, nicht wie bei *Chrysis ingnita* fast winklig gebrochen. Die erste Discoidalzelle an der Spitze nicht geschlossen, sondern weit oeffn, indem die erste rücklaufende Ader nicht einmal halb ausgebildet vorhanden ist. Dieses Rudiment derselben entspringt von der Mittelader. Der Hinterleib dicht punktirt, auf dem ersten Segment kaum gröber aber eben so dicht wie auf dem zweiten und zwischen den gröberen mit vielen eingestreiten, feineren Punkten. Auf dem zweiten Segment fehlen die feineren Pünktchen fast gänzlich und dadurch wird eine grössere Gleichförmigkeit der Punktirung gleich in die Auge fallend. Bei *Chrysis ignita* fehlen diese feineren Punkte auf dem zweiten Segment nie. Das dritte Segment noch dichter punktirt als das zweite, doch vor dem Hinterrande mit der gewöhnlichen Querreiche von Grübchen, die für die Gattung *Chrysis* so charakteristisch sind. Der Hinterrand selbst in der Mitte und zu beiden Seiten aussert schwach, ja fast unmerklich ausgerandet.» (Först. l. c.).

Patria: Germania (Herrstein).

194. **Chrysogona pumila** Klug.

Chrysis (Spinlharis) pumila, Klug, Symb. phys. Dec. V. tab. XLV. fig. 13. ♂. (1845).
Chrysis assimilis, Dhlb. Hym. Europ. II. p. 201, n. 108. ♂ ♀. (1854.).— Ab. Annal. Soc. Linn. Lyon. XXVI. p. 41 et 42. ♂ ♀. tab. II. fig. 51—53 (segm. anale) (1879). — Gog. Anal. Soc. Espan. Hist. Nat. XVI. p. 51, n. 17. (1887). — Destef. Natural. Sicil. VII. p. 138. (1888).
Chrysis virgo, Ab. Feuille Jeun. Natural. VII. p. 66, n. VI. (1877). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879).
Chrysogona tarsata, Tourn. Annal. Soc. Ent. Belg. XXII. p. 99. ♂. (1879).
Chrysis persica, Rad. Horae Soc. Ent. Rossicæ. XVI. Bullet. p. V. n. 1. ♂ ♀. (1881) sec. spec. typ. e coll. Rad.

Parva, subangusta, viridi-cyanea vel cyaneo-viridis, parcius cinereo-alboque pilosa; pronoto, mesonoti lobis lateralibus et abdominis segmentis dorsalibus duobus primis margine apicali nonnunquam viridi-subaureo nitentibus; cavitate faciali profunda, subtilissime punctulato-coriacea, superne acute marginata; antennis crassiusculis, nigris, articulis duobus primis viridi-cyaneis vel læte-viridibus; vertice et thoracis dorso confertim sat crasse punctatis et punctulatis, subcoriaceis; metanoti dentibus postico-late-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ralibus mediocribus, acutis, curvatis; abdominis segmentis dorsalibus sat distincte carinatis valde dense subtiliter punctulatis, tertio supra seriem incrassato, foveolis profundis irregularibus, margine apicali forma nonnunquam variabili, plerumque arcuato, centro leniter sinuato et utrinque acute dentato, rarius dentibus lateralibus minus distinctis; tarsis fuscis, in maribus pallidis; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta, apice anguste aperta, tegulis cyaneis. — ♂ ♀; long. 3 1/2—4 1/2 mm.

Exemplaribus minutis *Chrysidis cyaneae* L. similis; sed abdominis segmenti tertii margine apicali aliter formato et alarum anticarum areis discoidalibus primis apertis, statim cognoscitur.

Patria: Hispania (Gog.); Sicilia (Dhlb.); Sardinia (Costa); Gallia (Ab.); Hungaria centralis et septentrionalis, mense Junio sat rara (Mocs,); Caucasus (Ab. et Coll. Rad.!); Persia (Rad.!); Aegyptus (Dhlb.); Nubia (Ambukohl, September, Klug.).

195. **Chrysogona soluta** Dhlb.

Chrysis nitidula, Dhlb. Monogr. Chrys. Suec. p. 11, n. 7. var. b. (1829).
Chrysis soluta, Dhlb. Hym. Europ. II. p. 217, n. 118. ♂. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 42 et 44. (1879).

Descriptio secundum Dahlbom:

«Angusta linearis vix 2 lin. decimal. long. confertim punctata et punctulata subcoriacea parum nitida, violacea, verticis lineola transversa, marginibus segmentorum abdominis primi et secundi apicalibus, femoribus tibiisque uno alterove latere virescentibus, pedibus ceterum ad colorem primarium brunneis, capitis cavitate faciali superne non marginata, occipite inermi, segmenti tertii margine laterali leniter flexuoso, alarum cellulis discoidali et radiali incompletis.

Observ. Chrysidis nitidulae maxime affinis et similis; at corpore multo breviore et angustiore, violaceo nec nisi locis in diagnosi nuperrime memoratis coeruleo-virescente, capitis cavitate faciali superne non marginata, occipite inermi, alarum cellulis discoidali et radiali incompletis, capite thoraceque modice punctato l. fere punctulato-coriaceis facillime distinguitur.

Vertex pone stemmata transversaliter virescens; etiam in pronoti dorsulo, metanoto et pectore punctura viridis obvenit, sed color harum partium primarius violaceus. Cavitas facialis punctulato-coriacea nitida, superne cyanea apice virescens; clypeus mediocris transversus nitidus viridis punctis paucis adspersus, disco convexiusculus, ad centrum marginis apicalis lenissime arcuato-emarginatus. Antennæ ut in *Chryside nitidula*. Labrum semilunatum mediocre subpulvinatum pubescens testaceo-brunneum. Mandibulæ parte basali virides, parte apicali testaceo-brunneæ. Thorax cylindricus, metanoti anguli postico-laterales parvi coriacei punctati subacute triangulares. Alæ hyalinæ venis brunneis, venula transverso-medialis tantum dimidiata h. e. in medio inter venas radialem firmiorem et cubitalem subtilem inchoatam desinit, hinc cellula discoidalis facta est *incompleta;* cellula radialis lanceolato-acuminata, apice modice aperta. Abdomen lineare, thorace paullulum longius at eiusdem latitudinis, dorso con-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

vexum, segmenta primum et secundum confertim punctulata, marginibus apicalibus nitidis coeruleo-virescentibus, illud (segm. primum) ceterum violaceum, hoc (segm. secundum) nigro-æneum et nonnihil purpurascens, lineola mediana subtiliter carinulata; segmentum tertium confertius subtiliter punctulatum, basi nigro-æneum, apice nitidum cyaneum, series anteapicalis, dentes et margo lateralis ut in *Chrys. nidulae var. a.* Venter viridi-cyaneus.»

Patria: Suecia (Dhlb.); species rarissima.

196. **Chrysogona Bohemanni** DHLB.

Chrysis Bohemanni, Dhlb. Dispos. p. 12, n. 20. ♂. (1845); Oefvers. K. Vetensk. Acad. Förhandl. p. 137, n. 3. ♂. (1850); Hym. Europ. II. p. 187, n. 101. ♂. tab. X. fig. 105. (1854).

«Minuta gracilis linearis 1 1/4 lin. decimal. long. punctulato-coriacea opaca cœrulea tarsis nigro-fuscis, alis subhyalinis ad costam cellulæ radialis brunneo-fumosis, venis piceis, cellulis discoidali prima et radiali incompletis: venis apice obliteratis.

Observ. Chrysidi cyaneae similis et affinis; at corpore angustiore, abdominis dorso non nitido sed confertissime punctato-coriaceo, armatura anali constante nec variante, cellulis radiali et discoidali incompletis etc. facillime dignoscitur.

Corpus parvum angustum lineare, totum dorso confertim punctulato-coriaceum subopacum, viridi-cœruleum, breviter cinereo-puberulum, pleuris, pedibus, metanoto postico ventreque nitidis. Caput proportionaliter robustum crassiusculum, superne amplum modice punctato-reticulatum convexum et quasi subglobosum obvenit; oculi ovato-rotundati exserti; cavitas facialis subprofunda, magnitudine mediocris semicircularis, tota viridissima et subtiliter transverse strigosa. Antennæ longitudine et crassitie mediocres, nigro-fuscæ puberulæ scapo pedicelloque cyaneo-virescentibus. Clypeus brevissimus transversus virescens, disco carinato-convexus. Mandibulæ piceæ. Thorax cylindricus dorso cœruleus, punctulato-subreticulatus, postice lateribusque virescens; postscutellum convexius; metanoti anguli postico-laterales parvi triangulares. Abdomen lineare capite thoraceque simul sumptis longius, dorso depresso-convexum confertissime et subtiliter punctulato-coriaceum læte cœruleum, lateribus et margine segmentorum apicali non nihil viridi-nitens, in disco segmentorum lineola mediana subelevata; segmenti primi impressio basalis brevis levis et obsoleta; segmentum tertium ante seriem lenissime subimmersum, series ante-apicalis non in arcum sed in angulum rectum ducta foveolis numerosis minutis approximatis; segmenti tertii margo apicalis subbrevis subtilissime coriaceus subtriangularis tridentatus: denticulis parvis subminutis conicis invicem æqualiter distantibus, spatio inter denticulos centralem et lateralem obliquo subrecto l. vix nisi lenissime arcuato; venter modice fornicatus nitidus cyaneo-viridis.»

Patria: Africa meridionali-orientalis (Port Natal).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

97. **Chrysogona Frey-Gessneri** n. sp.

Submediocris vel parva, elongata, sublinearis, viridi-cyanea, cinereo-alboque pilosa; vertice post stemmata, mesonoti lobo medio, abdominis segmentis dorsalibus duobus ultimis parte basali et secundi fascia anteapicali lata abbreviata læte-cyaneis parumque violascentibus; cavitate faciali, fronte et abdominis segmentis dorsalibus parte reliqua læte-viridibus; cavitate faciali profunda, dense subtiliter transverse-striata, superne triangulariter acute-marginata; antennis crassiusculis, nigris, articulis tribus primis læte-viridibus; vertice thoracisque dorso dense minus fortiter punctato-reticulatis; postscutello gibbo-convexo; metanoti dentibus postico-lateralibus mediocribus, subacutis; abdominis segmentis dorsalibus subcoriaceis, primo basi trifossulato, fossulis profundis cyaneis, disco dense minus profunde punctato et subtiliter punctulato, secundo carinula mediana indistincta cum tertio subtilissime rugosiuscule dense punctulatis, hoc supra seriem parum incrassato, foveolis circiter 12 minus profundis minutis rotundis, margine apicali valde brevi, arcuato-integro; ventralibus læte-viridibus, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tarsis pallide-testaceis; alis hyalinis, venis pallide-fuscis, cellula radiali valde incompleta, tegulis viridi-cyaneis. — ♂♀; long. 4—5 mm.

Eximia hæc species: abdominis colore, punctatura et forma anali, facile cognoscitur.

Patria: Nova-Hollandia (Coll. Saussurei; a Dom. Frey-Gessner mecum benevole communicata).

198. **Chrysogona verticalis** PATT.

Chrysis verticalis, Patt. Canad. Entom. XI. p. 67. April (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 226, tab. VIII. fig. 36. (caput antice visum), fig. 37. (segm. anale) (1885).
Chrysis striatellus (!), Nort. Transact. Amer. Ent. Soc. VII. p. 239, May (1879).

Parva, elongata, sublinearis, tota viridi-cyanea parumque virescens, cinereo-alboque pilosa; cavitate faciali sat profunda, viridi, dense subtilissime transverse-striata, superne arcuatim marginata, margine medio parum flexuoso; antennis crassiusculis, nigris, articulis duobus primis et tertio supra viridibus; vertice et thoracis dorso dense minus crasse punctato-subreticulatis; metanoto convexo; abdominis segmentis dorsalibus minus dense fortius punctatis, tertio supra seriem anteapicalem parum incrassato, foveolis per carinulam medianam interruptis magnis ac profundis confluentibus, margine apicali arcuato-integro; ventre pedibusque viridibus, tarsis fuscis vel pallide-fuscis; alis hyalinis, venis pallide-fuscis, cellula radiali incompleta, apice aperta, tegulis viridi-cyaneis.

Chrysogonae armatae mihi simillima; sed postscutello convexo, thorace et abdominis segmentis dorsalibus minus crasse punctatis, huius tertio margine apicali subarcuatim integro.

«Fifteen specimens in the collection from the following localities: Massachusetts, Delaware, Virginia, Illinois (types of striatellus), New Hampshire, Georgia, Colorado,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Washington Territory and California. Norton also mentions Pennsylvania. Varies from bright green with blue reflections to dull blue and purple. The dorsum of the abdomen in many specimens is dull, with the reflections darker than the general color. In some specimens the dorsum is dull black with very slight reflections. The head is much longer than is generally the case in the species of the genus; 4—6 mm. long.» (Aaron l. c.)

Patria: America septentrionalis (Texas, Mus. Hung.).

II. *Postscutellum mucronatum.*

199. **Chrysogona Saussurei** n. sp.

Submediocris aut parva, elongata, sublinearis, tota viridi-cyanea et plus minus virescens, cinereo-alboque pilosa; mesonoti lobo medio maculaque magna in abdominis segmentis dorsalibus nigro-cyaneis; cavitate faciali profunda, læte-viridi, dense subtiliter transverse-striata, superne acute marginata, margine ramos quattuor longitudinales ad verticem demittente, ramis his lateralibus abbreviatis, internis duobus stemma anticum includentibus aream insignem formantibus; antennis crassiusculis, nigris, articulis tribus primis viridi-cyaneis; vertice thoracisque dorso sat dense crassius punctato-reticulatis; postscutello mucronato, mucrone sat longo triangulari, subtus planato; metanoti dentibus postico-lateralibus sat validis triangularibus, acutis; abdominis segmentis dorsalibus sat distincte carinatis minus dense crassius profundeque punctatis; ventre, femoribus item et tibiis viridibus, tarsis fuscis; alis hyalinis vel parum sordidis, venis fuscis, cellula radiali subcompleta, apice parum aperta, tegulis viridi-cyaneis.

Femina: abdominis segmento dorsali tertio foveolis per carinulam medianam interruptis circiter 8—10, intermediis magnis et profundis subconfluentibus; margine apicali tridenticulato, dente intermedio externis longiore, triangulari. — Long. 6 mm.

Mas: abdominis segmento dorsali tertio foveolis per carinam acutam interruptis quattuor solum bene distinctis magnis ac profundis; margine apicali tridenticulato, dentibus externis minutis triangularibus acutis, intermedio breviore arcuato-obtuso. — Long. 5 mm.

Species: de frontis area insigni, mucrone postscutelli et punctatura abdominis, facile cognoscitur.

Patria: Mexico (Cordoba, Coll. Saussurei).

200. **Chrysogona armata** n. sp.

Parva, elongata, sublinearis, cinereo-alboque pilosa, cyanea, parum virescens; cavitate faciali (in mare viridi-subaurata) profunda, medio subtilissime transverse-striata, superne arcuatim marginata; antennis crassiusculis, fuscis, articulis tribus primis viridibus, tertio brevi, quarto æquali; genis brevibus, linearibus; vertice et thorace valde dense fortius punctato-reticulatis; postscutello in mucronem brevem triangularem producto; abdominis segmentis dorsalibus cyaneis, basi nigro-violaceis, margine apicali parum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

virescenti, dense sat crasse, tertio parum subtilius punctatis, secundo carinula mediana minus distincta, tertio supra seriem anteapicalem non calloso, foveolis magnis et profundis nigro-violaceis confluentibus circiter 8 tantum, margine apicali apiculo centrali-obtuso-, utroque latere angulato-triangulari; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et metatarsis externe viridi-cyaneis, his intus articulisque reliquis fuscis; alis hyalinis, iridescentibus, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis cyaneis. — ♂♀; long. 4—4'/₂ mm.

Patria: Brasilia (Blumenau, Mus. Hung. et Vindob.!; Neufrieburg, Mus. Halense Saxonum!).

Genus X. PLEUROCERA Guér.

Revue Zoologique, p. 149. (1842). -- Brullé, Hym. IV. p. 48. (1846).

(πλευρά vel πλευρόν = latus; κέρας = cornu, antennæ; antennæ lateribus dilatatæ.)

Genus: antennis, tibiarum anticarum calcaribus et tarsis anticis difformibus' eximium est.

Corpus: mediocre, angustum, sat gracile, Chrysidiforme.

Caput: transversum, pronoto fere duplo longius. *Antennae:* valde difformes: articulus nempe primus longus, crassus, parum compressus, secundus crassiusculus, tertio dimidio brevior, articuli 3—12 subtus transversaliter valde dilatati, compressi, præsertim 3—8 et apice oblique truncati, 3—5 sensim longiores, 6—7 longissimi, reliqui sensim breviores, apice et lateribus subrotundati, ultimus parum compressus, omnium minutissimus.

Thorax: subtetraëdro-cylindricus. *Pronotum:* transversum, mesonoto dimidio brevius, convexum. *Mesonotum:* suturis minus distinctis. *Scutellum:* convexum. *Postscutellum:* medio acute carinatum.

Alae: apice abdominis multo breviores, ut in Chrysidibus genuinis formatæ.

Pedes: longius pilosi; *femora:* crassiuscula; *tibiae* et *tarsi:* graciles, longi. *Calcaria antica:* difformia, arcuatim curvata et dilatato-compressa, apice truncata; *tarsi antici:* articulo primo subtus excavato et cum 2—4 supra dilatati; *tarsi posteriores:* longi, tenues, tibiis dimidio adhuc longiores, articulus primus sequentibus duobus simul sumptis longitudine æqualis.

Abdomen: elongatum, ut in Chrysidibus normalibus constructum.

Eximii huius generis unica adhuc cognita est species e regione neotropica, quæ Dahlbomo ignota mansit.

Animadversio. -- Nescio, an characteres hi de uno specimine Musæi Berolinensis, mihi a Clariss. Domino H. Dewitz libentissime transmisso, desumpti, utrique sexui communes sint vel solum feminæ? -- Exemplar enim facie et ventre *Anthrenis* mutillatum est et ideo eius sexum dicere nequeo. Guérin-Méneville de sexu non facit mentionem, Brullé tantum feminam noverat et Spinola ex his solum assumsit characteres.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

201. **Pleurocera viridis** Guér.

Chrysis (Pleurocera) viridis, Guér. Revue Zoolog. p. 150, n. 19. (1842).
Pleurocera viridis, Brullé, Hym. IV. p. 49. ♀. (1846). — Spin. Gay's Hist. fisica y politica de Chile. VI. p. 409, n. 1. (1851).

Mediocris, elongata, viridi-cyanea, longius cinereo-alboque pilosa; cavitate faciali viridi, punctulato-coriacea, superne haud marginata; antennis sordide-testaceis, articulis plus minusve infuscatis, duobus primis et tertio supra viridibus; vertice dense irregulariter, pronoto sat sparsim crasse, mesonoto ænescenti cum scutello postscutelloque parum subtilius fortius punctato-subreticulatis; abdominis segmentis dorsalibus duobus primis crasse, tertio parum subtilius rugosiuscule-punctatis, carinula mediana secundi distincta, tertii indistincta subtilissime punctulata, tertio supra seriem leniter incrassato, foveolis immersis anguste-sulciformibus circa 8 minus distinctis per carinulam interruptis, margine apicali sextendato, dentibus in arcum dispositis, quattuor intermediis subacute-triangularibus distinctis, duobus lateralibus angulum laterali-apicalim efficientibus latis arcuato-obtusis, emarginaturis sat profunde arcuatis, centrali lateralibus latiore; ventre femoribus item et tibiis viridibus et cyaneis, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice late aperta, tegulis viridibus. Long. 7½—9 mm.

Species: quoad formam marginis apicalis *Chrys. Zetterstedti* Dhlb. et fasciatæ Oliv. (violaceæ Panz.) haud insimilis est.

Patria: Chile (Guér.; Santiago, Mus. Berol.!).

Genus XI. STILBUM Spin.

Ins. Lig. I. p. 9. (1806) et II. p. 3. (1808). — Dhlb. Hym. Europ. II. p. 355, gen. 9. (1854).
(στιλβὸς = nitens, splendens.)

Genus: capite rostrato et postscutelli parte basali sub scutello abscondita et solum parte apicali mucronis validi exarati vel excavati instar procedens corporeque magno, robusto ac splendidissimo, eximium est.

Corpus: robustum, magnum aut maximum, rarius propter evolutionem minus faventem submagnum, subovale, convexissimum, splendidissimum.

Caput: thorace multo angustius, longitudinale, in parte antica *cavitatibus duabus* instructum: *superiore* sive *verticina* alte-arcuata stemma anticum superne includente, undique marginata, margine apicali triangulariter emarginato; *inferiore* seu *faciali* elongata, angusta, sublineari, profunda, densissime tranverse-striata, medio canaliculata, superne spatio convexo-declivi crebreque punctato. *Antennae:* mediocres aut subbreves, normaliter constructæ, crassæ. *Clypeus:* a forma Chrysidum genuinarum valde aberrans, non transversus, sed longitudinalis, medio canaliculatus (non carinatus) utrinque convexo-depressus, apice arcuato-emarginatus, lobo utrinque arcuato-obtuso. *Mandibulae:* elon-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

gatæ, falcatæ, acuminatæ, sed non inciso-denticulatæ. *Labrum :* mediocre, convexum, rotundatum. *Labium :* subcordatum.

Thorax : crassus, gibbus, globoso-subquadratus, antice posticeque truncatus, apice multo latiore quam basi. *Pronotum :* breve, transversum, antice posticeque late transverse-arcuato emarginatum. *Mesonotum :* longum, suturis medianis bene distinctis, crenatis leniterque arcuatis. *Scutellum :* magnum, convexum. *Postscutellum :* a Chrysidum mucronatarum postscutello forma normali distincte aberrat. *Mesopleurae :* in areas oblique-longitudinales divisæ, apice irregulariter crenato-dentatæ.

Alae : sat latæ, fere apicem abdominis attingentes; *anticae :* cellulis tribus: costali nempe, mediali et discoidali prima completis, venis firmis nigro-piceis; cellulis submediali et cubitali prima subcompletis, hæc apice venula transverso-cubitali coeca, nonnihil angulata, ex angulo ramulum venæ radiali parallelum emittente; cellula radiali lanceolata incompleta et late aperta.

Pedes : longius pilosi, normaliter constructi.

Abdomen : validum, capite thoraceque simul sumptis conspicue longius, ovato-semiconicum, dorso convexissimum, valde splendidum; segmentum primum breve, secundum maximum, primo fere triplo longius, tertio secundo plerumque tantum duplo brevius: area basalis instar marginis ampli convexo-depressi transverso-arcuati supra seriem prominens, area analis humilis, declivis, convexo-depressa, prominula, subtrapezina, dentibus quattuor apicalibus robustis triangularibus armata; *series ante apicalis :* foveolis rotundis numerosis; *tubulus feminarum* bene visibilis plerumque longe exsertus.

Ex hoc eximio genere duæ tantum sunt species, *Stilbum cyanurum* Först. cum suis varietatibus nempe et *Stilbum viride* Guér. e Madagascar.

202. **Stilbum cyanurum** Forst.

Chrysis cyanura, Forst. Novæ Spec. Ins. p. 89, n. 89. (1771). -- Gmel. Linn. Syst. Nat. Ed. XIII. Tom. I. P. V p. 2747, n. 22. (1792) (nec Dhlb.).

Chrysis nobilis, Fuesl. Magaz. der Entom. I. p. 222 (1778) (nec Sulz).

Stilbum splendidum, Blanch. Hist. nat. III. p. 297, n. 2. tab. III. fig. 3. (1840). — Brullé, Hym. IV. p. 15, n. 1. ♂ ♀. (1846). — Dhlb. Oefvers. K. Vetenst. Acad. Förhand. p. 142, n. 9. (1850); Hym. Europ. II. p. 358, n. 199. ♂ ♀. var. b—c. tab. XII. fig. 114. (partes corp.) (1854). — Schck, Nass. Jahrb. XI. p. 79, n. 1. (1856) ex parte. — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 564, n. 1. (1857). — Schck, Progr. Gymn. zu Weilb. p. 16, n. 21. (1870) ex parte. -- Lampr. Goldwesp. Deutschl. p. 8, n. 7. (1881) (nec Fabr.).

Stilbum Wesmaeli, Dhlb. Hym. Europ. II. p. 359, n. 200. ♂. (1854).

Stilbum calens, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 40. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 46, n. 16. (1887) (nec Fabr.).

Stilbum amethystinum Fabr. *var. festivum,* Mocs. Topogr. med. et phys. reg. Budapest. p. 81. (1879); Chrys. faun. Hung. p. 43 et 83, n. 2. ♂ ♀. (1882).

Stilbum amethystinum, Destef. Natural. Sicil. VII. p. 94. (1888).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Viride vel cyanescenti-viride, splendidissimum, sæpius in locis certis nitore aureo; abdominis segmentis dorsalibus duobus primis concoloribus, tertio violascenti-cyaneo. — ♂ ♀ ; long. 12—14 mm.

Patria: pars calida Europæ mediæ, Europa meridionalis, Asia minor et territorium Transcapicum (Coll. Rad.!).

var. Siculum Tourn.

? *Chrysis punctatissima,* Vill. Linn. Ent. III. p. 259, n. 13. tab. VIII. fig. 16. (1789).
? *Stilbum calens var. speciosa,* Ghil. Atti Acad. Gioënia. XIX. p. 24. (1842) (opus non vidi).
Stilbum Westermanni, Dhlb. Dispos. p. 16, n. 4. (1845) (ex parte).
Stilbum splendidum, Dhlb. Hym. Europ. II. p. 358, n. 199, tab. XII. fig. 114. var. d. (1854).
Stilbum siculum, Tourn. Mittheil. Schweiz. Ent. Ges. V. p. 307. ♂ ♀. (1878).

A typo differt: capite thoraceque maxima ex parte cum abdominis segmentis dorsalibus duobus primis tertiique basi utrinque, femoribus item et tibiis læte-auratis igneoque concinne lavatis, splendidissimis, segmenti tertio parte reliqua violacenti-cyanea. — ♂ ♀ ; long. 9—13 mm. — Patria: Sicilia et Melitta (Malta) insulæ.

var. nobile Sulz.

Chrysis nobilis, Sulz. Abgek. Geschichte der Insect. p. 193, tab. XXVII. fig. 7. (1776). — Christ, Naturg. p. 405, tab. 45, fig. 3. (1791) (nec Klug).
Chrysis calens, Fabr. Spec. Ins. I. p. 455, n. 3. (1781); Mant. Ins. I. p. 283, n. 3. (1787). — Römer, Gen. Ins. tab. XXVII. fig. 7. (1787). — Cyrillo, Entom. Neap. I. tab. IV. fig. 2. (1787—92). — Rossi, Faun. Etr. II. p. 74, n. 841. (1790). — Oliv. Encycl. Méth. Ins. V. p. 672, n. 5. (1790) (at patria: «Cayenne» falsa est). — Gmel. Linn. Syst. Nat. Ed. XIII. Tom. I. P. V. p. 2744, n. 10. (1792). — Fabr. Ent. Syst. II. p. 239, n. 4. (1793). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 61, tab. XV. fig. 11. (1801). — Fabr. Syst. Piez. p. 171, n. 4. (1804). — Latr. Hist. nat. XIII. p. 237, n. 1. (1805). — Spin. Ins. Lig. I. p. 63, n. 1. (1806). — Lep. Annal. du Mus. Hist. nat. VII. p. 126, n. 10. (1806). — Illig. Rossi Faun. Etr. Ed. II. Tom. II. p. 119, n. 841. (1807). — Lam. Anim. sans vertébr. IV. p. 126, n. 3. (1817).
Stilbum calens, Spin. Ins. Lig. I. p. 9. (1806); II. p. 3. (1808). — Latr. Gen. Crust. et Ins. IV. p. 48. (1809). — Blanch. Hist. nat. III. p. 297, n. 1. (1840). — Ghil. Atti Acad. Gioënia. XIX. p. 21. (1842) (teste Destef.). — Labr. et Imh. Insect der Schweiz. (1842). — Brullé, Hym. IV. p. 16, n. 2. ♂ ♀. tab. XXXVII. fig. 2. (1846). — Luc. Explor de l'Algér. Zoolog. III. p. 315, n. 360. (1849). — Dhlb. Hym. Europ. II. p. 360, n. 201. ♂ ♀. tab. XII. fig. 115. (thorax) (1854). — Schck, Nass. Jahrb. XI. p. 79, n. 2. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 564, n. 2. (1857). — Chevr. Chrysid. du Léman. p. 7. ♂ ♀. (1862). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 308, n. 53, tab. VI. fig. 35. (1866). — Schck, Progr. Gymn. zu Weilb. p. 16, n. 22. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 24, n. 50. (1877). — Lampr. Goldwesp. Deutschl. p. 8, n. 8. tab. I. fig. 3. (segm. anale) (1881).
Stilbum amethystinum, Smith, Transact. Ent. Soc. Lond. p. 470. (1874) ex parte.
Stilbum splendidum, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 40. (1879).
Stilbum nobile, Mocs. Chrys. faun. Hung. p. 42 et 82, n. 1. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 46. (1887) exparte. — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 34. (genit. maris) (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

A typo differt: capite thoraceque et abdominis segmento dorsali tertio violascenti-cyaneis, illis sæpius levissime viridi pictis, hoc segmentis primo secundoque auratis vel viridi-auratis, splendidissimis. — ♂ ♀ ; long. 8—11 mm. — Patria: pars calida Europæ mediæ, Europa meridionalis, Algeria, Asia minor, Caucasus, Persia, Sibiria, Turkestania et Mongolia centralis (Ta-wan, Coll. Rad.!).

«*Armure.* La branche du forceps est cylindrique vers l'extrémité et pourvue de poils courts. La volsella est de longueur de la branche du forceps, vers l'extrémité garnie de gros points et de poils. Les crochets se retrécissent graduellement vers l'extrémité où ils sont parsemés de poils minces, courts. Le couvercle génital vers l'extrémité est arrondi garnis des points irréguliers et de poils.» (Rad. l. c. tab. VI. fig. 69a, 69b, 69c, 69i, 69k.)

var. amethystinum FABR.

Chrysis amethystina, Fabr. Syst. Entom. p. 359, n. 12. (1775); Spec. Ins. I. p. 457, n. 15. (1781); Mant. Ins. I. p. 284, n. 18. (1787). — Oliv. Encycl. Méth. Ins. V. p. 672, n. 4. (1790). — Christ, Naturg. p. 404. (1791). — Fabr. Ent. Syst. II. p. 243, n. 22. (1793). — Donov. Ins. of India, p. —. tab. LVI. fig. 3. (1800—1803). — Fabr. Syst. Piez. p. 176, n. 32. (1804). — Lep. Annal. du Mus. Hist. nat. VII. p. 126, n. 11. (1806).

Stilbum splendidulum, Westw. Donov. Ins. of. India. New. Edit. p. 88, tab. LVI. fig. 3. (1842).

Stilbum splendidum, Dhlb. Hym. Europ. II. p. 358, n. 190. *var. a.* (1854). — Gerst. Peter's Reise nach Mossamb. Zoolog. V. Insectes, p. 519. (1862).

Stilbum amethystinum, Smith, Journ. Linn. Soc. Lond. Zoolog. III. p. 177. (1859); Transact. Ent. Soc. Lond. p. 398 et 470 ex parte (1874). — Mocs. Chrys. faun. Hung. p. 43 et 83, n. 2. ♂ ♀. (1882). — Aar. Transact. Amer. Ent. Soc. XII. p. 243. ♀. (1885). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 34. (genit. maris) (1888).

A typo differt: colore cyaneo vel viridi-cyaneo plus minusve violascenti, abdomine concolori; mesonoti lobo medio antice et lateralibus parte longitudinali antica disperse minus crasse, in speciminibus nonnullis valde subtiliter punctatis fereque lævibus. ♂ ♀ ; long. 9—14. mm. — Patria: inde a Caucaso (Mus. Hung.) et Syria, Arabia Persiaque per totam Asiam insulasque eidem adnexas Australiamque; et inde ab Aegyto per totam Africam, frequens vel frequentissimum; etiam in America septentrionali (Ontario, teste Aaron, et in Venezuela, Mus. Dresdense!) inventum est.

«*L'armure* par sa forme ressemble beaucoup à celle de l'espèce précédente (peut être ce n'est qu'une variété); on remarque cependant: 1) que la volsella est plus courte que la branche du forceps; 2) que les crochets sont nus vers l'extrémité, sans être par-

* *Animadversio.* — De *Stilbo cyanuro* et eius varietate *nobili* Clarissimus Dominus Frey-Gessner (Chrys. Helvet. p. 46.) sequentia scripserat: «wahrscheinlich in allen wärmeren Theilen des Tessin wo *Scolien* vorkommen, bei welchen *Stilbum* schmarotzen soll.» — Nos aliam habemus opinionem. Constat enim, testibus Passerini et Coquerell aliisque, *Scolias* parasitas esse *Coleopterorum*, præsertim generis *Oryctes*: et sic de parasitismo secundario esset loquendum, qui tamen apud Chrysididas nondum observatus est, et insuper ex observationibus quam maxime conscientiosis piæ memoriæ viri: J. Lichtenstein certum est, *Stilbi cyanuri var. nobilem Chalicodomae murariae* F. esse parasitam.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

semés de poils; 3) que le couvercle génital n'a pas même de traces des points.» (Rad. l. c. tab. VI. fig. 70a, 70b, 70f, 70i, 70k).

var. splendidum FABR.

Chrysis splendida, Fabr. Syst. Ent. p. 357, n. 1. (1775); Spec. Ins. I. p. 454. (1781); Mant. Ins. I. p. 282, n. 1. (1787); — Christ, Naturg. p. 401, tab. 44, fig. 8. ♀. (1791). — Fabr. Ent. Syst. II. p. 238, n. 1. (1793); Syst. Piez. p. 170, n. 1. (1804).

Stilbum variolatum, Costa, Annuario Mus. di Napoli. II. p. 67, n. 1967. (1864) (at patria: «India» falsa est).

Chrysis Spinolae, Montr. Annal. Soc. Linn. Lyon. Sér 2. tom. XI. p. 249. (1864).

Stilbum splendidum, Smith, Transact. Ent. Soc. Lond. p. 469, n. 1. ♂ ♀. (1874). — Mocs. Chrys. faun. Hung. p. 83. (1882) (nec Dhlb.).

A typo differt: magnitudine multo maiore (omnium Chrysididarum maxima), colore cyaneo plus minusve violascenti parumque hic illic virescenti, abdomine concolori; mesonoti lobis lateralibus disperse, lobo medio vero dense et crasse inæqualiter subtransverse-rugosis. ♂ ♀; long. 16—20 mm. — Patria: Australia et Nova Caledonia.

Animadversio. — Magnificam hanc specimen, in suis varietatibus per omnes orbis terrarum partes (Europa septentrionali et America meridionali exceptis) diffusam, Forsterus omnium primus noverat verbisque sequentibus descripsit: «Glabra, nitens, smaragdina, thorace bidentato, abdomine concolore, quadridentato.— Habitat in Hispania ad Calpen freti Gaditani.— Corpus magnitudine æquat maximas inter *Chrysid. ignitas*, totum nitens, colorem smaragdinum imitatur. — Antennæ nigræ totis ultimis duobus articulis et quibusdam reliquorum supra nitentibus. — Oculi magni purpureo-fusci. — Thorax linea capiti parallela transversim divisus, dein medium thoracis divisum in areolas tres lineis longitudinalibus. — Scutelli loco, duo dentes; sub alis versus abdomen utrinque dentes singuli. — Abdomen undique nitens viride, duo extrema ad apicem segmenta cyanea; anus quadridentatus. — Alæ fuscæ; costa alarum, venæque nigræ. — Pedes nitentes; tarsis fuscis.» — Haec verba satis clara sunt ad ea, ut species rite cognoscatur; et mihi fontes et opera antiquorum scriptorum indaganti, nomen vetustissimum restituendum erat. Varietates tamen, colore et sculptura ab invicem differentes, distinguendas esse censebam.

203. **Stilbum viride** GUÉR.

Stilbum viride, Guér. Revue Zoolog. p. 144, n. 1. ♀. (1842). — Brullé, Hym. IV. p. 16, n. 3. ♂. (1846). — Smith, Transact. Ent. Soc. Lond. p. 470, 3. (1874).

Stilbi cyanuri Forst. varietatibus: *amethystino* et *splendido* simile: viride vel viridicyaneum, abdominis segmento dorsali tertio aurato-viridi; vertice, pro- et mesonoto tegulisque postice dense crasseque rugoso-punctatis; abdomine segmentis dorsalibus duobus primis quoque, sed præsertim tertio multo densius punctatis; mesopleurarum area secunda longitudinali non subtiliter, sed crasse profundeque punctata, bene distinctum. — ♂ ♀; long. 12—15 mm.

Patria: insula Madagascar (Guér., Mus. Hung. aliaque Musæa).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Genus XII. CHRYSIS Linn. Mocs.

Chrysis, Linn. Syst. Nat. Ed. XII. Tom. I. P. II. p. 947, gen. 296. (1767) ex parte. — Dhlb. Hym. Europ. II. p. 98, gen. 7. (1854) ex parte.

Pyria, Lep. et Serv. Encycl. Méth. Ins. X. p. 494. (1825). — Brullé Hym. IV. p. 18. (1846). — Smith, Transact. Ent. Soc. Lond. p. 463. (1874).

Spinolia, Dhlb. Hym. Europ. II. p. 363, gen. 10. (1854).

Euchroeus, Latr. Gen. Crust. et Ins. IV. p. 49, gen. 478. (1809). — Dhlb. Hym. Europ. II. p. 365, gen. 11. (1854).

Polyodontus, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 25. (1877).

Brugmoia, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 26. (1877).

(χρῦσις, ιδος = vas aureum, vestis aurea.)

Genus: postscutello libero seu sub scutello parte basali non abscondito; abdominis segmenti dorsalis tertii margine apicali crustaceo, adeoque non aliter composito, quam ipso segmento; alis anticis cellula discoidali completa; antennis, pedibus et calcaribus normalibus, facile cognoscitur.

Corpus: parvum, mediocre vel magnum, proportionaliter angustum sæpissime elongatum vel oblongum, rarius robustum ac crassum.

Caput: plerisque mediocre, rotundato-triangulare, orbiculatum vel suborbiculatum, rarius subquadratum et magnum, aut elongato-sublineare, pronoto latius longiusque, rarius angustius et brevius; *cavitate faciali:* pro scapis quiescentibus plerumque profunda et sæpius subtiliter transverse-striata vel planiuscula et subtiliter punctato-coriacea, superne sæpius transverse marginata et area insigni decorata. *Antennae:* crassiusculæ vel robustæ, rarius tenues, longæ vel nonnunquam breves vel breviusculæ, aut mediocres, filiformes vel subsetaceæ. *Clypeus:* transversus, subtrapezinus vel arcuatus, apice sæpius emarginatus. *Mandibulae:* mediocres, apice uni-, rarius bi-, rarissime tantum tridenticulatæ. *Genae:* lineares vel mediocres, nonnunquam elongatæ vel longæ. *Occiput:* sæpius angulo spinoideo armatum vel regulariter inerme.

Thorax: longiusculus, subcylindricus vel convexo-depressus, aut subquadratus vel quadrato-subcylindricus. *Pronotum:* transverso-rectangulum, rarius antice angustatum, sæpius breve, mesonoto brevius, rarius longius. *Mesonotum:* convexum, vel parum depresso- vel gibbo-convexum, suturis longitudinalibus plerumque distinctis. *Postscutellum:* convexum, gibbo-convexum, vel sæpius conicum vel mucronatum. *Metanotum:* postice truncatum vel leniter declive et utrinque dentibus postico-lateralibus vario modo formatis armatum. *Mesopleurae:* inermes vel sæpius apice crenulatæ, bispinosæ, denticulatæ vel mucronatæ.

Pedes: pilosi; *femora* et *tibiae:* normalia.

Alae: mediocres, plurimis apicem abdominis vix attingentes, hyalinæ, vel sordidæ et — præsertim anticæ — saturatius fumatæ violaceoque nitentes; *anticae:* cellulis costali, mediali et discoidali prima completis, cellula radiali et submediali prima iam completis, iam apertis, cellula cubitali prima rarissime completa, plerumque incompleta, submedialis secunda incompleta; *venis:* firmis, piceis vel fuscis; *posticae:* tantummodo vena

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

costali, postscostali et cellula costali completis gaudent; reliquarum venarum et cellularum solum vestigia obsoleta aut obsoletissima animadvertuntur.

Abdomen: ovatum, ovale, ellipticum, lineare, elongatum, subrectangulum vel subquadratum vel elongato-subquadratum, convexum vel convexo-depressum, segmenti tertii margo apicalis vario modo formatus; *tubulus feminarum:* plerumque bene visibilis, longitudine mediocris vel longe exsertus, rarius penitus absconditus; *genitalia marium:* in speciebus diversis vario modo formata et in litigiosis propterea sæpius characteristica.

Differentia sexus: mares feminis sæpius minores, magis robusti, nonnunquam aliter colorati, punctatura dentibusque analibus sæpius fortioribus, facie uberius densiusque pilosa, antennarum flagelli articulis sæpius brevioribus, abdominis segmento dorsali tertio breviore magisque convexo, margine apicali truncato vel subtruncato (non arcuato) et ventris segmento tertio margine apicali sæpissime membrana pallida.

Generis *Chrysis* hoc sensu iam 519 cognoscimus species ex omni orbis terrarum parte; et quidem e subgenere *Holochrysis* 118, *Gonochrysis* 28, *Monochrysis* 4, *Dichrysis* 4, *Trichrysis* 21, *Tetrachrysis* 227, *Pentachrysis* 18, *Hexachrysis* 85, *Heptachrysis* 1, *Polyodontus* 1, *Euchroeus* 8, *Spinolia* 4. Secundum regiones: e regione palæarctica 274, æthiopica 59, orientali 28, australiaca 38, nearctica 48, neotropica 67. Nonnullæ 2 aut 3 et unica 4 inhabitant regiones. Ignota est patria 8 specierum. — Apud Dahlbomum ex his 132 tantum inveniuntur species.

*

Species generis *Chrysis*, facilioris conspectus et determinationis causa, a piæ memoriæ viro: *Dahlbomo* in 8 phalanges dividuntur, modo sequenti:

Phalanx prima: *Chrysides ano integerrimae*, scilicet: abdominis segmenti tertii margo apicalis integerrimus (*Olochrysis* Licht.).

Phalanx secunda: *Chrysides ano inaequales*, scilicet: abdominis segmenti tertii margo apicalis inæqualis, lenissime aut undulatus aut angulatus, quæ inæqualitas tamen nonnisi oculo armato detegi potest (*Gonochrysis* Licht.).

Phalanx tertia: *Chrysides ano unidentatae*, scilicet: abdominis segmenti dorsalis tertii margo apicalis apiculo centrali terminatus et hinc uni-denticulatus, utroque latere arcuato-obtusis (*Monochrysis* Licht.).

Phalanx quarta: *Chrysides ano tridentatae*, scilicet: abdominis segmenti dorsalis tertii margo apicalis utrinque dente unico laterali armatus (*Dichrysis* Licht.).

Phalanx quinta: *Chrysides ano tridentatae*, scilicet: abdominis segmenti dorsalis tertii margo apicalis denticulo unico centrali et duobus lateralibus armatus (*Trichrysis* Licht.).

Phalanx sexta: *Chrysides ano quadridentatae,* scilicet: abdominis segmenti dorsalis tertii margo apicalis denticulis quattuor armatus (*Tetrachrysis* Licht.).

Phalanx septima: *Chrysides ano quinque-dentatae*, scilicet: abdominis segmenti dorsalis tertii margo apicalis dentibus quinque armatus (*Pentachrysis* Licht.).

Phalanx octava: *Chrysides ano sex-dentatae,* scilicet: abdominis segmenti dorsalis tertii margo apicalis dentibus sex armatus (*Hexachrysis* Licht.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

A Clariss. Domino Abeille de Perrin vero in quattuor sectiones solum dividuntur, modo sequenti:

A. Corps nettement vert ou bleu, sans trace de dorure ... ... Sectio I. *virides*.
A.′ Corps plus ou moins doré.
B. Abdomen doré, ayant au moins un de ses 3 segments vert ou bleu. Sectio II. *zonatae*.
B.′ Abdomen entièrement doré, sauf parfois le rebord du troisième segment.
C. Tête et thorax verts ou bleus ... ... Sectio III. *bicolores*.
C.′ Tête et thorax, en partie du moins, dorés ... ... Sectio IV. *auratae*.

Ego Dahlbomi phalanges cum mutationibus mihi optime visis denonimationibusque ingeniosis Lichtensteini, et non sectiones has Abeillei e colore desumptas acceptavi, quamvis perbene concedo, etiam hanc regulam non esse sine exceptione, prouti hoc in *Chryside succincta* Linn. et eius varietatibus vidimus. Præterea etiam illud certum est, quod specierum nonnullarum margo apicalis segmenti tertii ita formatus sit, ut illæ ad unam vel ad alteram phalangem pertinere videantur. — Sed exceptiones tales inveniuntur etiam in systemate Abeillei, ubi *Chrysidis succinctae* femina ad unam, mas ad alteram eius sectionem pertinent, et quia ego *Euchroeum* tamquam subgenus solum considero, *Chrysidis* (Euchrœi) *purpuratae* Fabr. femina unius, mas alterius eius sectionis cives sunt. — E contrario, apud plurimas species margo apicalis ita constructus est, ut statim observetur, animal ad qualem nam sectionem pertineat, et denominatio «Tetrachrysis fulgida Linn.» iam etiam ipsam sectionem indicat, in qua species quærenda est. — Phalanges has Dahlbomi ego tamquam subgenera considero, et illas, in exceptionibus etiam paucis, in magna Chrysidum cohorte ad species facilius determinandas convenientes et maxime utiles esse censeo. Species tamen nonnullas Dahlbomianas aliorumque in alia collocavi subgena.

*

Subgenus I. OLOCHRYSIS Licht. (r. HOLOCHRYSIS).

Abdominis segmenti tertii margo apicalis plerumque integer, rarius — præsertim in maribus — subtruncatus et medio plus minusve emarginatus, sed non undulatus vel lateribus, ante vel in initio seriei anteapicalis, angulatus est.

Animadversio. — In hoc subgenus collocavi species Chrysidarum omnes illas, quæ abdominis segmenti dorsalis tertii marginem apicalem non tantum integrum plus minusve arcuatum vel rotundatum habent, sed etiam illas, in quibus margo apicalis subtruncatus, et — præsertim in maribus — medio emarginatus est. In *Chryside trimaculata, neglecta, simplici* aliisque femina marginem penitus arcuatum habet, mas vero truncatum. In *Chryside pustulosa* (*bicolori* Dhlb. ex parte) margo apicalis subtruncatus est, et Dahlbomus illam tamen primæ suæ phalangi inseruit. Apud *Chrysidem hybridam* mas medio distincte emarginatus est et feminæ margo apicalis iam subtruncatus apparet. Etiam in *Chrysidis igni-frontis* Brullé mare margo apicalis medio distincte emarginatus est, et femina (*Chrysis aurifrons* Dhlb.) illum iam penitus integrum habet, prouti etiam *Chrysis hydropica* Ab. Præterea, specierum illarum,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

quas ego huic subgeneri adnumeravi et secundum Dahlbomum ad secundam illius phalangem pertinere deberent, præter *Chrysidem emarginatulam*, margine apicali in sexu utroque medio emarginato, plerumque mares solum cogniti sunt et mihi haud impossibile esse videtur, etiam harum specierum feminas marginem apicalem penitus integrum habere.

*

I. *Corpus totum viride, cyaneum vel violaceum, aut his coloribus variegatum, sed nunquam auratum vel cupratum.*

204. **Chrysis tenella** n. sp.

Parvula, elongata, sat gracilis, tota viridi-cyanea, parcius cinereo-alboque pilosa; macula circa stemmata et mesonoti lobo medio cyanescentibus; cavitate faciali planiuscula, dense punctato-coriacea, superne in medio transverse marginata; antennis crassiusculis, fusco-rufescentibus, articulis tribus primis viridibus, secundo longitudine mediocri, tertio quartoque simul sumptis subæquali; clypeo brevi, apice triangulariter exciso; genis mediocribus, articulo secundo flagelli brevioribus; vertice et metanoto dense subtilius punctato-subreticulatis; pro- et mesonoto scutelloque subtiliter et irregulariter punctatis et subtilissime punctulatis, subcoriaceis; abdominis segmentis dorsalibus viridi-cyaneis, secundo magis cyanescente, subcoriaceis, valde dense subtilissime rugosiuscule-punctulatis, secundo carinula mediana nulla, tertio supra seriem convexo, foveolis sat profundis, rotundis, circiter 10, margine apicali brevi, truncato-integro, medio parum sinuato; ventre et pedibus concoloribus, segmento secundo basi utrinque nigro-maculato, tarsis fusco-rufescentibus; alis subhyalinis, venis fuscis, cellula radiali lanceolata fere completa, tegulis viridi-cyaneis. — ♀; long. 5 mm.

Statura et magnitudine *Chrysid. cyaneae* Linn., sed margine apicali segmenti tertii abdominis truncato-integro; a sequenti vero: corpore multo minore, antennis fusco-rufescentibus, genis evidenter brevioribus, cavitate faciali medio carinata, punctatura abdominis alia, satis distincta.

Patria: Caucasus (Coll. Rad.).

205. **Chrysis genalis** Mocs.

Chrysis foveata, Rad. Fedts. Reise in Turkest. Hym. Chrysid. tab. I. fig. 7. ♀. (1877) sec. spec. typ. e coll. Rad. (sine descriptione) (nec Dhlb.).

Chrysis genalis, Mocs. Term. Füz. XI. p. 14. (1887). — Rad. Horæ Soc. Ent. Rossicæ XXIII. p. 18. (genit. maris) (1888).

Mediocris, elongata, cyaneo-viridis, dense longius albo-pilosa; genis longis; cavitate faciali haud profunda, punctulato-coriacea, superne convexa, non marginata, spatio minuto utrinque ad stemmata postica lævi; vertice thoracisque dorso irregulariter subreticulatis; abdomine cyaneo-viridi, segmentis dorsalibus: duobus primis sat dense crassius minus profunde, tertio convexo densius subtiliusque punctatis, serie anteapicali leniter immersa foveolis haud distinctis plerumque confluentibus, margine apicali brevi, subtiliter et inæqualiter punctulato, summo apice introrsum versus leniter arcuato;

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

segmenti primi impressione basali minus profunda, secundi carinula mediana nulla; ventre et antennarum articulis quattuor primis viridi-subauratis; illo segmentis duobus primis utrinque macula magna basali nigra notatis, tertio basi nigro; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata penitus completa. — ♀; long. 8 mm.

Species: corpore toto unicolore cyaneo-viridi, dense longius albo-piloso, genis longis, cavitate faciali haud profunda, superne convexa, non marginata, serie anteapicali foveolis haud distinctis, segmento dorsali secundo carinula mediana nulla, antennarum articulis quattuor primis viridibus, tertio sequentibus tribus longitudine æquali et cellula radiali penitus completa, a congeneribus facile cognoscitur.

«*Armure.* La branche du forceps large, son bord supérieur échancré vers l'extrémité et garni de poils. Volsella nue. La forme des crochets representée sur la fig. 35i.» (Rad. l. c. tab. III. fig. 35a, 35b.)

Patria: Turkestania (Vallis Sarafschan et Maracanda, Coll. Rad.).

206. **Chrysis Japonica** Cam.

Chrysis japonicus (!), Cam. Proced. Manch. Lit. and Philos. Soc. XXVI. p. 9. (1887).

«Apex of abdomen entire. Blue with a purplish tinge, variegated with green, flagellum of antennæ black, wings fuscous hyaline, the nervures black; head and thorax covered with longish fuscous hair; antennæ as long as the thorax, the scape bare, black, more or less marked with green and irregularly punctured. Head above coarsely rugosely punctured; along the inner side of the eyes much less strongly and more irregularly; the central part of hollow striolated; below the antennæ the punctures are moderately large and distinctly separated; between them almost impunctate; the keel over the depression shaped; clypeus incised; mandibles black. Thorax covered with large, round, clearly separated punctures; they are smallest on the lateral lobes of the mesonotum, and are, if anything, smaller on the scutellum than in the centre of mesonotum; on the metanotum they are more irregular in shape (but not larger than on the scutellum) and run into reticulations; on the pleuræ the punctuation is closer and finer; the depressions are shining and striated in the centre; a little below the middle of the mesopleuræ is a large broad longitudinal furrow. Abdomen closely punctured, the punctures interlacing on the basal segment; on the apical segment they are much weaker. The apical segment is waved in the centre and on either side, but there are no teeth; the foveæ are not very deep. The coxæ, trochanters, femora, and more or less of the tibiæ are green; the former three parts bear longish fuscous hairs; the tibiæ are more sparsely haired; the tarsi are almost glabrous; the coxæ are punctured; the femora are finely punctured, and bear also some large punctures among the smaller, and the hinder four are hollowed on the underside behind. The metatarsus is as long as the following three joints united; the second joint is as long as the fifth.

The ground colour of the body is blue, the face, the orbits of the eyes more or less, two lines on the pronotum, the mesonotum laterally, the edges of the metanotum,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

the greater part of the pleuræ, and the edges of the abdominal segments are greenish or greenish-blue.

Length 9—10 mm.»

Patria: Japonia (Hitoyoshi).

207. **Chrysis jugum** Dhlb.

Chrysis jugum, Dhlb. Oefvers. K. Vetensk. Acad. Förhandl. p. 136, n. 2. (1850); Hym. Europ. II. p. 101, n. 55. (1854).

«Mediocris 2'/4 lin. decimal. long. confertim modice punctata cinereo-pubescens læte viridis, abdominis segmentis secundo macula utrinque et tertio fascia basali cyaneis, illa (segmenti secundi) cum lineola basali angustissime cohærente jugum formante; flagellis tarsisque fuscis, alis hyalinis disco levissime sordidis, abdominis segmenti tertii serie anteapicali regulari foveolis separatis æqualibus sublongitudinalis.

Observ. Corpus sublineare confertim modice punctatum nitidum læte viride, pube cinerea adspersum. Caput orbiculatum superne convexum. Infra stemmata, inter oculos, cavitati faciali proxime, adest carinula lævissima nigro-fusca transverso-arcuata aream ex parte includens transversam nitidam subpolitam inæqualem vix punctatam. Cavitas facialis cyaneo-viridis confertissime transverse strigosa, lateribus albido- l. cano-sericeo-pilosa. Antennæ basi cyaneo-virides nitidi, flagella robusta subbrevia cinereo-brunnea, propter pubem subtilissimam adpressam subopaca. Clypeus brevis politus sparse punctulatus, medio longitudinaliter carinato-convexus, ad centrum marginis apicalis subemarginato-truncatus, totus viridis: margine apicali nec non labro minuto apiculato nigro-piceis. Mandibulæ nitidæ nigro-piceae, basi virides. Pronotum transverso-rectangulum: disco lineola mediana obsoletissima difficillime conspicua, utrinque macula parva viridi-aurea, truncatura antica convexiuscula polita pulchre purpurascenti-violacea, foveolis duabus discoidalibus notata. Margo pronoti posticus, suturæ dorsuli duæ longitudinales alarumque tegulæ cyanea; sternum sublæve aut punctulis tantum paucis adspersum nitidissimum viride, in diverso situ luminis plus minus cyaneo-resplendens. Pedes cyaneo-virides nitidi largiter griseo-piloselli calcaribus pallidis, tarsis fuscis. Alæ hyalinæ venis brunneis; in anticarum cellulis radiali, cubitali et discoidali striæ sordidæ vix observantur; cellula radialis lanceolata-acuminata apice late aperta, vena cubitalis prius desinit quam vena radialis apici alæ approximata. In alæ anticæ margine postico sub apice venulæ transverso-medialis secundæ adest punctum corneum piceo-brunneum. Abdomen normaliter constructum, confertim modice punctatum et punctulatum nitidum læte viride; segmenti dorsalis primi impressio basalis triramosa cyaneo-nigricans; segmenti secundi margo basalis nigro-æneus, utrinque macula lateralis rotundata cœrulea cum margine baseos nigro-æneo cohærens formam jugi simulans; e centro marginis nigro-ænei excurrit in discum lineola subtilis cœrulescens; segmentum tertium basi margineque apicali cyaneum, disco fascia viridissima, sub hac fascia (et ante summum marginem apicalem) nonnihil immersum propter seriem ante-apicalem; hæc (series) regularis foveo-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

lis distinctis separatis æqualibus sublongitudinalibus 12; margo infra seriem convexiusculus sparse punctulatus, margo summus tenuissimus transverso-obtusus subarcuatus. Venter viridi-cyaneus apice fuscus.»

Patria: Caffraria Africæ meridionali-orientalis.

208. **Chrysis capitalis** Dhlb.

Chrysis capitalis, Dhlb. Hym. Europ. II. p. 100, n. 54. tab. V. fig. 83. (1854).

«Mediocris 2'/2 lin. decimal. long. crasse punctata fusco-pubescens viridis vertice, dorsuli area intermedia abdominisque segmentis secundo parte basali tertioque saturate cyaneis, flagellis uno latere tarsisque totis testaceis, alis sordide hyalinis, segmenti tertii serie ante-apicali irregulari foveolis maioribus et minoribus alternis.

Observ. Magnitudine et habitu nonnihil similis minoribus exemplaribus *Chrysidis nitidulae.* Corpus quæmadmodum *Chrys. ignitae* oblongum et punctatum. Caput viride, supra crebre punctatum, macula verticis nigro-violacea; infra stemmata et supra cavitatem facialem adest area transversa linearis nitida inæqualis aureo-viridis margine elevato fusco undique circumdata; cavitas facialis viridis nitida, lateribus coriacea punctulato-subgranulosa, disco longitudinali confertissime transverse strigosa. Antennæ subbreves robustæ; scapus et pedicellum subcyanescenti-viridia, flagellum rufo-testaceum postice nigro-lineatum, disco nonnihil crassius quam basi et apice unde subfusiforme obvenit. Clypeus mediocris nitidus viridis sparse punctatus, ad centrum marginis apicalis truncatus et aureo-resplendens. Mandibulæ piceo-brunneæ, basi macula virescenti-aurea. Thorax longiusculus subcylindricus basi apiceque truncatus, crebre subcrasse punctatus: punctatura subreticulata viridis; pronoti truncatura antica nec non cavitas lateralis sterno proxima, dorsuli area intermedia et metanoti area postica cyanea. Pedes virides pubescentes ex uno alterove latere cyanescentes, calcaria pallida, tarsi testacei. Alæ hyalinæ, disco sordidæ brunneo-subfumosæ; venæ firmæ piceo-brunneæ, cellula radialis elongato-lanceolata incompleta scil. summo apice anguste aperta; cellula discoidalis completa transversa rhombea. Abdomen longitudine capitis et thoracis simul sumtarum, longitudinale rectangulare, basi truncatum et normaliter impresso-foveatum, apice obtusum l. lenissime arcuatum, dorso modice convexum et subcrebre punctatum, segmentum primum viride: ante marginem apicalem linea transversa abbreviata cyanea; segmenta secundum et tertium cyanea: illud apice fascia viridi lateraliter ampliata, hoc ante seriem apicalem linea transversa viridi; venter basi viridis, apice viridi-cyaneus.

Patria: Promontorium Bonæ Spei.

209. **Chrysis Kriechbaumeri** Grib.

Chrysis Kriechbaumeri, Grib. Annali Mus. Civ. Stor. Natur. Genova. VI. p. 358, n. 1. (1874) sec. spec. typ. e coll. Rad.

«Parva, robusta, cyaneo-viridis, haud nitida: fronte et thorace crasse punctato-reticulatis, segmento abdominis primo sparsim crasseque punctato, secundo et tertio

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

confertissime subtiliter punctato-rugulosis, subcoriaceis: serie ante-apicali subimmersa: margine anali brevi, integro, late arcuato-obtuso. — Long. corp. mill. 4½.

Riesce facile il reconescere questa specie dalla singolare punteggiatura del suo addome, specialmente dei due ultimi segmenti.»

Ad descriptionem, de specimine male conservato et mutillato factam, addendum est:

Cavitate faciali profunda, viridi-subaurata, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne indistincte marginata; antennarum scapo viridi, articulis reliquis nigris; genis brevibus; vertice thoracisque dorso confertim crassius punctato-reticulatis; abdominis segmentis dorsalibus: primo cyaneo sat crasse punctato, secundo parte basali violascenti, apice et tertio viridi-cyaneis, secundo carinula mediana nulla, tertio foveolis profundis rotundis haud numerosis, circiter 8; ventre pedibusque viridi-subauratis, tarsis nigris; alis hyalinis. — ♂.

Patria: Nova Hollandia (Coll. Rad.!).

210. **Chrysis fausta** Smith.

Chrysis faustus (!), Smith, Transact. Ent. Soc. Lond. p. 456, n. 2. (1874).

«Female. — Length 4¾ lines. Green with shades of blue; head and thorax strongly punctured, the abdomen very finely so.

Head and prothorax of a bright golden-green, the rest of the thorax of a dark green with brighter shades laterally; the tegulæ smooth and bright green. Abdomen: each segment more or less blue-green towards its basal margin; the femora and body beneath golden-green; the tarsi and antennæ black, both more or less green above towards their base. The head, prothorax, scutellum and postscutellum very strongly punctured, the latter angulated; wings subhyaline, the nervures black; the extreme base of the abdomen very strongly punctured; the rest of the abdomen very closely and finely punctured.

The description is that of the most highly coloured example seen; others are of a darker green, inclining to blue, but the puncturing is constant and the carina on the second abdominal segment is always strongly marked.»

Patria: Australia septentrionalis (Queensland).

211. **Chrysis Australiaca** n. sp.

Mediocris, elongata, tota læte-cyanea, longius cinereo-alboque pilosa; cavitate faciali subangusta profunda, dense punctulato-coriacea, superne indistincte marginata; antennis crassiusculis, nigris, articulis tribus primis viridi-cyaneis; genis sublinearibus; margine occipitali utrinque angulo parvo prominulo; vertice thoracisque dorso dense minus crasse punctato-subreticulatis; metanoti dentibus postico-lateralibus triangularibus, acutis, incurvis; abdominis segmentis dorsalibus: primo basi trifossulato sat dense cras-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

sius punctato et punctulato, secundo parte basali multo subtilius densiusque rugosiuscule-punctato, parte apicali cum tertio dense subtilissime subrugose-punctulatis, secundo carinula mediana abbreviata, tertio supra seriem leniter incrassato foveolis haud profunde immersis numerosis mediocribus subrotundis, margine apicali arcuato-integro; ventre pedibusque et tegulis læte-cyaneis, tarsis nigris; alis subhyalinis, venis piceis, cellula radiali triangulariter lanceolata apice late aperta. — ♀; long. 8 mm.

Species: corpore toto læte-cyaneo et abdominis punctatura, facile cognoscitur.

Patria: Australia (Mus. Hung.).

212. **Chrysis reversa** Smith.

Chrysis reversus (!), Smith, Transact. Ent. Soc. Lond. p. 457, n. 3. (1874).

«Length 3 lines. Green inclining to olive above; beneath, bright green; sometimes of an uniform colour; occasionally dark green, with the prothorax and metathorax brighter, as well as the posterior margins of the segments of the abdomen; the wings hyaline, the nervures black. The head, thorax and base of the abdomen strongly and closely punctured, the abdomen finely so; the punctures on the second and third segments are oblong, placed transversely, and more or less confluent.»

Patria: Tasmania.

213. **Chrysis viridifrons** Smith.

Chrysis viridifrons, Smith, Transact. Ent. Soc. Lond. p. 457, n. 4. ♀ (1874).

«Female. — Length 3—4 lines. Obscure green, blue and purple; the face and body beneath bright green. The pro and mesothorax and also the posterior margins of the segments of the abdomen green; the metathorax, abdomen and vertex violet or more or less purple; the legs blue or more or less green, the tarsi dusky; wings hyaline, the nervures black. Head, thorax and baso of the abdomen strongly and very closely punctured, the punctures more or less confluent. Abdomen finely and closely punctured; the fineness of the puncturing gradating from the base of the apex, where it is very fine and close.»

Patria: Tasmania.

214. **Chrysis Caledonica** Mocs.

Chrysis integra, Montr. Annal. Soc. Linn. Lyon. Sér. 2. tom. XI. p. 249. (1864) (nec Fabr.).
Chrysis caledonica, Mocs. Term. Füz. XI. p. 15. (1887).

Mediocris, elongata, tota viridis et cyanea, parcius cinereo-alboque pilosa; cavitate faciali profunda, viridi-aurata, subtilissime punctulato-coriacea, medio longitudinaliter canaliculata; fronte planata, inæqualiter crassius punctato-rugosa acuteque arcuatim marginata; clypeo viridi-aurato, apice arcuatim emarginato nigro-æneoque limbato; genis brevibus, sublinearibus; mandibulis apice rufis; antennis crassiusculis, nigris, articulo primo viridi-aurato, secundo cyaneo; margine occipitali utrinque angulo parvo prominulo; vertice et thoracis dorso sat crasse punctato-reticulatis; pronoto brevi; meta-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

noti dentibus postico-lateralibus sat longis acutis; abdominis segmentis dorsalibus magis cyaneis, primi lateribus et secundi margine apicali virescentibus, primo sat sparsim crassius punctato interstitiis impunctatis, secundo tertioque subtilius densiusque rugosiuscule-punctatis, secundo carinula mediana distincta lævi, tertio supra seriem parum incrassato, foveolis numerosis distinctis rotundisque circiter 16 per carinulam brevem in duas partes æquales divisis, latera versus sensim minoribus; margine apicali arcuato-integro; ventre, femoribus tibiisque viridibus parumque subauratis, tarsis fuscis; alis hyalinis, venis piceis, cellula radiali lanceolata apice sat late aperta, tegulis viridibus. — ♂.

Species: de frontis area lata punctato-rugosa superneque arcuatim acute marginata, eximia est. — Montrousier speciem verbis sequentibus descripserat:

«Vert doré ou bleu métallique. Tête et Prothorax couverts de gros points enfoncés. Front muni d'un rebord transversal. Abdomen finement pointillé. Dernier segment sans dentelure. — Long. 7 mm.»

Patria: Nova Caledonia (Kanala, Montr.; Coll. Andréi!).

215. **Chrysis pacifica** Say.*

Chrysis pacifica, Say, Contrib. Maclur. Lyc. I. p. 82, n. 1. (1828). — Lec. Ins. of North Amer. I. p. 384, n. 1. (1859). — Nort. Transact. Amer. Ent. Soc. VII. p. 240. ♂. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 227. ♂ ♀. (1885).

«Seventen specimens in the collection with the following localities represented: New York, Delaware (Nortons types), North Carolina, Texas, Colorado, Washington

* Conspectus specierum *Holochrysidarum* Americæ septentrionalis secundum Aaron sequens est:

Abdomen dark red, with green, purple and golden reflections ... *martia* Cress.
Abdomen colored as the thorax, green, or blue and purple.
Posterior corners of the margin of third segment rounded, even, not produced.
An arched carina across the front of the head immediately above the basin of face, which is striated (secundum me pertinet ad genus *Chrysogona* Först.) ... *verticalis* Patt.
Front without carina, basin of face punctured.
Posterior lateral angles of the metathorax subobtuse, not produced.
Margin of third segment evenly rounded ... *inusitata* Aar.
Margins of third segment straight laterally and on the apex, broadly rounded on the angles, much tapered *optima* Aar.
Posterior lateral angles of the metathorax more or less produced or pointed.
Anteapical series of pits contained at the bottom of a strong declivity ending on each side near the base of the segment ... *pacifica* Say.
Anteapical series of pits contained in a broad, shallow groove or sulcus, becoming obsolete laterally and ending not half way to the base of segment.
Apical margin of third segment straight, or slightly rounded outwardly ... *hilaris* Dhlb.
Apical margin of third segment slightly sinuate in the middle ... *tota* Aar.
Posterior corners of the margins of third segment angulated, produced.
Corners produced but slightly into a rounded lobe, series of pits small, ending about in the middle of the lateral margins ... *cobáltina* Aar.
Corners produced into a well defined triangular tooth bluntly pointed, the series of pits large, ending near the base of the segment ... *lateri-dentata* Aar.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Territory, California and Labrador. This is undoubtedly Say's species. One specimen emerald-green with brassy and some golden reflections, the others are green and blue, with slight variation as to depth of color. Some specimens with a slightly smoothed space down the middle of the face; densely punctured, large and equal on the head and thorax, of two sizes on the abdomen, the larger ones separated, the finer punctures rather close; pits rather large, oblong, contained in a strong groove; varies greatly from 6—12 mm. in lenght. Bot males and females.» (Aaron) l. c.

Patria: America septentrionalis.

216. **Chrysis hilaris** Dhlb.

Chrysis hilaris, Dhlb. Hym. Europ. II. p. 103, n. 56. (1854). — Nort. Transact. Amer. Ent. Soc. VII. p. 239. ♂. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 227, tab. VIII. fig. 41 (metathorax) (1885).

Chrysis halictula, Grib. Annali Mus. Civ. Stor. Nat. Genova. VI. p. 359, n. 2. (1874).

«Four specimens from the localities: Canada, Illinois, Washington Territory and California (Connecticut, Norton). Varies from emerald-green to blue, purple and green; basin of face punctured; head and thorax densely punctured, large and equal, a little separated on the prothorax, with a few fine punctures between; finer and subequal on the abdomen (of two sisez according to Norton's description); apex of the second segment allmost smooth; 5,5—8 mm. long. Gribodo's *halictula* does not differ; his description is as follows (the notes in brackets are mine): «Related to *C. hilaris* Dhlb., but distinguished from it in the following characters: antennæ filiform, articles not swelling (varies in *hilaris)*, posterior margin of pronotum and sides not abnormal (not abnormal in *hilaris)*, third segment of abdomen conspicuously narrower at apex than at base (also decidedly the case in *hilaris)*, anteapical series moderately abrupt (small, but distinct in *hilaris,* this is probably what in meant by abrupt), length of body 6 mm. Habitat California.»*

Gribodo has incorrectly determined *hilaris*, for Dahbom's description reads: «metanoti anguli postico-laterales magni conici». (Aaron l. c.)

Patria: America septentrionalis.

217. **Chrysis tota** Aar.

Chrysis integer (!), Cress. Proceed. Ent. Soc. Philad. IV. p. 306, n. 1. ♀. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 240. ♀. (1879) (nec Fabr., nec Montr.).

Chrysis tota (!), Aar. Transact. Amer. Ent. Soc. XII. p. 228, tab. VIII. fig. 42. (segm. anale) (1885).

Chrysis elongata, Mocs. Term. Füz. XI. p. 15. (1887).

«Six specimens in the collection, including the type, all from Colorado; color is

* «*C. hilari* Dhlb. affinis at notis sequentibus facillime dignoscitur: antennis filiformibus, articulis haud tumidiusculis, pronoti margine postico, lateribusque haud abnormibus: segmento abdominis tertio apice conspicue angustiore quam basi: serie anteapicali modice abrupta. Long. corp. mill. 6. Hab. in California.»

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

emerald-green all over with brassy reflections and very little blue; head and thorax covered with comparatively long fuscous pubescence; head, thorax and lateral surface of abdomen with the larger punctures sparse, the intermediate spaces filled up with close, fine punctures; 10—12 mm. long. The *var. a.* ♀. of Norton is the following species.» (Aaron l. c.)

Patria: America septentrionalis.

218. **Chrysis perpulchra** Cress.

Chrysis perpulchra, Cress. Proceed. Ent. Soc. Philad. IV. p. 308, n. 3. ♀. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 241. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 229. ♂♀. tab. VIII. fig. 43. (segm. anale) (1885).

Mediocris, robusta, læte-viridis vel cyanea plus minusve virescens, longius cinereo-alboque pilosa; cavitate faciali sat profunda, dense subtilissime transverse-striata, lateribus crasse punctata, superne transverse marginata, margine ramulos ad ocellos et deorsum versus demittente; antennis crassiusculis, nigris, articulis tribus primis viridibus vel cyaneis; mandibulis bidentatis; vertice densius, thoracis dorso dispersius crassiusque punctato-reticulatis; metanoti dentibus postico-lateralibus triangularibus acutis, curvatis; abdominis segmentis dorsalibus: primo sat crasse punctato interstitiisque punctulatis, secundo fortius densiusque, tertio multo subtilius denseque irregulariter rugosiuscule-punctatis carinulaque mediana instructis, hoc supra seriem sat fortiter calloso, foveolis profunde immersis per carinulam interruptis, subrotundis, confluentibus, margine apicali sat longo dense punctulato centroque plus minusve profunde late-triangulariter exciso; ventre pedibusque corpore concoloribus, tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice sat late aperta.

Species: de cavitate faciali, mandibulis et punctatura abdominis excisuraque marginis apicalis segmenti tertii, facile cognoscitur. — Illam apud scriptores Americanos Gonochrysidibus insertam invenimus; sed secundum me locum magis aptum habet apud Holochrysidas. Ex eadem causa etiam *Chrysidem facetam* Aar. his adnumeravi.

«Twenty-seven specimens in the collection from the localities: Canada, Delaware, North Carolina, Georgia, Colorado (the type), Utah, Nevada, California, New Mexico, Montana, Washington Territory and Vancouver's Island. There are variations in color from deep blue and little green with some purple, the upward continuation of the carina strong, enclosing the anterior ocellus; others having this continuation almost wanting. The notch in the middle of the apical margin of third segment varies in size and depth, and the lateral margins are in some specimens straight, in others slightly sinuate; length from 6—8 mm.» (Aaron l. c.)

Patria: America septentrionalis (Texas, Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

219. **Chrysis smaragdicolor** Walk.

Chrysis smaragdicolor, Walk. Lord's The Natur. in Vancouver Islands. II. p. 343. (1866).

«Smaragdina, aspere punctata; antennis viridibus, apices versus nigris; abdominis segmenti secundi margine postico subglabro, tertii margine postico subruguloso, quarto brevissimo non dentato, tarsis nigris, alis nigricantibus, posticis cinereis.

Emerald green, thickly and somewhat coarsely punctured. Antennæ black, bright green towards the base. Abdomen very finely punctured than the thorax; second segment very finely punctured than the first almost smooth, and with purplish blue reflections along its hind border; hind border of the third segment slightly rugulose; fourth segment very short, not dentate. Tarsi black. Wings blackish, cinereous hindward; veins black. Lenght of the body 7 lines, of the wings 9 lines.»

Patria: America septentrionalis (British Columbia).

220. **Chrysis Doriæ** Grib.

Chrysis Doriae, Grib. Annali Mus. Civ. Stor. Nat. Genova. VI. p. 359, n. 3. (1874). — Aar. Transact. Amer. Ent. Soc. XII. p. 231. (1885).

Descriptio secundum Gribodo:

«*C. cyaneae* L. quoad habitum assimilis, sed ano integerrimo mox dignoscitur. Gracilis, viridi-cyanea, nitidiuscula: capite et thorace confertim subcrasse punctatis, abdomine sparsim et modice punctato: segmento tertio apice distincte angustiore quam basi, arcuato subtruncato: serie anteapicali modice abrupta, medio distincte interrupta, foveolis obliteratis. Long. corp. mill. 4 1/2.»

Patria: America borealis (Grib.).

Animadversio. — Species forsan in genus *Chrysogona* Först. pertinet?

221. **Chrysis resecta** Grib.

Chrysis resecta, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 336, n. 14. (1879).

«Omnino læte viridis nitidiuscula sat depressa, capite thoraceque confertissime irregulariter punctatis et punctulatis subgranosis: abdominis segmento primo (præcipue basi lateribusque) sparsius et crassius, secundo et tertio densius subtiliusque irregulariter punctatis et punctulatis, margine apicali segmenti secundi medio polito subimpunctato: capite triangulari sat producto, ricti lateribus elongatis concurrentibus: facie plana, superne haud marginata: mesopleuris non tuberculatis: serie anteapicali irregulari parum profunda, foveolis mediocribus irregularibus: margine anali apice distinctissime transversim reciso: alis sordide hyalinis.

Long. corp. mill. 9.

Questa elegante specie si riconosce immediatamente dalla struttura singolare del margine anale: il quale appare come un margine curvo ordinario (ad esempio della *refulgens)* tagliato nettamente all' estremità in senso transversale: la troncatura è retta,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ai due lati, congiungendosi colla parte laterale curva, forma due angoli ben distincti. Assai poco comune è la forma della faccia, che non presenta alcuna cavità sotto antennale, ed ha un contorno distinctamente triangolare.

Un solo esemplare della mia collezione.»

Patria: America septentrionalis (Mariposa in California).

222. **Chrysis inusitata** Aar.

Chrysis inusitata (!), Aar. Transact. Amer. Ent. Soc. XII. p. 227, tab. VIII. fig. 38. (caput antice visum) et 40. (1885).

«Bright emerald-green, with brassy and slight golden reflections. Very densely punctured all over, the punctures on the head and thorax of twe sizes, the larger one sparse, the finer punctures entirely filling up the intermediate spaces, largest on dorsum of metathorax, very fine on the metanotum; face punctured, obliquely and very slight striated just above the base of antennæ; abdomen with the punctures dense, equal, fine on the dorsum; wings hyaline, subfuscous on the radial cellule; postlateral spines of the metanotum abbreviated, subobtuse, not produced; apical margin of the third abdominal segment evenly rounded; pits small, contained in a shallow groove; 8.5 mm. long. (♀ ?) — Two specimens.«

Patria: America septentrionalis (insula Vancouver et California).

223. **Chrysis optima** Aar.

Chrysis optima (!), Aar. Transact. Amer. Ent. Soc. XII. p. 227. ♀. tab. VIII. fig. 39. (segm. anale) (1885).

«Bright green and blue, one specimen emerald-green; densely punctured, the punctures on the head and thorax of two sizes, the larger ones separated, the smaller closely filling up the spaces between, largest on the scutellum and postscutellum, fine on the metanotum; the posterior lateral angles of the metanotum, abbreviated, obtuse; face punctured with very fine, oblique striæ just above the base of antennæ; abdomen densely and about equally punctured; third segment with margins rounded unequally, narrowed at the apex, the ovipositor projecting and showing a metallic green color; the pits rather separated, contained in a broad shallow groove; wings hyaline, slightly infuscated on the disc; 8 mm. ♀. — Three specimens.»

Patria: America septentrionalis (California).

224 **Chrysis lateri-dentata** Aar.

Chrysis lateri-dentata, Aar. Transact. Amer. Ent. Soc. XII. p. 228. ♀. (1885).

«Rather dull, light green, with some brassy reflections; head and thorax closely punctured, the punctures not large, subequal; abdomen with the first and second

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

segments densely punctured, the larges ones separated, the spaces between them filled up with finer punctures of several sizes; third segment with the punctures smaller, contiguous, subequal; apical margin nearly straight, the lateral posterior corners produced into a distinct pointed tooth; pits medium, contained in a deep groove, which ends on the lateral margin near the base of the segment; wings hyaline, basal half infuscated; tarsi light brown; 9 mm. long.

Three specimens, all ♀.

Differt from *cobaltina* in laving little or no pubescence on the head and thorax, in the pits and grooves, in the lateral apical teeth and by the larger punctures on abdomen being deeper.»

Patria: America septentrionalis (Montana and Washington Territory).

225. **Chrysis cobaltina** Aar.

Chrysis integra, Cress. *var. a.* ♀. Nort. Transact. Amer. Ent. Soc. VII. p. 240. (1879).
Chrysis cobaltina, Aar. Transact. Amer. Ent. Soc. XII. p. 228. ♀. (1885).

«Elegant blue with some green and very slight purple reflections; head with dense fuscous pubescence, shorter and less dense on the thorax; head and thorax densely punctured, on the pothorax with some finer punctures between the larger ones; punctures on abdomen less dense, those on the first and second segments shallow, the larger ones sparse, and with separated finer punctures on the intermediate spaces, those on the third segment contiguous, subequal; apical margin of third segment very slightly sinuate in the middle, the lateral posterior corners distinctly but slightly produced or lobed; pits small, shallow, rather close, contained in a shallow groove, which ends about midway on the lateral margin; wings hyaline, the basal half infuscated, the radial cell darkest; tarsi fuscous; 9 mm. long. ♀.

This is probably the typical specimen of Norton's var. *a.* ♀. of *integra*. — One specimen.«

Patria: America septentrionalis (Massachusetts).

226. **Chrysis divergens** Cress.

Chrysis divergens, Cress. Proceed. Ent. Soc. Philad. IV. p. 105. ♀. (1865).

«Metallic green; the mesothorax and abdomen, especially the second segment, blue; antennæ, except base, black; third segment of abdomen with a deep transverse excavated line before the apical margin, interrupted on the middle; wings subhyaline.

Head green, tinged with blue on the front, deeply and very closely punctured, slightly pubescent; on the front a transverse, sinuate carina, from which proceeds two equidistant, abbreviated carinæ towards the ocelli; antennal cavity pubescent and minutely rugose; antennæ black, the two basal joints blue-green. Thorax deeply, coarsely and closely punctured, slightly pubescent, green, with a more or less deep

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

blue reflections, especially on the mesothorax, which has two well impressed longitudinal lines on the disk; sides of the pectus deeply excavated, golden-green, as well as the pleura, which is more grossly punctured than the rest of the thorax; metathorax with the posterior angles stout, long, subacute and strongly divergent, the excavation on each side very deep and golden-green; tegulæ blue-green. Wings almost hyaline, with a very faint fuscous tinge; nervures blackish. Legs blue-green, slightly pubescent; tarsi blackish. Abdomen oblong, scarcely broader than the thorax, deeply and rather closely punctured, green, deep purplish-blue on the disk of the second segment and on the apex of the third segment, which has a deep, transverse, foveate excavation just before the apical margin, and interrupted on the middle by an elevated ridge; apical margin entire; venter deeply concave, blue-green, polished. Length 3 lines.»

Patria: Cuba.

227. **Chrysis Azteca** n. sp.

Mediocris, elongata, sat robusta, cyaneo-viridis, opaca, longius cinereo-alboque pilosa; truncatura antica pronoti violacea; cavitate faciali sat profunda, dense irregulariter transverse-striata, superne acute-marginata, margine ramulum utrinque ad stemma anticum emittente areamque subcompletam medio depressam formante; antennis longis, crassiusculis, fusco-nigris, scapo viridi, sequentibus articulis tribus virescenti-cyaneis, tertio mediocri, quarto quintoque simul sumptis longitudine æquali; genis sat brevibus, articulo antennarum secundo æquilongis; vertice thoracisque dorso crasse profundeque fere æqualiter punctato-reticulatis; postscutello parum gibbo, supra depresso; metanoti dentibus postico-lateralibus validis, longiusculis, subacutis, apice incurvis; abdominis segmentis dorsalibus cyaneo-viridibus, opacis, nitore violaceo, primo basi trifossulato crasse profundeque sat sparsim, 2—3 densius parumque subtilius punctato-reticulatis, secundo carinula mediana minus distincta, tertio ante marginem apicalem foveis quattuor magnis et duabus lateralibus minutis violaceis lævibus subpellucidis, margine apicali longiusculo arcuato, centro leniter sinuato; segmentis omnibus dense cinereo-pilosis; ventralibus viridibus, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et tarsorum articulis basalibus supra viridibus, articulis reliquis nigris; alis hyalinis, venis firmis piceis, cellula radiali lanceolata completa, tegulis viridibus. — ♀; long. 8 mm.

Species: de cavitate faciali, postscutello, punctatura corporis crassa punctato-reticulata, abdominis segmenti dorsalis tertii foveis quattuor magnis lævibus violaceis, iam facile cognoscitur.

Patria: Mexico (Mus. Hung.).

Animadversio. — *Chrys. Sonorensi* Cam. similis esse videtur; sed cavitate faciali dense irregulariter transverse-striata, superne acute-marginata etc. iam satis distincta.

228. **Chrysis Sonorensis** Cam.

Chrysis sonorensis, Cam. Biolog. Central-Americ. Hym. p. 461, n. 2, tab. XX. fig. 9, 9.a. (1888).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Green, with cobalt-blue spots, the head with brassy tints; narrowish, linear; closely and uniformly punctured, but if anything more strongly on the head, pro- and metathorax; the abdomen not so strongly and more closely punctured than the thorax, the third segment with a coarser punctuation than the second. Basin of face with a very shallow excavation, punctured. Eyes small, oblong. Lateral angles of the metathorax not projecting much, and not outwardly, the projection not reaching to the apex of the metathorax, which is rounded inwardly between the apex of the projection and the centre. Abdomen longer than the thorax, the base scarcely excavated; the apex of the third segment raised, projecting upwards (especially in the centre), broadly but not deeply, retreating backwards in the middle; the eight distinct foveæ are large, longer than broad, and moderately deep in the centre, becoming ill-defined laterally; the third segment is depressed somewhat broadly at the base, broadly raised in front of the foveæ; the foveæ-bearing part of the segment in distinctly narrower than the rest of the segment. The pubescence is long, sparse, and fuscous. Antennæ green, black towards the apex. Legs green, with blue tints and covered with pale hair; tarsi black. Wings clear hyaline, scarcely infuscated towards the base.

Legth 8 millim.

Closely allied to *C. tota*, Aaron (olim *integra*, Cresson, nec Fabr.); but the latter is longer (10—12 millim.), and has not the basin of the face excavated, the eyes «nearly circular», the posterior angles of the metathorax divergent, and the foveæ much smaller and round.»

Patria: Mexico (Nothern Sonora, Cam.).

229. **Chrysis Mexicana** Cam.

Chrysis mexicana, Cam. Biolog. Central-Americ. Hym. p. 460, n. 1. tab. XX. fig. 10, 10.a. (1888) (nec Guérin).

«Dull emerald-green, with bluish tints on the legs and thorax; broad, obovate, covered densely with a moderately long fuscous pubescence. Head, pro- and mesonotum closely and uniformly punctured; metanotum with the punctures larger, more irregular, and more widely separated; pleuræ with the punctures still larger, and running into reticulations; basin of face not very deeply excavated, transversely striated. Lateral margin of metathorax acutely triangularly pointed, punctured. Abdomen with the first and second segments uniformly covered with shallow, clearly separated punctures; the third segments more strongly punctured; the base of the first segment almost transverse. Apical margin of the third segment rounded (but not forming an arc of a circle, not being broad enough), entire, the base noth angled; the apex without pits, but with a distinct margin, in front of which there is a narrow groove. Antennæ black, the scape metallic green. Legs green, punctured, covered with long fuscous hair; the tarsi black, the spurs pale. Wings smoky, somewhat paler at the base.

Two specimens from Presidio apparently also belong to this species. They are

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

smaller (scarcely 7 millim.), and have the abdomen more strongly punctured, duller, and with scarcely any blue tints; but otherwise do not differt appreciably.»

Patria: Mexico (Zacatecas city).

230. **Chrysis unita** n. sp.

Mediocris, elongata, sat robusta, cyaneo-viridis, opaca, cinereo-alboque pilosa; fronte angusta, cavitate faciali minus profunda, dense subtilissime transverse-striata, lateribus punctulato-coriacea, superne depresso-convexa, tantum in medio carinula minuta levi minus distincta; clypeo apice truncato nigroque æneo; genis linearibus, fere nullis; vertice dense irregulariter punctato-subreticulato; pronoto brevi, transverso-rectangulo et antice in medio impresso cum mesonoto dense subtilius, scutello postscutelloque fortius punctato-reticulatis; postscutello lamina crassa apice arcuata sat porrecta elevataque postice declivi instructo; metanoti dentibus postico-lateralibus mediocribus, subacutis; abdominis segmentis dorsalibus subviridi-ænescentibus parumque violascentibus subopacis, primo parum fortius, reliquis subtiliter punctato-rugosis, coriaceis, 2—3 imo basi late nigro-æneis sparsim fortius punctatis, interstitiis lævibus, secundo carinula mediana abbreviata minus distincta, tertio convexo foveolis profunde immersis confluentibus unitis, sulcum transverso-arcuatum sat latum formantibus, margine apicali brevi brunneo-pellucido, violascenti, arcuato-integro; ventre violaceo-cyaneoque vario; pedibus concoloribus, tarsis fusco-brunneis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice subcompleta, tegulis viridibus, externe ænescentibus. — ♀; long. 7 mm.

Species: de cavitate faciali, lamina postscutelli, punctatura abdominis et segmenti tertii serie foveolarum in unum confluentibus sulcumque latum transverso-arcuatum formantibus margineque apicali, a congeneribus facillime cognoscenda.

Patria: Mexico (Mus. Hung.).

Animadversio. — *Chrys. Mexicanae* Cam. similis esse videtur; auctor tamen nullam facit mentionem de forma postscutelli notisque aliis, et ideo nostram speciem bene distinguendam censeo.

231. **Chrysis quadri-tuberculata** Cam.

Chrysis quadri-tuberculata, Cam. Biolog. Central-Americ. Hym. p. 461, n. 3, tab. XX. fig. 7, 7.a. (1888).

«Green, with slight bluis reflections; the head and thorax covered with rather long fuscous hair; the abdomen with a short pale pubescence on the base and apex, the second segment being almost glabrous. Head and thorax coarsely and uniformly punctured; the abdomen with the punctuation much less coriaceous, more scattered, and shallower. Basin of face shining, transversely striated; the sides densely covered with withe hair. There is a transverse keel above the face, the keel being prolonged in a half-circle so as to enclose the lower ocellus. Above the ocelli are four large, shining,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

impunctate tubercles; the inner pair blue, and nearer each other than are the laterales ones from them. The posterior lobes of the metathorax large, coarsely punctured, and divergent. Abdomen a little longer than the thorax; the third segment notched and raised in the middle, projecting on either side of the notch into a broad distinctly separated lobe, the notch wider than the lobes, the latter shining and impunctate; the foveal groove wide and deep; the foveæ large, deep, blue, roundish, and closely set, although few in number. Antennæ green, black at the apex. Tarsi blackish. Wings hyaline, slightly infuscated in front.

Length 8 millim.

A stout and broad insect. The peculiar tubercles on the vertex clearly ally it to *C. faceta* Aaron, from Colorado; but that species has the abdomen mettalic scarlet and gold, with ruby reflections, forming a striking contrast to the colour of the thorax.»

Patria: Guatemala (Capitello).

II. *Corpus cum abdominis segmento dorsali tertio obscure nigro-aeneum, postscutello et abdominis segmentis duobus primis virescenti-aeneis cupreoque lavatis; antennarum flagello tarsisque fusco-rufis.*

232. **Chrysis Kuthyi** n. sp.

Mediocris, robusta, obscure nigro-ænea, densius cinereo-alboque pilosa: postscutello et abdominis segmentis dorsalibus duobus primis virescenti-æneis cupreoque lavatis; fronte angusta, cavitate faciali sat profunda, dense subtilissime coriacea medioque leviter carinata, lateribus argenteo-sericeo-pilosa, superne non marginata; antennis fusco-rufis, argenteo-puberulis, ultimis colore magis diluto, scapo cupreo-ænescenti; vertice et mesonoto dense minus crasse punctato-subreticulatis, coriaceis; pronoto brevi, transverso, antice profunde fossulato, coriaceo, sat sparsim punctato interstitiisque subtilissime punctulatis, scutello et postscutello punctato-reticulatis; metanoti dentibus postico-lateralibus mediocribus, curvatis; abdominis segmentis dorsalibus subtiliter coriaceis, duobus primis et tertio in medio punctatura duplici, irregulariter nempe minus crasse punctato interstitiisque subtilissime punctulatis, punctatura segmenti secundi margine apicali densiore, secundo sine carinula mediana tertioque basi concinne minus dense punctatis, tertio ante marginem callosum seriei anteapicalis transversaliter convexiusculo-immerso, foveolis distinctis profundis circiter 20 parum sulciformibus, margine apicali arcuato-integro; ventre, pedibus tegulisque obscure nigro-æneis, tarsis fusco-rufis; alis hyalinis, venis fuscis, cellula radiali leniter lanceolata valde incompleta, apice nempe late aperta. — ♀; long. 7 mm.

Eximiam hanc speciem in honorem amici mei: Desiderii Kuthy denominavi, qui faunam entomologicam Hungariæ iam tot detectionibus illustris ditavit speciemque hanc circa Budapestinum initio Augusti 1887. detexit mihique donavit.

Patria: Hungaria centralis (Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

III. *Corpus obscure nigro-aeneum, thorace ex parte abdomineque obscure nigro-cupreis; antennarum flagello tarsisque saturate brunneis.*

233. **Chrysis Mlokosewitzi** Rad.

Chrysis Mlokosewitzi, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 13. ♀. (1888). sec. spec. typ. e coll. **Rad.**

Parvula, angustula, obscure nigro-ænea, parce albo-pilosa; pro- et mesonoto, scutello, postscutello et abdominis segmentis dorsalibus ventreque obscure nigro-cupreis; antennarum flagello tarsisque saturate brunneis, scapo, femoribus tibiisque ænescentibus; cavitate faciali planiuscula, punctulato-coriacea, lateribus albo-pilosa, superne convexa, non marginata; abdominis segmentis dorsalibus subtiliter valde dense rugosiuscule-punctulatis, serie anteapicali foveolis haud numerosis parvis subrotundis, lateralibus haud distinctis, margine apicali rotundato medio parum sinuato; alis sordide-hyalinis, venis pallide-fuscis, cellula radiali triangulariter lanceolata apice aperta. — ♀; long 5 1/2 mm.

Petria: Caucasus (Coll. Rad.).

IV. *Corpus obscure viridi-aeneum; abdominis dorsum viridi-cyaneum, segmento secundo margine apicali et tertii disco viridibus.*

234. **Chrysis chalcophana** n. sp.

Parvula, angustula, obscure viridi-ænea, parce albo-pilosa, vertice cyanescenti; cavitate faciali haud profunda, medio canaliculata, dense punctulato-coriacea, superne indistincte marginata; antennarum flagello tarsisque fusco-rufis, scapo ænescenti; thorace supra subtiliter et inæqualiter subreticulato; abdomine viridi-cyaneo, valde dense subtiliter rugosiuscule-punctulato, segmento secundo margine apicali et tertii disco viridibus, serie anteapicali leniter immersa foveolis parvis rotundatis violascentibus, margine apicali valde leniter arcuato; ventre viridi et cyaneo nigroque maculato; femoribus tibiisque viridibus; alis hyalinis, venis pallide-fuscis, cellula radiali lanceolata fere completa. — ♂; long. 5 mm.

Species: colore capitis thoracisque facile cognoscitur.

Patria: Caucasus (Coll. Rad.).

V. *Corpus cyaneum et viride, abdominis dorso aureo-viridi, margine apicali nigro-aeneo.*

235. **Chrysis tarsata** Dhlb.

Chrysis tarsata, Dhlb. Hym. Europ. II. p. 105, n. 57. (1854). -- Schck, Nass. Jahrb. XI. p. 74, n. 1. (1856); Progr. Gymn. zu Weilb. p. 14, n. 2. (1870). — Lampr. Goldwesp. Deutschl. p. 10, n. 10. (1881).

Descriptio secundum Dahlbom:

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Parva 1 1/2 lin. decimal. long. subangusta punctato-rugulosa griseo-pilosa cyaneo-viridis pedibus concoloribus, tarsis brunneo-testaceis, abdominis dorso aureo-viridi, margine anali nigro-æneo, alis hyalinis.

Observ. Magnitudo et statura valde similis individuis minoribus *Chrysidis cyaneae*, at pictura et margine anali diversa. Totum dorsum corporis et mesopleuræ punctato-rugulosa, superficies totius corporis sparse griseo-pilosa. Caput læte virens; facies pone antennas utrinque parce albido-subsericea. Antennæ fuscæ; scapus, pedicellus et flagelli articulus primus viridi-micantes. Mandibulæ apice læte et palpi brunnescentes. Pronotum cyaneum macula transversa magna utrinque ad sulcum medianum læte viridi. Mesonotum totum et mesopleuræ viridia. Metanotum cyaneum. Sternum viride suturis et maculis cyaneis. Abdominis dorsum punctulato-rugulosum parum nitidum, aureo-viride et præsertim ad latera atque ad apicem segmentorum ex hoc colore micans; basis segmenti primi cyanescens; margo apicalis segmenti tertii nigro-æneus vix incrassatus, series ante-apicalis concolor e punctis profundiusculis irregularibus constituto; ceterum est segmentum tertium æqualiter depresso-convexum. Venter disco viridis, basi apiceque nigricans. Pedes virides micantes, tarsis brunneis l. brunneo-testaceis. Alæ subhyalinæ venis fuscis; cellulis mediali et discoidali prima (hoc exemplum est in Chrysidis Genere rarissimum) completis, submediali prima et secunda nec non radiali subcompletis.»

Patria: Germania (ad Berolinum, Dhlb.) et Tyrolis (Dalla-Torre).

VI. *Corpus viridi-cyaneum, vertice, pro- et mesonoto scutelloque et abdominis segmento dorsali primo viridi-aureoque lavatis, huius segmentis: secundo margine apicali et tertio ante seriem cupreo-auratis, tertio margine apicali cupreo-aeneo.*

236. **Chrysis Caffra** n. sp.

Minuta, elongata, sat gracilis, viridi-cyanea, parcius cinereo-alboque pilosa; vertice circa stemmata, pro- et mesonoto sculloque viridi-aureoque lavatis; cavitate faciali sat profunda, viridi, dense subtilissime transverse-striata, superne non marginata, fronte alta; antennis tenuibus, haud longis, nigris, articulis duobus primis viridibus; vertice, mesonoto cum scutello sat crasse punctato-subreticulatis; pronoto transverso, brevi, antice in medio parum impresso, fortius punctato interstitiisque subtilissime punctulatis; abdominis segmentis dorsalibus viridi-cyaneis, primo viridi-aurato crassius subrugose-punctato, secundo tertioque sat sparsim punctatis interstitiisque microscopice subtilissime punctulatis, subcoriaceis; secundo carinula mediana nulla, margine apicali et tertio ante seriem leniter callosam cupreo-auratis, foveolis sat profunde immersis, numerosis, minus distinctis, subsulciformibus, margine apicali sat longo cupreo-æneo integro, lateribus parum angulatis; ventre viridi et cyaneo nigroque picto; pedibus viridi-cyaneis, tarsis fuscis; alis parum fumato-hyalinis, venis fuscis, tegulis viridibus. — ♀; long. 5 mm.

Patria: Caffraria (Mus. Cæs. Vindobonense).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

VII. *Corpus viride aureo lavatum, abdominis segmentis dorsalibus secundo et tertio basi violaceo-purpureis.*

237. **Chrysis sumptuosa** SMITH.

Chrysis sumptuosa, Smith, Journ. Proceed. Linn. Soc. Zoology. III. p. 27, n. 3. (1859).

«Fortiter punctata, metallico-viridis auro lavata; thoracis disco, abdominis segmento secundo et tertio basi purpureis; segmento apicali margine integro.

Length 3 1/2 lines. Golden-green; the thorax at the sides and posteriorly with bright coppery effulgence; an oblong purple spot on the disk of the thorax; the metathorax and its lateral teeth vivid green, the vertex and prothorax plashed with gold. Abdomen: the basal segment bright green, with a bright coppery or golden effulgence at the sides; the second segment purple at the base, coppery at the apex, and with a suffusion of green between these tints; the third segment is similarly coloured, with the apical margin entire; the insect closely and strongly punctured troughout.»

Patria: Celebes.

VIII. *Corpus viride, nigro-violaceo-maculatum; abdominis segmentis dorsalibus margine apicali viridi-auratis cupreoque lavatis.*

238. **Chrysis Andréi** n. sp.

Mediocris, sat robusta, viridis, densius cinereo-alboque pilosa; vertice circa stemmata, pronoto antice in medio et postice utrinque, lobis item mesonoti et scutelli basi nigro-violaceo-maculatis; cavitate faciali planata, irregulariter crassius punctato-rugosa, lateribus subtus irregulariter subtiliterque transversim rugosis, superne non marginata; antennis crassiusculis, apicem versus valde attenuatis, nigris, scapo et articulo primo flagelli viridibus, huius articulo longo, tertio quartoque simul sumptis longitudine æquali; genis linearibus, fere nullis; mandibulis bidentatis, dente superiore parvo, obtuso; vertice densius et subtilius, thorace supra crasse profundeque regulariter punctato-reticulatis; pronoto transverso, sat longo, antice subtiliter transversim marginato, mesonoti suturis profundis; metathorace basi profunde fossulato nigroque violaceo; metanoti dentibus postico-lateralibus robustis triangularibus, subacutis; abdominis segmentis dorsalibus parte basali nigro-violaceis, apicali viridi-auratis cupreoque lavatis; primo basi crasse sparsim punctato, interstitiis spatioque superiore lævibus ac politis, disco et etiam secundi densius subtiliusque, lateribus et tertii parte apicali crasse irregulariter punctato-rugosis, tertio parte basali valde dense subtilissime transversim aciculato, serie anteapicali nulla, margine apicali centro emarginato; segmentis ventralibus viridi-subauratis, crasse sat dense punctatis; femoribus tibiisque et tarsorum articulo primo supra cyaneis et viridibus, articulis reliquis et tibiis postice nigris; alis sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice late aperta, tegulis nigro-æneis, antice cyanescentibus. — ♂; long. 7 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Eximia hæc species: de punctatura singulari faciei abdominisque et serie anteapicali deficiente, facile cognoscitur.

Patria: Brasilia (Coll. Edm. André).

IX. *Corpus minutum totum viridi-auratum (in Chrys. fugace Ab. abdominis segmento dorsali tertio margine apicali virescenti-aeneo).*

239. **Chrysis fugax** Ab.

Chrysis fugax, Ab. Diagnos. Chrys. Nouvell. p. 5, n. XXXI. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 76 et 86. ♂. (1879) sec. spec. typ. e coll. Abeillei. — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 162. (1879).

Parvula, angustula, subfiliformis, parallela, tota viridi-aurata, nitore cupreo, pectore pedibusque cyanescentibus, parcius cinereo-alboque pilosa; cavitate faciali lata, planata, medio subtilius longitudinaliter canaliculata, utrinque dense subtiliter punctulato-coriacea, superne convexo-depressa, non marginata; antennis longiusculis, tenuibus, nigris, cano-puberulis, scapo ænescenti, articulo tertio brevi, secundo dimidio tantum longiore; genis proportionaliter longis, articulo antennarum tertio æquilongis vel parum adhuc longioribus; mandibulis rufescentibus; oculis valde exsertis, ovalibus; vertice valde convexo cum thorace dense subtiliter inæqualiterque punctato-subreticulatis, subcoriaceis; occipite utrinque angulo spinoideo minuto; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter profunde sulcato; postscutello parum gibbo, fovea centrali minuta; metanoti dentibus postico-lateralibus mediocribus, tenuibus, subacutis; mesopleuris inermibus; abdominis segmentis dorsalibus: primo basi cyanescenti, 2—3 nigro-æneis; 1—2 dense subtiliter, tertio adhuc subtilius rugosiuscule-punctulatis, tertio convexo, supra seriem vix incrassato, foveolis mediocribus, circiter 18, rotundis, margine apicali virescente, valde brevi, rotundato-integro, medio parum sinuato, lateribus arcuatis; ventre cyaneo nigroque vario; tarsis rufescentibus; alis hyalinis parum sordidis, cellula radiali triangulariter lanceolata completa, tegulis viridi-cyaneis. — ♂; long. 5 mm.

Chrys. Krüperi Mocs. similis; sed minor, magis gracilis, colore corporis non tam læte viridi-aurato, antennarum tantum scapo ænescenti, punctatura thoracis subtiliori, sed abdominis e contrario parum fortiore, tertio margine apicali virescenti-æneo, distincta.

Patria: Gallia (Lorgues, Ab.; Provence. Marq.).

240. **Chrysis Krüperi** n. sp.

Minuta, elongata, sat gracilis, viridi-aurata, parcius fusco-alboque pilosa; cavitate faciali planata, dense subtiliter punctato-coriacea, superne convexa, non marginata; antennis crassiusculis, nigris, articulis tribus vel quattuor primis viridibus; vertice sat concinne punctato-reticulato; thorace supra inæqualiter subtilius punctato et punctulato,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

subcoriaceo, punctatura pronoti parum fortiore, metanoti multo subtiliore; abdominis segmentis dorsalibus subtiliter punctato-coriaceis, secundo carinula mediana nulla, tertio supra seriem convexo, foveolis haud immersis sat profundis solum 8—10 visibilibus, rotundis, margine apicali brevi arcuato-integro; segmentis ventralibus viridi-auratis, segmento secundo basi utrinque et tertio basi nigro-maculatis; pedibus viridi-cyaneis, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali leniter lanceolata penitus completa, tegulis viridi-cyaneis. — ♀. long. 5—5½ mm.

Species: de colore uniformi viridi-aurato, tegulis viridi-cyaneis staturaque parva, iam facile cognoscitur. — Cum *Chrysida viridana* Dhlb. multum habere potest similitudinis; sed de tegulis viridi-cyaneis nulla facta est mentio.

Patria: Græcia (mons Parnassus, Mus. Atheniense et Cæs. Vindob.).

241. **Chrysis viridana** Dhlb.

Chrysis viridana, Dhlb. Hym. Europ. II. p. 137, n. 75. ♀. (1854).

»Parva gracilis 1⅓ lin. decimal. long. modice punctata viridis, vertice pronoto mesonoto abdominisque dorso viridissime auratis, hoc punctulato-coriaceo margine apicali purpureo-aureo, serie ante-apicali levi (non immersa) punctis parvis rotundis distinctis, ventre modice fornicato nigro-, viridi- et igneo-maculato, alis hyalinis venis fuscis, cellula radiali completa.

Observ. Corpus fere ut in *Chrysida succincta* constructum, sparse cinereo- et canopilosellum. Caput viride latiusculum, vertice et occipite punctato-subreticulatum; oculi parvi valde exserti; antennæ longiusculæ subangustæ fuscæ, a basi fere in medium viridi-nitidæ; clypeus parvus, apice subtransversus; mandibulæ nitidæ piceo-brunneæ; palpi tenues fusci. Thoracis dorsum et mesopleuræ subtiliter punctato-reticulata; pronotum et mesonotum viridissime aurea, dorsuli area media basi coriacea; metanotum et pectus viridi-cyanea aut cyaneo-viridia. Pedes virides tarsis fuscis. Alæ hyalinæ, ad costam cellulæ radialis nonnihil sordide subfumosæ; cellula radialis triangulariter lanceolata completa, scil venæ radialis apex tenuis costam tangit. Abdomen ovato-oblongum confertim punctulatum fere coriaceum, viridi-aureum, modice depresso-convexum; segmenti tertii series ante-apicalis centro interrupta l. subobliterata, margo apicalis summus arcuatus tenuis (non incrassatus) paullulum oblique prominulus rufo-aureus.

Patria: Asia minor.

X. *Corpus viridi-cupreum, abdomine roseo tincto.*

242. **Chrysis chloroprasis** Buyss.

Chrysis chloroprasis, Buyss. Revue d'Entom. VII. p. 5. ♀. (1888).

»Corps assez trapu, couvert d'une longue pubescence blanchâtre, entièrement vert-cuivré, l'abdomen avec une teinte rosée métallique. Ponctuation de l'avant-corps ruguleuse, coriacée, formée de points irréguliers, très serrés, inégaux. Tête grande, face

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

rectangulaire, joues longuement prolongées en avant, clypeus large, à teinte cuivré-doré, cavité faciale plane, plus finement et plus densément ponctuée, à teinte vert-gai; antennes brun noirâtre avec les trois premiers articles verts, le troisième deux fois long comme le deuxième. Pronotum assez court, rectangulaire, ayant dans sa ponctuation de gros points ronds à fond brillant, un léger sillon se trouve au milieu de la troncature antérieure; mésonotum ponctué comme la tête; écusson aves des points à fond brillant comme sur le pronotum; postécusson légèrement convexe, les plus gros points de la ponctuation à fond plan; angles postico-latéraux du métanotum à pointe courte, subaiguë, un peu divariquée. Écailles vert un peu bleuâtre; ailes parfaitement hyalines à nervures très épaisses, cellule radiale grande, très allongée, subfermée. Pattes vertes un peu cuivrées, tarses brunâtres. Abdomen brillant, un peu cylindrique, à dorsulum assez convexe, couvert d'une ponctuation fine, peu profonde, mais assez serrée, les intervalles brillants, très lisses: premier segment à ponctuation un peu moins fine, avec la bordure apicale lisse, légèrement bleu, la troncatura antérieure est brusquement creusée et bleue; seconde segment à bordure apicale réfléchie, dès lors un peu bombée, très angaînante, marginée d'une teinte bleue; troisième segment tronqué-arrondi transversalement, à ponctuation semblable à celle du seconde segment, mais à points plus profonds; côtés des segments subrectilignes; ligne de points antéapicale un peu enfoncée, formée de 16 points environ, très petits, peu visibles, ouverts, espacés, arrondis; marge apicale large, concolore, couverte de petits points confluents transversalement, bordure extrême subscarieuse, hyaline. Ventre avec chaque segment vert plus ou moins bleuâtre, un peu cuivré, entourés de noir. Oviscape roussâtre. — Long. 7 1/2 mill.

Le *Chrys. chloroprasis* se rapproche beaucoup par sa forme du *Chr. austriaca* Fabr., mais le coloris est bien différent, comme on vient de le voir, et sa taille est un peu plus petite.»

Patria: Algeria (Oran: Tlemcen, Coll. F. Ancey).

XI. *Corpus cyaneo-, viridi-, aeneo-, cupreo- vel aureo-variegatum.*

1) *Abdominis dorsum igneo-purpureoque auratum, segmento dorsali primo laete-cyaneo superne viridi-aureo-limbato, parte apicali anguste nigro-cyaneo vel viridi-cyaneo-marginato, tertio margine apicali aenescenti.*

243. **Chrysis coeruleiventris** Ab.

Chrysis coeruleiventris, Ab. Diagnos. des Chrysid. Nouvell. p. 5. n. XXVI. ♀. (1878); Annal. Soc. Linn. de Lyon. XXVI. p. 79. ♀. (1879). -- Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 81, n. 60. (1887). — Buyss. Revue d'Entom. VII. p. 11. ♂. (1888).

Mediocris, elongata, robusta, cinereo-alboque pilosa, læte-cyanea parumque violascens; vertice mesopleurisque viridi-aureo-maculatis; pro- et mesonoto (antice cyanescenti) scutelloque igneo-auratis; fronte subangusta, cavitate faciali profunda, medio longitudinaliter canaliculata, utrinque subtilissime vix distincte transverse-striata, lateribus punctato-coriacea, superne minus distincte abbreviatim marginata; antennis bre-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

vibus, crassiusculis, nigris, cano-puberulis, scapo viridi, articulo primo flagelli supra cyanescenti, huius articulo secundo brevi, primo vix duplo longiore; genis sat longis, articulo secundo flagelli longioribus; mandibulis bidentatis, rufis, apice nigris; vertice dense subtilius punctato-subreticulato circa et post stemmata nigro-æneo; pronoti truncatura antica colloque cyaneis; pronoto sat longo, transverso-rectangulo, antice in medio parum impresso cum mesonoto dense fortius, scutello et postscutello modice gibbo-convexo læteque cyaneo adhuc crassius punctato-reticulatis; metanoti dentibus postico-lateralibus sat longis, acutis; abdominis segmentis dorsalibus igneo-violascentique purpureo-auratis; primo parte basali læte-cyaneo superne viridi-aureo-limbato, parte apicali anguste nigro-cyaneo vel viridi-cyaneo marginato, secundo tertioque imo basi nigro-æneis sparsim punctatis interstitiisque lævibus, secundo carinula mediana indistincta, tertio margine apicali ænescenti; primo sat crasse profundeque, secundo tertioque parum subtilius densiusque punctatis, interstitiis lævibus; tertio convexo, supra seriem modice calloso, foveolis immersis sat profundis parum confluentibus 12—14 per carinulam medianam interruptis, margine apicali brevi, dense punctato, arcuato-integro, lateribus lenissime sinuatis; ventre saturate-coeruleo nigroque maculato; pedibus læte-cyaneis, tibiis apice externe parum viridi-aureo nitentibus, tarsis fuscis; alis hyalinis, disco et ad costam cellulæ radialis parum sordidis, venis firmis piceis, cellula radiali lanceolata apice late aperta, tegulis nigro-æneis. — ♀; long. 8 mm.

« ♂. Ce sexe jusqu' à présent inconnu diffère de la femelle par son corps légèrement moins allongé, la face, le dessous du thorax et les pattes verts, les antennes plus grosses, la tête plus large, la marge apicale des segments abdominaux non irisée; le troisième segment abdominal plus court, plus tronqué, avec un petit sinus subaigu à l'apex qui le rend émarginé et enfin par le ventre d'un bleu moins vif avec quelques reflets vert-doré.

J'ai capturé quatre individus de ce sexe dans le département de l'Allier; j'ai même pris du même coup de filet les deux sexes accouplés sur des pierres séches exposées aux plus forts rayons du soleil de la fin de juin. » (Buyss. l. c.)

Patria: Hispania (Madrid, Aranjuez, Gog.); Gallia (Alpes, Ab.; Allier, Buyss. et Mus. Hung.).

2) *Abdominis dorsum auratum, segmento primo maxima ex parte viridi-aurato.*

244. Chrysis pelopaeicida Buyss.

Chrysis pelopaeicida, Buyss. Revue d'Entom. VI. p. 176, n. 12. ♂♀. (1887) sec. spec. typ. e coll. Buyssoni.

Mediocris, parum elongata, cyaneo-viridis, cinereo-alboque pilosa; vertice post ocellos, pronoto et mesonoti lobis lateralibus aurato irroratis; cavitate faciali planiuscula, minus profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne convexa, non marginata; antennis tenuibus, nigris, articulis tribus primis quartique basi aurato-viridibus, tertio sat longo, quarto quintoque simul sumptis parum longiore; genis

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

longis, articulo tertio antennarum æquilongis; mandibulis bidentatis; margine occipitali utrinque angulo parvo prominulo; pronoto brevi, transverso-rectangulo, in medio antice late sulcato; vertice densius et parum subtilius, thorace dispersius minus regulariter fortius punctato-reticulatis; postscutello obtuse-conico; metanoto dentibus postico-lateralibus brevibus, robustis, obtusis; abdomine ovali, subcylindrico, valde convexo, segmentis dorsalibus: primo viridi-aurato, maculis utrinque et secundo tertioque igneo-auratis, secundi margine apicali pure vel viridi-aurato, primo sparsim irregulariter cribrato-punctato, interstitiis latis dense subtilissime punctulatis, secundo fortius punctato-rugoso, interstitiis angustis subtilissime punctulatis, carinula mediana minus distincta, tertio densius fortiusque punctato-aciculato, ante marginem callosum concaviusculo-immerso, foveolis per carinulam medianam interruptis profundis, magnis, confluentibus, minus dinstinctis, ipso margine apicali anguste nigro-æneo arcuato medioque lenissime sinuato; segmentis ventralibus duobus primis viridi-, tertio igneo-auratis, secundo basi utrinque nigro-maculato; pedibus cyaneo-viridibus, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata completa, tegulis cyaneo-viridibus, radice aurato. — ♀; long. 7½—9 mm.

Mas — secundum Buysson — differt a femina: antennarum articulis 4—7 medio tumidis, sicut in mare *Chrysidis dichroae* Dhlb., facie multo densius et longius pilosa, abdominis segmento dorsali tertio margine apicali regulariter rotundato.

Species hæc eximia, cum *Chrys. pustulosa* Ab. quoad sculpturam coloremque thoracis multum habens similitudinis: colore segmenti primi eiusque et tertii punctatura singulari, foveolis profunde immersis magnis confluentibus margineque apicali anguste nigro-æneo, facile cognoscitur.

Patria: Asia minor (Aidin, Mus. Hung.); Syria (Tiberias [Tabarijeh], Coll. Buyssoni).

3) *Abdominis dorsum igneo-auratum, segmento primo antice cyaneo, postice viridi-aurato.*

245. **Chrysis humilis** Buyss.

Chrysis humilis, Buyss. Revue d'Entom. VI. p. 174, n. 10. ♂. (1887) sec. spec. typ. e coll. Abeillei.

Parva, sat robusta, elongata, viridi-cyanea, parcius cinereo-alboque pilosa; vertice post stemmata, mesonoti lobo medio, scutello postscutelloque cum metathorace cyaneis; facie, fronte, pronoto et mesonoti lobis lateralibus, femoribus item et tibiis viridi-subauratis; cavitate faciali profunda, dense punctulato-coriacea, albo-sericeo-pilosa, medio longitudinaliter canaliculata, superne indistincte marginata; fronte angustata, punctato-subreticulata; antennis crassiusculis, fusco-nigris, scapo cyaneo, articulis duobus primis flagelli viridi-auratis, huius articulo secundo brevi, tertio vix longiore; vertice thoracisque dorso subcoriaceo dense subtiliter punctato-subreticulatis; pronoto antice obsoletius sulcato; metanoto dentibus postico-lateralibus parvis, rectis acutisque; abdomine subovali, segmentis dorsalibus: primo cyaneo, margine postico viridi-aurato, irregulariter dense punctulato-coriaceo; secundo tertioque igneo-auratis, minus splendidis, parum fortius dense punctulato-coriaceis medioque carinulatis; tertio convexo, supra seriem

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

nec minime calloso, foveolis circiter 12 rotundatis sat profundis, separatis, margine apicali arcuato-integro; ventralibus obscure-æneis, viridi- et nigro-maculatis; tarsis rufo-brunneis; alis parum sordide-hyalinis, venis fuscis, cellula radiali subtriangulariter lanceolata apice sat late aperta, tegulis brunneis. — ♂; long. 5 1/2 mm.

Chrysidi basali Dhlb. similis; sed magis robusta ac lata, cavitate faciali non subtiliter transverse-striata, fronte angusta, abdominis segmento dorsali primo margine apicali viridi-aurato, secundo tertioque medio carinulatis punctaturaque alia, bene distincta.

Patria: Hispania (Madrid [Madritum]).

4) *Abdominis dorsum igneo-auratum, segmento primo viridi-cyaneo vel cyaneo viridi.*

246. **Chrysis basalis** Dhlb.

Chrysis basalis, Dhlb. Hym. Europ. II. p. 106, n. 58. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 45. (1879).

Parva, angusta, sublinearis, parcius cinereo-alboque pilosa; capite thoraceque et abdominis segmento primo dorsali viridi-cyaneis aut cyaneo-viridibus; cavitate faciali minus profunda, dense subtilissime transverse-striata, fronte convexiuscula; antennis tenuibus, nigris, articulis tribus primis viridibus, tertio longitudine mediocri, quarto dimidio longiore; genis longis, articulo tertio antennarum æquilongis; abdominis segmentis dorsalibus duobus ultimis igneo-auratis, confertissime punctulatis, tertio foveolis minutis rotundatis numerosis, lateralibus obsoletis; ventre viridi-cyaneo, segmento tertio basi macula aurea. — ♂ ♀; long. 4 1/2—5 mm.

Statura et magnitudine *Chrys. succinctae* Linn. mari (Frivaldszkyi Mocs.) similis; sed cavitate faciali dense subtilissime transverse-striata (non punctato-coriacea), fronte convexiuscula, segmento abdominis tertio margine apicali non viridi- vel nigro-æneo, iam satis distincta.

Patria: Algeria (Dhlb. et Mus. Hung.).

Animadversio. — *Chrysis basalis,* Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879) e Gallia, alia est species, verisimiliter tantum mas *Chrys. succinctae* Linn. — *Chrysis basalis,* Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 66, n. 38. (1887) est = *Chrys. Gogorzae* Licht. — *Chrysis basalis,* Destef. Natural. Sicil. VII. p. 40. (1888) est = mas *Chrys. succinctae* Linn.

5) *Abdominis dorsum cum segmenti tertii parte apicali, capite item antice thoraceque supra viridi-aurata, vertice et segmento tertio parte basali cyaneis.*

247. **Chrysis ornata** Smith.

Chrysis ornatus (!), Smith, Zoolog. Appen. p. CXXV. ♂. (1851).
Chrysis ornata, Smith, Entom. Annual, p. 95. ♂. (1862).

Descriptio secundum auctorem in Entom. Annual.

»Male. Length 4 1/2 lines. Head golden-green, with the vertex dark blue: the thorax, legs and apical segment of the abdomen golden-green; the thorax with a mixture

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

of golden and coppery effulgence above, dashed with a faint tinge of carmine in parts; the scape green, the flagellum and tarsi black; the wings slightly coloured; the 2 basal segments of the abdomen of a rich carmine-red, very minutely and closely punctured, the extreme base strongly so; the base of the apical segment blue, with the apex edentate, evenly rounded, not laterally angulated.

This very beautiful insect was taken by Mr. Hevitson, who presented it te me; it closely resemble *C. bidentata* and possibly it may be an extreme variety; but the structural differences are so great that I have kept it separate in the hope that its locality Bristol, may be assidous ly searched, when some examples may be fund. It differt from *C. bidentata* in being larger than any of that insect that I have seen; its prothorax is much more prolonged; the abdomen is as finely punctured as in *C. neglecta,* and the apex of the terminal segment of the abdomen is rounded and without teeth; the second discoidal cell is also considerably longer and larger.»

Patria: Anglia.

6) *Abdominis dorsum auratum, segmento tertio toto cyaneo (nonnunquam transverse aureo- vel viridi-striato vel maculato vel toto cyaneo-viridi; mares punctatura fortiore).*

*

Conspectus specierum huius subsectionis:

1 (2). Vertice area insigni planata subreniformi; abdominis segmento dorsali secundo margine apicali crassius punctato-rugoso, tertio parte basali fortius sparsim crasse punctato, interstitiis subtilissime punctulatis ... ... *Humboldti* Dhlb.

2 (1). Vertice sine area insigni subreniformi; abdominis segmento dorsali secundo margine apicali tertioque parte basali dense modice punctatis.

3 (4). Capite thoraceque cyaneo-viridibus vel viridi-cyaneis tantum leniter viridi-aureo maculatis vel irroratis; abdominis segmentis dorsalibus: primo punctis politis virescentibus, tertio foveolis profundis magnis parum sulciformibus. — Long. 7—7'/₂ mm. ... ... *incrassata* Spin.

4 (3). Vertice, pronoto, mesonoti loborum lateralium vitta lata, scutello, postscutello ac pleuris supra viridi-cupreoque auratis; abdominis segmentis dorsalibus: primo punctis politis virescentibus nullis, tertio foveolis minutis subrotundis. — Long. 5'/₂ mm. ... ... *gratiosa* n. sp.

*

248. **Chrysis Humboldti** Dhlb.

Chrysura Humboldti, Dhlb. Dispos. p. 6, n. 4. ♂. (1845).

Chrysis Humboldti, Dhlb. Hym. Europ. II. p. 110, n. 61. ♂. tab. V. fig. 85. ♂. (1854).

Chrysis cyanura, Dhlb. Hym. Europ. II. p. 109, n. 60. ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46. ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. ♀. (1879) — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 65, n. 36. ♂. (1887). — Destef. Natural. Sicil. VII. p. 142. ♂. (1888) (nec Forst.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis Fedtschenkoi, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 12, n. 20. ♀. (non ♂.) tab. I. fig. 5. ♀. (1877).

Magna, robusta, læte-cyanea, parcius cinereo-alboque pilosa; vertice, pronoto, mesonoti lobis lateralibus, scutello et mesopleuris viridi-subaureo irroratis; cavitate faciali profunda, in femina cyaneo-viridi, in mare cyanea, medio longitudinaliter canaliculata et subtilissime minus distincte transverse-striata, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne marginata areaque insigni subreniformi planata stemma anticum includente instructa; fronte angusta, antennis tenuibus, argenteo-puberulis, rufescentibus, in femina articulis tribus, in mare quattuor primis læte-viridibus, tertio longitudine mediocri, quarto dimidio solum longiore; genis brevibus sublinearibus; pronoti sulco longitudinali lato et mesonoti lobo medio postscutelloque læte-cyaneis; metanoti dentibus postico-lateralibus validis subobtusis; abdominis segmentis dorsalibus duobus primis viridi-auratis parumque igneo vel cupreo resplendentibus, primo basi cyaneo superne viridi-aureo limbato, secundo imo basi nigro-violaceo, carinula mediana abbreviata sat distincta, margine apicali punctatura forti minus densa, tertio læte-cyaneo, unicolore vel supra seriem macula transversa viridi-aurea, parte basali depresso-convexo sparsim fortius punctato, interstitiis sat latis subtilissime punctulatis, medio transversaliter concaviusculo-immerso, supra seriem fortiter calloso, foveolis profunde immersis magnis, circiter 18—20 subovatis approximatis, margine apicali violascenti-brunneo-pellucido, leniter arcuato, in mare medio lenissime sinuato et lateribus obtuse subangulatis; ventre læte cyanescenti-viridi, segmento secundo utrinque nigro-maculato; pedibus cyaneis vel viridi-cyaneis, tarsis rufo-testaceis; alis hyalinis parumque sordidis, cellula radiali lanceolata apice late aperta, venis fuscis, tegulis pure cyaneis vel viridi-maculatis.

Femina: thorace supra subcoriaceo, irregulariter minus profunde punctato, scutello et postscutello subreticulatis; abdominis segmentis dorsalibus: duobus primis dense punctato-rugulosis subcoriaceis, primi et secundi basi punctis politis rotundis virescentibus interstitiisque subtilissime et dense punctulatis. — Long. 9—12 mm.

Mas: thorace supra distincte punctato-reticulato; abdominis segmentis dorsalibus duobus primis minus dense fortiusque punctato-rugulosis, punctis politis rotundis virescentibus interstitiisque latis subtilissime denseque punctulatis. — Long. 9—10 mm.

Patria: Hispania (Gog.); Gallia (Montpellier, Mus. Hung.); Sicilia (Destef.); Græcia (Syra, Coll. Rad.!; Corcyra, Mus. Hung.); Russia meridionalis (Dhlb.); territorium Transcaspicum (Krasnowodsk, Mus. Hung.); Turkestania (Rad.); insula Rhodus (Dhlb).

Animadversio. — *Chrysidem cyanuram* et *Humboldti* unam eandemque esse speciem Dahlbomus non recognovit, ex ea circumstantia, quia mares in hac sectione punctatura fortiore gaudent, quam feminæ.

var. minor mihi.

Typo simillima; sed minor, vertice circa stemmata, pronoto, mesonoti lobis lateralibus et scutello lætius viridi-aureo tinctis, abdominis segmentis dorsalibus parum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

fortius punctatis. — ♂ ♀ ; long. 7 mm. — Patria: territorium Transcaspicum (Merw, Coll. Rad.).

var. minuta mihi.

Typo simillima; sed minuta, mares tantum 5 mm. longi. — Patria: Sarepta (Mus. Vindob.).

249. **Chrysis incrassata** Spin.

Chrysis incrassata, Spin. Annal. Soc. Ent. France. VII. p. 454, n. 5. ♀. (1838). — Dhlb. Hym. Europ. II. p. 107, n. 109, ♀. tab. V. fig. 84. ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 48. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Frey, Chrys. Helvet. p. 48 et 56. ♂ ♀. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 74, n. 48. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 12. (genit. maris) (1888).

Chrysis cyanura, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 554, n. 2. ♂. sec. spec. typ. e Sarepta in coll. Rad. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 304, n. 27, tab. III. fig. 16. ♂. (1866) (nec Forst., nec Dhlb.).

Mediocris, minus robusta, cyaneo-viridis vel viridi-cyanea plus minusve viridi-aureo maculata vel irrorata, parcius cinereo-alboque pilosa; cavitate faciali profunda, viridi-cyanea vel viridi-subaurata, medio subtilissime minus distincte transverse-striata longitudinaliterque canaliculata, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne marginata, margine sæpius aurato flexuoso, nonnunquam obsoleto, fronte angusta; antennis tenuibus, nigris, argenteo-puberulis, in mare apicem versus parum rufescentibus, articulo tertio longitudine mediocri, quarto dimidio solum longiore; genis brevibus, sublinearibus; vertice circa et post stemmata nigro-æneo vel subviolascenti; pronoto antice in medio parum impresso, mesonoti lobo medio et postscutello cyaneis; abdominis segmentis dorsalibus duobus primis igneo-auratis, primo basi cyaneo superne viridi-aureo limbato, secundo imo basi nigro-æneo, carinula mediana sat distincta, margine apicali punctatura valde densa minus forti, tertio læte-cyaneo, unicolore vel supra seriem macula transversa viridi-aurea, aut toto cyaneo-viridi, parte basali dense modice punctato transversaliterque concaviusculo-immerso, supra seriem in femina fortius, in mare lævius calloso, foveolis immersis sat magnis, numerosis, circiter 18, parum sulciformibus; ventre læte- vel cyanescenti-viridi nigroque maculato; pedibus viridibus vel cyaneo-viridibus, tarsis fuscis vel parum rufescentibus; alis sordide-hyalinis, basi et apice dilutioribus, cellula radiali lanceolata, apice late aperta, venis fuscis, tegulis aurato-viridibus.

Femina: antennarum articulis duobus primis tertiique basi læte-viridibus; thorace supra subcoriaceo irregulariter minus profunde punctato, scutello postscutelloque subreticulatis; metanoti dentibus postico-lateralibus brevibus, valde obtusis; abdominis segmentis dorsalibus: primo sat sparsim punctato, punctis politis virescentibus, interstitiis subtilissime denseque punctulatis, tertio margine apicali longo, medio multo longiore, quam lateribus, profunde arcuato-integro, lateribus subsinuatis. — Long. 8—8½ mm.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Mas: antennarum articulis tribus primis læte viridi-auratis; thorace supra distincte punctato-reticulato, punctis sat profundis; metanoti dentibus postico-lateralibus mediocribus, subobtusis; abdominis segmentis dorsalibus: primo sparsim punctato, punctis politis virescentibus, interstitiis subtilissime denseque punctulatis, secundo fortius dispersiusque punctato-coriaceo quam in femina, tertio margine apicali haud longo, arcuato-integro medioque lenissime sinuato. — Long. 7—7½ mm.

Chrys. Humboldti Dhlb. eiusque varietatibus similis et affinis; sed minus robusta, verticis area insigni subreniformi nulla, abdominis segmentis dorsalibus duobus primis læte igneo-auratis (non viridi-auratis parumque igneo-cupreoque resplendentibus), segmento secundo multo densius punctato-coriaceo, punctis politis virescentibus nullis, margine apicali punctatura valde densa minus forti, tertio parte basali dense modice punctato, foveolis magis elongatis et margine apicali violascenti-brunneo non pellucido, tarsis fuscis vel parum rufescentibus, optime distinguenda.

«*Armure.* La branche du forceps nue, l'extrémité pointue, son bord supérieur profondément échancré. Volsella large. Les chrochets par leurs extrémités présentent une forme caractéristique; cette extrémité est large et parsemée de poils courts petits. (Rad. l. c. tab. II. fig. 21a, 21b, 21i.)

L'armure des *Chr. cyanura* Dhlb. et *Chr. Fedtschenkoi* Rad. est identique dans tous ses détails avec l'armure de cette l'espèce et je suppose, que *Chr. cyanura* et *Chr. Fedtschenkoi* formen les variétés de *Chr. incrassata* Spin.» (Rad. l. c. p. 13.)

Patria: Austria ad Vindobonam (Dhlb.); Hungaria centralis, mense Julio rara (Mocs.); Helvetía (Frey); Hispania (Gog.); Gallia (Ab.); insula Corsica (Dhlb.); Sardinia (Costa); Russia meridionalis (Sarepta, Coll. Rad.!); Aegyptus (Spin.).

250. **Chrysis gratiosa** n. sp.

Minuta, sat robusta, parcius albo-pilosa, læte-cyanea, cupreo-aureoque variegata, abdominis segmentis dorsalibus duobus primis cupreo-igneoque auratis, tertio læte-cyaneo; cavitate faciale profunda, viridi-cyanea, medio longitudinaliter canaliculata subtilissimeque transverse-striata, lateribus punctulato-coriacea argenteo-sericeoque pilosa, superne minus acute distincteque flexuoso-marginata; antennarum scapo et articulo primo flagelli supra viridi-cyaneis, reliquis fuscis; vertice viridi-cupreoque aurato, circa stemmata occipiteque obscure-cyaneis; pronoto toto, mesonoti loborum lateralium vitta lata, scutello, postscutello ac pleuris supra viridi-cupreoque auratis; mesonoti lobo medio, ac lateralium lateribus, pleuris subtus pectoreque læte-cyaneis, scutello et postscutello punctato-subreticulatis; vertice, pro- et mesonoto abdominisque segmentis dorsalibus duobus primis dense minus fortiter rugosiuscule-punctatis, subcoriaceis, primo basi cyaneo, secundo carinula mediana abbreviata, margine apicali dense punctato, tertio parte basali dense modice punctato, supra seriem anteapicalem leniter incrassato, ipsa serie sat immersa foveolis minutis rotundis, numerosis, sat profundis, margine apicali integro, arcuato, violascenti-brunneo-pellucido; ventre viridi-cyaneo, segmento secundo

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

basi utrinque nigro-maculato; pedibus læte-cyaneis, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali sublanceolata apice late aperta, tegulis auratis. — ♀; long. 5½ mm.

Præcedentium socia; sed capite thoraceque ex parte aliter coloratis, distincta.

Patria: Algeria (Bône, Coll. Pérezi).

7) *Abdominis dorsum auratum vel igneo-auratum, segmento tertio solum margine apicali cyaneo vel nigro-violaceo vel cyanescenti-aeneo.*

*

Conspectus specierum huius subsectionis:

1 (2). Fronte aureo-maculata ... ... *candens* Germ.

2 (1). Fronte sine macula aurea.

3 (6). Pronoto sat longo et mesonoti lobis lateralibus pure auratis; oculis elongato-ovatis.

4 (5). Antennarum articulis in sexu utroque regularibus; pronoto sine sulco mediano, mesonoti lobo medio nigro-æneo; ventre nigro, opaco ... ... *Phryne* Ab.

5 (4). Antennarum articulis 3—4 in maribus medio tumidis; pronoto sulco mediano sat profundo, mesonoti lobo medio cyaneo; ventre viridi-cyaneo, segmentis nigro-maculatis ... ... *Destefanii* mihi.

6 (3). Pronoto brevi antice solum et mesonoti lobis lateralibus viridi-auratis, vel viridi-aureo-irroratis, lobo medio cyaneo; ventre cyaneo-viridi.

7 (8). Corpore subparvo, elongato; pronoto antice et mesonoti lobis lateralibus viridi-auratis; cavitate faciali superne convexa; oculis ovatis; abdominis segmentis dorsalibus subtiliter rugosiuscule-punctatis, subcoriaceis, tertio supra seriem anteapicalem vix incrassato, foveolis mediocribus; alarum tegulis cyaneis. *Circe* n. sp.

8 (7). Corpore brevi, robusto; pronoto et mesonoti lobis lateralibus cum scutello viridi-aureo-irroratis; cavitate faciali superne transverse flexuoso-marginata; oculis elongato-ovatis; abdominis segmentis dorsalibus duobus primis sat fortiter punctatis, tertio supra seriem anteapicalem fortiter incrassato-convexo, foveolis valde magnis; alarum tegulis igneo-auratis ... ... *hydropica* Ab.

251. **Chrysis candens** Germ.

Chrysis candens, Germ. Reise nach Dalmat. p. 260, n. 344. ♀. (1817); Faun. Ins. Europ. fasc. IV. tab. 13. ♀. (1817). — ? Först. Verh. nat. Ver. preuss. Rheinl. X. p. 306. (1853). — Dhlb. Hym. Europ. II. p. 140, n. 77. solum ♀. (nec ♂) (1854). — Schck, Nass. Jahrb. XI. p. 75, n. 7. (1856); Progr. Gymn. zu Weilb. p. 14, n. 5. (1870) ex parte (ex Dhlb.). — Lampr. Goldwesp. Deutschl. p. 13, n. 24. (1881) ex parte (ex Dhlb. et Schck.). — Destef. Natural. Sicil. VII. p. 181. ♀. (nec ♂) (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis semicyanea, Brullé, Expéd. de Morée. Tom. III. Zoolog. Sér. 2. p. 377, n. 832. ♀. tab. 51, fig. 9. ♀. (1832).

Chrysis Laïs, Ab. Feuille Jeun. Natural. VII. p. 66, n. IV. ♂ ♀. (1877); Annal. Soc. Linn. Lyon. XXVI. p. 75 et 83. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879). — Destef. Natural. Sicil. VII. p. 180. ♀. (1883).

Subparva, angustula, læte-cyanea, cinereo-alboque pilosa; clypeo et mesopleuris virescentibus; fronte et vertice usque ad ocellos posticos, pronoto et mesonoti lobis lateralibus auratis; cavitate faciali minus profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata et subtilissime transverse-strigosa, superne convexa, non marginata; antennis tenuibus, nigris, albo-puberulis, articulis duobus primis viridi-auratis, tertio basi cyanescenti, hoc longo, quarto quintoque simul sumptis æquali; genis longis, articulo tertio longitudine æqualibus; thoracis dorso inæqualiter minus profunde punctato-reticulato, subcoriaceo; metanoti dentibus postico-lateralibus sat fortibus, acutis; abdominis segmentis dorsalibus auratis vel parum igneo-auratis, dense subtilius rugosiuscule-punctulatis, subcoriaceis, secundo basi nigro-æneo, carinula mediana nulla, tertio margine apicali nigro-violaceo; ventre viridi-aurato, segmento secundo basi utrinque nigro-maculato, tertio apice late nigro-limbato; femoribus tibiisque cyaneis parumque virescentibus, tarsis fuscis; alis hyalinis, venis fuscis.

Femina: facie sub fronte læte-cyanea; mesonoti lobo medio nigro-violaceo; scutello viridi-aureo maculato; abdominis segmento dorsali tertio foveolis minutis irregularibus, numerosis, margine apicali sat lato, arcuatim integro; cellula radiali lanceolata apice sat late aperta, tegulis læte-viridibus. — Long. 5 1/2 mm.

Mas: facie sub fronte fere usque ad clypeum aurata; mesonoti lobo medio nigro-æneo; scutello læte-cyaneo; abdominis segmento dorsali tertio foveolis nullis, margine apicali brevi, arcuato medioque leniter sinuato; cellula radiali lanceolata apice fere completa, tegulis læte-cyaneis. — Long. 5 mm.

Patria: Italia (Sicilia, Destef.); Gallia (Ab. et Mus. Hung.); Tyrolis (Dalla Torre et Kohl); Littorale Hungaricum (Fanum St. Viti Flamoniensis [Fiume], a Dom. Korlevićreinventa; Germar et Mus. Hung.); Græcia (insula Morea, environs de Messéne, Brullé; Attica, Mus. Atheniense!).

Animadversio. — De *Chryside candente* Germar in suis operibus citatis sequentia scripserat: «*Chrysis candens* (ano integro): corpore cœruleo, capitis vertice, thoracis antico, abdomineque supra aureis. Von Fiume. Die Fühler sind schwarz. Die Stirn ist schwarzblau. Der Mittellappen des Rückenschildes ist schwärzlich. Der Vorderlappen mit dem Seitenlappen haben leuchtenden Goldglanz; Rückenschildchen, Hinterrücken, Brust und Beine sind blau. Der Bauch hat, so wie das sehr schmal hervortretende Aftersegment eine schwärzliche ins blaugrüne schillernde Färbung. Sie hat ohngefähr die Grösse und Gestalt der *Chrys. succincta.*» — Hæc verba satis clara sunt ad ea, ut species rite cognoscatur, tanto magis, quia frontis maculam auream etiam figura citata bene ostendit. Ego vidi et habeo exemplaria e Fano Sancti Viti Flamoniensi (Fiume) Hungariæ a Dom. Korlević collecta, ergo *specimina chorotypica,** quæ cum exemplaribus e Gallia ortis (in collectione Musæi nostri et Dom.

* Sub hoc nomine (a græcis vocabulis: *χῶρα* vel *χώριον* = regio et *τύπος, ὁ* = forma, imago) specimen tale designare volo, quod de eadem regione oritur, quam species litigiosa patriam suam profitetur. Hæc circum-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Peréz) et a Clariss. Domino Abeille de Perrin sub nomine *Chrysis Laïs* descriptis penitus conformia sunt. Dahlbomus duas confundebat species et Dom. Buysson recentissime sub nomine *Chrysis candens* animal a vera *Chryside candente* Germ. toto coelo diversum descripsit, quod ego optime in honorem Hymenopterologiæ cultoris eximii, Domini Teod. De-Stefani, inventoris animalis et Monographiæ Chrysididarum Siciliæ auctoris, denominare volui.

252. **Chrysis Phryne** Ab.

Chrysis candens, Dhlb. Hym. Europ. II. p. 140, n. 77. (1854) solum ♂ (nec ♀) (nec Germar).
Chrysis Phryne, Ab. Diagnos. des Chrysid. nouvell. p. 5, n. XXIX. ♀. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 84. ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. ♀. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 81, n. 59. ♀. (1887). — Buyss. Revue d'Entom. VII. p. 9. ♂. (1888).

Subparva, angustula, parallela, læte- vel parum virescenti-cyanea, cinereo-alboque pilosa; clypeo, orbitis oculorum et genis virescentibus; pronoto sat longo et mesonoti lobis lateralibus auratis; lobo medio et verticis disco nigro-æneis; cavitate faciali minus profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata et subtilissime subtransverse rugosiuscula, superne convexa, non marginata; oculis elongato-ovalibus; antennis tenuibus, nigris, articulis: primo toto, secundo tertioque supra virescentibus, hoc sat longo, quarto duplo longiore; genis proportionaliter longis, articulo antennarum quarto longioribus; vertice et thoracis dorso inæqualiter minus crasse punctato-reticulatis, subcoriaceis; metanoti dentibus postico-lateralibus sat fortibus, subacutis; abdominis segmentis dorsalibus igneo-auratis, subtiliter rugosiuscule-punctatis, subcoriaceis, punctis in segmento primo maioribus nonnullis inmixtis, secundo carinula mediana nulla, tertio supra seriem anteapicalem parum incrassato, foveolis sat immersis, magnitudine inæqualibus, circiter 16, centralibus confluentibus, margine apicali nigro-violaceo, brevi, arcuato-integro; ventre nigro, opaco; pedibus cyaneis parumque virescentibus, tarsis fuscis; alis hyalinis parum sordidis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis cyaneis. — ♀; long. 5—6 mm.

«Le *Chr. Phryne* Ab. ♂ diffère du *Chr. candens* Buyss. ♂ (= Destefanii mihi) par sa ponctuation régulière, subreticulée, formée de points assez gros, subégaux; par ses joues plus longuement prolongées en avant, presque paralelles; par son pronotum un peu plus allongé, sans sillon profond à la troncature antérieure; par le troisième et le quatrième article des antennes qui sont renflés dans leur milieu; par les angles postico-latéraux du métanotum qui sont à pointe subaiguë; par ses tarses blanc sale; par ses ailes assez enfumées; par le troisième segment abdominal qui est tronqué-arrondi transversalement; par la marge apicale qui est très mince, un peu transparente; par la série anteapicale qui est large et enfoncée, etc.» (Buysson l. c. p. 11.).

Chrys. candenti Germ. similis et affinis; sed corpore magis parallelo, oculis elongato-

stantia sæpe magni potest esse momenti in diiudicandis speciebus dubiosis, et ideo denominationem illam Entomologorum benevolentiæ commendo.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ovatis, longioribus, fronte immaculata, prothorace multo longiore, abdominis segmentis dorsalibus densius subtiliusque punctulatis, ventre nigro, opaco et tegulis cyaneis, satis superque distincta.

Patria: Hispania (Gog.); Gallia (orques, Ab.; Provence, Marq.); Italia (Lombardia, Buysson); ? Tyrolis (Mus. Hung.).

253. **Chrysis Destefanii** mihi.

Chrysis candens, Buyss. Revue d'Entom. VII. p. 10. ♂. (1888). — Destef. Natural. Sicil. VII. p. 181. solum ♂ (nec ♀) (1888) (nec Germar).

«Long. 5 1/2 mill. Corps étroit, allongé, couvert d'une très fine pubescence blanchâtre. Tête entièrement bleue, couverte de points réguliers, serrés, subocellés sur le front, subreticulés; cavité faciale à teinte verte, peu profonde, évasée, sans arête vers le front, subcanaliculée, lisse, imponctuée et brillante au milieu, finement ponctuée sur les côtés qui sont eux-mêmes couverts d'une longue pubescence blanche; front non doré; joues assez prolongées en avant, mais un peu convergentes, non parallèles. Thorax couvert d'une ponctuation assez serrée, formée de points médiocres entremêlés de points plus petits. Pronotum cylindrique, assez long, doré-feu, avec un sillon assez profond au milieu de la troncature antérieure; mesonotum cylindrique, les aires latérales doré-feu, l'aire médiane bleue; écailles bleues, ainsi que les côtés du mésosternum, tout le dessous du thorax, l'écusson, le postécusson, le métanotum et les pattes. Postécusson arrondi, avec une cavitè au milieu de sa base près de l'écusson; angles postico-latéraux du métanotum à pointe courte, obtuse. Ailes subhyalines, cellula radiale assez courte, presque compléte; tarses roussâtres. Abdomen feu-doré, un peu allongé, assez bombé sur le disque du seconde segment; premier segment à ponctuation plus grosse que sur les autres segments, formée de points plus gros entremêlés de petits; seconde segment un peu plus large que les autres surtout dans sa partie postérieure, ponctuation régulière formée de points égaux, assez serrés, une ligne de couleur plus feu suit le milieu du segment dans toute sa longueur; troisième segment régulièrement bombé sur son disque, régulièrement arrondi non tronqué transversalement, non émarginé au milieu, ponctué comme le seconde segment; ligne antéapicale peu ou point enfoncée, interrompue au milieu, formée de gros points irréguliers, confluents allant en diminuant de grosseur sur les côtés, au nombre de 16 environ; marge apicale bleu vif, assez large, nullement scarieuse, épaisse, finement ponctuée, avec une tache triangulaire feu-doré avançant au milieu, partant du point d'interruption de la ligne antéapicale et atteignant presque le bord apical. Ventre bleu verdâtre avec des taches noirâtres sur le milieu de chaque segment.

Le *Chr. candens* Buyss. ♂ diffère du *Chr. Laïs* Ab. (= *candens* Germ.) ♂ par sa forme allongée, subcylindrique, non trapue, par son front bleu, nullement doré, ses joues plus longuement prolongées en avant, sa ponctuation thoracique moins grosse, forme de points médiocres entremêlés de petits, par ses angles postico-latéraux du métanotum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

qui sont à pointe courte et obtuse (chez le *Chr. Laïs* Ab. ♂ ils sont à pointe assez allongée); par le cellule radiale des ailes moins allongée; par l'abdomen moins trapu, moins bombé, le seconde segment à ponctuation formée de gros points mêlés à des petits (chez le *Chr. Laïs* Ab., ce segment est couvert de points gros, égaux et réguliers); par la ligne anteapicale interrompue par un tache feu-doré et formée de fovéoles plus grosses, confluentes et irrégulières; par la marge apicale un peu plus large, non émarginée à l'apex, mais bien régulièrement arrondie (chez le *Chr. Laïs* Ab. ♂, un léger sinus obtus se trouve à l'apex et le rend presque émarginè) et enfin par son ventre bleu verdâtre (le *Chr. Laïs* Ab. ayant le ventre noir à la base, feu doré sur le reste).»

Patria: Sicilia.

254. **Chrysis Circe** n. sp.

Subparva, elongata, parallela, læte-cyanea, parum virescens, cinereo-alboque pilosa; pronoto antice et mesonoti lobis lateralibus viridi-auratis; cavitate faciali, clypeo et fronte virescentibus; illa minus profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata subtilissimeque transverse-strigosa, superne convexa, non marginata; antennis tenuibus, nigris, argenteo-sericeo-puberulis, articulis: primo toto, secundo et tertii basi supra læte-viridibus, tertio sat longo, quarto quintoque simul sumptis longitudine æquali; genis longis, articulo tertio antennarum æquilongis; oculis ovatis; vertice et thoracis dorso inæqualiter minus crasse et profunde punctato-reticulatis, subcoriaceis; abdominis segmentis dorsalibus: primo pure, 2—3 vero igneo-auratis, subtiliter rugosiuscule-punctatis, subcoriaceis, secundo basi nigro-æneo, carinula mediana indistincta, tertio supra seriem anteapicalem vix incrassato, foveolis haud immersis numerosis inæqualibus, nonnullis viridi-auratis, margine apicali sat longo, cyaneo, arcuato-integro; ventre cyaneo-viridi, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tibiis externe magis viridibus, tarsis fuscis; alis hyalinis parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis cyaneis. — ♀; long. 5½—6 mm.

Præcedentibus similis et affinis; sed pronoto antice et mesonoti lobis lateralibus viridi- et non pure auratis; a *Chrys. candente* insuper vertice immaculato, a *Chrys. Phryne* oculis brevioribus ovatis, lobo medio mesonoti cyaneo, abdominis segmentis dorsalibus parum fortius punctulatis, tertio supra seriem vix incrassato, margine apicali et genis longioribus, præsertim distincta.

Patria: Caucasus (Coll. Rad.).

255. **Chrysis hydropica** Ab.

Chrysis hydropica, Ab. Diagnos. Chrys. Nouvell. p. 4. n. XXI. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 55 et 65. ♂ (non ♀), tab. I. fig. 20 (abdomen) (1879) sec. spec. typ. e coll. Abeillei. — Buyss. Revue d'Entom. VII. p. 12. ♂ ♀. (1888).

Mediocris, brevis, robusta, cyanea, parum violascens, longius cinereo-alboque pilosa; vertice circa stemmata, pronoto, mesonoti lobis lateralibus, scutello et eius lateribus

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

metanotique lateribus et mesopleuris aureo-irroratis; alarum tegulis igneo-auratis; cavitate faciali profunda, lata, medio longitudinaliter canaliculata, utrinque anguste dense subtilissime transverse-striata, lateribus punctulato-coriacea et argenteo-sericeo-pilosa, superne transverse, medio parum arcuatim marginata, margine utrinque ramulum obliquum ad oculum demittente; antennis longis, tenuibus, nigris, cano-puberulis, articulis tribus primis ænescentibus, tertio longo, quarto duplo longiore; oculis ovalibus, valde exsertis; genis longis, articulo antennarum quarto vix brevioribus; pronoto brevi, transverso-rectangulo, antice in medio impresso; metanoto convexo, dentibus postico-lateralibus brevibus, robustis, late-triangularibus, subobtusis; vertice et mesonoto dense minus fortiter, pronoto et scutello fortius punctato-subreticulatis; abdomine igneo-coccineoque aurato, segmentis dorsalibus: primo basi leviter trifoveato, viridi-aurato, secundo carinula mediana minus distincta, tertio valde convexo, supra seriem fortiter incrassato-convexo, foveolis profunde immersis circiter 12, intermediis magnis elongatis, margine apicali sat longo, virescenti- et cyanescenti-æneo, arcuato, medio leniter emarginato, lateribus utrinque leniter sinuatis; segmentis: primo dense crassius, reliquis succesive densius parumque subtilius modice rugosiuscule-punctatis; ventralibus cyaneo-, viridi- et aureo-variegatis, segmentis basi et apice nigris; alis hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata fere completa. — ♂; long. 6½ mm.

«La description qu'a donné M. Elz. Abeille de Perrin dans son *Synopsis* p. 65 et 66, est celle du mâle. . . . La ♀ diffère du ♂ par sa forme moins trapu; la série antéapicale plus large, formée de points plus grands, disposés transversalement à la série elle-même, c'est-à-dire dans le sens de la longueur de l'abdomen; la marge apicale du troisième segment est nullement échancrée au milieu, les côtés forment un petit angle obtus un peu après la naissance de la marge et un leger sinus se trouve avant la série antéapicale comme chez le ♂. L'abdomen est chez la ♀ plus allongé et un peu moins renflé.» (Buyss. l. c.).

Patria: Gallia.

8) *Abdominis dorsum igneo- vel coccineo-auratum, segmento tertio margine apicali fortiter calloso-incrassato nigro-aeneo, pro serie foveolarum excipienda extra ordinem profunde transverse sulcato.*

256. **Chrysis emarginatula** Spin.

Chrysis emarginatula, Spin. Ins. Lig. II. p. 239, n. LXXXIV. tab. IV. fig. 18. ♂. (1808). — Dhlb. Hym. Europ. II p. 164, n. 89. ♂. tab. VII. fig. 94. (abdomen) (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 65. ♂ ♀. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 56. n. 25. ♂ ♀. (1887).

Chrysis crassimargo, Spin. Annal. Soc. Ent. France. Sér. 2. tom. I. p. 127. ♀. (1843). — Dhlb. Hym. Europ. II. p. 169, n. 92. ♀. tab. VIII. fig. 96. (abdomen) (1854).

Chrysis emarginata, Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160. (1879).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Magna vel submagna, oblonga, robusta, viridi-cyanea vel læte-cyanea, parcius cinereo-alboque pilosa; pronoto, mesonoti lobis lateralibus scutelloque plus minusve viridi-aureo irroratis; vertice post stemmata, occipite et mesonoti lobo medio nigro-æneis; pronoti truncatura antica atro-cyanea; fronte angusta, cavitate faciali profunda, læte-cyanea, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne vel penitus convexa vel in medio transverse submarginata; antennis crassiusculis, nigris, argenteo-puberulis, scapo viridi-, articulo secundo cupreo-auratis, tertio longitudine mediocri, secundo tantum duplo longiore, quarto quintoque simul sumptis fere breviore; genis mediocribus, articulo tertio antennarum parum brevioribus; vertice dense minus crasse punctato-subreticulato; pronoti truncatura antica spatio centrali lævi ac polito piceo; pronoto ipso brevi, transverso, antice in medio profunde impresso, inæqualiter crasse, mesonoto parum subtilius, scutello crasse profundeque punctato-subreticulatis, hoc interstitiis sat latis subtilissime punctulatis; metanoto convexo, sat crasse regulariter punctato-reticulato, dentibus postico-lateralibus brevibus, validis, acutis, area sub post-scutello semicirculari foveata violacea; mesopleuris in medio longitudinaliter canaliculatis; abdomine capite thoraceque simul sumptis longiore, sublineari, segmentis dorsalibus igneo-cupreoque auratis, sat dense crassius concinne parum rugosiuscule-punctatis, primo basi nigro-æneo et trifoveato, secundo margine basali anguste nigro-æneo, carinula mediana sat distincta, tertio foveolis profunde immersis latis sulciformibus per carinulam medianam interruptis extra ordinem profunde transverse sulcatis, nigro-æneis, margine apicali mediocri fortiter calloso-incrassato parum virescenti nigroque æneo, sparsim punctato, centro leniter emarginato, pone emarginaturam arcuato-integro; ventre planato, segmento secundo carinato, igneo-aurato, segmentis duobus primis basi utrinque nigro-maculatis; pedibus læte-cyaneis, tibiis virescentibus, tarsis fusco-rufescentibus, in femina colore multo dilutiore; alis subhyalinis, cellulis modice sordidis, venis brunneis, cellula radiali incompleta apice parum aperta, tegulis nigro-æneis. — ♂♀; long. 9—10 mm.

De hac specie Clariss. Dom. Gogorza sequentia scripserat:

«Esta especie tan escasa en Francia y otros países de Europa es muy comùn en la región central de España. Hace su aparición en la época de floración de la *Thapsia* y es à veces tan abundante que en poco tiempo pueden cogerse centenares de individuos visitando las inflorescencias de esta planta. Por estas circumstancias debe considerarse la *Chr. emarginatula,* como una especie característica de nuestra región. Su estación predilecta son los pequeños valles cubiertos de bosque de la sierra de Guadarrama.»

Patria: Portugalia (Monchique, Coll. Hiendlmayri!); Hispania (Spin., Gog.; Albarracin, Coll. Hiendlmayri!); Italia (Genua, Spin.); Gallia (Alpes, Gir.; Lorgues, Ab.; Provence, Marquet).

Animadversio. — Speciem hanc apud Dahlbomum in secunda eius phalange invenimus, quæ tamen secundum me ad Holochrysidas pertinet.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

9) *Abdominis dorsum igneo-auratum, segmentum primum viride leniter auratum, segmento tertio summo apice aeneo.*

257. **Chrysis Mocquerysi** Buyss.

Chrysis Mocquerysi, Buyss. Revue d'Entom. VI. p. 178, n. 14. ♂. (1887).

« ♂. Corpore parallelo, sat robusto, albo-pubescente. Antennarum scapo viridi, basi igneo-aureo, secundo articulo viridi, tertio articulo basi leniter viridi, aliis obscure brunneis. Capite rotundato; oculis modice exsertis; cavitate faciali brevi, subquadrata, subcanaliculata, nitida, politissima, leniter strigosa transverse ad antennas, solum in lateribus ad oculos dense punctulata et albopubescente, superne ad frontem abrupte elevata sed sine carina; fronte viridi, rugulosa, crebre punctata; vertice cyaneo cum punctis minoribus. Thorace omnino crebre punctato, dorsulo convexo. Pronoto transverse rectangulo, cyaneo, antice viridi, sulco antico cyaneo, subobsoleto, truncatura antica cyanea, punctis sat profundis; mesonoto areis lateralibus aureis, leniter viridibus ad alas, area mediana viridi-cyanea; scutello rotundiusculo cyaneo, postscutello rotundato subgibboso; sterno viridi-cyaneo; metanoti angulis postico-lateralibus rectis, subacutis. Tegulis piceis; alis sat fumosis, cellula radiali aperta. Pedibus læte viridibus, tarsis rufo-brunneis. Abdomine confertim regulariter punctato: primo segmento viridi leniter aureo; secundo segmento igneo-aureo, basi leniter viridi, in disco carinula subtilissime punctulata; tertio segmento igneo-aureo, integerrimo, regulariter arcuato, non angulato, in disco eadem carinula ut in præcedente segmento; serie anteapicali non immersa, foveolis circa 12 irregularibus, mediocribus, confluentibus vel separatis, subæneis; margine apicali brevi, igneo-aureo, obsolete punctulato, marginella apicis ænea. Ventre subparallelo, igneo-aureo, brunneo-maculato. — Long. 7 1/2 mill.

Le *Chr. Mocquerysi* est voisin du *Chr. Gribodoi* Ab. ♂, mais il en diffère par sa ponctuation plus fine, sa forme plus trapue et plus courte, son thorax bombé, ses ailes plus enfumées, son coloris différent, son ventre à côtés parallèles et non convergents vers l'apex, le troisième segment abdominal largement arrondi, la marge apicale très peu large et non longuement produite en arrière, etc. Cet ensemble de caractères différentiels permet de voir dans ce *Chrysis* une véritable espèce. »

Patria: Gallia (Montpellier, Coll. Buyssoni).

10) *Abdominis dorsum totum auratum vel cupratum, plus minusve viridi-micans.*

A. *Thorax supra nunquam auratus, nec aureo-fasciatus, sed violaceus, cyaneus vel viridis pictura cyanea, aut solum viridi-aureo-maculatus vel irroratus.*

a) *Postscutellum conicum vel subconicum.*

α) Venter cyaneus vel viridis vel viridi-cyaneus et nigro-maculatus.

*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Conspectus specierum huius subsectionis:

1 (8). Antennarum flagello ex parte rufo-testaceo.

2 (7). Capite thoraceque cyaneis plus minusve viridi vel viridi-subaureo tinctis; ventre pedibusque viridibus et cyaneis vel solum cyaneis, illo nigro-maculatis.

3 (4). Abdominis segmentis dorsalibus duobus primis crasse profundeque punctatis interstitiisque subtiliter punctulatis, tertio foveolis magnis et profundis confluentibus viridi-subauratis; ventre cyaneo, segmento tertio apice late testaceo-scarioso ... ... *picticornis* mihi.

4 (3). Abdominis segmentis dorsalibus duobus primis dense minus crasse rugosiuscule-punctatis subcoriaceis, tertio foveolis parvis haud numerosis, lateralibus minus distinctis; ventris segmento tertio apice non testaceo-scarioso.

5 (6). Antennarum articulis 4—13 rufo-testaceis nigro-fusco-marginatis; genis sat longis, articulo tertio flagelli parum longioribus; abdominis segmentis dorsalibus duobus primis dense minus crasse rugosiuscule-punctatis, tertio supra seriem anteapicalem leniter incrassato, imo margine spatio sulciformi obsoletissimo; ventre viridi et cyaneo. — Long. 8 mm. ... ... *varicornis* Spin.

6 (5). Antennarum articulis 4—13 rufo-testaceis magis infuscatis; genis evidenter brevioribus, articulo tertio flagelli non longioribus; abdominis segmentis dorsalibus duobus primis fortius dispersiusque punctatis, tertio supra seriem anteapicalem fortius incrassato, imo margine simplici; ventre læte-cyaneo. — Long. 9½—10 mm. ... ... *separanda* mihi.

7 (2). Capite thoraceque fere totis, ventre nigro-maculato et femoribus tibiisque læte-viridibus viridi-subaureo nitentibus ... ... *Hiendlmayri* n. sp.

8 (1). Antennarum flagello ex parte nigro vel brunneo.

9 (12). Abdominis segmento dorsali tertio imo margine infra incrassato-dilatato transverseque sulcato.

10 (11). Abdominis segmentis dorsalibus duobus primis sat crasse punctatis interstitiisque subtilissime punctulatis, tertio supra seriem non incrassato, foveolis non numerosis parvis; antennarum flagello crassiusculo ex parte nigro ... *sulcata* Dhlb.

11 (10). Abdominis segmento dorsali tantum primo sat crasse punctato interstitiisque subtilissime punctulatis, secundo valde dense subtiliter parumque rugosiuscule-punctulato, subcoriaceo, tertio supra seriem incrassato, foveolis immersis maiusculis; antennarum flagello ex parte brunneo ... ... *cyaniventris* n. sp.

12 (9). Abdominis segmento dorsali tertio imo margine infra non incrassato-dilatato, nec transverse sulcato.

13 (14). Genis longis, articulo antennarum quarto dimidio longioribus; abdominis segmento dorsali secundo macula didyma aurea notato ... ... *Ottomana* n. sp.

14 (13). Genis mediocribus, articulo antennarum quarto æquilongis vel solum parum longioribus; abdominis segmento dorsali secundo sine macula didyma aurea.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

15(16). Corpore mediocri minus elongato; abdominis segmento dorsali tertio ante seriem modice incrassato parumque subtransverse impresso; alis sordide-hyalinis, apice dilutioribus. — Long. 8 mm. ... ... *Erigone* n. sp.

16(15). Corpore subparvo, elongato; abdominis segmento dorsali tertio ante seriem convexo, vix incrassato; alis subhyalinis. — Long. 6—6½ mm. *desertorum* Buyss.

*

258. **Chrysis varicornis** Spin.

Chrysis varicornis (r. variicornis), Spin. Annal. Soc. Ent. France. VII. p. 449, n. V. ♂. (1838). — Dhlb. Hym. Europ. II. p. 118, n. 65. ♂. (1854) ex parte. — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 14. (genit. maris) (1888).

Mediocris, elongata, sat robusta, cinereo-alboque pilosa: cyanea, mesonoti lobis lateralibus plus minusve viridibus, vel viridi-cyanea, occipite, collo et mesonoti lobo medio cyaneis; cavitate faciali sat profunda, dense punctulato-coriacea, medio minus distincte canaliculata, superne convexa; antennarum articulis duobus primis et tertio supra cyaneis vel viridi-cyaneis, hoc subtus et reliquis rufo-testaceis nigro-fusco-marginatis, ultimis infuscatis, articulo secundo flagelli longo, tribus sequentibus simul sumptis æquali; genis sat longis, articulo tertio flagelli parum longioribus; pronoto, medio antice parum impresso, cum mesonoto pleurisque minus crasse irregulariter punctatis et punctulatis; postscutello conice prominulo; abdominis segmentis dorsalibus igneo-auratis, segmento primo parte truncata viridi-cyaneo, supra et lateribus dense rugoso-punctato, subcoriaceo, 2—3 basi anguste nigro-æneis, secundo fere æqualiter dense minus crasse rugosiuscule-punctato, subcoriaceo, carinula mediana nulla, tertio parte basali dense æqualiter paulo fortius punctato, parte apicali densius subtiliusque punctulato, supra seriem anteapicalem leniter incrassato, foveolis parvis, haud numerosis, lateralibus minus distinctis, imo margine apicali spatio sulciformi obsoletissimo; ventre viridi et cyaneo, nitido, segmento secundo basi utrinque nigro-maculato; pedibus cyaneis, tibiis parum virescentibus, tarsis fusco-rufescentibus; alis hyalinis, disco plus minusve sordidis, cellula radiali lanceolata fere completa, tegulis semper cyaneis. — ♂; long. 8 mm.

«*Armure*. La branche du forceps nue (excepté l'extrémité, garnie de poils assez forts), ourlée. Volsella nue.» (Rad. l. c. tab. II. fig. 25a, 25b, 25i, 25k.)

Patria: Aegyptus (Spin., Dahlb. et Coll. Rad.!); Algeria (Teniet-el-Haad, Buyss.).

259. **Chrysis separanda** mihi.

Chrysis varicornis, Dhlb. Hym. Europ. II. p. 118, n. 65. ♂. (1854) ex parte. — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 60. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 195. (1880). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 51, n. 18. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 160. (1888) (nec Spin., nec Rad.).
Chrysis separanda (Mocs.), Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 14. (genit. maris) (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Præcedenti paulo maior et robustior: cyanea, mesonoti lobis lateralibus viridi-subauratis, flagelli articulis 4—11 rufo-testaceis magis infuscatis, genis evidenter brevioribus, articulo tertio flagelli non longioribus, abdominis segmentis dorsalibus duobus primis fortius dispersiusque punctatis, primo punctatura duplici, tertio supra seriem anteapicalem fortius incrassato, ventre pedibusque læte-cyaneis, haud viridi-pictis, alarum tegulis viridi-subauratis, distincta. — ♂ ♀; long. 9'/₂—10 mm.

«*L'Armure* ressemble à celle de l'espèce précédente. L'extrémité de la branche du forceps complètement la partie supérieure de la volsella; elle est recourbée, pointue et garnie autour de poils minces. Le bord de volsella faiblement pourvu de poils. Les crochets sont plus larges. Couvercle génital pointu (non arrondi) à l'extrémité. (Rad l. c. tab. II. fig. 26a, 26b, 26k.)

Patria: Hispania (Dhlb., Gog.) Sicilia (Destef.); Gallia (Marseille, Ab.; Provence, Marq.); Græcia (Syra, Coll. Rad.! et Mus. Hung.); insula Cyprus (Grib.)

Animadversio. — Quod hæc species maxime meridionalis etiam ad Varsoviam a Dom. Waga inventa esset, prouti hoc in opere Abeillei legimus, mihi valde dubiosum esse videtur.

260. **Chrysis picticornis** mihi.

Chrysis varicornis, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 11, n. 18. tab. I. fig. 4. ♀. (1877) sec. spec. typ. e coll. Rad. (nec Spin.).
Chrysis picticornis (Mocs.), Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 15. (genit. maris) (1888).

Præcedentibus duabus similis et affinis; sed postscutello brevius conico, thorace supra et præsertim abdominis segmentis dorsalibus duobus primis crasse profundeque punctatis interstitiisque subtiliter punctulatis, non subcoriaceis, secundi carinula mediana sat distincta, tertio quoque crassius punctato, supra seriem anteapicalem fortius incrassato, ipsa serie foveolis magnis et profundis confluentibus, fere solum in medio interruptis, viridi-subauratis, ventris segmento tertio apice sat late testaceo-scarioso tarsisque obscurioribus, certe alia est species. — ♂ ♀; long. 9'/₂—10 mm.

«*Armure.* La branche du forceps très large, nue; le contour de son bord supérieur diffère des espèces précédentes. Volsella très large, dépassant le bord du forceps. (Rad. l. c. tab. II. fig. 27a, 27b, 27i, 27k.)

Patria: Caucasus (Coll. Rad.!) et Turkestania (vallis Sarafschan, Coll. Rad.! et Mus. Hung.).

261. **Chrysis Hiendlmayri** n. sp.

Submagna, elongata, læte-viridis, viridi-subaureo nitens, vertice thoraceque supra fusco-, parte reliqua corporis albo-pilosis; in mare occipite, mesonoti lobo medio antice posticeque et metathorace subtus, in femina etiam facie, impressione pronoti et mesonoti lobis lateralibus ad alas suturisque cyanescentibus; cavitate faciali haud profunda, dense subtiliter punctato-coriacea, superne convexa, non marginata; antennis longis, crassis, articulis tribus primis viridi-auratis, reliquis rufo-testaceis, articulis apice et duobus ultimis infuscatis vel in specimine Oraniensi nigro-fusco-annulatis, in femina arti-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

culis his fortiter infuscatis, articulo tertio longo, sequentibus tribus simul sumptis fere æquilongo, 4—8 in mare subtus parum tumidus; clypeo brevi, apice truncato nigro-æneo; genis mediocribus, articulo antennarum quarto æquilongis; vertice dense minus crasse punctato-subreticulato; pronoto brevi, transverso, sat crasse, mesonoto parum subtilius irregulariter rugosiuscule-punctatis interstitiisque angustis subtiliter punctulatis, scutello et postscutello punctato-subreticulatis, postscutello elevato subacute-conico; metanoti dentibus postico-lateralibus mediocribus, robustis, subobtusis, incurvis; abdominis segmentis dorsalibus igneo-coccineoque auratis, primo basi viridi-cyaneo crassius punctato, disco sat sparsim crassius minus profunde parum subrugose-punctato interstitiisque subtilissime punctulatis, subcoriaceis, secundo dense concinne subtiliter minus profunde rugosiuscule-punctato, carinula mediana sat distincta, tertio imo basi nigro-æneo sparsim punctato, parte reliqua punctatura segmenti secundi parum densiore, supra seriem maris non calloso, foveolis non immersis minutis obsoletis, feminæ modice calloso foveolis aliquot minutis distinctioribus, margine apicali in mare truncato-, in femina arcuato-integro; ventre (segmento secundo basi utrinque nigro-maculato) et femoribus tibiisque læte-viridibus viridi-subaureo nitentibus, in femina parum cyanescentibus, tarsis fusco-nigris; alis hyalinis, disco modice sordidis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta, tegulis viridi-auratis. — ♂ ♀; long. 8—10 mm.

Patria: Hispania (Chicklana, Coll. Hiendlmayri!) et Algeria (Oran, Coll. Saussurei!).

Animadversio. — Species hæc eximia cum *Chrys. tafnensi* Luc. multum habere videtur similitudinis.

262. **Chrysis sulcata** Dhlb.

Chrysis sulcata, Dhlb. Dispos. p. 7, n. 6. ♀. (1845); Hym. Europ. II. p. 116, n. 64. ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 54 et 59. ♀. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 195. (1880). — Rad Horæ Soc. Entom. Rossicæ. XXIII. p. 13. (1888).

Mediocris, elongata, cyaneo-viridis, fusco-alboque pilosa; mesonoti lobis lateralibus et tegulis viridi-subauratis, lobo medio antice posticeque cyaneo; cavitate faciali minus profunda, dense punctato-coriacea, medio longitudinaliter canaliculata, superne convexa; antennis tenuibus, nigris, scapo et articulis duobus (♀) vel tribus (♂) primis flagelli supra læte-viridibus, huius secundo longo, tertio quartoque simul sumptis æquilongo, maris 3—5 infra tumidis seu inflatis (sicut in *Chrys. dichroae* Dhlb. mare); genis mediocribus, articulo antennarum quarto æquilongis; vertice thoracisque dorso crassius punctato-reticulatis; pronoto brevi, transverso-rectangulo, capite angustiore, antice in medio parum impresso; postscutello obtuse-conico, horizontaliter prominulo; metanoti dentibus postico-lateralibus sat longis, validis, obtusis; abdomine ovali, segmentis dorsalibus convexis igneo-auratis, primo secundoque sat crasse punctatis interstitiisque subtilissime punctulatis, secundo carinula mediana indistincta, tertio dense subtilius sat regulariter punctato, convexo, serie anteapicali foveolis haud immersis parvis rotundisque, obso-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

letis, tantum intermediis distinctis, margine apicali arcuato-integro et infra incrassato-dilatato (specie subtus visa) transverseque sulcato, quod spatium sulciforme tamen, secundum Dahlbom, nonnunquam obsoletum obvenit; ventre cyaneo-viridi, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, tarsis nigro-fuscis; alis hyalinis, cellulis discoidali, cubitali et ad costam cellulæ radialis sordidis, cellula radiali triangulariter lanceolata apice sat late aperta. — ♂ ♀; long. 8 mm.

Species: de segmenti tertii margine apicali facile cognoscitur; mas feminæ similis est et nullo modo varietas *Chrys. varicornis* Spin., prouti hoc Clariss. Dom. Abeille suspicabatur.

«*Armure.* Le bord supérieur de la branche du forceps garni de poils fins, ainsi que de poils plus forts. Volsella, vue de côté, n'est pas large. Sa tenette petite. Les chrochets pointus.» (Rad. l. c. tab. II. fig. 22a, 22b, 22c, 22f, 22i.)

Patria: Sardinia (Costa); Sicilia (Dhlb.); Græcia (Syra, Schmiedkn. et Coll. Rad.!; Attica, Coll. Wüstneii!); insula Rhodus (Dhlb. et Mus. Vindob.!).

263. **Chrysis cyaniventris** n. sp.

♀ *Chrysis mendax*, Ab. Diagnos. Chrys. Nouvell. p. 4, n. XIX. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 54 et 59. ♀. (1879). — Schmiedkn. Entom. Nachricht. VI. Nro 18, p. 197. (1880).

Submagna, elongata, sat robusta, læte-cyanea, vertice, pronoto, mesonoti lobis lateralibus et lobi medii disco, scutello mesopleurisque viridi parumque subaureo irroratis, cinereo-alboque pilosa; cavitate faciali minus profunda, viridi-cyanea, dense punctulato-coriacea, superne convexa, non marginata; antennis crassiusculis, brunneis, articulis tribus primis cyaneo-viridibus, tertio longo, sequentibus tribus simul sumptis fere æquilongis; vertice minus crasse dense punctato-subreticulato; pronoto brevi, transverso, antice in medio profunde impresso, sat sparsim crassius, mesonoto subtilius irregulariter punctatis interstitiisque subtilissime punctulatis, subcoriaceis, scutello irregulariter minus crasse punctato-ruguloso, postscutello punctato-subreticulato; postscutelli mucrone elevato subacute-conico; metanoti dentibus postico-lateralibus robustis subobtusis incurvis; abdominis segmentis dorsalibus igneo-auratis, segmento primo colore dilutiori, basi cyaneo crasseque punctato, disco sat sparsim crassius minus profunde punctato interstitiisque subtilissime punctulatis, subcoriaceo, secundo tertioque imo basi nigro-æneis sparsimque punctatis, illo dense minus crasse rugosiuscule-punctato, carinula mediana distincta, hoc punctatura secundi parum densiore, supra seriem modice calloso, foveolis immersis haud numerosis maiusculis rotundis, margine apicali arcuato-integro, infra incrassato-dilatato transverseque sulcato; ventre virescenti-cyaneo, segmento secundo basi utrinque violaceo-maculato; pedibus viridi-cyaneis, tarsis fusco-brunneis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali lanceolata incompleta, apice sat late aperta, tegulis viridi-subauratis. — ♀; long. 9 mm.

Patria: Algeria (Setif, Coll. Saussurei!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Animadversio. — Species forsan eadem est ac *Chrysis mendax* Ab. e Lambessa Algeriæ; auctor tamen Clarissimus non facit mentionem de forma postscutelli et ventrem eius iam ignitum (pag. 54), iam nigrum, viridem et cyaneum sine maculis ignitis (pag. 59) esse dicit. — De cetero descriptio *Chrysidis mendacis* Ab. secundum auctorem est sequens:

«Espèce tellement voisine de la *Mulsanti,* qu'une longue description me paraît superflue. Elle en diffère par sa taille qui est de 9 millim., par la pubescence blanche et moins longue de son front, par la ponctuation générale du corps et surtout de l'abdomen beaucoup plus fine, celle des côtés du mésosternum irrégulière, formée de points et de rides coriacées, par le bord postérieur du troisième segment plus relevé avant la ligne de points, par son ventre noir, vert et bleu sans taches feu. Elle se rapproche beaucoup de l'*Aerata* pour la sculpture du corps et pour la taille; mais son dernier segment a la forme et la ponctuation spéciale, ainsi que la ligne de points de la *Mulsanti.* En outre, la pubescence du front est blanche, ainsi que je l'ai déja dit.

J'ai vu une seule ♀ appartenant à M. Fallou et provenant de Lambessa, où elle a été récoltée par M. R. Oberthür.»

264. **Chrysis Ottomana** n. sp.

Mediocris, elongata, cyaneo-viridis, fusco-alboque pilosa; clypeo, vertice post stemmata, occipite temporibusque magis cyaneis; mesonoti lobis lateralibus scutelloque viridi-subauratis; cavitate faciali planiuscula, dense punctato-coriacea, medio longitudinaliter canaliculata, argenteo-sericeo-pilosa; antennis tenuibus, nigris, argenteo-puberulis, scapo et articulis tribus primis flagelli supra læte cyaneo-viridibus, huius articulo secundo longo, sequentibus duobus simul sumptis parum longiore, 3—5 infra tumidis seu inflatis; mandibulis bidentatis; genis longis, articulo tamen secundo flagelli brevioribus; vertice densius, thorace supra parum dispersius minus crasse punctato-subreticulatis, subcoriaceis; postscutello elevato subacute-conico, horizontaliter prominulo; metanoti dentibus postico-lateralibus brevibus, obtusis; abdomine ovali, segmentis dorsalibus convexis, igneo-auratis, primo disco parum virescenti, secundo macula didyma aurea notato, omnibus dense subtiliter, parum rugosiuscule-punctatis subcoriaceis, primo secundoque carinula mediana indistincta, tertio colore magis coccineo, convexo, supra seriem anteapicalem non calloso, foveolis haud immersis minus distinctis parvis rotundisque, margine apicali arcuato-integro, imo apice anguste nigro-æneo nec minime incrassato; ventre cyaneo-viridi, segmento secundo basi utrinque nigro-maculato, tertio viridi-subaurato, splendido, apice nigro; pedibus viridi-cyaneis, tarsis nigro-fuscis; alis hyalinis parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis viridi-cyaneis. — ♂; long. 8½ mm.

Patria: Asia minor (Malatia in Mesopotamia, Mus. Hung.).

265. **Chrysis Erigone** n. sp.

Mediocris, minus elongata, viridi-cyanea vel cyaneo-viridis, parcius cinereo-alboque pilosa; cavitate faciali planiuscula, dense punctato-coriacea, superne convexa; antennis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tenuibus, nigris, scapo et articulis tribus primis flagelli supra viridibus, huius secundo longo, tertio quartoque simul sumptis æquilongo; genis mediocribus, articulo primo flagelli longioribus; vertice et thoracis dorso dense minus crasse punctato-subreticulatis, subcoriaceis; pronoto brevi transverso-rectangulo, antice in medio impresso; postscutello subobtuse-conico, parum prominulo; metanoti dentibus postico-lateralibus sat longis, robustis, subacutis, apice incurvis; abdomine subovali, segmentis dorsalibus convexis igneo-auratis, omnibus dense subtiliter parum rugosiuscule-punctatis subcoriaceis, secundo carinula mediana nulla, tertio ante seriem modice incrassato parumque subtransverse impresso, foveolis obsoletis minus distinctis subrotundis, margine apicali arcuato-integro nec minime incrassato; ventre cyaneo-viridi, parum viridi-subaurato, splendido, segmento secundo basi utrinque nigro-maculato; pedibus cyaneo-viridibus, tarsis fuscis; alis sordide-hyalinis apice dilutioribus, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, tegulis cyaneis vel viridibus. — ♀; long. 8 mm.

Chrys. Ottomanae valde similis et affinis; sed multo latior, subrobusta, magis cyanea, metanoti dentibus postico-lateralibus multo longioribus et validis, abdominis segmento dorsali tertio supra seriem modice incrassato parumque subtransverse impresso, distincta.

Patria: Caucasus (Coll. Rad.! et Mus. Hung.).

266. **Chrysis desertorum** Buyss.

Chrysis desertorum, Buyss. Revue d'Entom. VI. p. 175, n. 11. ♂. (1887). sec. spec. typ. e coll. Buyssoni.

Subparva, viridi-cyanea, fusco-alboque longius pilosa; pronoto, mesonoti lobis lateralibus mesopleurisque magis viridibus; cavitate faciali planiuscula, dense punctulato-coriacea, superne convexa; antennis tenuibus, nigris, scapo et articulis tribus primis læte-viridibus, secundo flagelli longo, tertio quartoque simul sumptis longitudine æquali, 4—7 subtus inflatis seu tumidis; mandibulis bidentatis; genis mediocribus, articulo antennarum quarto æquilongis; vertice dense, thorace supra dispersius minus distincte et regulariter subtilius punctato-subreticulatis; pronoto brevi, capite angustiore, transverse-rectangulo, antice in medio parum impresso; postscutello obtuse-conico magisque regulariter punctato-reticulato, mesopleuris subcoriaceo-rugosis; metanoti dentibus postico-lateralibus brevibus, leniter curvatis, obtusis; abdominis segmentis dorsalibus igneo-auratis, dense minus crasse rugosiuscule-punctatis, secundo carinula mediana nulla, tertio convexo, ante seriem vix incrassato, foveolis minus distinctis, haud numerosis, circiter 12 tantum, rotundatis, margine apicali arcuato-integro; ventre viridi et cyaneo, segmento secundo utrinque nigro-maculato; pedibus cyaneo-viridibus, tarsis fuscis; alis subhyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, tegulis cyaneis. — ♂; long. 6—6½ mm.

Inter species huius sectionis minima est.

Patria: Syria (Ramleh, Coll. Buyssoni).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

β) Venter igneus nigro-maculatus.

*

Conspectus synopticus specierum Europæarum mihi cognitarum.

1 (4). Corpore mediocri vel submagno, 7—10 mm. longo, elongato vel subangusto; antennarum articulis quattuor primis viridibus vel viridi-cyaneis; alis hyalinis disco et ad costam cellulæ radialis parum sordidis.

2 (3). Capite cum facie et thorace supra longius nigro-, clypeo, genis, temporibus, thorace lateribus et subtus, pedibus item abdomineque albo-pilosis; thoracis dorso dense irregulariter minus crasse profundeque punctato-subreticulato, subcoriaceo; abdominis segmentis dorsalibus sat crasse rugosiuscule-punctatis, subcoriaceis, tertio, supra seriem in femina parum incrassato, foveolis sat magnis vel maiusculis profundis rotundatisque, imo margine infra incrassato-dilatato transverseque sulcato ... ... *Mulsanti* Ab.

3 (2). Vertice cum lateribus faciei genisque, thorace item supra, femoribus tibiisque externe longius nigro-, clypeo, mandibularum basi, temporibus, thorace lateribus et subtus abdomineque albo-pilosis; thoracis dorso coriaceo fortius minus profunde punctato interstitiisque angustis subtilissime punctulatis; abdominis segmentis dorsalibus: secundo tertioque in femina densissime concinne punctulatis subgranulosis, in mare primi disco et margine apicali secundoque imo basi minus dense crassius punctatis, tertio densissime concinneque punctulato-subgranuloso; tertio in sexu utroque supra seriem non incrassato, foveolis irregularibus numerosis obsoletis linearibus, margine apicali infra nec minime incrassato-dilatato transverseque sulcato... ... ... *trimaculata* Först.

4 (1). Corpore magno lato ac robusto, 10—13 mm. longo; antennarum articulis solum tribus primis cyaneis vel viridi-cyaneis; alis anticis disco saturate brunneo-fumatis; vertice thoraceque supra nigro-, subtus cum abdomine pedibusque niveo-pilosis; thorace supra crassius punctato-reticulato; abdominis segmento dorsali tertio supra seriem calloso foveolis profunde immersis subovatis maiusculis, imo margine apicali infra nec minime incrassato-dilatato transverseque sulcato ... ... *refulgens* Spin.

*

267. **Chrysis Mulsanti** Ab.

?*Chrysis rufiventris,* Dhlb. Hym. Europ. II. p. 119, n. 66. (1854). — Schmiedkn. Entom. Nachricht. VI. p. 195. (1880).

Chrysis Mulsanti, Ab. Diagnos. Chrys. Nouvell. p. 3, n. XVIII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 54 et 57. ♂ ♀. tab. I. fig. 18. (facies et oculi) (1879). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 160. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 197. (1880). — Lampr. Goldwesp. Deutschl. p. 12, n. 18. tab. I. fig. 9. (segm. anale) (1881).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Mediocris, elongata, subangusta, cyanea, rarius virescenti-cyanea, capite cum facie et thorace supra longius nigro-, clypeo, genis, temporibus, thorace lateribus et subtus, pedibus item abdomineque albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, superne convexa, non marginata; antennis longis, crassiusculis, nigris, argenteo-puberulis, articulis quattuor primis viridibus vel viridi-cyaneis, tertio longo, sequentibus duobus simul sumptis adhuc parum longiore; clypeo mediocri, apice truncato nigro-æneoque limbato; genis sat longis, articulo primo flagelli duplo longioribus; mandibulis nigris, apice rufis, bidentatis; vertice et thoracis dorso dense irregulariter minus crasse profundeque punctato-subreticulatis, subcoriaceis, punctatura pronoti transversi et antice in medio impressi parum fortiore magisque regulari; postscutello mediocriter elevato obtuse-conico; metanoti dentibus postico-lateralibus mediocribus latis ac robustis, apice subacutis incurvisque; abdominis segmentis dorsalibus igneo-auratis et sæpius parum viridi lavatis, dense sat crasse rugosiuscule-punctatis, subcoriaceis, punctatura segmenti secundi disco densiore parumque subtiliore, carinula mediana subtili, tertio supra seriem in femina parum incrassato foveolis sat magnis rotundatis profundisque circiter 10—12 per carinulam medianam interruptis, margine apicali arcuato-integro, in mare non incrassato foveolis minoribus, margine apicali truncato-integro medioque lenissime sinuato, imo margine infra incrassato-dilatato transverseque sulcato (quod in mare melius videtur, quam in femina); ventre igneo-aurato, segmento secundo basi utrinque macula magna et tertio apice nigris; pedibus cyaneis vel viridi-cyaneis, tarsis fuscis; alis hyalinis, disco et ad costam cellulæ radialis parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, apice parum aperta, tegulis cyaneis. — ♂ ♀; long. 7—8 mm.

«Je suis heureux de la dédier à mon vénéré maître, M. Etienne Mulsant, un des princes de la science. J'en possède plusieurs exemplaires qui m'ont été donnés par M. Lichtenstein, qui l'obtient par éducation d'*Hélix*, dans lesquelles avaient niché des *Osmia aurulenta*. La *Mulsanti* remplace dans le midi l'*Aerata*. Mes sujets proviennent tous de Provence et de Montpellier. J'en ai pris moi-même 39 individus sur des euphorbes fleuries, ou pondant sur des fenouils morts. Je l'ai vu dans la collection Spinola, confondue avec la *Neglecta*, dont son postécusson seul suffirait à la distinguer.» (Abeille l. c.).

Patria: Gallia (Provence et Montpellier, Abeille et Licht!; Toulouse, Marq.); Hispania (Mus. Vindob.! et Hung.); Insulæ Baleares (Mallorca, Friese! et Mus. Hung.). — Germania (Perleberg, Rudow teste Lamprecht) (? Mocs.).

Animadversio. — Parum dubito, quin *Chrysis rufiventris* Dhlb., ignotæ patriæ, eadem est species cum *Chryside Mulsanti* Ab., quamvis auctor antennas nigro-fuscas et cellulam radialem completam esse dicat; sed descriptio in aliis penitus convenit, et inter animalia huius secundariæ sectionis cum post-scutello conico tantum in *Chryside Mulsanti* est margo apicalis infra seriem incrassatus, sicut in *Chryside sulcata* Dhlb., quod etiam auctor optime indicat. — Radoszkovszkyi *Chrysis rufiventris* e Caucaso (Horæ Soc. Ent. Rossicæ. XV. 1879, p. 142), secundum specimen typicum, quod vidi, solum *Chrysis Austriaca* Fabr. est. — Quod demum species hæc etiam Germaniæ incola esset, prout hoc Dom. Rudow

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

voluit, in dubium vocare aussus sum, quoniam species maxime meridionalis ne in Hungaria quidem observata est. Eius specimina, si talia habet, certe e Gallia, a Dominis Lichtenstein vel Marquet oriuntur.

De cetero, comparationis causa, *Chrysidis rufiventris* Dhlb. descriptio sequens est:

«Mediocris 2½ lin. decimal. long. confertim irregulariter punctata et punctulata subcoriacea cyaneo-viridis, abdomine undique igneo-aureo, alis hyalinis disco sordidis, cellula radiali completa, postscutello conico.

Observ. Simillima *Chr. varicorni* Spin., et forsitan huius varietas? tamen dignoscitur corpore breviore et angustiore, antennarum flagellis nigris, sculptura thoracica minus crassa, abdominis segmenti tertii serie ante-apicali irregulari foveolis profundioribus, ventre igneo, etc.

Caput, thorax, pedes et alæ omnino ut in *Chryside varicorni;* antennæ autem breviores, nigro-fuscæ, scapo solo cyaneo-viridi; cavitas facialis superne carinula transversa caret, adeoque a fronte non separata. Oculi minores quam in *Chr. varicorni* et magis distantes. Abdomen eandem formam, sculpturam et picturam in dorso præbet quam apud *Chr. sulcatam;* at segmenti tertii series ante-apicalis diversa et irregularis medio per carinulam brevissimam depresso-planam interrupta, utrinque foveolis 6—8 profundioribus nigris invicem fere alternatim confluentibus, margo apicalis infra hanc seriem omnino ut in *Chryside sulcata* constructus; venter igneo-auratus splendidissimus marginibus segmentorum piceo-nigris.

Specimen unicum e Collectione Paykulliana Musei Reg. Acad. Scient. Stockholm. communicavit D. Boheman, patria non indicata.»

268. **Chrysis trimaculata** Först.

Chrysis trimaculata, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 307, n. 71. ♀. (1853) sec. spec. typ. Mus. Nat. Hung. — Mocs. Chrys. faun. Hung. p. 45 et 83, n. 1. ♀. (1882). — Frey, Chrys. Helvet. p. 50 et 59. ♂ ♀. (1887).

Chrysis aerata, Dhlb. Hym. Europ. II. p. 129, n. 71. ♀. tab. VI. fig. 86. (1854). — Schck, Nass. Jahrb. XI. p. 37, n. 16. ♀. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 68. (1858). — Schck, Progr. Gymn. zu Weilb. p. 9, n. 5. ♀. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 54 et 58. ♂ ♀. tab. II. fig. 36. (ala sup.) (1879). — Schmiedkn. Entom. Nachricht. VI. p. 197. ♀. (1880). — Lampr. Goldwesp. Deutschl. p. 11, n. 15, tab. I. fig. 7. (segm. anale) (1881). — Heyd. Ber. Senkenb. naturf. Ges. p. 250, n. 19. (1882). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 52, n. 19. ♂ ♀. (1887).

Chrysis Blancoburgensis, Schmiedkn. Entom. Nachricht. VI. p. 174. ♂. (1880) sec. spec. ab ipso Clariss. Auctore mihi donatum. — Lampr. Goldwesp. Deutschl. p. 11, n. 16. ♂. (1881).

Mediocris vel submagna, minus elongata, sat robusta, cyanea vel parum virescenti-cyanea, vertice cum lateribus faciei genisque, thorace item supra, femoribus tibiisque externe longius nigro-, clypeo, mandibularum basi, temporibus, thorace lateribus et subtus abdomineque albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, superne convexa, non marginata; antennis longis, crassiusculis nigris,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

argenteo-puberulis, articulis quattuor primis cyaneo-viridibus, tertio longo, sequentibus duobus simul sumptis adhuc parum longiore; clypeo mediocri, apice truncato nigroque limbato; genis sat longis, articulo antennarum quarto æquilongis; mandibulis nigris, apice rufis, fortiter bidentatis; vertice dense subtiliter punctato-subreticulato; pronoto brevi, transverso, antice in medio parum impresso cum mesonoto scutelloque fortius minus profunde punctatis interstitiisque angustis subtilissime punctulatis, coriaceis, a latere visis punctis parum rugosiuscule confluentibus; suturis duabus mesonoti lenissime crenulatis; postscutello elevato obtuse-conico, crasse punctato-reticulato, basi fovea centrali; metanoti dentibus postico-lateralibus mediocribus, latis ac robustis, apice subobtusis leniter incurvis; abdominis segmentis dorsalibus igneo-coccineoque auratis, carinula mediana in omnibus segmentis subtili, tertio ante seriem planato, nec minime incrassato, foveolis irregularibus numerosis obsoletis leviter impressis linearibus, margine apicali infra nec minime incrassato-dilatato transverseque sulcato; ventre igneo-aurato splendidissimo, segmento secundo basi utrinque macula magna et tertio basi apiceque nigris; pedibus æneo-viridibus, tarsis fuscis; alis hyalinis, disco et ad costam cellulæ radialis brunneo-fumosis, venis fuscis, cellula radiali subtriangulariter lanceolata subcompleta, tegulis viridi-cyaneis. — ♂ ♀; long. 9—10 mm.

Femina: abdominis segmentis dorsalibus: primo valde dense punctulato-coriaceo, secundo tertioque densissime concinne punctulatis, subgranulosis, tertio margine apicali depresso arcuato-integro, apice distincte angustiore, quam basi.

Mas: abdominis segmentis dorsalibus: primo lateribus et secundi maxima parte dense irregulariter punctulato-coriaceis, illo disco et margine apicali secundoque imo basi minus dense crassiusque punctatis, tertio densissime concinneque punctato-subgranuloso, punctatura parum fortiore, quam in femina, margine apicali depresso subtruncato-integro medioque lenissime sinuato.

«Espèce rare, qui paraît remplacer la *Mulsanti* dans le Nord..... Lichtenstein l'a même envoyée dans des *Hélix* où avaient niché des *Osmia bicolor*. Son cocon est ovale, opaque et glabre..... Le ♂ diffère de la ♀ par son dernier segment abdominal tronqué et même un peu échancré du milieu, sans carêne sur sa ligne médiane.» (Abeille l. c.).

Clariss. Dom. Schmiedeknecht de sua *Chrys. Blancoburgensi* sequentia scripserat:

«Wie war ich erstaunt, als ich am 25. März 1880 auf einem von der Sonne beschienenen Stein eine *Chrysis* sich tummeln sah, war mir doch vor Ende April nie eine Goldwespe zu Gesicht gekommen. Das Thier war mir ebenso neu wie seine Flugzeit und ich vermuthete anfangs die *Chr. hirsuta* Gerst. in ihm, weil ich die Beschreibung nicht sogleich bei der Hand hatte. An demselben Tage fing ich ein zweites Exemplar, am zweitfolgenden ein drittes. Sämmtliche drei sind ♂. Alle waren wenig scheu und flogen auf Sandboden, stets am Saume von Gebüsch und zeigten eine entschiedene Vorliebe für hellerleuchtete Gegenstände. So fing ich ein Stück in der Scherbe eines weissen Porzellantellers. Ich nenne die Art zu Ehren meiner Vaterstadt Blankenburg in Thüringen, deren Umgegend reich an Naturschönheiten im Grossen und Kleinen ist.» (Schmiedeknecht l. c. p. 175—176).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Patria: Hispania (Gog.); Gallia (Court. et Mus. Hung.); Germania (Schck); Helvetia (Dhlb.); Tyrolis (Dalla Torre et Kohl); Austria (Rogenh. et Kohl); Hungaria centralis, medio mensis Aprilis valde rara (Mocs.]; Græcia (Mus. Atheniense!); præsertim in regionibus montanis.

Animadversio. — Nihil mihi superest dubii, quin *Chrys. Blancoburgensis* mas *Chrysis trimaculatae* sit: punctatura abdominis segmentorum dorsalium parum fortiore. Clariss. enim Auctor in suo opere classico: *Apidae Europaeae,* fasc. XII. 1886, pag. 177 (1043) eam *Osmiae bicoloris* Schrk (fuscæ Christ) parasitam esse dicit. — Mares in hac sectione, et etiam alibi, punctatura sæpius fortiore gaudent et meam opinionem confirmant circumstantiæ proventus ambarum specierum: ineunte nempe vere, quum earum animal nutrix: *Osmia bicolor* Schrk volitat et aliæ adhuc species Chrysidarum in Europa media tam mature non inveniuntur.

269. **Chrysis refulgens** Spin.

Chrysis refulgens, Spin. Ins. Lig. I. p. 8, n. 4. tab. I. fig. 3. ♀. (1806). — Dhlb. Hym. Europ. II. p. 131, n. 72. ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 54 et 57. ♂ ♀. (1879). — Schmiedkn. Entom. Nachricht. VI. Nr. 18, p. 197. (1880). — Lampr. Goldwesp. Deutschl. p. 11, n. 17. (1881). — Mocs. Chrys. faun. Hung. p. 46 et 86, n. 2. ♂ ♀. (1882). — Destef. Natural. Sicil. VII. p. 159. (1888).

Chrysis flammea. Lep. Annal. du Mus. Hist. nat. VII. p. 128, n. 27. ♀. tab. VII. fig. 17. (1806). — Chevr. Chrysid. du Léman, p. 22. ♂ ♀. (1862). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 159. (1879). — Frey, Chrys. Helvet. p. 50 et 59. (1887).

Magna, lata ac robusta, cyanea, plus minusve viridi picta, vertice thoraceque supra nigro-, subtus cum abdomine pedibusque niveo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, superne convexa, non marginata; antennis longis, crassis, nigris, argenteo-puberulis, articulis tribus primis cyaneis vel viridi-cyaneis, tertio longo, sequentibus duobus simul sumptis æquilongo; clypeo longiusculo, transverso, apice truncato medioque leniter sinuato; genis sat longis, articulo antennarum quarto æquilongis; fronte lata, oculis proportionaliter subparvis, valde exsertis; pronoto brevi, transverso, antice in medio parum impresso, eius truncatura antica fovea centrali lævi ac politissima nigro-violacea; thorace supra crassius punctato-reticulato; postscutello elevato, obtuse-conico; metanoti dentibus postico-lateralibus mediocribus, robustis, latis, obtuse-triangularibus; abdomine longo, capite thoraceque simul sumptis parum longiore, robusto, ovali, dorso depresso-convexo, igneo-aurato, segmento primo et lateribus plus minusve viridi resplendentibus, impressione primi parva, semilunata, nigro-ænea vel potius atro-violacea, marginibus basalibus 2—3 nigro-ænescentibus, primo sat dense crassius, reliquis parum subtilius punctatis, punctis in locis certis parum rugosiusculis punctisque aliquot minoribus inmixtis, carinula mediana in segmento secundo bene distincta, in primo tertioque abbreviata iam distincta, iam obsoleta, tertio supra seriem calloso foveolis profunde immersis medio per carinulam interruptis utrinque circiter 8 subovatis, maiusculis, margine summo apicali fusco-ænescenti, in femina arcuato-integro, in mare subtruncato-integro multoque breviore; ventre dense punctulato, igneo-aurato, segmento secundo basi utrinque nigro-maculato; pedibus cyaneo-viridi-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

bus aut viridi-cyaneis, calcaribus brunneo-testaceis, tarsis fuscis; alis hyalinis, anticis disco saturate brunneo-fumatis, venis firmis piceis, cellula radiali lanceolata incompleta, apice parum aperta, tegulis ovalibus viridi-cyaneis, dense punctulatis. — ♂ ♀ ; long. 10—13 mm.

Species: inter Holochrysidas mihi in natura cognitas maxima est.

Patria: Italia (Genua, Spin.; Sicilia, Destef.); Gallia meridionalis (Ab.); Tyrolis (Dalla Torre); Hungaria meridionalis, valde rara (Mocs.); Dalmatia (Dhlb., Gasperini! et Mus. Hung.); Istria (Pola, Coll. Handlirschi!); Russia meridionalis (Dhlb.); Caucasus (Rad.); Asia minor (Dhlb. et Mus. Hung.). — Helvetia dubiosa est.

Animadversio. — *Chrysis flammea* Lep. secundum magnitudinem figuræ (11 mm.) certissime eadem est species cum *Chrys. refulgente* Spin., quia species reliquæ huc pertinentes minores sunt. Opera in eodem tempore edita sunt, prioritas ergo esset litigiosa; ego tamen nomen a Spinola datum præferendum esse censeo, quia sub hoc nomine animal magis cognitum est et Spinola in opere maiore illud certe prius descripserat, quam Lepeletier in sua publicatione minori.

270. **Chrysis pyrogaster** Brullé.

Chrysis pyrogaster, Brullé, Expéd. de Morée. Tom. III. Zoolog. 2 Sect. p. 374, n. 826. ♀. tab. LI. fig. 4. ♀. (1832).

«Capite thoraceque latissime punctatis, viridi-nitidis, cyaneo-variegatis; pedibus cyaneo-virescentibus; alis subinfuscatis; abdomine dentissime punctato, apice integro, cupreo-nitidissimo; ventre apice nitidiore, subviolaceo. Femina. — Long. 13 millim.

Très-largement ponctué sur la tête et le corselet, et revûté de poils blanchâtres. Tête d'un vert brillant un peu doré sur la face et le chaperon, bleue en haut de la face, entre les ocelles et sur le vertex; antennes noires, garnies d'un très-court duvet grisâtre: leurs trois premiers articles sont un peu bleuâtres. Corselet d'un vert brillant un peu doré, nuancé de bleu sur le milieu du mésothorax, au-dessus de l'insertion des ailes et sous l'écusson: les côtés du prothorax et la poitrine présentent aussi cette même couleur; angles postérieurs du métathorax avancés et pointus. Écaille des ailes verte, avec un peu de bleu à la base; celles-ci un peu enfumées, avec les nervures noires. Pattes d'un vert bleuâtre; jambes et tarses revêtus d'un court duvet gris ou jaunâtre et luisant. Abdomen beaucoup plus finement ponctué que le reste du corps, sans dentelures à l'extrémité, légèrement caréné au milieu des deux premiers segmens, entièrement d'un cuivreux rougeâtre très-brillant, plus doré sur le bord des segmens. L'extrémité du ventre et le bord de ses segmens sont plus brillans, et ornés de vert bleuâtre et de violet. Femelle.

En Mai; dans les environs de Messéne.»

Patria: Græcia.

Animadversio. — Species, non satis clare descripta, an huius secundariæ sectionis sit civis vel præcedentis, difficile erui potest. Animal tale magnum, 13 mm. longum, ad quod descriptio applicari posset, in collectionibus non inveni speciesque igitur mihi mystica mansit.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

γ) Venter cupreus nigro-maculatus.

271. **Chrysis Osiris** Buyss.

Chrysis Osiris, Buyss. Revue d'Entom. VI. p. 177, n. 13. ♀. (1887) sec. spec. typ. e coll. Abeillei.

Subparva, sat robusta, æneo-viridis, parcius cinereo-alboque pilosa; cavitate faciali planiuscula, dense punctato-coriacea, superne convexa; antennis tenuibus, nigris, articulis tribus primis cum clypeo ænescentibus; genis sat longis, articulo tamen secundo flagelli brevioribus; vertice et thorace supra minus crasse et regulariter punctato-reticulatis; pronoto brevi, transverso-rectangulo, sine impressione basali, truncatura eius antica in medio lævi, violaceo-cuprea; postscutello parum prominulo, subconico; mesopleuris leniter cupratis; metanoti dentibus postico-lateralibus subrectis, sat validis, obtusiusculis; abdomine ovali, segmentis dorsalibus viridi-cupratis, primo disco magis virescenti, omnibus dense minus crasse ac profunde rugosiusculepunctulatis, subcoriaceis, secundo basi nigro-æneo carinula mediana minus distincta, tertio intensius cuprato, convexo, ante seriem vix incrassato, foveolis minus profunde immersis, circiter 12, rotundatis, margine apicali subtiliter punctulato, imo apice anguste nigro-æneo, arcuatim-integro; ventre igneo-cupreo, segmentis: secundo basi utrinque et tertio basi nigro-maculatis; pedibus viridibus leniter cupratis, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, tegulis viridibus. — ♀; long. 5 1/2—6 mm.

Chrysidis ignifrontis Brullé feminæ (aurifronti Dhlb.) quoad colorem abdominis multum habet similitudinis; sed multo minor, capite thoraceque unicoloribus æneo-viridibus, postscutello subconico, abdominis segmentis dorsalibus crassius rugosiusculepunctatis, tertio foveolis profundius immersis magisque distinctis.

«Cette espèce ressemble assez au *Chr. Lucasi* Ab. (unicolor Luc.), mais s'en éloigne par sa forme plus trapue, sa ponctuation plus serrée, subcoriacée, son postécusson subgibbeux, presque conique, le troisième segment abdominal de forme différente avec la série de points enfoncée et non à peine distincte, par la marge apicale non tronquée transversalement et enfin par le ventre qui est d'un beau cuivré. Le seconde segment abdominal à la marge apicale arrondie, réfléchie, ce qui le fait paraître légèrement renflé.

Le *Chr. Osiris* a été obtenu d'éclosion par M. Juba de Lhotellerie, *d'Helix* habités par *l'Osmia Lhotelleriei* Pérez.» (Buyss. l. c.).

Patria: Aegyptus (Coll. Abeillei).

272. **Chrysis artifex** Smith.

Chrysis artifex (l), Smith, Transact. Ent. Soc. Lond. p. 456, n. 1. (1874).

«Length 5 lines. Head and thorax violet, with blue tints; abdomen golden, with shades of carmine in certain lights. The face with silvery-white pubescence; the

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

antennæ also with a fine white pile, the three basal segments tinged with violet; the third segment of the abdomen of a bright carmine tint, the second sligthly so on the disk in certain lights; the legs blue, with the tarsi black; wings subhyaline. The thorax slightly narrowed before the tegulæ; the anterior lateral angles subacute; the postscutellum elevated into a slight tubercle. Head and thorax strongly and very closely punctured. Abdomen: finely and very closely punctured, most strongly so at the base; the second segment with a central longitudinal carina, it is also faintly traced on the basal segment; beneath golden, with a coppery lustre on the two apical segments.»

Patria: China septentrionalis (Hong Kong).

Animadversio. — Denominatio pessima; Chrysididæ enim vitam agentes parasiticam, artifices esse non possunt etsi voluissent.

b) *Postscutellum convexum vel gibbo-convexum.*

α) Venter cyaneus vel viridis vel viridi-cyaneus, plus minusve violaceo- vel nigro-picto.

273. **Chrysis transversa** Dhlb.

Chrysis transversa, Dhlb. Hym. Europ. II. p. 113, n. 62. (1854). — Schmiedkn. Entom. Nachricht. VI. p. 195. (1880).

Descriptio secundum Dahlbom:

«Latiuscula 2²/₃ lin. decimal. long. crasse punctata cyaneo-viridis, abdomine obtuse subrectangulo l. subquadrato basi viridi, lateribus et ante apicem virescenti-aureo, segmento tertio brevi transverse subrectangulo, ante seriem apicalem leviter callosomarginato, margine apicali transverso tenui, alis albo-hyalinis ad costam cellulæ radialis incompletæ limboque apicali sordidis.

Observ. Ad habitum nonnihil affinis *Chrys. foveatae.* Corpus robustum crassum, antice posticeque transverso-obtusum, totum cinereo- et cano-pubescens pilosellumque, dorso crasse punctatum. Caput viride, pone stemmata et occipite cyanescens. Vertex modice punctatus subreticulatus. Antennæ modice robustæ breviusculæ fuscæ, scapus et flagelli basis nonnihil viridi-micantes. Clypeus mediocris transversus medio convexiusculus. Mandibulæ piceæ, basi macula viridi, ante apicem læte brunnescentes. Thorax crasse punctato-reticulatus viridis; pronotum fovea mediana subcontinua, antice truncatum: truncatura medio polita concaviuscula subænea, utrinque parce punctulata nitida viridis; dorsuli area media cyanea viridi-irrorata, areæ laterales virides intus subaureo-irroratæ; scutellum, mesopleuræ, discus postscutelli et latera metanoti viridia; reliquæ partes thoracis cyaneæ, plus minus viridi-nitentes. Abdominis segmentum dorsale primum crasse punctatum viride, basi macula cyanea, apice utrinque ex aureo-viridi resplendens; segmentum secundum confertim at mediocrius crasse punctatum viridi-aureum, præsertim ad latera et in apice, basi macula subtriangulari violacea; segmentum tertium breve, obtuse transverso-subrectangulum l. late et breviter subtrapezinum, inæquale: basi linea marginali violacea sparse punctatum, tum transverse con-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

caviusculo-immersum punctato-coriaceum cupreo-aureum et deinde paullulum incrassatum in marginulum subcallosum viridi-auratum; series ante-apicalis sub hoc immediate sita e punctis et foveolis mediocribus orbiculatis numerosis constituitur; margo apicalis tenuis, paullulum prominulus, late transversus, vix nisi lenissime et inæqualiter curvus, utrinque arcuato-obtusus. Venter viridis, pedes concolores tarsis fuscis. Alarum venæ et cellulæ omnino ut in *Chrys. cyanura*, at vena radialis magis curva et apertura cellulæ radialis minus lata.»

Patria: Græcia (Schmiedkn.); Asia minor (Dhlb.).

274. **Chrysis gastrica** Dhlb.

Chrysis gastrica, Dhlb. Hym. Europ. II. p. 115, n. 63. ♀. (1854). — Schmiedkn. Entom. Nachricht. VI. p. 195. (1880).

Descriptio secundum Dahlbom:

«Oblonga 3 lin. decimal. long. et ultra, modice robusta, antice crasse punctato-reticulata cyaneo-viridi-irrorata, abdomine punctulato-coriaceo viridissime aurato, segmentis secundo et tertio fasciola basali nigro-ænea, segmento tertio mediocri semilunato, ante seriem non calloso, margine apicali incrassato non sulcato, alis hyalinis disco sordidis, cellula radiali incompleta.

Observ. Habitu fere *Chrysidi integrae* similis, licet maior, robustior et aliter sculpta pictaque. Caput cyaneum: vertice et occipite modice punctato-reticulatis viridi-irroratis. Antennæ crassiusculæ subbreves, basi virescentes, medio fuscæ, apice brunnescentes. Clypeus subbrevis viridis, medio convexiusculus, margine apicali transverso. Mandibulæ ut in *Chr. transversa*. Thorax longiusculus minus crassus, cyaneus, supra subaureo-viridi-irroratus; pronotum antice truncatum: truncatura cyanea, parte colliformi aureo-viridi, spatio centrali politissimo æneo. Abdomen ovato-oblongum confertim punctato-coriaceum, viridissime aureum, segmenta secundum et tertium in margine basali fasciola lanceolata nigro-ænea apice aureo-marginata; segmentum tertium mediocre semilunatum, modice depresso-convexum, disco vix nisi quam lenissime transverse immersum, series ante-apicalis e foveolis parvis orbiculatis hinc inde confluentibus constituta, margo apicalis nonnihil incrassatus aureus. Venter cyaneus, lineola mediana et margines segmentorum virescentes. Alæ hyalinæ, in cellula radiali ad costam et stigma, nec non in disco cell. discoidalis, cubitalis et submedialis secundæ umbra sordida observatur; venæ alarum firmæ brunneæ; cellula radialis apice subanguste aperta. Pedes l. cyaneo-virides l viridi-cyanei, tarsis testaceo-brunneis.»

Patria: Lusitania seu Portugalia (Dhlb.).

275. **Chrysis cyanocœlia** n. sp.

Mediocris, elongata, proportionaliter robusta, viridi-cyanea, vertice thoracisque dorso parcius nigro-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

dense punctato-coriacea, superne depresso-convexa, non marginata; antennis brevibus, crassis, nigris, argenteo-puberulis, articulis tribus primis viridibus, tertio mediocri, quarto quintoque simul sumptis æquilongo; clypeo apice truncato nigro-æneoque limbato; genis mediocribus, antennarum articulo quarto parum longioribus; vertice dense subtilius punctato-subreticulato; pronoto brevi, transverso-rectangulo, antice in medio profunde longitudinaliter sulcato cum scutello postscutelloque gibbo-convexo fortius, mesonoto subtilius punctato-reticulatis; metanoto dentibus postico-lateralibus validis, mediocribus, subacutis; abdominis segmentis dorsalibus thorace latioribus igneo-auratis, secundo tertioque imo basi nigro-æneis, primo sat sparsim minus profunde punctato interstitiisque subtilissime punctulatis, secundo tertioque dense subtiliter rugosiuscule-punctulato, subcoriaceo, hoc supra seriem parum calloso foveolis minutis orbiculatis viridibus circiter 10 per carinulam medianam interruptis bene distinctis, margine apicali arcuato-integro, apice distincte angustiore, quam basi, anguste nigro-æneo; ventre cyaneo, segmento secundo basi utrinque nigro-maculato, tertio viridi; pedibus viridi-cyaneis, tarsis longis gracilibus fuscis; alis hyalinis, disco parum sordidis, venis piceis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta, tegulis viridi-cyaneis. — ♀ ; long, 7 mm.

Patria: Caucasus (Tiflis, Mus. Hung.).

276. **Chrysis Tafnensis** Luc.

Chrysis tafnensis (Lep), Luc. Explor. de l'Algér. Zoolog. III. p. 304, n. 340. Hym. tab. XVII. fig. 1. (1849). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 54 et 57. (1879).

«Long. 9 millim. enverg. 15 millim.

Capite, thorace pedibusque viridibus, tarsis fuscorufescentibus; antennis nigris, primo articulo viridi; abdomine rubro purpurato, segmento primo attamen viridi tincto; corpore infra omnino viridi.

Elle est voisine du *C. austriaca*, et vient se ranger tout près de cette espèce. La tête, assez finement chagrinée, est entièrement verte. Les mandibules sont d'un brun roussâtre brillant. Les antennes sont noires, avec le premier article vert. Tout le thorax, couvert de points assez forts et serrés, est de même couleur que la tête, et clairement parsemé de poils testacés, assez allongés. Les ailes à paraptères d'un brun foncé, et à nervures de cette couleur, sont très-légèrement enfumées surtout les premières. L'abdomen, couvert de points moins forts que ceux du thorax, mais plus serrés, est d'un rouge pourpre, avec le premier segment de cette couleur, mais teinté de vert; en dessous, il est entièrement de cette dernière couleur. Les pattes sont vertes, parsemées de poils testacés, avec des tarses d'un brun noirâtre.

Cette jolie petite espèce, que je n'ai pas rencontrée à été prise par M. de Saint-Fargeau sur les bord de la Tafna.» (Lucas l. c.)

«Espèce très-distincte de toutes par son thorax d'un vert très-clair et très-brillant,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

comme chez les *Stilbum*, et surtout par son écusson imponctué au milieu de sa base. Jusqu'ici elle n'a été prise qu'en Algérie.» (Abeille l. c.)

Patria: Algeria.

β) Venter aureo- vel igneo-pictus.

**) Fronte cyanea, viridi vel viridi-cyanea.*

*

Conspectus specierum mihi cognitarum.

1 (2). Cavitate faciali sat profunda dense subtilissime transverse-striata; genis brevibus linearibus, fere nullis; abdominis segmentis dorsalibus dense subtiliter punctato-coriaceis, tertio margine apicali in femina arcuato-, in mare truncato-integro; alarum anticarum cellula radiali valde incompleta, apice late aperta *neglecta* Shuck.

2 (1). Cavitate faciali planiuscula dense punctato-coriacea.

3(10). Vertice thoracisque dorso cum reliqua corporis parte cinereo-alboque pilosis.

4 (7). Abdominis segmento dorsali tertio margine apicali perfectissime arcuato-integro, apice multo angustiore, quam basi.

5 (6). Corpore parvo, 5 mm. longo; genis brevibus, fere nullis; abdominis segmento dorsali tertio foveolis circiter 12 rotundatis bene distinctis; tarsis sordide-albis *albitarsis* n. sp.

6 (5). Corpore mediocri vel magno, 7—10 mm. longo; genis longis articulo antennarum tertio fere æquilongis; abdominis segmento dorsali tertio foveolis fere obliteratis; tarsis rufo-brunneis ... ... *simplex* Dhlb.

7 (4). Abdominis segmento dorsali tertio margine apicali subtransverso, apice parum angustiore, quam basi.

8 (9). Corpore 8—9½ mm. longo, elongato, sat robusto; mandibulis bidentatis; metanoto basi fovea minuta; abdominis segmento dorsali tertio margine apicali centro parum sinuato, lateribus angulo arcuato-obtuso; ventris segmento secundo nigro-maculato ... ... *Austriaca* Fabr.

9 (8). Corpore 11—12 mm. longo, lato ac robusto; mandibulis unidentatis; metanoto basi longitudinaliter fossulato; abdominis segmento dorsali tertio margine apicali centro profundius emarginato, lateribus angulo magis arcuato-obtuso; ventris segmento secundo sine macula nigra ... ... *pyrocoelia* n. sp

10 (3). Vertice thoracisque dorso fusco- vel nigro-pilosis; genis mediocribus vel longis.

11(12). Vertice thoracisque dorso fusco-pilosis; corpore viridi-cyaneo; antennis longiusculis, nigris; abdominis segmentis dorsalibus igneo-auratis secundo tertioque purpurascentibus, tertio margine apicali centro et utrinque lenissime sinuato *scita* Mocs.

12(11). Vertice thoracisque dorso breviter nigro-pilosis; corpore cyaneo; antennis brevibus; abdominis segmentis dorsalibus igneo-auratis non purpurascentibus, tertio margine apicali arcuato-integro, non sinuato.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

13(14). Antennarum flagello fusco-rufo; metanoto gibbo convexo; abdominis segmento dorsali tertio supra seriem parum calloso, foveolis profunde immersis virescentibus, confluentibus ... ...*Graja* n. sp.

14(13). Antennarum flagello nigro; metanoto convexo; abdominis segmento dorsali tertio supra seriem leniter calloso, foveolis non tam profunde immersis bene distinctis ... ...*Rhodia* n. sp.

15(18). Abdominis segmentis dorsalibus longe albo-pilosis; calcaribus albido-testaceis.

16(17). Antennarum articulo tertio genis æquilongo; abdominis segmentis dorsalibus subcoriaceis dense subtilius rugosiuscule-punctatis; alarum anticarum cellula radiali apice parum aperta ... ... *Osmiae* THOMS.

17(16). Antennarum articulo tertio genis evidenter longiore; abdominis segmentis dorsalibus crasse rugosiuscule-punctatis interstitiisque subtilissime punctulatis; alarum anticarum cellula radiali penitus completa ... ...*pustulosa* AB.

18(15). Abdominis segmentorum dorsalium lateribus longe nigro-pilosis; calcaribus nigris; genis longis, articulo antennarum tertio æquilongis; abdominis segmentis dorsalibus dense subtiliter rugosiuscule-punctatis, coriaceis; alarum anticarum cellula radiali penitus completa ... ...*hirsuta* GERST.

*

277. **Chrysis albitarsis** n. sp.

Parva, elongata, sat robusta, cyanea, facie, pro- et mesonoti lateribus parum virescentibus, parcius cinereo-alboque pilosa (pilis in vertice thoraceque parum detritis); cavitate faciali planiuscula, dense punctato-coriacea, superne convexa, non marginata; antennis brevibus, proportionaliter crassis, fusco-nigris, argenteo-puberulis, articulis duobus primis viridibus, tertio brevi, quarto parum longiore; genis brevibus sublinearibus, mandibulis apice rufis; vertice post ocellos nigro-cyaneo; pronoto brevi, transverso-rectangulo, antice in medio profunde impresso; vertice thoraceque supra dense subtiliter punctato-subreticulatis; metanoto convexo, dentibus postico-lateralibus brevibus, apice acutis incurvisque; abdominis segmentis dorsalibus igneo-cupreoque auratis, primo subvirescente, duobus primis dense subtiliter, tertio parum fortius rugosiuscule-punctulatis, subcoriaceis, secundo tertioque imo basi nigro-æneis, illo carinula mediana nulla, hoc foveolis parum immersis circiter 12 rotundatis bene distinctis, margine apicali brevi, arcuato-integro; ventre viridi-aurato, segmento secundo basi urtrinque nigro-maculato; pedibus viridi-cyaneis, tibiis externe magis viridibus, tarsis sordide-albis; alis hyalinis, ad costam cellulæ radialis triangulariter lanceolatæ apiceque sat late apertæ parum sordidis, venis fuscis, tegulis brunneis.— ♂; long. 5 mm.

Species in hac secundaria sectione minima est.

Patria: Algeria (Setif, Coll. Saussurei).

278. **Chrysis simplex** DHLB.

Chrysis simplex, Dhlb. Hym. Europ. II. p. 127, n. 70. ♀. (1854.). — Schck, Nass. Jahrb. XVI. p. 175, n. 3. (1861); Progr. Gymn. zu Weilb. p. 9, n. 3. (1870). — Ab. Annal. Soc. Linn. Lyon.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

XXVI. p. 55 et 62. ♂ ♀. tab. I. fig. 19. (facies et oculi) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 197. (1880). — Lampr. Goldwesp. Deutschl. p. 11, n. 14. (1881). — Mocs. Chrys. faun. Hung. p. 46 et 83, n. 3. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 51 et 59. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 160. (1888).

Mediocris vel magna, minus elongata, sat robusta, cyanea, facie, fronte, pronoto, mesonoti lobis lateralibus, scutello et mesopleuris plus minusve virescentibus, vertice thoraceque supra et abdominis segmentis dorsalibus duobus primis cinereo-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, medio longitudinaliter canaliculata, superne convexa, non marginata; antennis brevibus, crassiusculis, nigro-fuscis, argenteo-puberulis, articulis tribus primis viridi-subauratis vel cyaneo-viridibus, tertio longo, sequentibus duobus simul sumptis adhuc parum longiore; clypeo lato, transverso-subtrapezino, viridi-subaurato, sparsim punctato, margine apicali piceo, lateribus oblique-, centro recte-truncatis; genis longis, articulo tertio antennarum fere æquilongis; mandibulis longe falcatis, unidentatis, piceis, apice rufis; fronte lata verticeque convexo-depressis, dense subtiliter punctato-subreticulatis; pronoto brevi, transverso-rectangulo, antice in medio parum impresso fortius, mesonoto et scutello subtilius punctato-subreticulatis, coriaceis, interstitiis angustis subtilissime punctulatis; metanoto convexo, regulariter punctato-reticulato, dentibus postico-lateralibus robustis, mediocribus; truncatura pronoti fovea centrali politissima nigro-picea; abdominis segmentis dorsalibus viridi-igneoque auratis, confertim punctato-coriaceis, primo secundoque carinula mediana sat distincta, tertio serie-anteapicali foveolis fere obliteratis, margine apicali in sexu utroque arcuato-integro; ventre igneo-aurato, dense subtiliter punctato-coriaceo, marginibus segmentorum violascentibus; pedibus cyaneis et viridibus, calcaribus testaceis, tarsis rufo-brunneis; alis hyalinis, ad costam cellulæ radialis leviter sordidis, venis firmis piceis, cellula radiali elongato-lanceolata apice anguste aperta, tegulis viridi-cyaneis, nitidis, sparsim punctatis. — ♂ ♀; long. 7—10 mm.

Species ubique sat rara, exemplaria meridionalia maiora sunt, quam specimina Europæ mediæ.

De eius vivendi modo Clariss. Dom. Gerstaecker sequentia scripserat:

«Bei der Anfertigung dieser ihrer Brutstätte (von Osmia cæmentaria Gerst.) werden die Weibchen von der seltenen *Chrysis simplex* Dhlb., welche in die noch offene Zellen eindringt, verfolgt. Letztere kann man sich daher leicht durch die Zucht verschaffen, wenn man, wie ich es im Frühling dieses Jahres gethan habe, die Brutzellen der *Osmia caementaria* von ihrer Unterlage ablöst, was bei der festen Verkittung derselben mit der Granitblock allerdings mit einigen Schwierigkeiten verbunden ist. Bei der Untersuchung einiger Brutzellen am 21. April fanden sich noch Larven in denselben vor, am 9. Mai dagegen schon Puppen. Beide sind von einer durchscheinenden, eiförmigen Zellenwand von spröder, dünn hornartiger Beschaffenheit eingeschlossen, welche, wenn sie eine Bienenpuppe enthält, weisslich, wenn eine *Chrysis*, dagegen bräunlich gefärbt ist. Wird die umschliessende Kapsel durch Zufall geöffnet, so färbt sich zwar sowohl die *Osmia*- wie die *Chrysis*-Puppe vollständig aus, stirbt aber allmä-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

lig ab. Aus unversehrt abgelösten Zellen entwickeln sich dagegen der Wirth sowohl wie der Parasit ohne alle Schwierigkeiten. Die *Chrysis* verbleibt vollständig ausgefärbt mindestens noch acht bis zehn Tage in ihrer Zelle und entwickelt innerhalb derselben auch ihre Flügel; sie beisst an einem sonnigen Morgen das eine Ende derselben in Form eines Deckels ab und spaziert aus derselben sofort mit der ihr eigenen Hurtigkeit der Bevegung hervor.» (Stettiner entom. Zeitung. XXX. 1869, pag. 341).

Patria: Hispania (Granada, Mus. Hung.); Sicilia (Destef.); Gallia (Gir.); Germania (Schck); Helvetia (Frey); Tyrolis (Kohl); Austria (Rogenh. et Kohl et Coll. Handlirschi!); Hungaria centralis et septentrionalis, sat rara (Mocs.); Græcia (Dhlb.).

279. **Chrysis Austriaca** Fabr.

Chrysis ignita var. Fabr. Ent. Syst. II. p. 241, n. 10. (in descriptione) (1793).

Chrysis Austriaca, Fabr. Syst. Piez. p. 173, n. 15. ♀. (in descriptione) (1804) sec. spec. typ. teste Dahlbom. — Lep. Annal. du Mus. Hist. nat. VII. p. 128, n. 26. (1806). — Spin. Ins. Lig. II. p. 170, n. 16, tab. V. fig. 20. (1808). — Shuck. Ent. Mag. IV. p. 168, n. 11. (1837). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 306. (1853). — Dhlb. Hym. Europ. II. p. 120, n. 67. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 75, n. 2. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 67. (1858). — Schck, Nass. Jahrb. XVI. p. 174, n. 1. (1861). — Chevr. Chrysid. du Léman. p. 12. ♂ ♀. (1862). — Smith, Entom. Annual, p. 92. (1862). — Schck, Progr. Gymn. zu Weilb. p. 9, n. 1. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 64. ♂ ♀. tab. I. fig. 17. (margo apical.) (1879). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 160. (1879).— Schmiedkn. Entom. Nachricht. VI. p. 196. (1880). — Lampr. Goldwesp. Deutschl. p. 10, n. 11, tab. I. fig. 5. (segm. anale) (1881). — Mocs. Chrys. faun. Hung. p. 47 et 83, n. 5. ♂ ♀. tab. I. fig. 11. (segm. anale) (1882). — Frey, Chrys. Helvet. p. 50 et 60. ♂ ♀. tab. III. fig. 14. (margo apical.) (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 53, n. 21. (1887). — Destef. Natural. Sicil. VII. p. 60. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 14. (genit. maris) (1888).

Chrysis rufiventris, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 142, n. 16. (1876) sec. spec. typ. e coll. Rad.

Submagna vel magna, elongata, sat robusta, cyanea, pronoto antice, mesonoti lobis lateralibus, scutello postscutelloque plus minusve viridi pictis, vertice et thoracis dorso cinereo-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, superne convexa; antennis robustis, longis, nigro-fuscis, argenteo-pubescentibus, articulis tribus primis cyaneis vel virescentibus, tertio longitudine mediocri, quarto quintoque simul sumptis parum breviore; clypeo submagno, transverso-subtrapeziformi, sparsim punctato, convexo-subcarinato, margine apicali truncato, nigro-piceo; genis longis, articulo antennarum tertio æquilongis; mandibulis robustis, nitidis, bidentatis; capite supra densius subtiliusque, thoracis dorso fortius confertim irregulariter punctato-rugosis, subreticulatis coriaceisque; pronoti margine antico profunde sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, latis, rectis, subacutis; abdominis segmentis dorsalibus depresso-convexis, igneo-auratis, nonnihil parum virescentibus, primo sat sparsim crassius punctato interstitiisque subtilissime

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

punctatis, secundo tertioque densius subtilisque punctatis, primo secundoque carinula mediana vel sat distincta vel sæpius obsoleta, tertio supra seriem ante-apicalem in sexu utroque non calloso, foveolis parum immersis parvis orbiculatis numerosis, rarius parum obsoletis, margine apicali basi subparallelo late-transverso lenissime arcuato utrinque angulo distincto arcuato-obtuso; ventre igneo-aurato, segmento secundo basi utrinque et tertio fere toto nigro-maculatis; pedibus viridi-cyaneis vel viridi-subauratis, tarsis fusco-brunneis; alis hyalinis, in cellula radiali, cubitali et discoidali plus minusve sordidis, venis firmis picco-brunneis, cellula radiali magna lanceolata subcompleta, apice anguste aperta, tegulis viridi-cyaneis vel cyaneo-viridibus, ovalibus. — ♂ ♀ ; long. 8—9½ mm.

Armure. L'extrémité de la branche du forceps arrondie et densement garnie de poils. Volsella légèrement garnie de poils. Les crochets effilés vers l'extrémité.» (Rad. l. c. tab. II. fig. 23a, 23b, 23c, 23i.)

Patria: Europa tota (in meridionali præsertim regiones montanæ) cum Sibiria et Caucaso (Rad.!) Algeriaque (Lucas) et Aegypto (Walker).

280. **Chrysis pyrocoelia** n. sp.

Chrys. Austriacae Fabr. simillima; sed multo maior, latior ac magis robusta, mandibulis unidentatis, antennarum articulo tertio longiore, quarto quintoque simul sumptis evidenter longiore, vertice thoracisque dorso fortius magisque regulariter punctato-subreticulatis, interstitiis distincte punctulatis, metanoto basi longitudinaliter fossulato; abdominis segmentis dorsalibus parum fortius punctatis, in locis certis rugosiuscule confluentibus, tertio foveolis — præsertim in femina — obliteratis, margine apicali in sexu utroque parum fortius arcuato, angulis lateralibus magis obtusis, ventris segmentis saturate igneo-auratis, secundo sine macula nigro-ænea, tertio tantum margine apicali nigro, species Chrysidibus maximis pleno iure adnumeranda mihi distinguenda esse videtur, quamvis etiam illud haud impossibile est, quod tantum varietas Asiatica sit *Chrys. Austriacae* Fabr.

Patria: Caucasus (Coll. Rad.!); Asia minor (Mus. Halense Saxonum!; Malatia in Mesopotomia, Mus. Hung.); Syria (Mus. Cæs. Vindob.! et Coll. Handlirschi!).

281. **Chrysis neglecta** Shuck.

Chrysis Austriaca, Dhlb. Monogr. Chrys. Suec. p. 14, n. 12. ♂ ♀. (1829); Exercit. Hym. p. 31. n. 15. (1831—33); Dispos. p. 7, n. 7. (1845) (nec Fabr.).

Chrysis neglecta, Shuck. Ent. Mag. IV. p. 169, n. 12. (1837). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 305. (1853). — Smith, Entom. Annual, p. 94. (1862). — Thoms. Opusc. Ent. II. p. 105, n. 2. (1879). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 63. ♂ ♀. tab. II. fig. 37. (ala sup.) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160. (1879). — Mocs. Chrys. faun. Hung. p. 48 et 84, n. 7. ♂ ♀. (excl. ♂) (1882). — Frey, Chrys. Helvet. p. 51 et 62. ♂ ♀. tab. III.fig. 16. (margo apical.) (1887). — Destef. Natural. Sicil. VII. p. 161. (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis integrella, Dhlb. Hym. Europ. II. p. 133, n. 73. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 38, n. 17. ♂ ♀. (1856.). — Chevr. Chrysid. du Léman, p. 19. ♂ ♀. (1862). - Taschb. Hym. Deutschl. p. 151. (1866). — Schck, Progr. Gymn. zu Weilb. p. 9, n. 4. (1870). — Schmiedkn. Entom. Nachricht. VI. Nr. 18, p. 197. ♀. (1880). — Lampr. Goldwesp. Deutschl. p. 12, n. 19, tab. I. fig. 8, ♀. (segm. anale) (1881).

Chrysis Thuringiaca, Schmiedkn. Entom. Nachricht. VI. Nr. 18, p. 193. ♂. (1880). — Lampr. Goldwesp. Deutschl. p. 11, n. 12. (1881). — Mocs. Chrys. faun. Hung. p. 48 et 83, n. 6. ♂ ♀. (excl. ♀.) (1882).

Mediocris aut subparva, elongata, sat robusta, cyanea, facie, vertice, pronoto antice, mesopleuris, metanoti lateribus tegulisque plus minusve viridi vel viridi-subaureo pictis, vertice et thorace supra fusco-, parte reliqua corporis albo-pilosis; cavitate faciali mediocri, dense subtilissime transverse-striata, carinula mediana subtilissima, lateribus et supra dense punctato-coriaceis, superne convexa, non marginata; antennis longitudine mediocribus, tenuibus, nigro-fuscis, argenteo-puberulis, articulis tribus primis in mare, duobus solum in femina virescentibus, tertio mediocri, quarto vix dimidio adhuc longiore; clypeo transverso subtrapezino crassius punctato, margine apicali piceo, ad centrum arcuato-emarginato subtruncato; mandibulis piceis, genis valde brevibus linearibus; vertice dense minus crasse punctato-subreticulato; pronoto brevi, transverso-rectangulo, antice in medio profunde sulcato cum scutello crassius, mesonoto subtilius irregulariter punctatis interstitiisque subtilissime punctulatis subcoriaceis, metanoto convexo, crassius punctato-reticulato, dentibus postico-lateralibus mediocribus, sat robustis, apice parum curvatis; abdomine lineari-elliptico, dorso depresso-convexo, igneo-aurato, basi et lateribus plus minusve viridi-micantibus, primo punctis crassioribus quoque adsperso parum fortius, reliquis subtilius dense subtiliter punctulato-coriaceis, secundo tertioque imo basi nigro-æneis, illo carinula mediana distincta; ventre igneo-aurato, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tarsis fuscis vel præsertim in maribus rufo-testaceis; alis hyalinis, disco leviter sordidis, cellula radiali lanceolata valde incompleta, apice late aperta, venis piceis. — ♂ ♀; long. 6—8 mm.

Femina: abdominis segmento dorsali tertio supra seriem parum incrassato, foveolis sat profunde immersis mediocribus rotundatis approximatis circiter 16—20, margine apicali brevi arcuato-integro.

Mas: abdominis segmento dorsali tertio supra seriem vix incrassato, foveolis maioribus minus profunde immersis irregularibus circiter 12—14 tantum, margine apicali brevi, basi parallelo, subtruncato-integro, lateribus truncaturæ angulis rotundatis.

Patria: Europa tota, inde ab Italia meridionali usque ad Fenniam meridionalem (Dhlb.) et Angliam (Shuck.).

282. **Chrysis mixta** Dhlb.

Chrysis mixta, Dhlb. Hym. Europ. II. p. 167, n. 90. (1854). — Destef. Natural. Sicil. VII. p. 161. (1888).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptio secundum Dahlbom:

«Mediocris oblonga 2 lin. decimal. long. confertim modice punctata subnitida virescenti-cyanea pedibus concoloribus tarsis fuscis, abdominis dorso saturate aureo, segmenti tertii (non sulcati) serie-anteapicali foveolis subconfluentibus minus distinctis, margine apicali maiori ad centrum distinctius emarginato, pone lobulos arcuato-integerrimo.

Observ. Simillima *Chrysidi emarginatulae* Spin.; at dignoscitur: corpore breviore, minus crasse punctato, vertice viridi-æneo, clypeo viridi-cyaneo non aureo-picto, pedibus cyaneo-viridibus non aureo-pictis, tarsis brunneis nec albo-testaceis, ventre basi nigro apice igneo, abdominis dorso saturatius aureo, serie ante-apicali foveolis subconfluentibus minus distinctis, emarginaturæ lobulis triangularibus subdentiformibus. Alæ subhyalinæ venis brunneis; cellula radialis lanceolata incompleta, apice modice aperta.»

Patria: Italia (Liguria, Dhlb.; Sicilia, Destef.).

Animadversio. — Speciem hanc mihi in natura ignotam apud Dahlbomum in secunda eius phalange invenimus, sed illam ego Holochrysidibus inserendam esse censeo.

283. **Chrysis scita** Mocs.

Chrysis scita, Mocs. Magy. Akad. Term. Értek. (Dissertationes physicæ Academiæ scientiarum Hungaricæ. Vol. XIII. Nr. 11, p. 14, n. 18. ♂. (1883).

Mediocris, elongata, minus robusta, viridi-cyanea, genis, pro- et mesonoto scutelloque magis virescentibus, vertice thoracisque dorso fusco-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea argenteo-sericeoque pilosa, superne libera, carinula nempe transversa a fronte non separata; antennis longiusculis, sat crassis, nigro-fuscis, argenteo-puberulis, articulis tribus primis viridibus, tertio mediocri, sequentibus duobus simul sumptis æquilongo; genis mediocribus, antennarum articulo tertio parum brevioribus; pronoto et mesonoti lobo medio postice scutelloque crassius punctato-subreticulatis, mesonoti lobis lateralibus, pleuris et postscutello convexo coriaceo-rugosis; metanoti dentibus postico-lateralibus brevibus, subacutis incurvisque; abdominis segmentis dorsalibus igneo-auratis, segmentis: secundo parum, tertio intensius purpurascentibus, primo sat sparsim crassius, secundo densius et subtilius, tertio dense subtiliter rugoso-punctatis, subcoriaceis, tertio convexo, ante seriem vix calloso, foveolis parvis numerosis, haud profundis, imo margine nigro-æneo, arcuato, centro et utrinque lenissime sinuatis; ventre igneo-purpureo-aurato, segmentis duobus anticis ad basin utrinque nigro-maculatis, tertio apice nigro-æneo; pedibus cyaneis, tibiis externe virescentibus, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice sat late aperta, tegulis cyaneis. — ♂; long. 7 1/2 mm.

Patria: Syria (Kaifa, Mus. Hung.).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

284. **Chrysis Graja** n. sp.

Mediocris, elongata, minus robusta, cyanea, fronte, pronoto, mesonoti lobis lateralibus, metanoti lateribus mesopleurisque parum virescentibus, vertice thoracisque dorso breviter nigro-, parte reliqua corporis albo-pilosis, cavitate faciali planiuscula, dense punctato-coriacea, superne convexa, non marginata; antennis brevibus tenuibus, fusco-rufis, articulis tribus primis virescenti-cyaneis, tertio longitudine mediocri, quarto quintoque simul sumptis æquali; genis mediocribus, antennarum articulo tertio æquilongis; vertice mesopleurisque dense subtilius, thorace supra parum fortius irregulariter punctato-rugosis, coriaceis, interstitiis angustis subtilissime punctulatis; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter fossulato; metanoto gibbo-convexo, dentibus postico-lateralibus robustis, obtusis, incurvis; abdominis segmentis dorsalibus igneo-auratis, dense rugosiuscule-punctatis, secundo tertioque imo basi late nigro-æneis, carinula abbreviata minus distincta, tertio supra seriem parum calloso, foveolis profunde immersis, numerosis, rotundatis, virescentibus, magnitudine mediocribus, confluentibus, per carinulam medianam interruptis, margine apicali brevi, arcuato-integro; ventre igneo-aurato, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, calcaribus albidis, tarsis rufo-testaceis, anticis externe parum infuscatis; alis hyalinis, ad costam cellulæ radialis parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis viridi-cyaneis. — ♀; long. 7 1/2 mm.

Patria: Græcia (Attica, Mus. Atheniense; Tinos, Mus. Batav. Lugdunense).

285. **Chrysis Rhodia** n. sp.

Chrys. Grajae simillima; sed paulo maior, antennarum flagello nigro, argenteo-puberulo, magis crasso, articulo tertio parum longiore, metanoto magis convexo, dentibus postico-lateralibus longioribus magis incurvis, abdominis segmento dorsali tertio supra seriem anteapicalem leniter calloso, foveolis non tam profunde immersis, maiusculis, rotundatis, numerosis, circiter 14 per carinulam interruptis, bene distinctis, non confluentibus, tarsis fusco-rufescentibus, alis anticis cellula radiali subcompleta, apice parum aperta, species mihi distinguenda esse videtur.

Patria: insula Rhodus (Mus. Cæs. Vindob.).

286. **Chrysis Osmiae** Thoms.

Chrysis bicolor, Dhlb. Hym. Europ. II. p. 123, n. 69. ♂ ♀. (1854) ex parte (nec Lep.).

Chrysis Osmiae, Thoms. Opusc. Entom. II. p. 106, n. 4. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 63. ♂ ♀. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 196. (1880). — Frey, Chrys. Helvet. p. 51 et 62, tab. III. fig. 16. (margo apic.) (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 55, n. 23. (1887).

Chrysis lativentris, Tourn. Annal. Soc. Ent. Belg. XXII. p. 92. ♂ ♀. (1879) sec. spec. typ. teste Frey.

Chrysis similaris, Tourn. Annal. Soc. Ent. Belg. XXII. p. 93. ♀. (1879) sec. spec. typ. teste Frey.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptio secundum Thomson:

«Præcedenti (bicolori Dhlb.) simillima, thorace viridi tincto, abdomine multo crebrius punctato, segmento ultimo apice minus late truncato-rotundato, tibiis posterioribus vix metallicis bene distincta.»

Mediocris, elongata, minus robusta, cyaneo-viridis, vertice, pronoto, mesonoti lobis lateralibus, scutello, alarum tegulis, femoribus et tibiis anticis plus minusve viridi- vel viridi-subaureo pictis, vertice thoraceque supra parcius longe nigro-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, superne convexo-depressa, non marginata; antennis crassiusculis, nigris, argenteo-puberulis, articulis quattuor primis viridi-cyaneis, tertio longitudine mediocri, sequentibus duobus simul sumptis æquilongo vel parum breviore; genis longis, articulo antennarum tertio æquilongis; vertice circa stemmata dense subtiliter punctato-subreticulato, postice ad latera utrinque irregulariter crassius punctato, spatio minuto auratoque subtilissime strigoso ad omnia stemmata; pronoto brevi, transverso-rectangulo, antice in medio parum impresso cum scutello crassius punctato-reticulatis, punctis cyaneis, mesonoto irregulariter rugoso-punctato interstitiisque subtilissime punctulatis, subcoriaceis, postscutello basi fovea centrali magna gibbo-convexo, metanoto dentibus postico-lateralibus validis, obtusis; abdominis segmentis dorsalibus igneo-auratis parumque nonnihil virescentibus, subcoriaceis, carinula mediana subtili, primo levius rugoso-punctato interstitiisque angustis subtilissime punctulatis, secundo crassius, tertio subtilius dense regulariter rugosiuscule-punctatis, tertio supra seriem vix calloso, foveolis sat immersis irregularibus obsoletis, margine apicali ad medium transverso, apice distincte angustiore quam basi; ventre igneo-aurato, segmento secundo basi macula utrinque, tertio basi et apice nigris; tarsis fuscis; alis hyalinis, disco et ad costam cellulæ radialis parum sordidis, venis piceis, cellula radiali lanceolata apice parum aperta. — ♂ ♀; long. 6—9 mm.

«Le ♂ diffère de la ♀ par ses articles intermédiaires renflés en dessous chacun vers le milieu.» (Abeille l. c. pag. 63).

«Es ist mir nicht gelungen, fassbare Differenzen zwischen *Ch. lativentris* Tourn., *similaris,* Tourn. und *Osmiae* Thoms. zu finden.

Nicht gerade sehr selten. Von der Thalsohle bis zu 2000 Meter Höhe in den Alpen vorkommend.

Anfang Juni bis Mitte Juli an Baumstämmen, Holzwänden, Pfosten etc., wo viel *Osmia tuberculata* und *Chelostoma maxillosa* nisteten» (Frey-Gessner l. c. pag. 62).

Patria: Suecia (Thoms.); Gallia (Alpes, Gavernie, Digne, Ab.); Helvetia (Tourn. et Mus. Hung.); Tyrolis (Trafoi, Coll. Handlirschi!); Austria inferior (Mus. Vindob!); Corsica (Ab.); Hispania (Escorial, Ab.).

287. **Chrysis pustulosa** Ab.

Chrysis bicolor, Dhlb. Monogr. Chrys. Suec. p. 10, n. 6. ♂ ♀. (1829); Hym. Europ. II. p. 123, n. 69. ♂ ♀. (1854) ex parte. — Schck, Nass. Jahrb. XI. p. 75, n. 3. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 68. (1858). — Schck, Nass. Jahrb. XVI. p. 175, n. 2. (1861)

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

ex parte. — Smith, Entom. Annual. p. 93. (1862) ex parte. — Schck, Progr. Gymn. zu Weilb. p. 9, n. 2. (1870) ex parte. — Thoms. Opusc. Ent. II. p. 106, n. 3. (1870). — Lampr. Goldwesp. Deutschl. p. 11, n. 13, tab. I. fig. 6. (segm. anale) (1881). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 14. (genit. maris) (1888).

Chrysis Austriaca, Zett. Ins. Lapp. p. 466, n. 6. Nota (1840) (nec Fabr.).

? *Chrysis mutica,* Först. Verh. nat. Ver. preuss. Rheinl. X. p. 306. (1853).

Chrysis pustulosa, Ab. Diagnos. des Chrys. nouvell. p. 6, n. XXXV. (1878) ; Annal. Soc. Linn. Lyon. XXVI. p. 60. ♂ ♀. tab. I. fig. 16. (margo apicalis) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 18. (1880). — Heyd. Ber. Senkenb. Naturf. Ges. p. 254, n. 27. (1882). — Mocs. Chrys. faun. Hung. p. 47 et 83, n. 4. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 50 et 60, tab. III. fig. 15. (margo apic.) (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 53, n. 20. ♂ ♀. (1887).

Chrys. Osmiae Thoms. simillima ; sed plerumque maior, antennarum articulo tertio genis evidenter longiore, sæpius etiam quinto virescenti vel cyanescenti, pro- et mesonoto scutelloque crassius profundiusque regulariter punctato-reticulatis, postscutelli fovea basali maiore, abdominis segmentis dorsalibus omnibus crassius rugosiuscule-punctatis interstitiisque latioribus distincte subtilissimeque punctulatis, alarum cellula radiali plerumque penitus completa.

«*Armure.* La forme de la branche du forceps rappelle celle de l'*incrassata,* mais son extrémité est arrondie et symétriquement garnie de poils. La forme des crochets est différente, sa rapprochant à celle de l'*austriaca.*» (Rad. l. c. tab. II. fig. 24a, 24b, 24f, 24k.).

«Durch die starke dichte doppelte Punktirung auf den Hinterleibssegmenten aus der ganzen Gruppe leicht heraus zu finden. Bei den mir vorliegenden über 50 Stück überwiegt die grüne Farbe am Vorderkörper, gegenüber der *Chr. austriaca* wo die blaue Farbe vorherrscht. Die Grösse wechselt von blos 5 bis zu 10 mm. und zeigen die kleinen Exemplare auf dem 2. Segment grössere glatte Zwischenräume mit weniger zahlreich auftretenden feinen Punkten darin als bei den grösseren Stücken. Eine Verwechslung mit *austriaca* kann aber wegen der verschiedenen Form des 3. Hinterleibssegments nicht stattfinden. Das 4 und 5 Fühlerglied sind bei den Männchen stumpf sägezähnig erweitert, das 6 so breit wie der breite Theil des fünften, aber gegen die Basis hin nicht verschmälert, die Fühler werden nur nach und nach gegen die Spitze zu dünner.

Diese Art ist fast so häufig als *austriaca* und an denselben Orten zu finden, hingegen ist sie mir nur aus den Alpengegenden bekannt, wo ich sie übrigens auch nicht jedes Jahr fand; manches Jahr hindurch besass ich nur *austriaca*, dann fand ich an denselben Stellen, an welchen ich bisher diese Species von den Balkenwänden abfing, nur *pustulosa* Ab. und zwar zu 10—20 Stück per Jahr; dann wieder beide zugleich etc.

Im Hauptthal bereits Anfang Mai, aber noch nach Mitte Juli, in Val Annivier von 12—1300 Meter ü. M. an erst von Anfang Juni an.» (Frey-Gessner l. c. pag. 61.).

Patria: Lapponia (Zett.); Suecia (Thoms.); Anglia (Smith); Hispania (Ab.); Gallia (Ab.); Germania (Schck.); Helvetia (Frey); Tyrolis (Dalla Torre et Kohl); Austria

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

inferior, Carniolia, Istria (Coll. Handlirschi!); Hungaria meridionalis montes, rara (Mocs.); gubernium Mosquense (Assmus); Caucasus (Coll. Rad.!); Asia minor (Smyrna, Mus. Turicense!; Aidin, Mus. Hung.); Syria (Kaifa, Mus. Hung.); Aegyptus (Ab.).

288. **Chrysis hirsuta.** Gerst.

Chrysis hirsuta, Gerst. Stett. Ent. Zeit. XXX. p. 185. ♀. (1869). — Schck. Progr. Gymn. zu Weilb. p. 14, n. 3. ♀. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 196, ♀. (1880). — Lampr, Goldwesp. Deutschl. p. 10, n. 9. ♀. (1881). — Frey, Chrys. Helvet. p. 51 et 61. ♀. (1887) (nec Aaron).

Magna, elongata, sat robusta, cyanea, facie, pro- et mesonoti disco tegulisque virescentibus, vertice, thorace supra abdominisque segmentorum dorsalium lateribus parcius longe nigro-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, superne depresso-convexa, non marginata; antennis longis, crassis, nigris, argenteo-puberulis, articulis tribus primis viridibus, tertio longo, sequentibus duobus simul sumptis longiore; clypeo apice truncato nigro-æneoque limbato; mandibulis validis, apice rufis bidentatisque; genis longis, antennarum articulo tertio æquilongis; vertice dense subtilius punctato-subreticulato; pronoto brevi, transverso-rectangulo, dorso convexo, antice in medio sat profunde impresso cum mesonoti lobo medio parum fortius, huius lobis lateralibus subtilius rugosiuscule-punctatis interstitiisque subtilissime punctulatis, subcoriaceis, scutello postscutelloque gibbo-convexo et basi foveato crassius regulariter punctato-reticulatis, metanoti dentibus postico-lateralibus validis, obtusis; abdominis segmentis dorsalibus igneo-auratis medioque leviter carinulatis, dense subtiliter rugosiuscule-punctatis, coriaceis, punctatura primi parum fortiore quam reliquorum, tertio supra seriem anteapicalem vix calloso, foveolis parum immersis numerosis minus distinctis obliteratis, margine apicali transverso-truncato distincte angustiore, quam basi; ventre igneo-aurato nigroque maculato; pedibus cyaneis, tibiis externe virescentibus, calcaribus nigris; alis hyalinis leviter, cellula radiali ad costam magis sordidis, venis piceis, cellula radiali lanceolata penitus completa. — ♀; long. 9—10 mm.

Species: abdominis segmentorum dorsalium lateribus nigro-pilosis calcaribusque nigris, a congeneribus facile cognoscitur.

Patria: Carinthia superior (Ober-Kärnthen, Gerst.); Tyrolis (Dalla Torre et Kohl); Helvetia (Frey-Gessner).

289. **Chrysis multicolor** Walk.

Chrysis multicolor, Walk. List of Hym. collect. by Lord in Egypt etc. p. 8, n. 32. ♂ ♀. (1871).

«Male. — Purple, thickly punctured, with cinereous pubescence. Head green in front. Antennæ black; first joint green. Scutum black between the two distinct parallel furrows. Metathorax with a stout spine on each side of the hind border. Abdomen cupreous, with a slight keel and with three large segments; first segment, and the hind borders of the second and third segments, golden green; hind border of the third

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

segment golden green; under side purple, partly blue and green. Legs bluish green; tarsi black. Wings cinereous; weins black. Length of the body 5 lines.

Female. — Bluish green. Head purple about the hinder border; triangle of the ocelli black, Antennæ black; first joint bluish green. Scutum purple between the two parallel furrows. Abdomen cupreous; first segment golden green; under side green. Legs green; tarsi tawny. *Var.* β. — Golden green. Scutum black between the two parallel furrows. Abdomen as in *var.* α., except the disk of the first segment, which is cupreous. Tarsi piceous. Length of the body 3—3 1/2 lines.»

Patria: Arabia (Wâdy Ferran).

290. **Chrysis martia** PATT.

Chrysis martia, Patt. Canad. Entom. XI. Nr. 4, p. 67. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 226. (1885).

«Green, abdomen red, wings hyaline; length 5 mm.

Head and thorax green, with a thin griseous pubescence; antennæ black, the basal joints of the flagellum above and the scape green, the latter tinged with coppery in front, ocelli enclosed in a blue spot; wings hyaline, the tegulæ and nervures piceous, anterior tarsi and tips of the posterior tarsi blackish, the four posterior tarsi mostly pale testaceous. Abdomen dark red, with green and purple reflections, the base of the first segment golden-green, venter green with deep red reflections. Head and thorax densely and strongly punctured, the depression above the antennæ well marked, polished, front and vertex convex, no transverse ridge between eyes. Prothorax with a median grove, four distint groves on the mesoscutum, postscutellum and metathorax evenly rounded above. Abdomen densely punctured, the punctures finer than those of the thorax, the median line of the second segment distinct, the series of foveolæ consisting of twelve deep punctures, the median punctures the largest; second and third segments of equal length, the third segment suddenly narrowed a little beyond the foveolæ and produced in the centre, the tip truncate, of moore than on-third the width of the segment, not dentate.» (Patton l. c.).

«The insect is unknown to me. Without being able to examine the peculiar character of the apical margin as described, it becomes rather puzzling. I have placed the species in the group with the margin entire, but very doubtfully, however, as it may belong to the unilobed group. I have also placed it before *verticalis*, not intending, however, to indicate its correct position.» (Aaron l. c.).

Patria: Canada meridionalis (Godbout River).

**) *Fronte cum facie tota virescenti- vel cupreo-auratis.*

291. **Chrysis ignifrons** BRULLÉ.

Chrysis ignifrons, Brullé, Expéd. de Morée. Tom. III. Zoolog. 2. Sér. p. 375, n. 827. ♂. tab. LI. fig. 5. ♂. (1832).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis aurifrons, Dhlb. Hym. Europ. II. p. 122. n. 68. ♀. (1854). — Schmiedkn. Entom. Nachricht. VI. p. 196. ♀. (1880).

Sexus ab invicem colore satis differunt.

Mediocris, subangusta, parcius cinereo-alboque pilosa; cavitate faciali planiuscula, dense puntulato-coriacea, superne convexa, non marginata; antennis tenuibus, sat longis, articulo tertio sat longo, quarto quintoque simul sumptis æquali; genis longis, articulo tertio antennarum parum brevioribus; pronoto brevi transverso-rectangulo, antice in medio profunde sulcato; vertice dense punctulato-subreticulato; thorace supra irregulariter minus profunde punctato et punctulato, coriaceo; metanoti dentibus postico-lateralibus robustis subobtusis; abdomine thoracis latitudine, segmentis dorsalibus dense subtiliter punctato-rugosiusculis, coriaceis, secundo carinula mediana nulla, tertio convexo, supra seriem anteapicalem obsoletam nec minime calloso, foveolis minutis, irregularibus, subobliteratis (in mare intermediis sæpius distinctioribus, quam in femina), margine apicali late-arcuato integro medioque leniter sinuato; ventre aurato igneoque lavato, segmento secundo basi utrinque nigro-maculato; femoribus viridi-, tibiis externe pure auratis, tarsis rufescenti-testaceis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice in mare parum, in femina latius aperta, tegulis viridi-auratis.

Femina: viridi-cyanea; capite thoraceque mediocriter pilosis; facie tota cum clypeo, fronte verticeque usque ad ocellos posticos virescenti-auratis vel cupreo-auratis viridique plus minusve lavatis; antennarum articulis quattuor primis viridi-auratis, reliquis fuscis; vertice post ocellos thoraceque supra ex parte violascenti-cyaneis viridique vel ænescenti-viridi lavatis; abdominis segmentis dorsalibus virescenti-auratis, plus minusve, tertio fere toto concinne cupreo lavatis. — Long. 7—8 mm.

Mas: læte-cyaneus, parum virescens; capite thoraceque longe pilosis; facie tota cum clypeo, fronte verticeque usque ad ocellos posticos cupreo-auratis vel pura auratis; antennarum articulis quattuor primis cupreo-auratis, reliquis fuscis; abdominis segmentis dorsalibus igneo-auratis. — Long. 6 mm.

Species hæc eximia: colore capitis, punctatura verticis, thoracis et abdominis, antennarum articulis quattuor primis auratis, serie anteapicali subobliterata, a congeneribus facile cognoscitur. — Statura, colore capitis, punctatura abdominis et segmenti tertii dorsalis serie anteapicali subobliterata, cum *Chryside hybrida* Lep. multum habet similitudinis.

Patria: Littorale Hungaricum ad urbem S. Viti (Fiume) (Korlević et Mus. Hung.); Tergestinum [Triest] Austriæ (Coll. Handlirschi!); Græcia (Circa Messéne, mai, Brullé; Corcyra, Coll Rad.!); Italia (Dhlb.); Asia minor (Dhlb. et Mus. Hung.); Caucasus (Coll. Rad.!); Syria (Mus. Vindob.!).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

B. *Thorax lobis lateralibus mesonoti, scutello (nonnunquam etiam mesopleuris) et pronoto antice leniter cupratis vel auratis; postscutello obtuse-conico; ventre cyaneo vel viridi-cyaneo nigroque maculato.*

292. **Chrysis auropicta** n. sp.

Sexus ab invicem colore parum differunt:

Mediocris, elongata, minus robusta, cyanea, fusco-alboque pilosa; facie, clypeo, pronoti parte antica, mesonoti lobis lateralibus, scutello mesopleurisque in mare auratis, in femina cupreo-auratis; mesonoto lobo medio violaceo; cavitate faciali planiuscula, dense punctulato-coriacea argenteo-sericeoque pilosa; antennis crassis, argenteo-puberulis, articulis duobus primis viridibus vel viridi-cupratis, tertio mediocri, quarto quintoque simul sumptis æquilongo; genis mediocribus, articulo antennarum quarto vix longioribus; vertice dense subtilius punctato-subreticulato; pronoto brevi, transverso-rectangulo cum mesonoto fortius punctato-subreticulatis interstitiisque subtilissime punctulatis, scutello et postscutello obtuse-conico parumque prominulo et basi foveato regulariter punctato-reticulatis; metanoti dentibus postico-lateralibus robustis, subacutis; abdominis segmentis dorsalibus: primo sat sparsim minus fortiter punctato interstitiisque subtilissime punctulatis, secundo tertioque dense subtilius rugosiuscule-punctatis, subcoriaceis, tertio margine apicali arcuato-integro, apice distincte angustiore quam basi nigroque æneo; tarsis fuscis; alis hyalinis, disco et ad costam cellulæ radialis parum sordidis, venis piceis, cellula radiali lanceolata incompleta, apice sat late aperta. — Long. 8 mm.

Femina: antennis fusco-rufis; vertice post ocellos cyaneo-cuprato; abdominis segmentis dorsalibus cupreo-auratis, tertio supra seriem leniter calloso foveolis obliteratis plerumque minus, solum circiter 4 distinctis; ventre cyaneo viridi-maculato; femoribus tibiisque cyaneis cupreoque lavatis.

Mas: antennis rufis; vertice post ocellos cyaneo-subcuprato; abdominis segmentis dorsalibus igneo-auratis, tertio serie anteapicali obliterata foveolis fere nullis distinctis; ventre cœruleo viridi-aureo-maculato; femoribus tibiisque viridi-subauratis.

Species: cum *Chrysidis hybridae* Lep. mare multum habet similitudinis; sed maior, antennis crassis, rufis vel fusco-rufis, thorace et abdomine multo subtilius punctatis, postscutello non convexo, segmento tertio marginis apicalis centro non exciso, satis distincta.

Patria: Græcia (Attica, Mus. Cæs. Vindob.).

C. *Thorax supra aut aureo-fasciatus aut maxima ex parte auratus vel cupreo-auratus.*

a) *Pronoto solum aurato vel aureo-fasciato.*

293. **Chrysis aureicollis** Ab.

Chrysis aureicollis, Ab. Diagnos. des Chrysid. Nouvell. p. 5, n. XXVIII. ♀. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 75 et 82. ♀. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 80, n. 57. ♂ ♀. (1887).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Mediocris, elongata, minus robusta, læte-cyanea, longius cinereo-alboque pilosa; facie, vertice usque ad stemma anticum et pronoto antice tegulisque auratis; cavitate faciali minus profunda, dense subtilissime transverse-striata, superne convexo-depressa, non marginata; antennis longis, tenuibus, nigris, argenteo-puberulis, articulis tribus primis viridibus vel viridi-cyaneis, tertio mediocri, quarto quintoque simul sumptis parum breviore; genis brevibus linearibus; vertice dense irregulariter minus crasse punctato-rugoso subcoriaceo, stemmatibus singulis in sua fovea sitis; pronoto brevi, transverso-rectangulo, coriaceo, antice in medio longitudinaliter, ante marginem posticum transverse profundeque sulcato, sulco cyaneo, dense sat crasse punctato interstitiisque subtilissime punctulatis; mesonoto subtiliter coriaceo-rugoso, scutello coriaceo evidentius punctato et punctulato, postscutello convexo punctato-reticulato; metanoti dentibus postico-lateralibus viridi-auratis validis, obtusis, leniter incurvis; abdominis segmentis dorsalibus igneo-auratis, nonnunquam parum purpurascentibus, dense subtiliter punctato-coriaceis, punctatura primi parum fortiore, tertio supra seriem vix calloso, foveolis circiter 16 distinctis vel sat distinctis rotundisque, per carinulam medianam levem interruptis, margine apicali arcuato-integro, apice distincte angustiore, quam basi, imo margine anguste nigro- vel viridi-æneo; ventre igneo- vel purpurascenti-igneo aurato, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tibiis externe magis virescentibus, tarsis in feminis testaceis, in maribus fuscis; alis hyalinis, disco sæpius parum sordidis, venis fuscis, cellula radiali lanceolata apice late aperta. — ♂ ♀; long. 7—8 mm.

Variat: in specimine e Græcia orto: pronoto toto, etiam sulco basali posticeque aurato, tegulis alarum nigro-æneis.

Chrys. uniformis Dhlb. socia; sed pronoto plerumque solum antice aurato, scutello et postscutello haud gibbo læte-cyaneis (non auratis) et abdominis segmento dorsali tertio ante seriem vix calloso, optime distinguenda.

«Esta especie . . . no encasea en los campos donde existe la *Thapsia*, si bien no es tan abundante como la anterior (Chrys. cœruleipes Fabr.).» (Gogorza l. c.).

Patria: Portugalia (Faro, Coll. Hiendlmayri!); Hispania (Ab.); Græcia (Attica, Coll. Wüstneii!).

b) *Pronoto, scutello et postscutello auratis.*

294. **Chrysis uniformis** DHLB.

Chrysis fasciata, Spin. Faunæ Liguriæ Fragmenta, p. 14, n. 4. (1805); Ins. Lig. I. p. 7, Nr. III. tab. I. fig. 2. (1806) (nec Oliv., nec Spin. Annal. Soc. Ent. France. Sér. I. tom. IX. p. 202, n. 50. ♂. (1840) ex America meridionali = *Chrysis distinctissima* Dhlb.)

Chrysis uniformis, Dhlb. Hym. Europ. II. p. 149, n. 82. ♀. tab. VI. fig. 88. (1854). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 392, n. 23. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 12, n. 19. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 75 et 82. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 81, n. 58.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 178. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 16. (genit. maris) (1888).

Mediocris, oblonga, sat robusta, læte- vel parum virescenti-cyanea, longius cinereo-alboque pilosa; pronoto, scutello, postscutello tegulisque auratis; cavitate faciali sat profunda, dense subtilissime transverse-striata, superne depresso-convexa; antennis crassiusculis, sat longis, fusco-rufis, argenteo-puberulis, articulo tertio brevi, quarto dimidio tantum longiore; clypeo magno, transverso, apice nigro-æneo, centro marginis apicalis leniter sinuato; genis valde brevibus, linearibus; vertice dense irregulariter minus crasse punctato-rugoso, subcoriaceo, stemmatibus singulis in sua fovea sitis; pronoto brevi, transverso-rectangulo, coriaceo, antice in medio longitudinaliter, ante marginem posticum transverse sulcato, dense sat crasse punctato interstitiisque subtilissime punctulatis; mesonoto subtiliter coriaceo-rugoso, scutello coriaceo evidentius punctato et punctulato, postscutello gibbo punctato-reticulato; metanoti dentibus postico-lateralibus viridi-auratis validis, obtusis, leniter incurvis; abdominis segmentis dorsalibus igneo- vel coccineo-auratis, valde dense subtiliter punctulato-coriaceis, tertio disco leniter concaviusculo-subimmerso, supra seriem calloso, foveolis profunde immersis numerosis circiter 18 minutis rotundatis bene distinctis, per carinulam medianam interruptis; margine apicali arcuato-integro, summo margine anguste nigro-æneo; ventre igneo-aurato, segmento secundo utrinque nigro-maculato; femoribus tibiisque viridi-cyaneis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice late aperta. — Long. 7—7½ mm.

Femina: capite supra et cavitate faciali læte-cyaneis; antennarum articulis tribus primis viridibus vel viridi-cyaneis; tarsis fusco-rufescentibus.

Mas: fronte utrinque ad oculos linea vel macula orbitali viridi, vel fronte et cavitate faciali viridi-auratis; antennarum articulis quattuor primis viridi-auratis; tarsis rufo-testaceis.

«*Armure.* Le bord supérieur de la branche du forceps sinué, nu. Volsella nue, de largeur médiocre. Les crochets très larges. La forme du couvercle génital est représentée sur la fig. 31 k.» (Rad. l. c. tab. III. fig. 31a, 31b, 31i).

Patria: Italia (Liguria, Spin.; Sicilia, Destef.); Hispania (Gog.); Gallia meridionalis (Ab.); Hungaria meridionalis ad Mehadiam, valde rara (Mocs.); Græcia (Corcyra, Mus. Hung.; Attica, Mus. Atheniense!); Asia minor (Dhlb.); Caucasus (Rad.); Persia (Teheran, Rad.); Turkestania (Taschkent et in Bairacum, Rad.); Aegyptus (Ab.).

c) *Thorace maxima ex parte aurato vel viridi-aurato, sed fronte cyanea, viridi-cyanea vel virescenti-cyanea aut laete-viridi.**

295. Chrysis filiformis n. sp.

Chrysis Gyllenhali, Mocs. Chrys. faun. Hung. p. 49 et 84, n. 9. ♀ (1882) (nec Dhlb.).

* Species huius secundariæ sectionis cognitu valde difficiles sunt et propter descriptionem incompletam sine speciminibus typicis vel adminimum chorotypicis haud erui possunt.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Parva, elongata, parallela, filiformis, vix vel tantum unius millimetri latitudinis, cyanea, pro- et mesonoto scutelloque auratis parumque virescentibus, capite thoraceque supra fusco-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctulato-coriacea, superne depresso-convexa, non marginata; antennis brevibus, tenuibus, nigris, cano-puberulis, articulis tribus primis viridibus, tertio mediocri, quarto quintoque simul sumptis parum breviore; genis proportionaliter longis, articulo antennarum tertio æquilongis; vertice in femina parum virescenti dense subtiliter punctato-subreticulato; pronoto transverso-rectangulo longo, mesonoto æquilongo, cum scutello postscutelloque convexo parum fortius, mesonoto subtilius minus crasse punctato-subreticulatis; metanoto dentibus postico-lateralibus sat magnis, subacutis; abdominis segmentis dorsalibus igneo-auratis, primo parum fortius, 2—3 subtiliter punctulato-coriaceis, tertio supra seriem nec minime calloso foveolis parvis circiter 6 tantum distinctis minus profundis, margine apicali in sexu utroque subtruncato-integro; ventralibus viridi-auratis, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque viridi-cyaneis, tarsis fusco-nigris; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis cyaneis. — ♂ ♀; long. 4—4½ mm.

Species: in hac secundaria sectione minima, corpore toto gracili, parallelo, filiformi, capite thoraceque supra fusco-pilosis, iam facile cognoscitur.

Patria: Hungariæ meridionalis montes (Mus. Hung.) et Fanum Sancti Viti Flamoniensis Hungariæ ad littora maris Adriatici (Fiume) (Korlević et Mus. Hung.).

296. **Chrysis Cirtana** Luc.

Chrysis cirtana, Luc. Explor. de l'Algér. Zoolog. III. p. 310, n. 351. Hym. tab. XVII. fig. 7. (1849). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 75 et 79. (1879).

Descriptio secundum Lucas:

«Long. 5 millim. ½, enverg. 9 millim. ½.

C. sat fortiter confertimque granaria; capite cyaneo, antice cyaneo viridi metallico; antennis fuscorufescente tomentosis, tribus primis articulis viridi-metallicis; prothorace, mesothorace viridi aurato metallicis, hoc ad basim viridi cyanescente, metathoraceque nitido cyaneo subviolaceo tincto; abdomine sat fortiter punctato, rubro aurato metallico; corpore infra pedibusque viridi-metallicis, tarsis rufo testaceis.

La tête, parsemée de granules assez fortes et serrées, est bleue, avec toute la partie située entre les yeux d'un beau vert métallique brillant. Les mandibules sont d'un noir roussâtre. Les antennes sont d'un brun roussâtre tomenteux, avec les trois premiers articles d'un beau vert métallique. Tout le thorax présente la même granulation que la tête; le prothorax est d'un vert doré métallique, légèrement teinté de rouge feu; le mésothorax est de cette couleur, avec la partie postérieure d'un bleu verdâtre; le métathorax est d'une belle couleur bleue, légèrement teintée de violet, et cette couleur s'étend sur les parties latérales et sur tout le sternum. Les ailes, à nervures d'un brun foncé, sont transparentes et incolores. L'abdomen, assez fortement ponctué,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

est d'une couleur rouge doré métallique, avec le premier segment légèrement teinté de vert; en dessous, il est d'un bleu vert métallique. Les pattes sont de même couleur que le dessous du corps, avec les tarses d'un roux testacé.

Je n'ai rencontré que deux individus de cette jolie petite espéce, que j'ai prisé, en juin, dans les environs de Constantine et du cercle de Lacalle, sur le *Thapsia garganica.*» (Lucas l. c.).

«Dans les cartons du Muséum de Paris, il existe deux types de cette espèce. Le premier est très voisin de ma *Laïs,* mais ayant le mésonotum entièrement feu et la ligne ponctuée à points peu nombreux, peu enfoncés et irréguliers; le seconde est une espèce que je ne connais pas et qui est représentée dans les mêmes cartons par un autre individu figurant comme seconde exemplaire de la *Dives.* Jusqu'ici je ne connais la *Cirtana* que l'Alger.» (Abeille l. c. pag. 79.).

Patria: Algeria.

297. **Chrysis Lydiae** n. sp.

Submediocris, elongata, minus robusta, cyanea, pro- et mesonoto igneo-, scutello viridi-auratis, capite thoraceque supra nigro-, parte reliqua corporis albo-pilosis; cavitate faciali minus profunda, dense subtiliter punctulato-coriacea, superne depresso-convexa, non marginata; antennis brevibus, crassiusculis, fusco-nigris, cano-puberulis, articulis tribus primis viridibus, tertio longitudine mediocri, quarto quintoque simul sumptis parum breviore; genis longis, articulo antennarum tertio æquilongis; mandibulis bidentatis, apice rufis; vertice thoracisque dorso fere æqualiter dense minus crasse punctato-subreticulatis; metanoto convexo, dentibus postico-lateralibus mediocribus, subacutis; abdominis segmentis dorsalibus igneo-auratis, primo basi late cyaneo superne et margine apicali secundique imo basi anguste viridi-aureo-limbatis, primo subtilius, reliquis parum fortius punctulato-coriaceis, carinula mediana in omnibus segmentis minus distincta, tertio supra seriem parum calloso foveolis immersis minutis rotundisque circiter 12 per carinulam medianam interruptis sat distinctis parumque virescentibus, margine apicali arcuato-integro; ventris segmentis: secundo viridi-, tertio parum igneo-auratis, illo macula utrinque basali, hoc margine apicali nigris; pedibus viridi-cyaneis, tarsis fusco-rufescentibus; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis læte-cyaneis. — ♀; long. 6 mm.

Species: scutello viridi-aurato margineque apicali cyaneo-limbato, abdominis segmentis dorsalibus: primo margine apicali et secundo imo basi anguste viridi-aureo-limbatis, primi punctatura subtili punctulato-coriacea et foveolis sat distinctis, a congeneribus optime distinguenda.

Patria: Asia minor (Brussa, Mus. Hung.).

298. **Chrysis Smyrnensis** n. sp.

Submediocris, elongata, sat robusta, cyanea, capite thoraceque supra nigro-, parte reliqua corporis albo-pilosis; pro- et mesonoto scutelloque igneo-auratis; facie meso-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

pleurisque viridibus, fronte et vertice viridi-subauratis; cavitate faciali minus profunda, dense subtiliter punctato-coriacea, superne convexo-depressa, non marginata; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis tribus primis viridibus, tertio longitudine mediocri, quarto quintoque simul sumptis æquali; genis sat longis, articulo antennarum tertio æquilongis; vertice thoraceque supra dense minus crasse punctato-subreticulatis, subcoriaceis; pronoto sat longo, transverso-rectangulo, antice in medio impresso; metanoto convexo, dentibus postico-lateralibus mediocribus, subobtusis; abdominis segmentis dorsalibus igneo-auratis, dense subtiliter punctato-coriaceis, primo basi cyaneo superne viridi-aureo-limbato, secundo carinula mediana nulla, tertio supra seriem leniter calloso foveolis circiter 10 mediocribus rotundis profundisque bene distinctis, margine apicali arcuato-integro; ventralibus: secundo læte-igneo-aurato basi macula utrinque nigra, tertio nigro medio longitudinaliter subtilius sulcato et utrinque læte-igneo-maculato; pedibus viridi-cyaneis, tarsis fusco-rufescentibus; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis viridi-cyaneis. — ♀; long. $5^1/_2$ mm.

Præcedenti similis et affinis; sed facie mesopleurisque viridibus, fronte et vertice viridi-subauratis, scutello igneo-cupreoque aurato (non viridi-aurato), abdominis segmenti dorsalis primi punctatura parum fortiore, margine apicali et secundi basi non viridi-aureo-limbatis, foveolis parum maioribus, ventris segmentis læte-igneo-auratis, species mihi distinguenda esse videtur.

Patria: Asia minor (Smyrna, Coll. Wüstneii).

299. **Chrysis macrostoma** Grib.

Chrysis macrostoma, Grib. Annali Mus. Civ. Stor. Nat. Genova. VI. p. 360, n. 5. (1874).

«Modice robusta et nitida, cyanea pronoto, dorsulo, abdominisque dorso cupreo-aureis: capite, pronoti latiore, magno elongato-trapezino, magis alto quam lato: corpore toto confertim subtiliter punctato, capite thoraceque fere coriaceis: abdomine elliptico, apice angustiore; serie anteapicali parum profunda: margine anali perfecte arcuato, integro. Long. corp. mill. 6.

Il carattere più notevole di questa Chryside è la forma allungata, e larga nel tempo stesso della faccia e della bocca.»

Patria: Algeria.

300. **Chrysis socia** Dhlb.

Chrysis socia, Dhlb. Hym. Europ. II. p. 145, n. 80, tab. VI. fig. 87. ♂. (1854).

«Subparva 2 lin. decimal. long. oblonga angusta modice punctata cœrulea antennis apice læte brunneis, pronoto mesonoto abdominisque dorso viridi-aureis, hoc modice punctulato nitido, segmento tertio toto modice convexo, serie ante-apicali regulari foveolis minutis orbiculatis approximatis numerosis circ. 16, margine apicali late obtuse arcuato, ventre viridissime aurato nigro-maculato, concaviusculo-plano, alis hyalinis ad

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

costam cellulæ radialis sordidis, cellula radiali subcompleta, scutello mutico depresso-convexo.

Observ. Chrysidi Gyllenhali affinis et simillima; at dignoscitur corpore angustiore et breviore, abdominis segmenti tertii serie ante-apicali foveolis minutis approximatis numerosis 16 et ultra. — Caput ut in *Chryside Gyllenhali* formatum, totum punctulato-coriaceum opacum cyaneum, vertice circa stemmata et genis leviter virescentibus. Facies sparse cano-pilosella. Cavitas facialis confertim subtiliter punctulato-coriacea subgranulosa. Antennæ breves robustæ: scapo cyaneo, articulis tribus proxime sequentibus supra virescentibus, reliquis læte brunneis aut subferrugineis. Thoracis forma, sculptura et pictura omnino ut in *Chryside Gyllenhali*, ea solum differentia quod: punctura paullo minus crassa, pronoti sulcus medianus brevior, truncatura antice viridi-cyanea. Abdomen quoque eandem formam, picturam et puncturam, quam *Chrys. Gyllenhali*, habet; at segmentorum dorsalium punctura paullulum subtilior et — comparata — paullo minus conferta, segmenti tertii series ante-apicalis paullulum impressa (nec ita levis ut in *Chr. Gyllenhali*) foveolis minutis approximatis numerosioribus circ. 16 et ultra, margo apicalis infra seriem conspicue brevior quam in *Chr. Gyllenhali*. Ventris segmenta: primum nigrum, disco utrinque virescens; secundum basi macula maxima reniformi æneo-nigra, apice macula tridentata viridissime aurea; tertium basi virescenti-aureum, apice nigro-piceum, marginibus omnium segmentorum apicalibus testaceo-brunneo-scariosis. Alæ hyalinæ venis piceis, ad costam cellulæ radialis umbra linearis fumosa, cellula radialis subcompleta.»

Patria: Sicilia (Mus. Vienn., teste Dhlb.).

Animadversio. — Specimen typicum in Musæo Cæsareo Vindobonensi iam non existit illudque propterea non vidi.

301. **Chrysis Joppensis** Buyss.

Chrysis joppensis, Buyss. Revue d'Entom. VI. p. 179. n. 15. ♂. (1887).

«♂. Corpore subparvo, elongatulo, albo-piloso. Vertice prælongo, saturate cæruleo, modice punctulato; fronte maiore, rotundiuscula, subreticulata, læte viridi; cavitate faciali brevi, læte viridi, concaviuscula, in medio canaliculata, nitida et politissima, in lateribus punctulata necnon albopubescente, superne subelevata et cum fronte confluente sine carinula transversa; clypeo viridi-aureo. Antennarum scapo secundoque articulo viridibus, aliis articulis haud inflatis, obscure nigris. Pronoto igneo-aurato, sat confertim punctulato, cum mediano sulco antice sat profundo, prolongato, leniter virescente; truncatura antice cæruleo-viridi. Mesonoto igneo-aurato, punctulato punctis minoribus, area mediana antice nigro-viridi usque ad medium. Scutello planiusculo, igneo, sparse ac subobsolete punctato, in marginibus virescente; postscutello rotundato, cæruleo, regulariter punctato, subreticulato. Metanoto cæruleo-viridi, angulis postico-lateralibus subobtusis. Mesopleuris cyaneo-viridibus, irregulariter punctulatis. Pedibus superne cyaneo-viridibus, subtus viridi-auratis; tarsis subalbidis, vix ad ungues brunnescentibus. Tegulis obscure brunneis; alis hyalinis, cellula radiali sub-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

completa. Abdomine ovali, disco sat convexo, modice confertim punctato-subruguloso, aurato-igneo: primo segmento magis aurato, punctis paululo maioribus. truncatura antica cyanea; segmentis 2—3 leniter violascentibus; tertio segmento integerrimo, regulariter arcuato, disco subelevato-convexo; serie anteapicali vix distincta, obsoleta, foveolis minusculis, rotundatis, separatis, solum apice vix distinctis; margine apicali concolore, punctis minoribus punctulato. Ventre viridi, nitido, secundo segmento cum duabus nigris maculis, margine apicali tertii segmenti subpellucido. — Long., 6 mill.

Jaffa, ancienne Joppé (Syrie) ; pris par M. E. Abeille de Perrin.

Cette jolie espèce a le coloris général du *Chr. dichroa* Klug, mais porte une tache bleu foncé sur le vertex, le sillon de la partie antèrieure du pronotum est plus long et plus accentué, la base du compartiment médian du mesonotum est noir verdâtre, le postécusson est plus arrondi, la ponctuation plus fine et moins serrée sur le thorax, les ailes hyalines, les premiers articles des antennes non renflés, l'abdomen plus convexe, les tarses blanchâtres, etc.»

Patria: Syria.

302. **Chrysis dives** Luc.

Chrysis dives, Luc. Explor. de l'Algér. Zoolog. III. p. 306, n. 343. Hym. tab. XVII. fig. 3. (1849).

«Long. 7 millim. enverg. 11 millim.

Capite granario, cyaneo, transversim macula viridi metallica ornato; antennis fusco tomentosis, primo articulo cyaneo, secundo viridi metallico; thorace punctato, viridi metallico; mesothorace supra rubro cupreo metathoraceque ad basim cyaneo; abdomine punctato, rubro cupreo metallico, primo segmento subvirescente tincto; corpore infra cyaneo, ultimo segmento subviridi; pedibus cyaneo-metallicis, tarsis fuscis.

Elle ressemble un peu an *C. versicolor*. La tête, assez fortement chagrinée, est bleue et ornée, dans son milieu, entre les yeux, d'une tâche transversale, d'un beau vert métallique. Les mandibules sont roussâtres, et d'un noir brillant à leur extremité. Les antennes sont d'un brun tomenteux, avec le premier article bleu, et le suivant d'un vert métallique. Le thorax est entièrement couvert de points assez forts et serrés; il est d'un beau vert métallique, avec la partie supérieure du mésothorax d'un rouge cuivreux, et la base du mètathorax d'une belle couleur bleue; en dessous il est de cette couleur, et orné sur les côtés d'une tache d'un vert métallique. Les paraptères sont bleus. Les ailes, à nervures, d'un brun foncé sont incolores, transparentes, à l'exception cependant des premières, qui sont légèrement teintées de roussâtre. L'abdomen, un peu plus finement ponctué que le thorax, est d'un rouge cuivreux métallique, avec le premier segment légèrement teinté de vert; en dessous, il est brun, avec le dernier segment légèrement verdâtre. Les pattes sont d'un bleu métallique, avec les tarses d'un brun foncé.

Les environs de Constantine et de Milah nourissent cette espèce, que j'ai prise pendant les mois de mai et de juin dans des lieux sabloneux et exposés au soleil.»

Patria: Algeria.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

303. **Chrysis purpurascens** n. sp.

Mediocris, elongata, sat robusta, læte-cyanea, pro- et mesonoto scutelloque igneo-auratis, clypeo, vertice vittaque mesopleurarum parum viridi-subauratis, capite thoraceque supra nigro-, parte reliqua corporis albo-pilosis; cavitate faciali minus profunda cum genis dense subtilissime punctulato-coriaceis, illa superne depreso-convexa, non marginata; antennis brevibus, tenuibus, nigris, cano-puberulis, articulis quattuor primis viridibus, tertio longo, quarto quintoque simul sumptis fere longiore; clypeo apice cupreo-æneo; genis sat longis, articulo antennarum quarto evidenter longioribus; vertice dense minus crasse irregulariter punctato-subreticulato; pronoto transverso-rectangulari, brevi, mesonoti dimidii tantum longitudinis, antice in medio impresso, parum fortius, mesonoto postscutelloque convexo parumque violascenti subtilius irregulariter punctato-subreticulatis, subcoriaceis, scutello — præsertim parte antica — punctato-rugosiusculo; dentibus postico-lateralibus mediocribus, subacutis; abdominis segmentis dorsalibus igneo-auratis, primo secundoque margine apicali virescentibus, secundi parte reliqua tertioque concinne violaceo-purpurascentibus, duobus primis dense minus crasse, tertio adhuc densius parum rugosiuscule-punctulatis, subcoriaceis, secundo tertioque imo basi nigro-æneis, illo carinula mediana indistincta, hoc supra seriem non calloso foveolis circiter 8 tantum distinctis rotundatis sat profundis, margine apicali arcuato-integro; ventre nigro-æneo, segmento secundo parte apicali igneo-aurato; pedibus cyaneis, tibiis externe virescentibus, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata completa, tegulis cyaneis. — ♀; long. 7 mm.

Species: vertice vittaque mesopleurarum parum viridi-subauratis, punctatura scutelli et colore abdominis violaceo-purpurascenti ventreque, facile cognoscitur.

Patria: Algeria (Oran, Mus. Hung.).

304. **Chrysis Gyllenhali** Dhlb.

Chrysis Gyllenhali, Dhlb. Hym. Europ. II. p. 143, n. 79. (1854). — Thoms. Opusc. Entom. II. p. 106, n. 5. (1870).

«Submediocris 2½ lin. decimal. long. oblonga subangusta modice punctata cœrulea, antennis fuscis, pronoto mesonoto abdominisque dorso viridi-aureis, hoc modice subconfertim punctulato nitido; segmento tertio toto modice convexo, serie ante-apicali regulari foveolis parvis rotundatis separatis 12, margine apicali late obtuse arcuato, ventre viridissime aurato nigro-maculato concaviusculo plano, alis hyalinis venis brunneis, cellula radiali completa, postscutello mutico depresso-convexo.

Observ. Maxime affinis *Chrysidi dichroae*, a qua tamen facile dignoscitur corpore paullulum angustiore, thorace proportionaliter longiore et minus convexo, abdominis dorso nitido, nec ullo modo coriaceo, minus confertim punctato; segmento abdominis tertio toto modice convexo, nec immerso nec calloso, margine apicali paullo latius et obtusius arcuato, alis totis hyalinis. Ceterum, quoad reliquam sculpturam et picturam corporis, ulteriorem diversitatem detegere nequeo.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Caput rotundato-triangulare totum cœruleum, modice punctato-rugulosum; vertex convexo-depressus; cavitas facialis punctulata: spatio mediano subtiliter coriaceo, distincte canaliculato. Antennæ breves, robustæ fuscæ scapo cyaneo. Clypeus mediocris carinato-convexus punctulatus viridi-cyaneus, margine apicali nigro-piceo polito truncato. Mandibulæ breves robustæ, basi viridi-cyaneæ, apice rufo-piceæ, Thorax convexiusculo-depressus; pronotum et mesonotum confertim modice punctato-rugosa nitida viridissime aurea; pronotum sulco mediano subcontinuo paullo ante marginem posticum desinente, truncatura antica sparse punctata viridi ænea foveolis 2 centralibus politis. Metanotum cœruleum concinne (non crasse) punctato-reticulatum fovea basali centrali. Pleuræ concolores parum viridi-nitentes punctato-rugulosæ. Sternum et pedes nitida, parce piloso-punctulata, viridi-cyanea tarsis fuscis. Abdomen ovali-ellipticum, dorso modice convexum nitidum splendidum viridi-aureum confertim punctulatum, in segmentis secundo et tertio lineola mediana subtilis elevata ad certum situm luminis animadvertitur; segmentum tertium non minus convexum quam secundum l. tertium, margo apicalis obtuse arcuatus et parum brevior quam margo basalis; series ante-apicalis regulariter levis (non profunda) foveolis parvis rotundatis separatis circ. 12: mediis distinctioribus, extimis l. lateribus obsoletis. Ventris segmentum primum viridi-æneum apice nigro-piceum, secundum viridissime aureum: macula basali maxima reniformi atra (segm. tertium in nostro unico individuo mutilatum).» (Dhlb. l. c.).

Patria: Westrogothia Sueciæ (Dhlb.).

305. **Chrysis dichroa** Dhlb.

? *Chrysis elegans*, Brullé, Expéd. de Morée. Tom. III. Zoolog. Sér. 2, p. 377, n. 831. ♂. tab. 51, fig. 8. ♂. (1832) (nec Lep.).

? *Chrysis coeruleipes*, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 305. (1853) (nec Fabr.).

Chrysis dichroa, Dhlb. Hym. Europ. II. p. 146, n. 81. ♂ ♀. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 553, n. 1. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 68. (1858). — Schck, Nass. Jahrb. XVI. p. 178, n. 1. (1861). — Chevr. Chrysid. du Léman, p. 28. ♀. (1862). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 302, n. 22, tab. III. fig. 12. (1866). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 6. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 75 et 80. ♂ ♀. tab. I. fig. 28 (antennæ maris) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879). — Lampr. Goldwesp. Deutschl. p. 12, n. 20, tab. I. fig. 11. (segm. anale) (1881). — Mocs. Chrys. faun. Hung. p. 49 et 84, n. 10. ♂ ♀. (1882). excl. syn. *Chr. dives* Luc. — Frey, Chrys. Helvet. p. 49 et 57. ♂ ♀. (1887).

Chrysis Baeri, Rad. Horæ Soc. Ent. Rossicæ. III. p. 303, n. 26. ♂. tab. III. fig. 15. ♂. (1866) sec. spec. typ. e coll. Radoszkovszkyi.

Species: magnitudine, abdominis segmentis dorsalibus sculptura et serie anteapicali foveolarum variabilis.

Submagna, oblonga, minus robusta, cyanea vel virescenti-cyanea, rarius æneo-viridis; pro- et mesonoto scutelloque igneo-auratis, vertice thoracisque dorso nigro-, parte reliqua corporis albo-pilosis; cavitate faciali minus profunda, dense subtilissime punctato-coriacea, canalicula mediana subtili abbreviata, superne depresso-convexa.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

non marginata; antennis brevibus, robustis, nigro-fuscis, cano-puberulis, articulis tribus primis quartoque supra viridi-cyaneis vel virescentibus, tertio longo, quarto quintoque simul sumptis longitudine æquali; clypeo mediocri, medio carinato-convexo, margine apicali truncato, piceo; mandibulis piceis, bidentatis, apice rufis; genis longis, articulo antennarum tertio tamen brevioribus; vertice dense subtilius punctato-subreticulato, margine occipitali utrinque angulo parvo prominulo; pronoto longo, mesonoto tantum parum breviore, transverso-rectangulo, antice in medio profunde impresso cum scutello sat crasse, mesonoto subtilius punctato-coriaceis, subreticulatis; postscutello convexo subtilius punctato-reticulato, metanoto dentibus postico-lateralibus mediocribus, triangularibus, subobtusis; abdomine capite thoraceque simul sumptis longiore, latitudine thoracis, ovali-elliptico, dorso convexo purpureo-, coccineo-, igneo- vel parum virescenti-aurato, coriaceo, dense subtiliter rugosiuscule-punctato, punctatura nonnunquam, præsertim primi, fortiore minusve densa, 2—3 segmentis lineola mediana subtili, tertio parum calloso, foveolis transverse-subarcuato immersis iam regularibus parvis, ovalibus, numerosis distinctis, iam confluentibus, nonnunquam cyaneis, margine apicali arcuato-integro, imo margine anguste nigro-æneo; ventralibus viridi-igneoque auratis, segmentis duobus primis nigro-maculatis, tertio apice nigro; pedibus cyaneis vel viridi-cyaneis, tarsis fuscis; alis hyalinis vel plus minusve sordidis, venis piceis, cellula radiali triangulariter lanceolata completa vel subcompleta, tegulis cyaneis vel virescenti-cyaneis. — Long. 7—8½ mm.

Mas: differt a femina antennarum articulis 4—7 subtus inflatis seu tumidis.

Patria: Hispania (Sierra d'Alfacar in Granada, Mus. Hung.); Italia (Dhlb.; Sardinia, Costa); Corsica (Mus. Vindob.!); Gallia (Court.); Helvetia (Chevr.); Germania (Bamberg, Schck); Tyrolis meridionalis (Dalla Torre et Kohl); Austria (Dhlb.; Rogenh. et Kohl et Coll. Handlirschi!); Hungaria centralis et meridionalis, non rara (Mocs.); Dalmatia (Mus. Hung.); Istria (Pola, Coll. Handlirschi!); Græcia (Mus. Atheniense!); Russia (Orenburg, provinciæ Uralenses, Eversm.); Caucasus (Ab.; Erivan, Mus. Hung.); Asia minor (Dhlb.).

var. minor mihi.

Typo simillima; sed minor, tantum 5—6 mm. longa, magis angusta, punctatura ideo plerumque densiore et alis — in exemplaribus 9 coram me iacentibus omnibus — hyalinis. — Patria: Hungaria centralis et meridionalis, cum typo simul obviens.

306. **Chrysis angustifrons** Ab.

Chrysis angustifrons, Ab. Diagnos. Chrys. Nouvell. p. 5, n. XXVII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 81, ♂♀. tab. I. fig. 27 (antennæ) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879).

Chrysis carinaeventris, Mocs. Chrys. faun. Hung. p. 84, n. 11. ♀. (1882).

Chrysis Lagodechii, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 15. ♂. (1888) sec. spec. typ. e coll. Rad.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrys. dichroae Dhlb. colore similis; sed capite thoraceque supra pilis multo brevioribus fusco-cinereis vestitis, fronte angusta, cavitate faciali profunda læte-cyanea vel læte-viridi, sublævi ac polita, lateribus et superne crassius punctato-rugosa medioque abbreviatim flexuoso-aureo vel cupreo marginata, vertice quoque magis angusto convexoque, viridi et cupreo tincto, post stemmata nigro-violaceo crasse punctato; antennis brevioribus, nigris, solum scapo nigro-æneo, articulo tertio brevi, secundo vix duplo longiore, intermediis in mare simplicibus, non tumidis; mandibulis unidentatis; genis brevibus, articulo antennarum secundo solum æquilongis; oculis longioribus, elongato-ovalibus; thorace supra regulariter crassius punctato-reticulato, mesonoti lobo medio antice nigro-æneo vel cyaneo; abdominis segmentis dorsalibus quoque multo fortius minus dense punctatis, tertii foveolis numerosis sat magnis confluentibus profunde immersis, margine apicali incrassato, imo margine anguste nigro-æneo, centro parum sinuato; ventralibus nigro æneis medio acute carinatis, segmento secundo margine apicali igneo-aurato — satis superque distincta.

Mas differt: facie viridi- vel subaurata, cavitate faciali punctato-coriacea argenteoque pilosa, sine spatio lævi ac polito; antennarum articulis duobus primis viridi-auratis; punctatura thoracis abdominisque parum densiore, foveolis magis distinctis; ventris segmentis igneo-auratis, duobus primis basi utrinque nigro-maculatis; tibiis viridi-auratis, tarsis sordide-albis.

«*Armure.* Le bord antérieur de la branche du forceps fortement decoupé vers l'extrémité et richement garni de poils. Volsella bordée de poils. Les crochets assez larges, rétrécis au milieu. Couvercle génital est représenté sur la fig. 30 k.» (Rad. l. c. tab. II. fig. 30a, 30b, 30c, 30i).

Patria: Gallia (Marseille, Ab.; Provence, Marq.; Montpellier per Lichtenstein Mus. Hung.); Hungaria centralis, sat rara (Mocs.); Caucasus (Rad.!).

d) *Thorace maxima ex parte et etiam fronte vel toto capite antice auratis, viridi-auratis vel purpureo-auratis, cupratis vel viridi-cupratis.*

α) Abdominis segmento dorsali tertio supra seriem fortiter calloso incrassato.

307. **Chrysis Kohli** n. sp.

Magna, robusta, parcius cinereo-alboque pilosa, viridi-cyanea cupreo- et viridi-aureo variegata; cavitate faciali minus profunda, subtiliter punctato-coriacea, medio longitudinaliter canaliculata, viridi-aurata, lateribus albo-sericeo-pilosa, superne viridi-cyanea, distincte flexuoso-marginata; antennis longis, tenuibus, nigris, argenteo-puberulis, articulis tribus primis viridibus, tertio longo, quarto fere dimidio longiore; clypeo punctato, viridi-aurato, apice truncato nigro-æneo; genis mediocribus, flagelli articulo primo æquilongis; verticis macula usque ad stemmata, pronoto brevi medioque parum impresso, mesonoti lobis lateralibus, scutello et mesopleuris supra viridi-cupreoque auratis, sat fortiter irregulariterque punctato-reticulatis; mesonoto lobo medio violascenti; metanoto dentibus postico-lateralibus fortibus, subacutis, parum incurvis; abdo-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

minis segmentis dorsalibus viridi-auratis cupreoque lavatis (præsertim secundi lateribus tertioque in medio), macula ad baseos magna cyanea vel violascenti-cyanea crassius punctata, secundo tertioque basi late nigro-æneis, primo sat dense fortiter punctato interstitiisque subtilissime punctulatis, secundo coriaceo-rugoso levius punctato (in mare multo densius, quam in femina), carinula mediana abbreviata sat distincta, sæpius lævi ac polita, tertio supra seriem anteapicalem fortiter calloso-incrassatam disco transversaliter concaviusculo-immerso (sicut in Chryside Humboldti Dhlb.), ipsa serie foveolis profunde immersis numerosis, subrotundatis, per carinulam medianam interruptis, margine apicali longo subtilissime punctulato, arcuato-integro, apice multo angustiore, quam basi, imo margine anguste nigro- vel cupreo-æneo; ventre pedibusque viridi-subauratis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis, articulis tamen primis externe virescentibus; alis subhyalinis, parum sordidis, venis fuscis, cellula radiali lanceolata apice late aperta, tegulis cyaneis viridi-maculatis. — ♂♀; long. 9—12 mm.

Eximiam hanc speciem, cyaneam cupreo- et viridi-aureo variegatam, in honorem Dom. Fr. Fr. Kohl, amici mei carissimi et Hymenopterologiæ cultoris excellentis, sinceræ amicitiæ causa denominare volui.

Patria: Græcia (Athenæ, Mus. Vindob.!; Attica, Coll. Wüstneii!, Mus. Hung. et Mus. Atheniense!).

β) Abdominis segmento dorsali tertio supra seriem anteapicalem haud vel tantum leniter calloso.

**) Fronte vel toto capite antice thoraceque ex parte auratis vel viridi-auratis, cupratis vel viridi-cupratis.*

308. **Chrysis cuprata** Dhlb.

Chrysis cuprata, Dhlb. Hym. Europ. II. p. 135, n. 74. ♀. (1854). — Lampr. Goldwesp. Deutschl. p. 12, n. 22. (1881). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 16. (genit. maris) (1888). — Destef. Natural. Sicil. VII. p. 182. ♀. (1888).

Subparva, sat robusta, cyaneo-viridis, parce cinereo-alboque pilosa; vertice usque ad stemmata, pro- et mesonoto, scutello, postscutello et mesopleuris viridi-cupratis; vertice inde a stemmatibus, occipite, collo et mesonoti lobo medio basi atro-violaceis; cavitate faciali profunda, læte-viridi, medio longitudinaliter canaliculata, canalicula lævi, utrinque subtilissime minus regulariter transverse-striata, lateribus subtiliter punctulato-coriacea, superne arcuatim parumque flexuoso acute marginata; antennis crassiusculis, nigris, articulis duobus primis viridi-æneis, tertio breviusculo, quarto parum tantum longiore; vertice dense subtilius punctato-subreticulato; pronoto brevi transverso-rectangulo, antice in medio impresso, cum mesonoto, scutello postscutelloque convexo et mesopleuris punctato-reticulatis; metanoti dentibus postico-lateralibus brevibus, robustis, obtusis; abdomine mediocri, subovato, segmentis dorsalibus modice convexis viridi- aut subæneo-cupratis, parum nitidis, duobus primis minus crasse punctatis interstitiisque subtilissime punctulatis, carinula mediana abbreviata minus distincta, tertio

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

densius parumque rugosiuscule subtiliter punctato, supra seriem non calloso, foveolis profundis circiter 8—10 tantum distinctis orbiculatis, margine apicali arcuato-integro, imo margine nigro- vel viridi-æneo; ventre nigro-æneo levissime viridi-picto; pedibus viridibus, tarsis brunneo-testaceis; alis subhyalinis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta, tegulis viridibus. — ♀; long. 5 1/2—6 mm.

Species cum *Chryside versicolori* Spin. multum habet similitudinis; sed parum minor, segmento tertio margine apicali utrinque sub initio seriei anteapicalis sine angulo laterali distincto.

«*Armure* au premier coup d'oeil rappelle par sa forme l'armure des *Chr. coeruleipes* et *Chr. verna*. La branche du forceps est nue, son bord intérieur faiblement échancré. Volsella assez large, mais moins longue que sa branche, et vers l'extrémité garnie de poils. La tenette dépasse un peu la volsella. Les crochets pointus vers la base et de chaque côté un peu evidès, ne sont pas larges. La forme du couvercle génital est représentée sur la fig. 41 k.» (Rad. l. c. tab. III. fig. 41a, 41b, 41i).

Patria: Sicilia (Dhlb.); Tyrolis meridionalis (Kohl in Mus. Vindob.!); Caucasus (Rad.!).

Animadversio.— Domino Lamprechto placuit, species nonnullas e Tyrole meridionali vel ex Helvetia ortas, faunæ Germaniæ adnumerare!!

309. **Chrysis Lucasi** Ab.

Chrysis unicolor, Luc. Explor. de l'Algér. Zoolog. III. p. 309, n. 349. (1849) (nec Dhlb.).
Chrysis Lucasi, Ab. Diagnos. Chrys. Nouvell. p. 5, n. XXX. (1378); Annal. Soc. Linn. Lyon. XXVI. p. 76 et 86. (1879).

Descriptio secundum Lucas:

«Long. 7 millim. 1/2, enverg. 11 millim.

C. omnino viridis, abdomine subrubro tincto; capite subtiliter granario; antennis nigris, primo articulo viridi; thorace subcupreo tincto, fortiter punctato; alis subinfuscatis, nervuris fuscis; abdomine subtiliter confertimque punctato, tertio segmento infra fusco, subsequente in medio rubro-purpurato.

Entièrement vert, avec un léger reflet d'un rouge pourpre. La tête est finement chagrinée. Les mandibules sont d'un brun roussâtre. Les antennes sont noires, avec leur premier article seulement vert. Le thorax, légèrement teinté de cuivreux en dessus, est parsemé de points assez forts et serrés. Les paraptères sont de même couleur que le thorax. Les ailes, à nervures d'un brun foncé, sont très légèrement enfumées. L'abdomen, beaucoup plus finement ponctué que le thorax, est légèrement teinté en dessus par un reflet d'un rouge pourpre; en dessus, il est vert, avec le bord postérieur du troisième segment, d'un brun foncé; le suivant, de cette couleur, mais taché de rouge pourpre dans sa partie médiane. Les pattes sont vertes, avec les tarses d'un brun foncé.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Rencontré une seule fois en mai, sur le *Thapsia garganica*, aux environs de Constantine.»

Patria: Algeria.

310. **Chrysis affinis** Luc.

Chrysis affinis, Luc. Explor. de l'Algér. Zoolog. III. p. 305, n. 341. (1849).

«Long. 8 millim., enverg. 12 millim.

Capite granario, viridi cupreo, antice attamen omnino viridi; antennis nigro-tomentosis, primo articulo viridi tincto; thorace fortiter punctato, prothorace, metathorace cupreo subrubescentibus, mesothorace cupreo; sterno viridi, lateribus mesothoracis cupreorubescentibus; abdomine subtiliter confertimque punctato, supra rubro-cupreo infraque viridi cyanescente; pedibus viridibus, tarsis fuscorufescentibus.

Elle ressemble beaucoup au *C. tafnensis;* mais elle diffère par la couleur de sa tête et de son thorax. La téte, d'un vert cuivreux, avec sa partie antérieurement verte, est finement chagrinée et très-clairement parsemée de poils blancs. Les mandibules sont d'un brun roussâtre. Les antennes, d'un noir tomenteux, ont seulement leur premier article teinté de vert. Tout le thorax est couvert de points assez forts et serrés; le prothorax, ainsi que le métathorax, sont d'un cuivreux légèrement rougeâtre, avec tout le mésothorax et les paraptères verts; tout le sternum est de cette couleur, avec les parties latérales du mésothorax teintées de cuivreux rougeâtre. Les ailes, à nervures d'un brun foncé, sont incolores et transparentes. Tout l'abdomen est parsemé de points assez fins et serrés, et entièrement d'un rouge doré en dessus, à l'exception, cependant, du premier segment, qui présente quelques reflets cuivreux; en dessous, il est d'un vert bleuâtre. Les pattes sont vertes, avec les tarses d'un brun roussâtre.

Je n'ai rencontré qu'une seule fois cette espèce, que j'ai prise en avril, enfouie dans le sable.»

Patria: Algeria (Oran).

311. **Chrysis lepida** n. sp.

Mediocris, elongata, sat robusta, parce longius cinereo-alboque pilosa; vertice, mesonoti lobo medio postice et lateribus suturisque, postscutello item et pleuris viridi-auratis; pronoto, mesonoti lobis lateralibus scutelloque igneo-auratis; occipite, collo, lobo medio mesonoti antice metanotoque violaceis; cavitate faciali sat profunda, viridi-cyanea, punctulato-coriacea, medio sublævi, lateribus argenteo-sericeo-pilosa, superne in medio tantum acute-marginata; antennis brevibus, nigris, argenteo-puberulis, scapo et macula magna circa stemmata nigro-æneis; clypeo aurato, apice macula triangulari nigro-ænea; genis brevibus, antennarum articulo secundo æquilongis; mandibulis bidentatis, apice rufis; verticis stemmatibus in suis foveis sitis, vertice ipso ante stemmata dense punctato-reticulato, circa et post stemmata crassius sparsim punctato; pronoto brevi transverso-rectangulo, antice in medio impresso cum mesonoto crassius sparsim parum rugosiuscule punctatis, scutello et postscutello convexo crassius pun-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ctato-reticulatis; abdominis segmentis dorsalibus igneo-auratis, primo parum virescenti, basi late nigro-cyaneo, omnibus sat sparsim crassius punctatis, interstitiis lævibus, secundo carinula mediana obsoleta, tertio convexo, serie anteapicali foveolis profundis rotundatis circiter 12 sat magnis, summo margine apicali anguste nigro-æneo arcuato-integro; ventralibus duobus primis viridi-auratis, secundo basi utrinque nigro-maculato, tertio igneo-aurato; pedibus viridi-auratis, tarsis fusco-rufis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice parum aperta, tegulis nigro-æneis. — ♀; long. 7 mm.

Species: colore corporis et punctatura duplici verticis iam facile cognoscitur.

Patria: Caucasus (Coll. Rad.!, Erivan, Mus. Hung.).

312. **Chrysis hybrida** Lep.

Chrysis hybrida, Lep. Annal. du Mus. Hist. nat. VII. p. 128, n. 28, tab. VII. fig. 19. ♀. (1806). — Chevr. Chrysid. du Léman, p. 15. ♂♀. (1862). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 75. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879). — Frey, Chrys. Helvet. p. 49 et 58. ♂♀. (1887) (excl. *Chrysis aurifrontis* Dhlb. syn.). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 68, n. 40. (1887).

Chrysis venusta, Mocs. Public. mathem. et phys. Acad. Hung. XV. p. 247. ♂. (1878); Chrys. faun. Hung. p. 54 et 86, n. 18. ♂. tab. II. fig.. 3 ♂. (1882) (nec Cress.).

Sexus ab invicem colore satis differunt.

Mediocris, subangusta, parcius albo-pilosa; cavitate faciali planiuscula, minus profunda, dense punctato-coriacea argenteo-sericeoque pilosa, superne convexa, non marginata; antennis tenuibus, sat longis, articulo tertio sat longo, quarto quintoque simul sumptis æquali; genis longis, articulo tertio antennarum vix brevioribus; pronoto in medio antice parum impresso; vertice thoraceque supra dense subtilius punctato-subreticulatis, metanoti dentibus postico-lateralibus mediocribus, acutis, incurvis; abdomine latitudine thoracis, segmentis dorsalibus dense subtiliter punctato-rugosis, subcoriaceis, secundo carinula mediana nulla, tertio ante seriem convexo, nec minime calloso, foveolis minutis haud numerosis, tantum intermediis distinctis, rotundis, margine apicali late arcuato medioque leniter sinuato; ventre igneo-aurato, segmento secundo basi utrinque nigro-maculato; alis hyalinis, anticis disco obsolete et ad costam cellulæ radialis saturatius brunneo-fumosis, ipsa cellula radiali incompleta, apice sat late aperta, venis fuscis.

Femina: facie tota cum clypeo genisque, fronte, vertice thoraceque supra maxima ex parte viridi-cupreo-auratis; occipite, collo, temporibus, thoracis suturis, lobo medio mesonoti antice posticeque, alarum tegulis, metanoto pleurisque viridi-cyaneis et læte-cyaneis; antennis nigris, articulis tribus primis viridi-auratis; abdominis segmentis dorsalibus auratis viridi-igneoque lavatis. — Long. 6½—7 mm.

Mas: facie tota cum clypeo genisque, fronte verticeque usque ad ocellos posticos, pronoto, mesonoti lobis lateralibus et lobo medio postice, scutello et postscutello concinne cupreo-auratis; vertice post ocellos, temporibus, collo, mesonoti lobo medio antice, suturis, alarum tegulis postice, metanoto et pleuris læte-cyaneis, hinc illic

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

parum virescentibus; antennis nigris, articulis tribus primis cupratis; abdominis segmentis dorsalibus igneo-auratis. — Long. 6—6½ mm.

Venusta hæc species: colore et punctatura, segmento dorsali tertio abdominis eiusque foveolis obliteratis, a congeneribus facile cognoscitur.

Patria: Hispania (Ab.); Gallia (Lep. et Mus. Hung.); Helvetia (Chevr.); Hungaria septentrionalis, mense Julio rara (Mocs.).

313. **Chrysis fulminatrix** Buyss.

Chrysis fulminatrix, Buyss. Revue d'Entom. VI. p. 4. ♂. (1888).

« ♂. Corps allongé, assez étroit, à pubescence blanchâtre, entièrement feu doré, excepté le derrière de la tête, le dessous du thorax, les pattes et le postécusson qui sont bleu un peu verdâtre. Ponctuation de la tête et du thorax très serrée, ruguleuse, subcoriacée, formée de points irréguliers assez profonds. Tête triangulaire, cavité faciale plane, ponctuée finement et ridée transversalement; antennes noir-brun, avec les cinq premiers articles verts au moins en dessus, le troisième un peu plus long que les deux suivants, les articles 4, 5 et 6 renflés en dessous. Pronotum très court, rectangulaire, transversal, sans sillon à la troncature antérieure; côtés du mesosternum un peu cuivrés, couverts de points assez espacés, les uns petits, les autres plus gros; écusson plan avec une ponctuation moins serrée, les intervalles des points imperceptiblement ridés longitudinalement; postécusson gibbeux, très ruguleusement ponctué. Angles postico-latéraux du metanotum bleus, à pointe large, obtuse, aplatie, subdivariquée. Écailles vertes; ailes assez enfumées; tibias vert-doré en dessus, tarses brunâtres. Abdomen resplendissant, déprimé, un peu elliptique; premier segment moins large que le second, couvert de gros points espacés, dont les intervalles sont remplis par des points plus petits et peu profonds; seconde segment sensiblement plus large que les deux autres surtout dans la moitié postérieure, couvert de points moyens, peu serrés, une légère carène longitudinale, à peine visible, est ponctuée très finement; troisième segment plus large que le premier segment, normalement convexe, d'un feu plus intense, tronqué transversalement, régulièrement arrondi sur les angles de la troncature, les côtés sont largement sinués, la ponctuation est formée de points moyens assez serrés; la ligne de points antéapicale est interrompue, composée de sept fovéoles de chaque côté, irrégulières, ouvertes; marge apicale, concolore, plane, assez large, finement ponctuée. Ventre d'un beau feu-doré, avec les taches noires a la base de chaque segment. — Long. 8 mill.

Cette belle espèce est très voisine du *Chr. dichroa* Kl.; elle s'en distingue cependant par la forme de l'abdomen, la ponctuation des segments abdominaux, par les rides de la cavité faciale et de l'écusson, par la couleur feu de la tête et l'absence de sillon au milieu du pronotum à la troncature antérieure. »

Patria: Algeria (Teniet, Coll. Anceyi).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

**) *Vertice vel toto capite, pro- et mesonoto scutelloque purpureo-auratis.*

*

Conspectus specierum huc pertinentium.

1 (2). In capite solum fronte verticeque cupreo-purpureoque auratis; facie læte-, vel violascenti-, vel viridi-cyanea; prothorace lateribus subtus concolori; vertice thoracisque dorso fusco-piloso; postscutello gibbo-acuminato parum prominulo ... ... *purpureifrons* Ab.

2 (1). Capite toto, prothorace lateribus etiam subtus cupreo-purpureoque auratis; capite thoraceque supra nigro-pilosis; postscutello subacute- vel acute-conico, plus minusve longe prominulo.

3 (4). Postscutello tantum breviter prominulo subacute-conico, apice non planiusculo nec subtus profunde arcuatim excavato ... ... *cuprea* Rossi.

4 (3). Postscutello longius prominulo acute-conico, apice planiusculo subtusque profunde arcuatim excavato.

5 (6). Postcutelli mucrone mediocriter prominulo, subtus profunde arcuatim excavato; abdominis segmenti dorsalis tertii foveolis intermediis mediocribus subdistantibus ... ... *Oraniensis* Luc.

6 (5). Postscutelli mucrone longe prominulo, subtus adhuc profundius arcuatim excavato; abdominis segmenti dorsalis tertii foveolis intermediis maioribus profundioribusque ... ... *porphyrea* n. sp.

*

314. **Chrysis purpureifrons** Ab.

Chrysis purpureifrons. Ab. Diagn. des Chrysid. nouvell. p. 4, n. XXV. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 75 et 78. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879). — Gog. Annal. Soc. Españ. Hist. Nat. XVI. p. 79, n. 55. (1887). — Destef. Natural. Sicil. VII. p. 182. (1888).

Mediocris vel submagna, elongata, sat robusta, longius fusco-alboque pilosa; fronte cum vertice, pro- et mesonoto scutelloque cupreo-auratis parumque purpurascentibus; occipite, collo, truncatura pronoti antica, sulco mediano pronoti et lateribus subtus, postscutello cum metathorace et pleuris læte-cyaneis; cavitate faciali planiuscula, dense punctato-coriacea, superne depresso-convexa, non marginata; antennis crassiusculis, sat longis, nigro-fuscis, argenteo-puberulis, articulo tertio longo, quarto quintoque simul sumptis æquilongo; clypeo apice truncato nigroque æneo; mandibulis nigris, bidentatis; genis sat longis, articulo antennarum quarto longioribus; vertice dense subtilius punctato-subreticulato; pronoto longiusculo, transverso-rectangulo cum scutello postscutelloque gibbo-acuminato crassius, mesonoto parum subtilius punctato-reticulatis; suturis longitudinalibus mesonoti nigro-æneis; metanoti dentibus postico-lateralibus mediocribus, acutis, incurvis; abdominis segmentis dorsalibus convexis igneo-auratis, dense subtilius rugosiuscule-punctatis, subcoriaceis, primo punctis subtilibus minutis inmixtis, basi late cyaneo; primo secundoque carinula mediana minus distincta, tertio

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

foveolis circiter 8—10 sat profundis rotundisque, margine apicali arcuato-integro, apice distincte angustiore, quam basi, imo margine anguste nigro-æneo; ventralibus viridi-igneoque auratis, segmento secundo basi utrinque nigro-maculato; tarsis fusco-testaceis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis viridi- vel igneo-auratis. — ♂ ♀ ; long. 8—9 mm.

Femina: cavitate faciali læte- vel violascenti-cyanea; antennarum articulis tribus primis concoloribus, secundo supra nonnunquam virescenti, 4—6 subtus parum tumidis; mesopleuris læte-cyaneis; abdominis segmento dorsali tertio supra seriem leniter calloso; femoribus tibiisque cyaneis.

Mas: cavitate faciali viridi- vel viridi-cyanea; antennarum articulis quattuor primis viridibus; mesopleuris læte-cyaneis viridi-aureo-vittatis; abdominis segmento dorsali tertio supra seriem nec minime calloso; femoribus tibiisque cyaneis viridi lavatis.

Patria: Hispania (Ab.); Italia (Sicilia, Destef.); Gallia (Marseille, Ab.; Montpellier, Mus. Hung.); Græcia (mons Taygetus in Peloponeso seu peninsula Morea, Mus. Hung.; Athenæ, Mus. Atheniense!); Russia meridionalis (Sarepta, Mus. Turicense!).

315. **Chrysis cuprea** Rossi.

Chrysis (quarta), Schæff. Icon. Ins. Ratisbon. Vol. II. Pars I. tab. 115, fig. 3. (1768).

Chrysis cuprea, Rossi, Faun. Etr. II. p. 78, n. 851. ♀. (1790). — Panz. Schæfferi Icon. Ins. Ratisbon. p. 122. (1804). — Illig. Rossi Faun. Etr. Ed. II. tom. II. p. 126, n. 851. ♀. (1807). — Mocs. Chrys. faun. Hung. p. 50 et 84, n. 12. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 48 et 56. (1887). — Destef. Natural. Sicil. VII. p. 179. (1888) (nec Brullé).

Chrysis coerulescens, Fabr. Ent. Syst. Suppl. p. 257, n. 9. ♀. (1798). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 59, tab. XIV. fig. 5. ♀. (1801).

Chrysis coeruleipes, Fabr. Syst. Piez. p. 173, n. 13. (1804). — Panz. Faun. Ins. Germ. fasc. 109, tab. 11. ♀. (1809). — Schuck. Ent. Mag. IV. p. 167, n. 9. (1837). — Blanch. Hist. nat. III. p. 295, n. 4. (1840). — Dhlb. Hym. Europ. II. p. 141, n. 78. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 76, n. 8. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 68. (1858). — Chevr. Chrysid. du Léman, p. 25. ♀. (1862). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 7. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 75 et 77. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 161. (1879). — Lampr. Goldwesp. Deutschl. p. 12, n. 21. tab. I. fig. 10. (segm. anale). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 79, n. 56. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 15. (genit. maris) (1888).

Chrysis aurichalca, Lep. Annal. du Mus. Hist. nat. VII. p. 128, n. 25. tab. VII. fig. 16. (1806).

Chrysis aurichalcea, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 305. (1853) (nec Prov.).

Submagna, elongata, robusta vel sat robusta, læte-, vel parum virescenti-, aut violascenti-cyanea; capite, pronoto toto etiam lateribus subtus, mesonoto item et scutello purpureo-cupreo-auratis; capite thoraceque supra nigro-, parte reliqua corporis albo-pilosis; cavitate faciali planiuscula, dense punctato-coriacea, medio longitudinaliter canaliculata; antennis brevibus, robustis, nigris, cano-puberulis, articulis tribus primis viridi-cyaneis vel virescentibus, tertio longo, quarto quintoque simul sumptis æqui longo, in mare articulis 4—5 subtus parum tumidis seu inflatis; clypeo magno, gibbo,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

crasse punctato, aurato-æneo, margine apicali prominulo nigro-piceo, nitido, centro late truncato; genis longis, articulo antennarum tertio æquilongis; mandibulis bidentatis, apice rufis; vertice dense subtilius punctato-subreticulato; pronoto sat longo, antice in medio profunde impresso, parum fortius, mesonoto et scutello subtilius punctato-reticulatis, postscutello subacute-conico haud longe prominulo, metanoto pleurisque punctulato-coriaceis; metanoti dentibus postico-lateralibus validis, subacutis, incurvis; abdominis segmentis dorsalibus elongato-ovalibus, capite thoraceque simul sumptis distincte longioribus, igneo-auratis, segmentis anticis nonnunquam parum virescentibus, in mare punctatura parum fortiore, primo dense minus crasse punctato-rugoso, subcoriaceo interstitiis subtilissime punctulatis, secundo densius, tertio adhuc confertius subtiliusque rugosiuscule-punctatis, coriaceis, 2—3 carinula mediana minus distincta, tertio supra seriem in maribus parum calloso foveolis mediocribus ovatis circiter 10—12 per carinulam medianam interruptis, in feminis foveolis subimmersis sæpius non tam distinctis obliteratis, imo margine anguste nigro-æneo, arcuato-integro, in mare sæpius centro lenissime sinuato; ventre igneo-aurato vel parum etiam viridi-aureo-picto, segmentis duobus primis basi maculis binis, tertio macula basali transversa et sæpius etiam apicali atris; pedibus cyaneis vel parum viridi resplendentibus, tarsis fuscis; alis hyalinis, disco obsolete et ad costam cellulæ radialis saturatius brunneo-fumosis vel sordidis, cellula radiali triangulariter lanceolata fere completa, tegulis nigro-violaceis. — ♂ ♀ ; long. 8—9 mm.

«*Armure.* La branche du forceps nue, se rapprochant à celle du *Chr. picticornis*; son bord supérieur faiblement échancré. Les crochets pointus à l'extrémité. Diffère aussi par la forme du couvercle génital.» (Rad. l. c. tab. II. fig. 28a, 28b, 28i, 28k.).

Patria: Hispania (Gog.); Italia (Spin.; Sardinia, Costa: Sicilia, Destef.); Gallia (Fabr.); Helvetia (Imhoff); Tyrolis (Dala Torre); Germania meridionalis (Dhlb.); Austria (Fabr. et Coll. Handlirschi!); Hungaria centralis et meridionalis, mense Junio in florenti Euphorbia glareosa non rara (Mocs.); Dalmatia (Gasperini! et Mus. Hung.); Albania (Coll. Fairmairei!); Istria (Coll. Handlirschi!); Asia minor (Brussa, Mus. Hung.); Transcaucasia (Rad.).

316. **Chrysis Oraniensis** Luc.

Chrysis oraniensis, Luc. Explor. de l'Algér. Zoolog. III. p. 308, n. 347. Hym. tab. XVII. fig. 5. (1849). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 75 et 78. ♂ ♀. (1879).

«Espèce généralement confondue avec la precédente et qui semble la remplacer dans le nord de l'Afrique. Je ne répondrais même pas que n'en fût une race locale. Elle en est extrémement voisine; mais elle en diffère par le troisième segment plus court et plus large, à peu près conformé chez la ♀ comme chez le ♂ de la *Coeruleipes*, à ligne de points moins immergée, à apex plus largement tronqué et non échancré au milieu. Enfin le cône du postécusson est très-sensiblement plus aigu.

Je l'ai vue d'Alger au muséum de Paris et j'en ai sous les yeux un sujet de Bône (Collect. Dufour).» (Abeille l. c.)

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Specimen Algiricum adhuc non vidi, sed e benevolentia Clarissimi Domini R. Buysson habeo unam feminam e Jaffa Syriæ, ab ipso Domino Abeille captam. Secundum hoc exemplar, species est:

Chrysidi cupreae Rossi simillima; sed antennarum articulo tertio parum breviore, postscutelli mucrone longiore magisque acuminato, apice planiusculo et subtus profundius arcuatim excavato, abdominis segmentis dorsalibus: secundo tertioque fortius punctato-coriaceis, subrugosiusculis, tertio apicem versus magis angustato, ipso apice breviore, subtruncato, foveolis profundioribus, ventris segmento tertio non toto igneo-aurato, sed nigro-æneo et medio igneo-maculato, mihi solum distincta esse videtur.

Patria: Algeria (Oran, Luc.; Bône, Ab.); Syria (Jaffa, Coll. Buyss. et Mus. Hung.)

317. **Chrysis porphyrea** n. sp.

Chrys. Oraniensi Luc. simillima; sed postscutello mucrone adhuc distincte longiore, subtus profundius arcuatim excavato, abdominis segmentis dorsalibus: secundo tertioque densius subtiliusque rugosiuscule punctulato-coriaceis, foveolis intermediis maioribus et profundioribus magisque distantibus. — De cetero: species forsan solum eius varietas est.

Patria: Græcia (Cumani in peninsula Morea, Mus. Hung.); Asia minor (Smyrna, Mus. Hung.).

D. *Thorax supra totus auratus vel viridi-, vel coccineo-, vel cupreo-auratus vel rubro-cupratus et purpureo lavatus.*

*

Conspectus specierum huius sectionis:

1 (4). Corpore toto rubro-cupreo-aurato vel rubro-cupreo parumque virescenti.

2 (3). Postscutello mucronato, mucrone valido sat longo triangulari apice obtuso; capite thoraceque supra fusco-pilosis. Long. 11 mm ... ... *barbara* Luc.

3 (2). Postscutello solum parum gibbo-subconico; capite thoraceque supra nigro-pilosis. Long. 7 mm ... ... *pruna* Grib.

4 (1). Corpore læte-cyaneo, vertice thoraceque supra cupreo-auratis vel corpore viridi- et læte-aurato, vertice thoraceque ex parte purpureo lavatis, cinereo-alboque pilosis; metanoto convexo.

5 (6). Cavitate faciali læte-cyanea, superne convexa; temporibus, genis et thoracis lateribus læte-cyaneis; clypeo brevi; abdomine supra igneo-aurato, segmento tertio supra seriem haud calloso ... ... *Dournovi* Rad.

6 (5). Cavitate faciali virescenti vel viridi-aurata, superne arcuatim marginata; temporibus, genis et thoracis lateribus viridi-auratis purpureoque lavatis; clypeo longo; abdomine supra concinne purpureo-aurato, segmento tertio supra seriem fortius incrassato ... ... *Gestroi* Grib.

*

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

318. **Chrysis Durnovi** Rad.

Chrysis Dournovii, Rad. Horæ Soc. Ent. Rossicæ. III. p. 303, n. 25. ♀. tab. III. fig. 14. (1866) sec. spec. typ. e coll. Rad.

Mediocris, robusta, læte-cyanea parcius cinereo-alboque pilosa: vertice, pro- et mesonoto cum scutello et postscutello alarumque tegulis cupreo-auratis; cavitate faciali minus profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne convexa, non marginata, vertice ante stemmata viridi-aureo limbato; antennis brevibus, tenuibus, nigris, argenteo-puberulis, articulis: primo cyaneo, secundo tertioque supra cyanescentibus vel virescenti-cyaneis, tertio longitudine mediocri, secundo vix duplo longiore; genis brevibus, articulo secundo antennarum æquilongis; vertice, pro- et mesonoto dense inæqualiter minus crasse rugosiuscule-punctatis, subcoriaceis, scutello et postscutello minus crasse et distincte punctato-subreticulatis; metanoti dentibus posticolateribus brevibus, validis, incurvis; abdominis segmentis dorsalibus igneo-auratis, subtiliter dense fere æqualiter parum rugosiuscule-punctatis, punctatura primi parum fortiore, secundo carinula mediana indistincta, tertio convexo foveolis sat immersis numerosis rotundis circiter 18 distinctis, summo apice cyaneo vel nigro-cyaneo marginato; ventre aureo-igneoque variegato, segmento secundo basi utrinque nigro-maculato; pedibus læte-cyaneis, tarsis fusco-testaceis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice valde late aperta. — ♂ ♀; 7—7½ mm.

Patria: Græcia (Attica, Coll. Wüstneii! et Mus. Hung.; Athenæ, Mus. Atheniense!); Caucasus (Daghestan, Coll. Rad.!); Syria (Coll. Saussurei!).

319. **Chrysis Gestroi** Grib.

Chrysis Gestroi, Grib. Annali Mus. Civ. Stor. Nat. Genova. VI. p. 359, n. 4. (1874).

Mediocris, sat robusta, parcius cinereo-alboque pilosa, viridi- et læte-aurata; verticis medio, pronoti truncatura et huius parte antica vittaque lata loborum lateralium mesonoti, concinne purpureo lavatis; cavitate faciali minus profunda, medio longitudinaliter canaliculata, subtus subtilissime, supra fortius punctato-coriacea, superne arcuatim marginata; antennis tenuibus, nigris, argenteo-puberulis, articulis duobus primis nigro-æneis, tertio sat longo, sequentibus duobus simul sumptis æquali; genis sat longis, articulo secundo antennarum longioribus; clypeo longo, subquadrato, sat sparsim minus crasse punctato, igneo-aurato, apice nigro-æneo, in specimime nostro vix emarginato; mandibulis in medio rufis; vertice densius, thorace supra dispersius fortiusque punctato-reticulatis, metanoto convexo; mesopleuris fortius subreticulatim punctatis, subtus triangulariter productis acuteque marginatis; metanoti dentibus postico lateralibus robustis subacutis; abdomine concinne purpureo-aurato, segmentis dorsalibus: primo sparsim crasse punctato interstitiisque subtilissime punctulatis, secundo tertioque valde dense subtiliter coriaceo-rugosis, illo carinula mediana bene distincta, hoc supra seriem fortius incrassato, foveolis parvis minus distinctis, magnitudine in-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

æqualibus, subrotundis, circiter 16, margine apicali leniter arcuato, integro, lateribus subangulatis vix angustatis, summo margine anguste nigro-æneo; ventre viridi-cyaneo igneoque vario; femoribus tibiisque concinne purpureo-auratis, tarsis fuscis; alis subfumato-hyalinis, iridescentibus, venis piceis, cellula radiali triangulariter lanceolata apice late aperta, tegulis viridi-auratis, externe purpurascentibus. — ♀; long. 7 mm.

Species hæc eximia, quoad picturam capitis thoracisque, cum *Chryside (Euchroeo) purpurata* Fabr. multum habet similitudinis.

Patria: Algeria (Grib.; Sebdou, Mus. Hung.).

320. **Chrysis pruna** Grib.

Chrysis viridana, Rad. Horæ Soc. Ent. Rossicæ. VI. p. 303. (1869) (biologia, sine descriptione) sec. spec. typ. e coll. Rad. (nec Dhlb.)

Chrysis pruna, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 337, n. 16. ♂♀ (1879). — Buyss. Revue d'Entom. VII. p. 8. ♀. (1888).

Subparva, cylindrica, omnino rubro-cuprea (antennis apice tarsisque nigris exceptis) parumque virescens; capite thoraceque supra nigro-, parte reliqua corporis parcius albo-pilosis; cavitate faciali subplana, punctulato-coriacea, superne haud marginata; antennis tenuibus, fuscis, scapo et articulis duobus primis flagelli supra viridi-auratis, huius articulo secundo longo, sequentibus duobus simul sumptis longitudine æquali; genis valde longis, articulo secundo flagelli æquilongis; clypeo, comparative, elongato producto; vertice thoraceque supra confertissime irregulariter punctato-granosis; postscutello parum gibbo-subconico; metanoti dentibus postico-lateralibus gracilibus spinoideis; abdominis segmentis dorsalibus: primo dense punctato et punctulato, secundo modice, tertio confertim punctulatis, tertio serie anteapicali subobsoleta, foveolis parvis rotundisque, margine apicali mediocri, integro, apice arcuato; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta. — ♂♀; long. 7. mm.

Patria: Algeria (Grib. et Coll. Rad.!).

321. **Chrysis barbara** Luc.

Chrysis barbara, Luc. Explor. de l'Algér. Zoolog. III. p. 307, n. 346. Hym. tab. XVII. fig. 4. ♀. (1849) sec. spec. typ. Lucasi in coll. Rad. — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 78. (1879).

Sat magna vel magna, omnino rubro-cupreo-aurata, fusco-pilosa; cavitate faciali planiuscula, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne convexa, non marginata; antennis crassiusculis, fuscis, scapo et articulis duobus primis flagelli supra cupreo-auratis, huius articulo secundo longo, sequentibus duobus simul sumptis longitudine æquali; clypeo longo, sparsim punctato et punctulato, apice subtruncato, transverso; genis proportionaliter longis, articulo tamen secundo flagelli brevioribus; vertice valde dense, mesonoto dispersius, pronoto, scutello et postscutello fortius punctato-reticulatis; metanoti dentibus postico-lateralibus validis, obtusis; postscutello

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

mucrone valido, sat longo, triangulari, apice obtuso armato; abdominis segmentis dorsalibus subcoriaceis; primo valde dense subtiliter punctato, punctis sparsis maioribus, medio linea longitudinali latiuscula subtilissime punctulata, secundo tertioque valde dense subtilius punctatis, illo carinula mediana obsoleta, hoc ante seriem anteapicalem vix incrassato, ipsa serie subobsoleta, foveolis numerosis, sed minus distinctis, margine apicali arcuato-integro; ventre igneo-aurato segmentoque secundo basi utrinque nigro-maculato; femoribus et tibiis cupreo-auratis, tarsis fuscis; alis subhyalinis vel parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta. — ♀; long. 11—12 mm.

Species elegantissima: corpore toto cum abdomine pedibusque rubro-cupreo-auratis, postscutello mucronato, a congeneribus iam facile distinguenda.

Patria: Algeric (Luc. et Coll. Rad.!).

Subgenus 2. GONOCHRYSIS Licht.

Abdominis segmento dorsali tertio margine apicali distincte trisinuato aut undulato, lateribus, aut ante vel in initio seriei anteapicalis angulato.

Animadversio. — Species nonnullæ Tetrachrysidarum, præsertim *Chrysis viridula* Linn. (bidentata Linn.) eiusque sociæ, quæ dentes anales perbreves, non satis evolutos habent, ad hoc subgenus pertinere videntur; illæ tamen undulatione et angulis fortioribus gaudent, quapropter species illas cum Dahlbomo apud Tetrachrysidas reliqui. — Etiam species subgeneris *Spinoliae* habent denticulos laterales in initio seriei anteapicalis; sed in his margo proprius apicalis subtilissime serrulatus est, quod apud Gonochrysidas nunquam observatur.

*

I. *Corpus totum viride, cyaneum vel viridi-cyaneum, violaceum aut coeruleum, aut his coloribus variegatum, sed nunquam auratum.*

322. **Chrysis unicolor** Dhlb.

Chrysis unicolor, Dhlb. Exercit. Hym. p. 32, n. 16. ♂. (1831); Hym. Europ. II. p. 117, n. 96. ♂. tab. IX. fig. 100. (1854). — Thoms. Opusc. Entom. II. p. 105, n. 1. ♂. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 41. ♂. (1879). — Mocs. Chrys. faun. Hung. p. 51 et 84, n. 13. ♂ ♀. (1882).

Chryzura unicolor, Dhlb. Dispos. p. 6, n. 1. ♂. (1845).

Chrysis lazulina, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 315, n. 77. ♀. (1853) sec. spec. typ. Mus. Nat. Hung. — Lampr. Goldwesp. Deutschl. p. 26, ♀. tab. I. fig. 12. (segm. anale) (1881).

Chrysis albipennis, Dhlb. Hym. Europ. II. p. 175, n. 95. ♀. tab. VIII. fig. 99. (1854). — Schck, Nass. Jahrb. XVI. p. 178, n. 2. ♀. (1861); Progr. Gymn. zu Weilb. p. 14, n. 1. ♀. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 41. ♀. (1879). — Lampr. Goldwesp. Deutschl. p. 13, n. 25. ♀. (1881).

Subparva, breviter obtuse-ovata, robusta, tota nigro-violacea, opaca, densius cinereo-alboque pilosa; vertice post stemmata et sæpius etiam lobis lateralibus mesonoti

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ænescentibus; cavitate faciali planiuscula, dense subtiliter punctato-coriacea, fronte planata subtiliter et longitudinaliter coriaceo-rugulosa, subaciculata; antennis brevibus, tenuibus, fusco-ferrugineis vel fuscis, articulis duobus primis basalibus cyanescentibus, tertio brevi, quarto parum tantum longiore; clypeo magno subquadrato, parte basali punctulato-coriacea, viridi-cyaneo, apicali declivi sparsim punctulato, æneo, margine apicali summo leniter arcuato-emarginato; genis valde brevibus, linearibus; mandibulis robustis, apice rufis, bidentatis; capite thoraceque supra confertim punctulato-coriaceis, scutello et postscutello convexo punctulato-subreticulatis; pronoto brevi transverso-rectangulo, antice in medio vix impresso; metanoti dentibus postico-lateralibus mediocribus, robustis, triangularibus; mesopleuris apice utrinque acutangulis; abdominis segmentis dorsalibus dense subtilissime punctulatis, primo margine apicali in femina anguste viridi-aureo-limbato, secundo carinula mediana indistincta, tertio supra seriem leniter calloso, ipsa serie anteapicali continua foveolis numerosis minutis orbiculatis, margine apicali mediocri, humili, depresso, fortiter arcuato-prominulo, summo margine albo-testaceo, centro integerrimo, utrinque sub initio seriei angulo laterali remoto, distincto; ventre pedibusque nigro-violaceis, illo marginibus segmentorum brunneo-testaceo-scarioso, his tarsis fuscis vel fusco-ferrugineis; alis albo-hyalinis, venis brunneis, cellula radiali lanceolata valde incompleta, costa nempe mox post stigma et vena radiali mox post angulum centralem desinentibus, tegulis nigro-violaceis. — ♂ ♀; long. 4½—5 mm.

Species: colore, sculptura frontis, punctatura et abdominis segmento dorsali tertio sub initio seriei anteapicalis angulo laterali remoto distincto, forma item corporis: speciebus generis Hedychri haud insimili et cellula radiali valde incompleta, facile cognoscitur.

Patria: Suecia (Dhlb.); Germania (Bamberg, Schck); Hungaria centralis et meridionalis, in locis arenosis haud frequens (Mocs.).

323. **Chrysis trisinuata** n. sp.

Mediocris, elongata, parce albo-pilosa, cyanea; clypeo, frontis, pronoti et scutelli lateribus virescentibus; collo, mesonoti lobo medio antice et metanoti centro violaceis; genis brevibus; cavitate faciali profunda, subtiliter punctato-coriacea, superne abrupte, quasi crenato-marginata, fronte sat crasse rugoso-, vertice, thoracisque dorso crasse sat profunde punctatis; abdomine cyaneo, basi subtus nigro, lævi ac polito, segmentis dorsalibus primis duobus margine apicali virescentibus, 2—3 basi nigro-æneis, omnibus fere æqualiter dense punctatis, serie anteapicali haud immersa foveolis circiter 12 profundis, fere sulciformibus, margine apicali trisinuato, centro fere triangulariter, sed anguste, latera versus vero leniter, sed distincte et latius sinuatis; antennarum articulis duobus primis, femoribus item et tibiis viridibus, articulis reliquis fuscis, tarsis fusco-testaceis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice anguste aperta. — ♀; long. 8 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: corpore toto cyaneo, frontis sculptura, abdominis basi subtus nigro, lævi ac polito et segmento tertio margine apicali trisinuato, facile cognoscenda.

Patria: Turkestania (Taschkend, Coll. Rad.).

324. **Chrysis infuscata** Brullé.

Chrysis infuscata, Brullé, Hym. IV. p. 47, n. 36. ♂. (1846).

«Viridis, vertice et mesothoracis dorso nigris, abdominis dorso nigro, viridi et violaceo vario, antennis rufis, supra nigris, alis obscure rufis, dense punctata, segmento tertio integro. Mas.

Il est vert, avec le dos des deux premiers segments de l'abdomen couvert d'une grande tache d'un violet foncé presque noir et bordée de bleu; le troisième segment est d'un bleu violet, avec une grande tache noirâtre de chaque côté de la base. Le vertex et le lobe moyen du mésothorax sont noirâtres, ainsi qu'un trait sur le milieu du prothorax. Les antennes sont rousses à partir de l'extrémité du troisième article, noires en dessus; leurs trois premiers articles seuls sont verts. Les quatre ailes sont d'un roux très-obscur et comme enfumé, avec la base et l'extrémité plus pâles.

Le corps est criblé de gros points qui se touchent sur la tête et le thorax et sont plus écartés sur l'abdomen. La fossette de la face est profonde et surmontée d'une ligne élevée, sinueuse et qui se prolonge en avant de chaque côté. La fossette du prothorax n'est un peu marquée qu'en avant. Les sillons interlobulaires du mésothorax sont larges. La base de l'abdomen est pourvue de trois échancrures; la ligne médiane n'est nullement indiquée. Le bourrellet du troisième segment n'est indiqué que par une rangée de gros points. Le bord postérieur est dépourvu de dentelures et très-légèrement ondulé.

Longueur: 0,009.»

Patria; Promontorium Bonæ Spei.

325. **Chrysis Capensis** Mocs.

Chrysis carinata, Dhlb. Hym. Europ. II. p. 167, n. 91. ♂? tab. VII. fig. 95 (abdomen) (1854) (nec Guér.)

Chrysis capensis, Mocs. Term. Füz. XI. p. 14. (1887).

Descriptio secundum Dahlbom:

«Mediocris oblonga robusta 3 lin. decimal. long. confertim punctata subnitida tota cyanea aut violascens viridi-picta tarsis brunneis, segmenti tertii (non sulcati) serie ante-apicali foveolis subnumerosis rotundatis maiusculis profundioribus, margine apicali mediocri, ad centrum subacute emarginato, sub initio seriei utrinque angulo lateralis distincto.

Observ. Ad habitum et picturam *Chrysidi nitidulae* quodammodo similis. Corpus robustum semicylindricum lineare punctatissimum punctis mediocribus, saturate cyaneum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

l. potius violaceum. Caput rotundato-triangulum thoraci arcte applicatum, pronoto paullulum latius; vertex amplus depresso-convexus fusco-hirtus, ante stemmata virescens coriaceo-rugulosus, inter stemma anticum et cavitatem facialem carinula transversa brevissima arcuata obsoleta; oculi mediocres ovati exserti; cavitas facialis lata planiuscula viridi-cyanea nitida, confertissime punctulato-coriacea, disco anguste subtilissime transverse strigosa et distincte canaliculata. Antennæ elongatæ tenues: scapo, pedicello et parte basali flagelli fusco-virescentibus, parte apicali flagelli subferrugineo. Clypeus submagnus latus viridissimus nitidus sparse punctatus, carinato convexus, margine apicali transverso, anguste aureo-micante et leniter arcuato-emarginato. Mandibulæ robustæ piceæ basi virescentes. Thorax robustus cylindricus convexus confertim crasse punctatus violaceus; pronotum supra, dorsuli areæ laterales disco et area media basi scutellumque viridi-irrorata. Pronotum subbreve transverso-rectangulum margine postico leniter arcuato-emarginatum, supra non sulcatum, truncaturæ anticæ spatium centrale semicirculare politum viride utrinque foveolis 2: quarum proxima sulciformi et altera sive submarginali rotundata. Dorsuli suturæ medianæ profundæ crenulatæ, basi parum curvæ. Scutellum et postscutellum convexiora, illud crassius et remote punctatum, hoc basi fovea centrali. Metanoti anguli postico-laterales mediocres angusti acutius triangulares. Pleuræ punctulato-rugulosæ cyaneæ. Sternum nitidum viridi-cyaneum sparse et subtiliter punctulatum. Pedes cyaneo-virides nitidi griseo-pilosi tarsis brunneis. Alæ brunneæ subhyalinæ venis firmis piceis, venula transverso-mediali basi subangulato-inflexa. Abdomen mediocre aut subbreve longitudine ac latitudine thoracis, obtuse subrectangulum, dorso confertim modice punctatum et modice convexum violaceum, segmentorum primi et secundi margo apicalis virescens, lineola mediana subtilis subelevata in disco segmentorum secundi et tertii observanda; segmentum tertium confertius punctulatum coriaceum, series ante-apicalis medio interrupta, foveolis numerosis circ. 18 profundis rotundatis subpellucidis, mediis maioribus et in fundo purpurascenti-violaceis, extimis minoribus; margo analis mediocris depressus punctulatus coriaceus, centro leniter acutangulo-emarginatus, pone emarginaturam utrinque late depresso-arcuatus usque in angulum apicali-lateralem sub initio seriei situm; venter concaviusculo-planus nitidus viridi-cyaneus confertim pubescenti-punctulatus.»

Patria: Promontorium Bonæ Spei.

326. **Chrysis Ghilianii** Grib.

Chrysis Ghilianii Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 335, n. 12. (1879).

«Mediocris, elongata, depressiuscula, viridi-cyanea: capite thoraceque confertim sed modice, scutello postscutello abdominisque segmento primo crasse punctato-reticulatis; reliquis segmentis confertissime subtiliter punctulato-coriaceis: cavitate faciali subprofunda, longitudinaliter carinulata, subtilissime transversim rugulosa, superne distincte bimarginata: postscutello gibboso conico: seriei anteapicalis foveolis distinctis, rotundatis, regularibus: margine anali prominulo, medio subangulato, utrinque sub initio

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

seriei dente laterali valido prædito: pedibus antennisque basi viridibus, apice nigris: alis sordide hyalinis.

Long. corp. mill. 6—7.

Affine alla *albipennis*, Klg. *unicolor*, Dhl. e forsan *Branicki*, Radz., se ne distingue però nettamente per la punteggiatura, per la forma del margine anale, e per la gibbosità del postscudetto: specialissima poi è la duplice orlatura del margine superiore della cavità facciale. Il muso in questa Chryside non è guari allungato, i suoi lati sono abbastanza convergenti.

Comunicata dal sig. Smith.»

Patria: Africa meridionali-orientalis (Port Natal).

327. **Chrysis Radoszkovszkyi** Grib.

Chrysis Radoszkowszkyi, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 335, n. 13. ♀. (1879).

«Præcedenti (C. Ghilianii) affinis quidem et similis, at margine superno cavitatis facialis simplici; sculptura totius thoracis abdominisque segmenti primi uniformi; segmentis secundo et tertio subtiliter punctulato-reticulatis non ruguloso-coriaceis; postscutello minus conico; margine apicali segmenti tertii magis arcuato; denticulis analibus gracilioribus certe facillimeque dignoscitur.

Long. corp. mill. 6½.

Abbenchè molto affine alla *Ghilianii* non si potrà confondere colla medesima specialmente per l'orlatura della fronte che nella *Ghilianii* è duplice, e semplice invece in questa: come pure per la scultura che è del tutto diversa, specialmente sui due ultimi segmenti nei quali i punti sono in questa minutissimi bensì, ma rotondi, regolari, lasciando fra di loro un po' di area liscia per cui la superficie dei segmenti riesce più brillante, come brunita.

Due ♀; una della collezione Drewsen, un' altra generosamente regalatami dal Generale Radoskowszky.»

Patria: Australia.

328. **Chrysis densa** Cress.

Chrysis densa, Cress. Proced. Ent. Soc. Philad. IV. p. 307, n. 2. ♀. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 241. ♀. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 230, tab. VII. fig. 44. (segm. anale) (1885).

«Eleven specimens from Colorado and California, including Mr. Cresson's type specimens. The color varies from light blue with much green and slight purple reflections to emerald-green with very little blue and no purple; wings almost clear hyaline in one specimen, in the others subflavescent to a more or less degree; very densely and almost equally punctured all over. There is a great variation in the margins of the third abdominal segment, in that the angle of the posterior and lateral margins is in some specimens over 160°, while in others it is less than 140°. In the latter the posterior

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

margin is much less extended at the apex, and the segment appears quadrate, and the margin between the lateral angles and the notch is arched a little outwardly or straight, while in the former the apical margin is extended in the middle, and between the notch and angles is arched inwardly. The grades exist. This species approaches nearest the bidentate species, and through the development of the lateral angles into teeth, and the lobes on each side of the notch into extended points or teeth, probably represents the ancestral form of the bidentate and quadridentate species.» (Aaron l. c.).

Patria: America septentrionalis (Colorado et California).

329. **Chrysis Californica** Grib.

Chrysis californica. Grib. Annuali Mus. Civ. Stor. Nat. Genova. XIV. p. 336, n. 15. ♀. (1879).

«Parva cylindrica obscure cyanea parum nitida: capite thoraceque confertim parum profunde, modice, vel, comparative, subcrasse, punctatis; scutello et postscutello punctato-reticulatis: abdominis segmentis dorsalibus primo et secundo regulariter punctulato-subgranosis: segmento tertio irregulariter confertim punctato et punctulato: capite robusto, antice viso fere quadrato: lineis genarum brevibus, verticalibus: cavitate faciali mediocri, nitida impunctata, superne haud marginata: clypeo brevi, transverso, apice truncato, et iuxta marginem profunde foveolato: prothorace medio longitudinaliter depresso subfoveolato: postscutello perlenissime gibbulo: abdominis segmenti tertii area antica regulariter convexa; serie anteapicali parum abrupta, foveolis subparvis, irregularibus, numerosis: area anali mediocri, arcuato-subangulata, medio paullulum producta, apice utrinque distincte sed leniter emarginulata, apice quoque sed obsoletissime: alis subhyalinis. ♀.

Long. corp. mill. 5.

Assai facilmente si distingue questa specie dal suo colore azurro assai cupo; dalla forma della faccia, che è molto allargata e troncata al basso; e dalla intagliatura del margine anale. Alla diagnosi sopra scritta si aggiunga che il terzo segmento va restringendosi notevolmente verso l'apice, per cui questo è largo solo quanto la metà circa della base: i due primi segmenti invece sono affato cilindrici.

Un esemplare nella mia collezione.»

Patria: California.

II. *Corpus viridi-aeneum, pectore, ventre pedibusque cyaneo-viridibus.*

330. **Chrysis foveata** Dhlb.

Chrysis foveata, Dhlb. Dispos. p. 6, n. 2. ♀. (1845): Hym. Europ. II. p. 171, n. 93. ♀. tab. VIII. fig. 97. ♀. (1854).

«Mediocris oblonga robusta 2 1/3 lin. decimal. long. modice punctata nitida viridiænea pectore, ventre pedibusque cyaneo-viridibus, tarsis alarumque venis læte brun-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

neis, alis albis, abdominis segmenti tertii serie anteapicali foveolis remotis longiusculis profundis linearibus sulciformibus, margine apicali maiusculo humili depresso-arcuato ad centrum integerrimo, sub initio seriei utrinque angulo laterali obsoleto.

Observ. Pictura et magnitudine *Chrysidi rutilanti* nonnihil assimilis. Corpus robustum oblongum latiusculum subrectangulum crasse punctatum. Caput orbiculatum l. potius rotundato-subtriangulum non crassum, punctulato-reticulatum viridi-cyaneum; frons et vertex virides. Stemmata mediocria elevata; oculi exserti ovati; cavitas facialis mediocris superne transverse-marginata, tota viridis nitida, disco subpolita abrupte et subtiliter canaliculata, lateribus subtiliter punctulato-coriacea cano-sericeo pubescens. Antennæ mediocres fuscæ scapo viridi. Clypeus mediocris transversus latus nitidissimus viridis vix punctatus, medio carinato-convexus, utrinque foveato-immersus, margine laterali obliquo testaceo, margine apicali nigro-piceo arcuato-emarginato. Mandibulæ breves piceo-brunneæ basi virescentes. Thorax robustus subcylindricus dorso pleurisque crasse et subremote l. saltem non confertim punctato-reticulatus convexo-depressus viridi-æneus, qui color in mesonoto fere in cupreum abit; pronotum antice sulco mediano brevi subovato obsoleto; metanotum gibbo-convexum, area sub postscutello normalis, anguli postico-laterales validi acute triangulares virides punctulato-coriacei. Sternum nitidissimum sparse punctulatum cyaneo-viride; pedes concolores tarsis brunneo-testaceis. Alæ albæ, tegulis ænescentibus, venis læte brunneis, venula transverso-mediali basi distincte arcuato-inflexa; cellula radialis valde incompleta, scil. apice hiante aperta, costa paullo post stigma desinit, venæ radialis apex ab alæ apice longe remotus. Abdomen robustum ovato-subrectangulum latitudine mesonoti, capite thoraceque simul sumptis paullulum brevius, dorso depresso-convexum nitidissimum politum viridi-æneum punctis subcrassis rotundis crebre obsertum, lineola mediana subelevata subtili in segmentis primo et secundo continua; segmenti primi impressio basalis magna profunda semicircularis; segmentum tertium ante marginem apicalem leniter transverse arcuato-sulcatum, series ante-apicalis in hoc sulco (non profundo sed latiusculo) sita continua foveolis longitudinalibus linearibus sulciformibus profundis remotis circ. 14, margo apicalis brevis punctulatus depressus: summus depresso-arcuatus l. potius rectangulo-arcuatus, utrinque sub initio seriei angulo laterali obsoleto; venter fortiter fornicatus viridis cyaneo-maculatus.»

Patria: Aegyptus.

III. *Abdomen violaceum, fascia segmentorum dorsalium primi et secundi apicali viridissima; thorax ex parte auratus.*

321. **Chrysis Dalmanni** Dhlb.

Chrysis Dalmanni, Dhlb. Dispos. p. 12, n. 9. (1845); Hym. Europ. II. p. 150, n. 83. ♀. tab. VII. fig. 89. ♀. (1854).

«Mediocris oblonga circ. 3 lin. decimal. long. crasse punctata cyanea, pronoto tegulis scutello et postscutello aureis, abdomine violaceo segmentis primo secundoque

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

fascia apicali viridissima, segmenti tertii margine apicali lenissime inæquali scil. utrinque inter basin et apicem obsoletissime quasi angulato, alis sordidis brunneo-hyalinis, cellula radiali subcompleta.

Observ. Statura fere *Chrysidis bidentatae*. Corpus oblongum subsemicylindrico-lineare confertim punctatum. Caput mediocre suborbiculatum, confertim modice punctatum subreticulatum subviolaceum; vertex amplus convexo-depressus, ante stemma anticum leviter viridi-pictum; stemmata magna testaceo-pallida; oculi mediocres ovati parum exserti et parum convexi; cavitas facialis magna subprofunda, superne per carinulam transversam subrectangulo-arcuatam inter oculos ductam limitata, viridi-cyanea nitida, confertissime subtiliter transverse strigosa: canalicula mediana superne profundiore, inferne subtili. Antennæ perbreves robustæ, scapo viridi-cyaneo, pedicello flagellisque fuscis, hoc apice infra fusco-testaceo. Clypeus mediocris, disco carinato-convexus subpolitus viridi-aureo-resplendens, utrinque immersus sparse punctatus, cyaneo-viridis, margine apicali nigro-piceus truncatus. Mandibulæ parvæ piceæ, basi æneo-virescentes. Palpi fusci; horum articuli terminales, maxillarum processus et ligula brunneo-testacei. Thorax cylindricus, antice vix angustior quam caput, dorso et mesopleuris confertim et crasse punctato-subreticulatis, dorsuli punctura paullo minus profunda et paullo magis conferta quam in partibus iam memoratis. Pronotum convexo-depressum subplanum transverso-rectangulum aureum lateribus cyaneis; truncatura antica nitida subviolacea parce punctata foveolis binis centralibus; margo posticus leniter arcuato-emarginatus subtruncatus. Dorsuli areæ laterales saturate cyaneæ leviter viridi-irroratæ, area media nigro-ænea. Scutellum et postscutellum aurea. Metanotum, pleuræ et sternum cyanea viridi-picta; metanotum sub postscutello crassissime exaratum sulco transverso-arcuato lato et profundo, per carinulas nonnullas in foveas 3—5 diviso; anguli postico-laterales mediocres. Pedes viridi-cyanei, tarsis brunneo-testaceis. Alæ sordidæ brunneo-hyalinæ venis brunneis; cellula radialis lanceolato-acuminata, venula transverso-medialis basi brevissime et obtuse angulato-inflexa. Abdomen sublineare, ovato-ellipticum, dorso modice convexum confertim punctatum parum nitidum saturate cyaneum l. potius violaceum. Abdominis segmenti primi impressio basalis triramosa scil. e sulcis tribus profundis concentricis constituta: sulco medio longitudinali externis obliquis subtransversis; fascia apicalis mediocris linearis nitida viridissima. Abdominis segmentis secundi fascia apicalis latior et concolor, ad latera perparum aureo-nitens, antice utrinque arcuato-emarginata et hinc in segmenti discum angulum acutum promittens. Abdominis segmentum tertium carinula mediana subtilissima vix conspicua, paullulum infra basin macula discoidali parva obsoleta æneo-virescens; ante seriem non vere callosum nec marginatum, sed potius brevissime convexo-declive; series ante-apicalis post hanc declivitatem posita, igitur paullulum humilior quam pars anterior segmenti, medio interrupta, foveolis profundis maiusculis circ. 14, scil. 7 utrinque; margo apicalis convexo-depressus mediocris subconfertim punctulatus, summus arcuatus, attamen ad utrumque latus obtusissime quasi bi-angulatus. Venter fornicatus viridi-cyaneus nitidus subtiliter punctulato-coriaceus.»

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Patria: ignota (Mus. R. Acad. Scient. Stockholm. teste Dhlb.). — Probabiliter est species Africana.

IV. *Abdomen igneo-auratum, segmento primo dorsali cyaneo, parte postica viridi-aurato; thorax cyaneus, mesonoti lobis lateralibus virescentibus.*

332. **Chrysis Wüstneii** n. sp.

Mediocris, elongata, parce albo-pilosa, cyanea; mesonoti lobis lateralibus virescentibus; cavitate faciali profunda, punctulato-coriacea, medio canaliculata, superne arcuatim minus acute marginata, vertice dense punctato-subreticulato; genis sat longis, longitudine antennarum articulo tertio fere æquali; scapo cyaneo, articulis flagelli duobus primis supra virescentibus, subtus et reliquis fuscis, secundo primo duplo longiore; thorace supra sat crasse profundeque punctato-subreticulato, mesopleuris subtus triangulariter productis marginatisque; pronoto parte basali in medio vix impresso, metanoti dentibus postico-lateralibus obtusis; abdomine supra igneo-aurato, segmento primo cyaneo, parte postica viridi-aurato, sparsim profunde, secundo tertioque densius subtiliusque punctatis, serie anteapicali foveolis profundis sulciformibus circa 12 distinctis viridi-auratis, margine apicali flexuoso, lateribus posticis angulatis; ventre viridi-igneoque aurato, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tarsis fuscis; alis sordide-hyalinis, venis piceis, cellula radiali triangulariter lanceolata completa, tegulis viridi-cyaneis. — ♀; long. 7 mm.

Chrysidi fallaci Mocs. similis; sed maior, abdominis segmento dorsali primo cyaneo, parte postica viridi-aurato, sparsim crassius punctato, alis magis sordidis, distincta.

Patria: Syria; a Clariss. Domino W. Wüstnei mecum benevole communicata (Coll. Wüstneii).

V. *Abdominis segmentum dorsale primum viride, margine apicali lateribusque concinne auratis, secundum igneo-auratum, tertium cyaneum; caput, thorax et venter viridia et cyanea; antennarum flagellum rufo-annulatum.*

333. **Chrysis Gogorzæ** Licht.

Chrysis Gogorzae, Licht. Annal. Soc. Ent. France. Sér. 5. tom. IX. Bullet. p. CLXV. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. IX. p. 33. (1880).
Chrysis basalis, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 66, n. 38. (1887) (nec Dhlb).

Submagna, elongata, minus robusta, parallela, viridis et cyanea, longius cinereo-alboque pilosa; cavitate faciali sat profunda, medio subtilissime, lateribus multo fortius punctato-coriacea argenteo-serioceque pilosa, superne flexuoso-marginata, margine utrinque ramulum brevem minus distinctum ad stemma anticum demittente; antennis longiusculis, crassis, fuscis rufoque annulatis, articulis duobus primis viridibus, tertio supra cyanescenti, brevi, quarto tantum parum longiore; clypeo apice subtruncato

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

nigro-æneo; genis brevibus, linearibus; margine occipitali utrinque angulo parvo prominulo; vertice densius sed subtilius, pronoto longo transverso-rectangulo medioque antice parum impresso cum mesonoto dispersius parumque fortius, scutello et post-scutello convexis sat regulariter adhuc fortius punctato-reticulatis; metanoto dentibus postico-lateralibus validis subacutis; abdomine convexo, capite thoraceque simul sumptis æquilongo, segmentis dorsalibus subcoriaceis: primo viridi, basi violaceo et trisulcato, margine apicali lateribusque et linea brevi mediana abbreviata e margine apicali exeunte concinne auratis, sat sparsim fortius punctato interstitiisque subtilissime punctulatis; secundo igneo-aurato dense rugosiuscule-punctato, imo basi nigro-violaceo dense punctato; tertio cyaneo, linea mediana basali abbreviata viridi-nitente, dense parum subtilius, quam secundum, rugosiuscule-punctato, supra seriem leniter calloso foveolis ab invicem irregulariter remotis sat crassis profundisque 8—10 tantum distinctis, margine apicali brevi, dense punctulato, summo margine distincte trisinuato, centro nempe et utrinque; ventre viridi et cyaneo parumque violascenti, segmento secundo linea seu potius carinula mediana aurea, 2—3 apice brunneo-testaceo-scariosis; pedibus cyaneo-viridibus, tarsis fusco-rufescentibus; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta, tegulis nigro-violaceis externe ænescentibus. — ♂; long. 8½ mm.

Patria: Hispania (Nava-Cerrada, Licht.; Madritum [Madrid], Mus. Hung.).

Animadversio. Eximiam hanc speciem : colore abdominis ab omnibus mihi notis bene distinctam et iam primo intuitu facile cognoscendam, Clariss. Auctor Monographiæ Chrysididarum Hispaniæ, a piæ memoriæ viro : Lichtenstein in eius honorem denominatam, cum *Chryside basali* Dhlb. confundebat, cum qua tamen parum habet similitudinis et admınimum duplo longior et quadruplo robustior est.

VI. *Abdomen auratum, segmentis dorsalibus : secundo basi fascia arcuata subreniformi viridi-aureoque concinne limbata et tertio disco viridi-aureo-maculato cum lobo medio mesonoti violascenti-cyaneis, parte reliqua thoracis supra aurata.*

334. **Chrysis bellula** Guér.

Chrysis bellula, Guér. Revue Zoolog. p. 149, n. 16. ♂ ♀. (1842).
Chrysis sinuata, Dhlb. Dispos. p. 12, n. 18. ♂ ♀. (1845) ex parte, solum ♂. (nec Brullé).
Chrysis sinuosa, Dhlb. Hym. Europ. II. p. 153, n. 84. ♂. tab. VII. fig. 90. (segm. anale) (1854).

Descriptio secundum Guérin:

«D'un beau vert doré très-brillant à reflets d'or jaune; une tache sur le vertex, milieu du mésothorax, une grande tache à la base des premier et second segments de l'abdomen et tout le troisième d'un beau blue vif. Dernier segment sans dentelures au bord, mais un peu sinueux, avec les angles lateraux assez prononcés, offrant une bordure verte avant la rangée de points enfoncés. Côtés des deux segments précédents d'un doré des plus brillants à reflets de feu. Antennes noires avec les trois premiers articles d'un vert bleu. Pattes vertes à tarses roussatres. Ailes transparentes à nervures

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

noirâtres, la cellula radiale fermée. Dessous vert doré (mâle et femelle). — Long. 7 à 8 mill.»

Descriptio secundum Dahlbom:

«Mediocris oblonga robusta 3 lin. décimal. long. crasse punctata viridi-cyanea: pronoto, dorsuli areis lateralibus tegulis scutello postscutello abdominisque segmentis primo secundoque aureis, hoc fascia basali ampla arcuata subreniformi segmentoque tertio cyaneis: huius serie ante-apicali irregulari foveolis paucis maioribus et minoribus, margine apicali leniter undulato, alis sordidis.

Observ. Caput robustum oblongum sublineari-ellipticum, totum dorso pleurisque confertim crasse punctatum. Caput mediocre rotundato-triangulare, thorace antico paullulum latius, pone tempora utrinque in margine occipitali angulo spinoideo munitum, confertim punctato-subreticulatum, cano pubescens et pilosellum, cyaneum; vertex convexo-depressus antice aureo-virescens; stemmata magna subimmersa clara. Cavitas facialis magna subprofunda cyaneo-viridis nitida, subtilissime confertim transverse strigosa, medio canaliculata, lateribus et superne omnino ut in *Chr. Dalmanni* marginata, margine supero transverso ad centrum nonnihil arcuatim insinuato. Oculi mediocres ovati exserti. Antennæ breves robustæ, scapo cyaneo-viridi, pedicello fusco, flagello rufo-testaceo basi et infra fuscescente. Clypeus mediocris viridis nitidus, disco convexus et politus, utrinque immersus et punctulatus, margine apicali nigro-piceo ad centrum truncato. Thorax depresso-cylindricus confertim crasse punctato-reticulatus. Pronotum transverso-rectangulum submagnum aureum: plicis lateralibus deflexis et truncatura antica cyaneis, hac punctulata foveis medianis 2 lanceolatis profundis. Mesonotum et postscutellum aurea, dorsuli area intermedia cyanea. Metanotum viride: sulco transverso-arcuato crenato cyaneo, angulis postico-lateralibus brevibus crassis obtuse triangularibus apice auratis. Pleuræ virides, pectus et pedes cyaneo-viridia, tarsis fusco-brunneis. Alæ sordidæ venis brunneis, tegulis aureis. Abdomen robustum mediocre, capite thoraceque simul sumtis vix brevius, sublineare, dorso modice convexum, confertim crasse punctatum; segmentum primum aureum: impressione basali magna cyanea postice viridi-limbata obsolete subtrisulcata scil. sulcis multo minus distinctis quam in *Chr. Dalmanni;* segmentum secundum aureum fascia basali magna arcuata postice emarginata et hinc subreniformi cyanea: limbo postico viridi; segmentum tertium cyaneum, ad seriem macula centrali indeterminata viridi, totum modice convexum nec pro serie quidem excipienda immersum, carinula mediana subtilis tantum disco et ante seriem visibilis; series ante-apicalis irregularis medio interrupta utrinque foveolis 4—5 maioribus et minoribus, harum externis subconfluentibus, margo apicalis mediocris punctulatus convexo-depressus, summus late arcuatus et lenissime obtuso-undulatus; venter concaviusculo-planus, a segmentorum plicis lateribus sat marginatus et hinc quasi fornicatus videtur, viridi-cyaneis.»

Patria: Madagascar (Guér.); Promontorium Bonæ Spei (Dhlb. et Coll. Saussurei!).

Animadversio. — Ad descriptionem eximiam Dahlbomi vix addenda habeo; tanto magis, quia specimen, quod vidi, capite abdomineque magnopere mutillatum et mucore obductum est; illud tamen

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

exemplaribus maioribus *Chrys. viridulae* Linn. (bidentatæ Linn.) haud insimile est : punctature ubique fortiore et mesonoti lobo medio segmentoque secundo margine basali late violascenti-cyaneo pictis.

VII. *Abdomen auratum, segmento dorsali tertio cyaneo vel violascenti-cyaneo ; thorax ex parte auratus.*

335. **Chrysis Daphnis** n. sp.

Chrysis Daphnis (Mocs.), Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 17. (genit. maris) (1888).

Mediocris, elongata, cyanea, parcius albo-pilosa; pronoto, mesonoto et scutello igneo-, postscutello viridi-auratis; cavitate faciali sat profunda, medio longitudinaliter canaliculata, dense punctulato-coriacea, superne convexa, haud marginata, margine mediano valde obsoleto; genis linearibus; antennis fusco-rufis, articulis duobus primis viridibus, 3—4 nigris, tertio brevi, quarto parum longiore; vertice circa stemmata parum nigro-ænescenti, temporibus postice utrinque in margine occipitali angulo spinoideo munitis; thorace supra dense minus crasse punctato-reticulato, pronoto in medio antice sat profunde sulcato, mesonoti lobo medio basi nigro-ænescenti, pleuris parum virescentibus, coriaceo-sculptis; abdominis segmentis dorsalibus duobus primis igneo-auratis, dense minus crasse subrugoso-punctatis, secundo carinula mediana minus distincta, primo impressione basali triramosa et tertio cyaneis, hoc disco macula minuta viridi-subaurata, ante seriem leniter calloso, serie anteapicali per carinulam medianam interrupta foveolis sat magnis rotundis sex, intermediis parum confluentibus, foveolis lateralibus parvis minus distinctis, margine apicali subaurato-viridi dense punctulato, summo leniter undulato, lateribus rotundatis; ventre et pedibus viridi-cyaneis, tibiis magis viridibus, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta, tegulis nigro-æneis. — ♂; long. 7 mm.

Specierum : *Chrysidis sinuosae* Dhlb. et *viridulae* L. *var. erythromelanos* Dhlb. socia est; sed a *Chrys. sinuosa :* statura non robusta, cavitate faciali non transverse-strigosa, vertice antice haud aureo-virescenti, mesonoti lobo medio igneo-aurato; a specie posteriore vero : sine macula magna transversa inter oculos et stemmata virescenti-aurea et foveolis non numerosis et sulciformibus, præsertim distincta. — Etiam *Chrysidi viridulae* Linn. et eius *var. cingulicornis* Först. valde similis; sed harum margo apicalis non est leniter undulatus et lateribus rotundatus, sed dentibus externis brevibus triangularibus, intermediis brevissime lenissimeque arcuato-obtusis armatus.

« *Armure.* La branche du forceps se rétrécissent vers l'extrémité et garnie de poils. Volsella assez large, faiblement garnie de poils; sa tenette densement pourvue de poils courts. La forme des crochets représentée sur la fig. 32 i. » (Rad. l. c. tab. III. fig. 32 a, 32 b, 32 c, 32 f, 32 g).

Patria : Sicilia (Coll. Rad.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

336. **Chrysis consanguinea** n. sp.

Mediocris, elongata, subparallela, minus robusta, parcius cinereo-alboque pilosa, læte-cyanea unicolor (♀) vel in mesopleuris verticeque virescentibus (♂); pro- et mesonoto, scutello postscutelloque igneo-auratis; cavitate faciali profunda, dense subtilissime transverse-striata, lateribus punctulato-coriacea, superne convexa, non marginata; fronte subangusta, antennis brevibus, crassiusculis, cano-puberulis, articulis duobus primis viridibus, reliquis in femina nigris, in mare rufo-annulatis, tertio brevi, secundo parum tantum longiore; genis brevibus, sublinearibus; vertice dense subtilius punctato-subreticulato, post stemmata nigro-æneo; margine occipitali utrinque angulo parvo prominulo; pronoto longo, transverso-rectangulo, antice in medio profunde sulcato cum mesonoto, scutello postscutelloque convexo sat crasse punctato-reticulatis; metanoto dentibus postico-lateralibus brevibus, acutis; abdominis segmentis dorsalibus duobus primis igneo-auratis, primi truncatura antica trifossulata et tertio læte-cyaneis, hoc in mare supra seriem anteapicalem viridi-maculato, secundo tertioque imo basi nigro-æneis, segmentis omnibus æqualiter dense rugosiuscule-punctatis, subcoriaceis, secundo carinula mediana in femina nulla, in mare sat distincta, tertio supra seriem anteapicalem leniter calloso, foveolis sat profunde immersis haud numerosis circiter 10 tantum magnis, per carinulam medianam interruptis, parum confluentibus, margine apicali longiusculo, incrassato convexo, dense punctulato, subarcuato et distincte trisinuato; ventre pedibusque læte-cyaneis, illo apud marem segmento secundo linea seu potius carinula mediana aurea, his tarsis fusco-rufescentibus; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta apice parum aperta, tegulis piceis. — ♂♀; long. 7 mm.

Chrys. viridulae Linn. (bidentatæ Linn.) eiusque sociis consanguinea; sed abdominis segmento dorsali tertio margine apicali longiusculo, producto, incrassato-convexo, subarcuato (sicut in Chrys. incrassata Spin.) et distincte trisinuato, non vero mediocri, subtruncato, ubique fere æquilongo et plus minusve undulato-subdentato, species mihi distinguenda esse videtur.

Patria: Sicilia et Algeria (Setif, Coll. Saussurei).

Animadversio. — *Chrysis viridula* Linn. eiusque varietates et sociæ, animalibus huius sectionis valde similes, apud Tetrachrysidas inveniuntur, quia earum dentes apicales externi plerumque sat distincti breves triangulares et tantum intermedii brevissimi latissimique lenissime arcuato-obtusi sunt, quales in hac subgenere sat numerose reperiuntur; eas tamen cum Dahlbomo Tetrachrysidibus adnumerare mihi optime visum fuerat.

VIII. *Abdomen auratum, segmento tertio margine apicali subpellucido, subscarioso, leviter saturate-cyaneo; caput et corpus subtus laete-cyanea, thorax supra totus igneo-auratus.*

337. **Chrysis Anceyi** Buyss.

Chrysis Anceyi Buyss. Revue d'Entom. VII. p. 6. ♀. (1888).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

« ♀. Corps étroit, allongé, subparallele, couvert d'une longue pubescence cendrée, entièrement d'un beau doré feu, avec la tête et tout le dessous du corps d'un beau bleu vif. Tête un peu plus large que le pronotum, avec le front vert un peu doré, les joues un peu prolongées en avant mais légèrement convergentes; cavité faciale subquadrangulaire, légèrement creusée, imponctuée, lisse, brillante; antennes brun noirâtre avec les deux premiers articles bronzés en dessous et verts en dessus, le troisième avec la base verte en dessus, moins long que deux fois la longueur du deuxième; pubescence des antennes gris roussâtre; ponctuation de la tète médiocre et peu profonde. Pronotum étroit, long avec un large et long sillon au milieu de la troncature antérieure. Ponctuation thoracique formée de gros points peu profunds, espacés, à intervalles lisses et brillants; côtés du mésosternum (épimères) dorés au milieu, ponctués comme le dorsulum; suture postérieure de l'écusson bleue; postécusson arrondi, subréticulé; angles postico-latéraux du métanotum bleu vif, à pointe médiocre, subobtuse, dirigée en arrière. Écailles bronzées; ailes subhyalines, cellule radiale étroite, allongée, subfermée; tibias bleu verdâtre, tarses brun roussâtre, le reste des pattes d'un beau bleu vif. Abdomen subcylindrique, peu convexe, hérissé de longs poils blancs, espacés: premier segment couvert de points assez gros entremêlés de points plus petits, bordure apicale un peu cuivrée; seconde segment avec des points un peu confluents sur le disque, tous égaux, une légère carène élevee, longitudinale se distingue au milieu où l'on remarque une teinte violacée, la bordure apicale de ce segment est légèrement réfléchie, très engaînante, plus dorée; troisième segment acuminé, un peu violacé, avec un ponctuation un peu plus grosse, mais moins profonde, les côtés du segment convergents à l'apex; série antéapicale large, enfoncée, composée d'environ 12 gros points, largement ouverts, irréguliers, subpellucides; marge apicale large, subpellucide, subscarieuse, légèrement bleu bronzé, laissant de chaque côté un large angle arrondi très obtusément, puis formant à l'apex une pointe émarginée, de manière à former deux petits angles très émoussès; ponctuation de la marge apicale rare, assez fine et obsolète. Ventre avec les côtés bleu vif, les segments du milieu bleus au centre, le reste noir; oviscape brunâtre. — Long., 6 1/2 mill.

Le *Chr. Anceyi* si remarquable par son riche coloris se rapproche beaucoup par sa forme du *Chr. peninsularis* Ab. et Buyss., mais s'en éloigne quant à sa coloration et son armature apicale. »

Patria: Algeria (Mascara in provintia Oraniensi, Coll. F. Ancey).

IX. *Abdomen auratum vel igneo-auratum, segmenti tertii margine apicali nigro-aeneo; thorax in maribus cyaneus plus minusve viridi-aureo vel subaureo pictus, in feminis pronoto et mesonoti lobis lateralibus igneo-auratis.*

338. **Chrysis elegans** Lep.

Chrysis elegans, Lep. Annal. du Mus. Hist. Nat. VII. p. 128, n. 29. ♀. tab. VII. fig. 20. ♀ (1806). — Dhlb. Hym. Europ. II. p. 158, n. 87. ♂♀. ex parte, tab. VII. fig. 92 (segm. anale) (1854). —

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Schck, Nass. Jahrb. XI. p. 76, n. 9. ♂ ♀. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 68. (1858). — Rad. Horæ Soc. Ent. Rossicæ III. p. 304, n. 29, tab. IV. fig. 18. ♂. (1866). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 8. ♂ ♀. (1870). Ab. Annal. Soc. Linn. Lyon. XXVI. p. 64. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 161 et 162. ♂ ♀. (1879). — Lampr. Goldwesp. Deutschl. p. 13, n. 29. ♂ ♀. tab. I. fig. 13. (segm. anale) (1881). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 69, n. 42. ♀. (1887). — Destef. Natural. Sicil. VII. p. 181. ♂ ♀. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 17. (genit. maris) (1888).

Chrysis dorsata, Brullé, Expéd. de Morée. Tom. III. Zoolog. Sér. 2, p. 376, n. 830. ♀. tab. 51, fig. 7. ♀. (1832).

Chrysis confluens, Dhlb. Dispos. p. 6, n. 2. ♂. (1845).

Chrysis candens, Dhlb. Dispos. p. 10, n. 13. (1845).

Chrysis aurcola, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 319, n. 80. ♂. (1853).

Chrysis Schousboei, Rad. Horæ Soc. Ent. Rossicæ. III. p. 306, n. 43. tab. V. fig. 27. ♀. (1866) sec. spec. typ. e coll. Rad. (nec Dhlb.).

Sexus ab invicem colore thoracis magnopere differunt:

Mediocris vel submagna, oblonga, subparallela, viridis aut cyanea, densius cinereo-alboque pilosa; fronte angusta, cavitate faciali viridi vel viridi-subaurata planiuscula confertim punctulato-coriacea, medio longitudinaliter canaliculata, superne indistincte marginata; antennis brevibus, robustis, fuscis, cano-puberulis, articulis duobus primis ænescentibus (♀) vel viridi-auratis (♂), tertio sat longo, quarto quintoque simul sumptis longitudine æquali vel parum breviore; clypeo brevi, cupreo- vel viridi-aurato, apice truncato piceo; mandibulis bidentatis, piceis, medio rufis; genis brevibus, linearibus; vertice dense minus crasse punctato-reticulato, post stemmata atro-æneo; pronoto longo, transverso-rectangulo, antice in medio sat profunde longitudinaliter sulcato cum mesonoto, scutello postscutelloque convexo crassius punctato-reticulatis, punctatura in mare parum subtiliore; metanoti dentibus postico-lateralibus brevibus, latiusculis, subobtusis; abdomine longo, longitudine capitis thoracisque simul sumptorum, sublineari, dorso modice convexo, segmentis igneo- vel coccineo-auratis, primo impressione basali submagna basi fusca aut cyanescenti limbo viridi, 2—3 imo basi nigro-æneis, lineola mediana abrupta subelevata obsoletissima, omnibus dense fere æqualiter rugosiuscule-punctatis primoque interstitiis angustis subtilissime punctulatis, tertio supra seriem convexo foveolis numerosis mediocribus rotundatis, margine apicali brevi, æneo, centro subtransverso, lateribus biangulato, angulis in femina distinctioribus, quam in mare; ventre in femina igneo-, in mare pure-aurato, segmentis duobus primis basi utrinque nigro-maculatis, tertio in femina nigro; alis sordide-hyalinis, venis piceis, cellula radiali lanceolata incompleta, apice sat late aperta, tegulis nigro-æneis. — ♂ ♀; long. 8½—10 mm.

Femina: pronoto toto et mesonoti lobis lateralibus igneo-, scutello viridi-auratis; mesonoti lobo medio nigro-violaceo vel nigro-æneo; mesopleuris viridi- vel viridi-aureo-maculatis; femoribus violaceis, tibiis virescentibus, tarsis fusco-rufis.

Mas: pronoto vel toto vel tantum lateribus, mesonoti lateribus pleurisque viridi-auratis; lobo medio mesonoti nigro-violaceo; parte reliqua thoracis cyanea vel viridi; pedibus viridi-subauratis, tarsis sæpissime albido-testaceis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Variat: abdominis segmentis dorsalibus densius parumque subtilius rugosiuscule-punctatis subcoriaceis, tertio margine apicali non nigro-æneo, sed concinne purpureo. — Patria: Algeria (Setif, Coll. Saussurei!).

Patria: Hispania (Gog.); Italia (Calabria, Costa; Sicilia Guér.); Gallia (Lep.); ?Tyrolis (Dalla Torre); ?Austria (Rogenh. et Kohl); Dalmatia (Gir.); Epirus (Mus. Hung.); Græcia (en Mai, vallée de Messéne, Brullé), Russia meridionalis (Rad.); Caucasus (Rad.); Asia minor (Dhlb.); Armenia (Coll. Rad.!); Algeria (Coll. Rad.!).

Animadversio. — Speciem, in speciminibus numerosis e variis provintiis ante me iacentem, ita variabilem non inveni, prouti hoc apud Dahlbomum legimus. — Tyrolis et Austria mihi parum dubiæ sunt.

X. *Abdomen auratum vel igneo-auratum, segmenti tertii margine apicali viridi- vel nigro-aeneo; caput et thorax cyanea et viridia.*

339. **Chrysis Saussurei** Chevr.

Chrysis Saussurei, Chevr. Chrysid. du Léman, p. 36. ♂ ♀. (1862). — Schck, Stett. Ent. Zeit. XXXII. p. 253, n. 1. ♂ ♀. (1871). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 65. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160 et 161. (1879). — Lampr. Goldwesp. Deutschl. p. 14, n. 30. tab. I. fig. 14. (segm. anale) (1881). — Mocs. Chrys. faun. Hung. p. 53 et 86, n. 16. ♂ ♀. (1882) excl. *Chrysogona gracillima* Först. syn. — Heyden Bericht Senkenb. naturf. Gesellsch. p. 250, n. 20. (1882). — Frey, Chrys. Helvet. p. 52 et 67. ♂ ♀. tab. III. fig. 19 (segm. anale) (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 55, n. 24. (1887). — Destef. Natural. Sicil. VII. p. 143 et 156. (1888).

Parva vel submediocris, elongata, valde gracilis, subparallela, cyanea, longius cinereo-alboque pilosa; facie cum fronte, pronoto, meso- et metanoti lateribus angulis dentiformibus pleurisque plus minusve viridibus vel viridi-subauratis; cavitate faciali planiuscula, medio longitudinaliter canaliculata et utrinque valde subtiliter minus distincte transverse-striata, lateribus dense subtiliter punctulato-coriacea, superne subtilius marginata; antennis brevibus, tenuibus, fusco-nigris, cano-puberulis, articulis tribus primis viridi-auratis, tertio longitudine mediocri, quarto quintoque simul sumptis breviore, 4—6 in maribus subtus parum tumidis seu inflatis; clypeo apice nigro-æneo medioque exciso; genis proportionaliter longis, articulo antennarum tertio fere æquilongis; vertice dense subtilius punctato-subreticulato; occipite utrinque angulo prominulo subspinoideo; pronoto longo, transverso-rectangulo, antice in medio sat profunde impresso cum mesonoto, scutello postscutelloque convexo sat dense minus crasse et regulariter punctato-subreticulatis; metanoti dentibus postico-lateralibus brevibus, subobtusis; abdominis segmentis dorsalibus auratis, viridi- vel parum igneo-auratis, subcoriaceis, dense rugosiuscule-punctulatis, segmento primo punctis quoque maioribus inmixtis, 2—3 imo basi nigro-æneis, carinula mediana nulla; tertio supra seriem convexo vel parum incrassato foveolis numerosis mediocribus, modice confluentibus, per carinulam medianam interruptis, margine apicali nigro- vel virescenti-æneo, centro modice prominulo et utrinque leniter sinuato angulo laterali rotundato distincto; ventre viridi-aurato, maculis nigris et igneis; pedibus viridibus, tarsis fuscis; alis hyalinis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

disco parum sordidis, venis fuscis, cellula radiali lanceolata completa. — ♂ ♀ ; long. 4—6 mm.

Species: de corpore gracili, minuto et segmento anali, facile cognoscitur.

Patria: Hispania (Gog.); Italia (Sicilia, Destef.); Gallia (Marquet; Montpellier, Mus. Hung.); Helvetia (Chevr.); Tyrolis (Kohl.); Germania (Schck, et Mus. Hung.); Hungaria centralis et meridionalis (Mocs.).

340. **Chrysis melanophris** n. sp.

Submediocris, elongata, gracilis, subparallela, cyanea, longius cinereo-alboque pilosa; facie cum fronte, pronoto antice, vitta angusta loborum lateralium mesonoti pleurisque virescentibus; cavitate faciali minus profunda, dense subtiliter punctato-coriacea, medio longitudinaliter canaliculata, superne abbreviatim vix marginata; antennis longiusculis, tenuibus, nigris, cano-puberulis, articulis tribus primis viridi-subauratis, tertio longitudine mediocri, quarto dimidio longiore; genis longis, articulo antennarum quarto longioribus; mandibulis nigris, bidentatis, apice rufis; vertice dense subtilius punctato-subreticulato; occipite utrinque angulo dentiformi prominulo; pronoto longo, transverso-rectangulo, antice in medio leniter impresso parum fortius minus crasse, mesonoto et scutello subtilius sat sparsim punctatis interstitiisque subtilissime punctulatis, subcoriaceis, postscutello convexo subtilius punctato-subreticulato; metanoti dentibus postico-lateralibus mediocribus, subacutis; abdominis segmentis dorsalibus igneo-auratis, primi truncatura antica viridi-, secundi tertiique imo basi et huius margine apicali nigro-æneis; primo subtiliter punctato, punctis sparsis maioribus, præsertim antice et lateribus, 2—3 dense punctulatis, illo carinula mediana nulla, hoc supra seriem anteapicalem leniter calloso foveolis sat profundis numerosis oblongis, margine apicali centro late-arcuato et utrinque sat profunde arcuatim-exciso, angulis lateralibus distinctis obtusis; ventre nigro-æneo, opaco; pedibus cyaneis, tibiis externe magis virescentibus, tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata completa, tegulis viridi-cyaneis. — ♀ ; long. 6 mm.

Exemplaribus maioribus *Chrysidis Saussurei* Chevr. similis et affinis; sed pro- et mesonoto non punctato-subreticulatis; abdominis segmentis dorsalibus læte-igneo-auratis non rugosiuscule parumque fortius punctulatis, tertio margine apicali centro magis producto late-arcuato et utrinque sat profunde arcuatim-exciso, angulis lateralibus magis distinctis; ventre unicolore nigro-æneo, satis superque distincta.

Patria: Algeria (Blidah-Médéah, Mus. Berolinense).

XI. *Abdomen auratum et cupratum nitore igneo, segmento tertio margine apicali viridi; caput et thorax cyanea viridique nitentia.*

341. **Chrysis faceta** Aar.

Chrysis faceta, Aar. Transact. Amer. Ent. Soc. XII. p. 229. (1885).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Head and thorax blue with green reflections, closely covered with equal punctures; basin of face striated, on each side covered with withe pubescence; carina extending upwards and almost surrounding the anterior ocellus. On each side of the occiput above and behind and touching the eye, a rounded, strongly convex, smooth space, blue, and two others similar, but smaller, and each with a brassy and green reflection, just behind and touching the posterior ocelli; abdomen golden and cupreous, with elegant ruby reflections, in great contrast to the thorax, a faint green reflection at the basi of the first segment and the apical margin beyond the pits, green; sutures black, shining, when exposed; the punctures are as large as those of the thorax, but less dense, except on the immediate dorsum; apical margin of third segment deeply notched in the middle, on each side of the notch the margin is pointed; lateral margins very broadly but slightly sinuate or arched inwardly; pits medium, close, contained in a strong groove, which runs parallel to the lateral margins and ends near the base of the segment; wings hyaline, very slightly infuscated on a part of the radial cellule; tarsi fuscous; 4—5 mm. long. ♀. (?).

Colorado; one specimen. The caracter of the convex lobes on the occiput is very odd, and does not appear in any other species of the family with which I am acquainted.

Patria: America septentrionalis (Colorado).

XII. *Abdomen totum auratum, igneo- vel aeneo-auratum aut cupratum plus minusve viridi-micans.*

1) *Thorax supra cyaneus et viridis, vel solum ex parte viridi-subauratus.*

342. **Chrysis mediocris** Dhlb.

Chrysis medioris, Dhlb. Hym. Europ. II. p. 162, n. 88. ♂. tab. VII. fig. 93. ♂. (1854). — Schck, Nass. Jahrb. XI. p. 76, n. 10. (1856); Progr. Gymn. zu Weilb. p. 15, n. 9. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 64. ♂ ♀. tab. II. fig. 38—39. (segm. anale) (1879). — Lampr. Goldwesp. Deutschl. p. 13, n. 28. (1881).

Chrysis subsinuata (Ab), Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160. (1879).

Mediocris, elongata, parallela, sat gracilis, læte-cyanea, fusco-canoque pilosa; facie cum fronte, pro- et mesonoti lateribus, scutello mesopleurisque plus minus viridi- vel viridi-subaureo-irroratis; cavitate faciali planiuscula, medio longitudinaliter canaliculata, lateribus punctulato-coriacea subrugulosa argenteo-sericeoque pilosa; antennis brevibus, robustis, fuscis, cano-puberulis, articulis duobus primis cyaneis vel viridibus, tertio in femina longitudine mediocri, quarto longiore, in mare brevi, articulo quarto subæquali; clypeo brevi, nitido, viridi, disco carinato, apice truncato nigro-æneo; genis longis, articulo antennarum tertio æquilongis; mandibulis piceis, ante apicem rufo-brunneis, bidentatis; vertice dense minus crasse punctato-subreticulato, margine occipitali utrinque angulo parvo prominulo; pronoto longo, transverso-rectangulo, antice in medio leviter sulcato cum mesonoto minus dense crassius subrugoso-punctatis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

interstitiisque microscopice punctulatis, scutello crasse punctato-reticulato, postscutello gibbo-convexo punctato-reticulato; metanoti dentibus postico-lateralibus mediocribus triangularibus; abdomine mediocri, subovali-elliptico, apicem versus angustato, dorso modice convexo, segmentis igneo-auratis, nonnihil parum virescentibus, segmento primo impressione basali trisulcata læte-cyanea, lateribus virescenti, parte basali sparsim punctato et subtiliter punctulato, parte apicali cum segmento secundo dense subtiliter, tertio adhuc densius rugosiuscule-punctatis, subcoriaceis, 2—3 imo basi nigro-æneis, secundo carinula mediana in mare sat distincta, in femina obsoleta, tertio supra seriem anteapicalem convexo foveolis numerosis mediocribus, in mare rotundatis, in femina subovatis, profundis approximatis, viridi-auratis, per carinulam medianam interruptis, margine apicali brevi, in femina valde angustato, utrinque parum sinuato lateribus angulo rotundato-obtuso, in mare minus angustato, centro lenissime emarginatulo, utrinque convexo-arcuato et sub initio seriei anteapicalis obsoletissime angulato; ventralibus nitidis, subtilissime coriaceis, nigro-piceis, plicis lateralibus et segmentorum primi secundique macula discoidali maxima obcordata et tertii lineola mediana igneo-auratis; feminarum tubulo longe exserto sordide-testaceo; pedibus viridibus et cyaneis, tarsis nigro-fuscis; alis sordide-hyalinis, venis piceis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis viridi-auratis. — ♂ ♀; long. 7—7½ mm.

Chrysidi Saussurei Chevr. similis; sed maior, antennarum articulo tertio nigro, corpore fortius punctato, abdominis segmento dorsali tertio margine apicali non nigro- vel viridi-æneo.

Patria: Italia (Ab.); Gallia (Marseille, Ab.; Toulouse, Marq.; Vernet per Buysson, Mus. Hung.); Tyrolis meridionalis (Dalla Torre); Austria ad Vindobonam (Dhlb.); Caucasus (Erivan, Rad.).

343. **Chrysis fallax** Mocs.

Chrysis fallax, Mocs. Chrys. faun. Hung. p. 52 et 85, n. 15. ♀. (1882).

Chrysidi mediocri Dhlb. simillima; sed magis robusta, vertice post stemmata et thorace supra fortius profundiusque et parum dispersius subrugoso-punctatis, abdominis segmentis dorsalibus quoque multo fortius, sed dispersius punctatis, tertio foveolis multo maioribus, in sexu utroque sulciformibus, margine apicali distinctius angulatis, ventris segmentis viridi-auratis nigroque maculatis, optime distinguenda.

Patria: Hungaria centralis et meridionalis, mense Julio rara (Mocs.); Tauria (Coll. Rad.!); Asia minor (Brussa. Mus. Hung.).

344. **Chrysis sinuosiventris** Ab.

Chrysis sinuosiventris, Ab. Diagnos. des Chrysid. uouvell. p. 4, n. XX. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 55 et 62. ♂. (1879). — Schmiedkn. Entom. Nachricht. VI. p. 197. (1880). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 54, n. 22. ♂. (1887).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptio secundum Abeille.

«Long. 8 mill.

Corps assez allongé. Tête à points médiocres, serrés, plus fins sur la cavité faciale, qui est très-peu profonde et non rebordée en haut. Joues extrémement courtes, à côtés trés-courbes. Mandibules brunes. Antennes noires, vertes sur leurs trois premiers articles. Thorax couvert de points ocellés trés-rapprochés. Pronotum assez court. Postécusson gibbeux. Angles du métasternum très-obtus, écrasés et décombants. Abdomen à points assez fins et très-serrés, un peu caréné sur le seconde segment; troisième segment très-court, à côtés convergeant fortement vers le sommet, tronque nettement au bout, portant sur chaque côté, audessous de l'endroit où aboutit la ligne de points, un angle bien accusé, presque droit. Ligne de points formée de 8 où 9 points médiocres, ouverts, un peu irréguliers, de chaque côté. Rebord assez fortement relevé et très-fortement ponctué, un peu renflé. Ventre dor et feu, avec un grosse tache noire à la base de chaque côté du seconde segment. Pattes vertes, tarses d'un testacé un peu obscur. Pubescence blanche sur tout le corps, devant de la tête couvert d'un duvet blanc soyeux. Ailes hyalines. Ecailles vertes. Radiale presque fermée.

Je n'ai vu qu'un seul ♂ appartenant à la collection Dufour et portant l'étiquette Pba. Drs., ce qui, je pense, significe Ponteba, Dours.»

Patria: Hispania (Gog.); Algeria (Dours, Ab.).

2) *Thorax supra maxima ex parte auratus, viridi-subauratus vel cupratus.*

345. **Chrysis Transcaspica** n. sp.

Submagna, elongata, parallela, minus robusta, viridi-subaurata, parcius cinereo-alboque pilosa; facie, temporibus subtus, propleuris, mesonoti lobo medio et metanoti lateribus parum cyanescentibus; fronte angusta, cavitate faciali minus profunda, dense subrugoso-punctata, superne depresso-convexa, non marginata; antennis brevibus, tenuibus, fusco-nigris, cano-puberulis, scapo viridi-aurato, articulo primo flagelli supra ænescenti, secundo longitudine mediocri, tertio fere duplo longiore; genis linearibus, fere nullis; temporibus valde tumidis incrassatisque, sparsim crassius punctatis; vertice dense parumque subtilius irregulariter punctato-subreticulato; pronoto longo, transverso-rectangulo, antice in medio profunde sulcato cum mesonoto, scutello postscutelloque convexo crassius minus dense sat regulariter punctato-reticulatis; metanoto dentibus postico-lateralibus brevibus, validis, subacutis; abdomine longiusculo, thorace æquilongo et æquilato, viridi-aurato, dorso valde convexo, segmento primo margine apicali anguste purpureo-limbato, secundo postice et tertio maxima ex parte igneo- seu potius purpureo lavatis, primo disco crassius punctato-reticulato, lateribus subtilius rugoso-punctatis interstitiisque omnibus microscopice subtilissime punctulatis, secundo crassius, tertio adhuc fortius rugoso-punctatis interstitiis impunctatis seu lævibus ac politis, secundo carinula mediana minus distincta, tertio convexo, supra seriem vix calloso, foveolis immersis profundis, intermediis magnis subrotundis, lateralibus minutis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

in unum confluentibus, margine apicali subtruncato anguste nigro-æneo, centro et utrinque leniter, lateribus profundius sinuato angulatoque; ventralibus viridi-auratis, secundo basi utrinque macula magna et margine apicali anguste, tertio toto nigro-æneis; pedibus viridi-auratis, tarsis rufo-testaceis; alis valde brevibus, sordide-hyalinis, venis pallide-fuscis, cellula radiali lanceolata incompleta, apice late aperta, tegulis brunneo-æneis. — ♀; long. 9 mm.

Species: de forma valde elongata, parallela, temporibus, colore et sculptura foveolisque et margine apicali facile cognoscitur.

Patria: territorium Transcaspicum (Coll. Rad.).

346. **Chrysis rufitarsis** Brullé.

Chrysis rufitarsis, Brullé, Expéd. de Morée. Tom. III. Zoolog. Sér. 2. p. 375, n. 828. ♂ ♀. tab. LI. fig. 6. ♂. (1832).

«Latissime punctata; capite, thorace supra abdomineque cupreo-auratis; pectore femoribusque cyaneis; vertice aureo; tibiis auratis; tarsis obscure rufis; alis subobscuris; abdomine apice bidentato (femina), subintegro (mas); ventris fascia media fusca. — Long. 9 millim.

Descr. Très-largement ponctué, et en particulier sur le corselet. Tête d'un vert bleuâtre, avec des poils blancs sur la face; vertex un peu doré; antennes d'un brun foncé, avec la base un peu verdâtre. Corselet d'un cuivreux doré, bleu sur les côtés et à la partie postérieure du métathorax; poitrine bleue; prothorax long, creusé d'un sillon longitudinal très-profond; côtés du métathorax peu avancés, presque carrés. Écaille des ailes verte; celles-ci enfumées, avec les nervures brunes. Pattes bleues sur les cuisses, d'un vert brillant et un peu doré sur les jambes; le côté interne des deux jambes de devant et tous les tarses d'un roux brun; jambes et tarses revêtus d'un court duvet grisâtre. Abdomen muni au dernier segment d'une dentelure latérale assez forte: il est en entier d'un vert doré brillant et un peu rougeâtre. Ventre vert, avec le premier segment bleuâtre, et la base du suivant brune; l'extrémité du ventre bleuâtre.

Le mâle diffère de la femelle par l'extrémité de l'abdomen, qui ne présente pas de dent latérale, mais seulement une sinuosité qui est à peine sensible.

En Mai; forêt de Koubeh.»

Patria: Græcia (Morea).

347. **Chrysis sinuata** Brullé.

Chrysis sinuata, Brullé, Expéd. de Morée. Tom. III. Zoolog. Sér. 2. p. 376, n. 829. ♀. (1832).

«Profunde punctata; capite, pedibus et thorace subtus cyaneis; vertice subaureo; thorace supra et abdomine cupreo-auratis; antennis tarsisque fuscis; alis subobscuris; abdominis apice lateribus sinuato, serie transversa punctorum maiorum impresso. Femina. — Long. 8 millim.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Descr. Très-fortement ponctué, et en particulier sur le corselet. Tête bleue, un peu dorée sur le vertex; antennes d'un brun foncé, avec les premiers articles bleuâtres. Corselet d'un cuivreux doré en dessus, bleue en dessous, sur les côtés et à la partie postérieure du métathorax; prothorax court; côtés du métathorax avancés, épineux et un peu courbés. Écaille des ailes verte; celles-ci un peu obscures, avec les nervures brunes. Pattes bleues; jambes un peu verdâtres; tarses d'un brun pâle. Abdomen un peu échancré de chaque côté à l'extrémité, et muni avant le bord postérieur d'un bourrelet assez fort: il est entièrement doré, et même d'un cuivreux rougeâtre. Ventre vert, avec le second segment presque entièrement brun. Femelle.

Avec le précédent.

Obs. Cette espèce ressemble beaucoup à la précédente, et nous ne l'aurions pas distinguée, si elle n'avait le prothorax de moitié plus court, et les côtés du métathorax avancés et formant une forte epine; le bout de l'abdomen n'est pas dentelé de chaque côté comme dans le précédente, et il est muni d'un bourrelet, au-dessous duquel se trouve une rangée de points enfoncés très-profonds. Ce bourrelet n'existe pas dans le *Chr. rufitarsis,* et la ligne de points enfoncés est beaucoup plus faible. Ou retrouve du reste dans les deux la même disposition de couleurs; cependant les pattes présentent quelques différences, et la ponctuation est un peu plus forte dans le *Chr. rufitarsis* que dans le *Chr. sinuata.*»

Patria: Græcia (Morea).

Animadversio. — Species verisimiliter est eadem cum *Chryside pulchella* Spin.

348. **Chrysis versicolor** Spin.

Chrysis versicolor, Spin. Ins. Lig. II. p. 241, n. LXXXV. ♂ ♀. tab. V. fig. 19. (1808). — Dhlb. Hym. Europ. II. p. 173, n. 94. ♂ ♀. tab. VIII. fig. 98 (abdomen) (1854). — Chevr. Chrysid. du Léman, p. 30. ♂ ♀. (1862). — ? Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 13, n. 21. ♂ ♀. tab. I. fig. 6. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 76. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat.Toulouse, p. 162. (1879). — Lampr. Goldwesp. Deutschl. p. 13, n. 27. (1881). — Mocs. Chrys. faun. Hung. p. 53 et 86, n. 17. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 49 et 58. (1887).

Chrysis patriarchalis, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 142, n. 28. ♂. (1879) sec. spec. typ. e coll. Rad.

Submediocris, ovato-oblonga, robusta, speciebus minutis generis *Hedychri* haud insimilis, æneo-viridis, dense cinereo-alboque pilosa; fronte, pro- et mesonoto, scutello postscutelloque æneo-auratis vel cupratis; cavitate faciali planiuscula, dense punctulato-coriacea, medio longitudinaliter canaliculata, lateribus dense argenteo-sericeo-pilosa, superne transverse-marginata; antennis crassiusculis, sat longis, cano-puberulis, fuscis, articulis duobus primis viridibus vel viridi-auratis, tertio longitudine mediocri, quarto vix dimidio adhuc longiore; clypeo brevi, nitido, sparsim punctulato, disco convexo-carinato, margine apicali arcuato-emarginato parum æneo-aurato; genis longis, articulo tertio antennarum æquilongis, vertice dense subtilius punctato-subreticulato; pronoto

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

sat longo, transverso-rectangulo, antice in medio obsoletius sulcato, dense sat crasse, mesonoto parum subtilius irregulariter punctato-subreticulatis, scutello postscutelloque convexo crassius regulariter punctato-reticulatis; metanoti dentibus postico-lateralibus sat magnis ac latis acutis; abdomine mediocri, ovali, dorso modice convexo, subcoriaceo, segmentis æneo-auratis cupreoque lavatis, 2—3 imo basi nigro-æneis, primo sat sparsim minus profunde punctato interstitiisque subtilissime punctulatis, 2—3 dense parum rugosiuscule leviter punctatis, secundo carinula mediana distincta, tertio convexo, foveolis numerosis mediocribus rotundatis magnitudine inæqualibus parumque hic illic confluentibus, margine apicali mediocri, depresso, tenui, subtilissime punctulato, imo margine centro lenissime emarginato, haud procul a basi et sub initio seriei angulo laterali distincto; ventre cupreo-, aeneo- et viridi-picto; pedibus viridi-cyaneis, tarsis albo-testaceis parumque infuscatis; alis albo-hyalinis, ad costam cellulæ radialis parum fumatis, venis brunneis, cellula radiali lanceolata incompleta, apice parum aperta, tegulis viridi-cyaneis. — ♂ ♀; long. 5—6 mm.

Patria: Italia (Liguria, Spin.; Pedemontanum, Mus. Hung.); Gallia (Dhlb.); Helvetia (Chevr.); Germania (Thuringia, Lampr.); Tyrolis (Coll. Handlirschi!); Hungaria centralis, rara (Mocs.); Græcia (Parnassus, Mus. Atheniense!); Caucasus (Erivan, Rad. et Mus. Hung.); ?Turkestania (Katty-kurgan, Rad.).

349. **Chrysis integerrima** Klug.

Chrysis (Spintharis) integerrima, Klug. Symb. phys. Dec. V. tab. XLV. fig. 14. ♂. (1845).

«C. viridi-aurata, tarsis testaceis. Long. lin. 3.

Statura subquadrata *Euchroei purpurati*. Confertim impresso-punctata, viridi-aurea. Caput inter oculos argenteo-pubescens. Antennæ, articulo primo excepto, fusco-nigræ. Thorax dorso cupreo-micans. Tegulæ cupreæ. Alæ hyalinæ, versus marginem subinfuscatæ, nervis stigmateque fuscis. Pedes pubescentes. Tarsi testacei. Abdomen dorso auratum, apice truncatum, integerrimum, cupreum.»

Patria: Arabia deserta.

Animadversio. — Piæ memoriæ vir: Klugius, huius speciei marginem apicalem integerrimum esse dicit, sed ille in tabula citata ante initium seriei anteapicalis distincte angulatus delineatus est; animal ergo ad hoc subgenus pertinet et verisimiliter eadem est species cum *Chryside versicolore* Spin.

Subgenus 3. MONOCHRYSIS Licht.

Abdominis segmenti dorsalis tertii margo apicalis in feminis apiculo centrali terminatus et sic quasi unidenticulatus; in *Chryside Leachii* Shuck. mare apiculo centrali minus distincto; in maribus *Chrysidis succinctae* Linn. et *varietatibus: Gribodoi* et *Germari* subrotundatus, fere integer, in *variet. bicolor* Lep. feminarum margo apicalis centro emarginatus et cum maribus plus minusve distincte quadridenticulatus est.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Conspectus specierum huius subgeneris:

1 (12). Thorace abdomineque supra adminimum ex parte igneo- vel purpureo-aurato; postscutello convexo.

2 (3). Capite antice, pro- et mesonoto abdominisque segmentis dorsalibus 2—3 igneo-purpureoque auratis, thorace subtus cum scutello postscutelloque læte-cyaneis, scutelli lateribus mesopleurisque leniter viridi-auratis; cavitate faciali profunda disco sublævi ac polita ... ... *peninsularis* Buyss.

3 (2). Capite antice cyaneo vel virescenti-cyaneo aut solum viridi-subaurato; pronoto tantum antice et mesonoto toto (vel etiam scutello) viridi- vel igneo-auratis.

4 (5). Abdominis segmentis dorsalibus igneo- vel coccineo-auratis postice cyaneo-marginatis; cavitate faciali subtiliter transverse-striata ... ... *Leachii* Shuck.

5 (4). Abdominis segmentis dorsalibus igneo- vel coccineo-auratis cyaneo non marginatis, nec cavitate faciali transverse-striata; abdominis segmenti tertii margine apicali apiculo nigro-æneo vel viridi- aut cupreo-æneo.

6 (10). Scutello cyaneo vel solum parum virescenti-cyaneo; femoribus tibiisque non ænescentibus.

7 (11). Abdominis segmentis dorsalibus sine macula nigro-ænea.

8 (9). Abdominis segmento dorsali tertio margine apicali medio producto apiculatoque ... ... *succincta* Linn.

9 (8). Abdominis segmento dorsali tertio margine apicali plus minusve distincte quadridenticulato ... ... *succincta* L. *var. bicolor* Lep.

10 (6). Scutello igneo- vel viridi-aurato; femoribus tibiisque ænescentibus *succincta* L. *var. Germari* Wesm.

11 (7). Abdominis segmentis dorsalibus duobus primis vel solum primo nigro-æneo maculatis ... ... *succincta* L. *var. Gribodoi* Ab.

12 (1). Corpore toto cum abdomine smaragdino-viridibus parumque cyanescentibus; postscutello producto ... ... *discreta* Aar.

*

350. **Chrysis peninsularis** Buyss.

Chrysis peninsularis, Buyss. Revue d'Entom. VI. p. 182, n. 18. ♀. (1887) sec. spec. typ. e coll. Abeillei.

Mediocris, minus elongata, robusta, læte-cyanea, parcius cinereo-alboque pilosa; capite, pro- et mesonoto igneo-purpureoque, scutelli lateribus mesopleurisque leniter viridi-auratis; vertice post stemmata occipiteque nigro-violaceis; capite magno, thorace latiore, fronte latiuscula, cavitate faciali profunda, medio longitudinaliter viridi-subaureo canaliculata et utrinque late sublævi ac polita, lateribus sparsim punctata, superne subtiliter arcuatim marginata; antennis longis, crassis, parum depressis, nigris, cano-puberulis, articulis tribus primis æneis, tertio brevi, quarto vix dimidio adhuc longiore; clypeo nigro-æneo, sparsim punctato, medio carinato-convexo; genis mediocribus, articulo antennarum tertio æquilongis; fronte dense subtilius punctato-reticulata; pronoto sat

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

longo, transverso-rectangulo, antice in medio longitudinaliter sulcato, sulco et truncatura antica superne viridi-subauratis cum mesonoto et scutello postscutelloque convexo crassius punctato-reticulatis; metanoti dentibus postico-lateralibus mediocribus, haud crassis, subacutis; abdomine ovali, subdepresso, segmentis dorsalibus: primo igneo-aurato, disco et truncaturæ anticæ læte-cyaneæ sparsimque punctatæ margine supero viridi-auratis, sat dense punctato, punctis in disco sparsis maioribus; secundo violaceo-purpureoque aurato, dense minus profunde rugosiuscule-punctato, subcoriaceo, carinula mediana indistincta, 2—3 imo basi nigro-æneis; tertio subtriangulari saturatius violaceo-purpureo-aurato, disco et margine apicali ænescenti, dispersius fortiusque punctato-rugoso, supra seriem anteapicalem leniter calloso foveolis sat profunde immersis circiter 12 magnis, irregularibus, confluentibus, subpellucidis, per carinulam medianam interruptis, margine apicali centro producto obtuse-acuminato, lateribus arcuato-obtusis; ventre nigro-æneo maculis purpureo-violaceis et virescentibus; pedibus nigro-æneis, tibiis externe nigro-violaceis, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta, tegulis nigro-æneis. — ♀; long. 6½ mm.

Patria: Hispania.

351. **Chrysis Leachii** Shuck.

Chrysis Leachii, Shuck. Ent. Mag. IV. p. 168, n. 10. (1837). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 307. (1853). — Lampr. Goldwesp. Deutschl. p. 14, n. 32. (1881). — Mocs. Chrys. faun. Hung, p. 55 et 86, n. 20. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 49 et 57. (1887).

Chrysis Leachei, Dhlb. Hym. Europ. II. p. 181, n. 98. ♂ ♀. tab. IX. fig. 102. (1854) excl. Lep. syn. — Schck, Nass. Jahrb. XVI. p. 176, n. 4. (1861). — Chevr. Chrysid. du Léman, p. 33. ♂. (1862). — Schck, Progr. Gymn. zu Weilb. p. 10, n. 7. ♂ ♀. (1870). — Ab. Feuille Jeun. Natural. VII. p. 66. (1877). — Destef. Natural. Sicil. VII. p. 140. ♂; p. 219. ♀. (1888).

Chrysis Leachi, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 77 et 92. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 163. (1879).

Parva, subangusta, læte- vel in maribus parum virescenti-cyanea, cinereo-alboque pilosa; pronoto antice, mesonoto cum scutello viridi-igneoque auratis; cavitate faciali sat profunda, dense subtilissime transverse-striata, lateribus punctato-coriacea, superne convexo-depressa, non marginata; antennis longiusculis, tenuibus, nigris, cano-puberulis, articulis duobus primis viridi-auratis, tertio longo, quarto quintoque simul sumptis fere æquilongo; genis mediocribus, articulo antennarum tertio longitudine æqualibus; vertice dense minus crasse, thorace parum dispersius crassiusque punctato-reticulatis; abdominis segmentis dorsalibus viridi-igneoque auratis, subcoriaceis, segmentis omnibus apice læte-cyaneo-marginatis, margine primi latissimo, fere dimidium apicalem segmenti occupante, segmentis omnibus dense subtilius rugosiuscule-punctulatis, tertio supra seriem parum calloso foveolis numerosis sat magnis ac profundis rotundatis, per carinulam medianam interruptis, margine apicali centro producto distincto; ventre nigro-æneo viridi-maculato; pedibus cyaneo-viridibus, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata penitus completa, tegulis viridi-cyaneis. — ♂ ♀; long. 4—5 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: de statura parva et abdominis segmentis dorsalibus viridi-igneoque auratis margine apicali læte-cyaneo-limbatis, facile cognoscitur.

Patria: Anglia (Shuck.); Gallia (Ab.); Germania (Schck); Helvetia (Chevr.); Tyrolis (Dalla Torre et Kohl); Austria (Rogenh. et Kohl et Coll. Handlirschi!); Hungaria centralis et meridionalis, mensibus Maio-Junio non rara (Mocs.); Carniolia (Coll. Handlirschi!); Italia (Spin.; Sicilia, Destef); Asia minor (Dhlb); Caucasus (Coll. Rad.!).

352. **Chrysis succincta** Linn.

Chrysis succincta, Linn. Syst. Nat. Ed. XII. T. I. P. II. p. 947, n. 3. ♀. (1767). — Fabr. Syst. Ent. p. 358, n. 8. ♀. (1775). — Muell. Stad. Linnées Natursyst. Bd. II. Theil, V. p. 876, n. 3. ♀. (1775). — Fabr. Spec. Ins. I. p. 456, n. 10. (1781); Mant. Ins. I. p. 283, n. 12. ♀. (1787). — Vill. Linn. Ent. III. p. 256, n. 3. ♀. (1789). — Rossi, Faun. Etr. II. p 76, n. 846. ♀. (1790). — Oliv. Encycl. Méth. Ins. V. p. 675, n. 14. ♀. (1790.) — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2745, n. 3. ♀. (1792). — Fabr. Ent. Syst. II. p. 241, n. 13. ♀. (1793); Syst. Piez. p. 174, n. 19. ♀. (1804) (excl. Panz. syn.). — Lep. Annal. du Mus. Hist. nat. VII. p. 128, n. 24. ♀. (1806). — Illig. Rossi Faun. Etr. Ed. II. p. 122, n. 846. ♀. (1807). — Wesm. Bullet. Acad. Brux. VI. p. 176, n. 5. ♀. (1839). — Chevr. Chrysid. du Léman, p. 40. ♂ ♀. (1862) ex parte. — Ab. Feuille Jeun. Natural. VII. p. 66. (1878). — Mocs. Chrys. faun. Hung. p. 54 et 86, n. 19. ♀. tab. I. fig. 12. (segm. anale) (1882). — Frey, Chrys. Helvet. p. 49 et 57. ♀. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 77, n. 53. ♀. (1887) (excl. *Chrys. fervidae* Fabr. syn.).

?*Chrysis hungarica,* Scop. Annus quintus hist.-nat. p. 122, n. 146. ♀. (1772). — Christ, Naturg. p. 406. ♀. (1791).

?*Chrysis calens,* Christ, Naturg. p. 401. tab. 44, fig. 9. ♀. (1791) (nec Fabr.).

?*Chrysis obtusiventris,* Först. Verh. nat. Ver. preuss. Rheinl. X. p. 305. ♀. (1854).

Chrysis succinctula, Dhlb. Hym. Europ. II. p. 179, n. 97. ♀. tab. IX. fig. 101. ♀. (1854). ex parte — Schck, Nass. Jahrb. XI. p. 36, n. 15. ♀. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 69. ♀. (1858). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 555, n. 4. ♀. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 304, n. 30. ♀. (1866). — Schck, Progr. Gymn. zu Weilb. p. 10, n. 6. ♀. (1870) ex parte. — Lampr. Goldwesp. Deutschl. p. 14, n. 33. ♀. (1881). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 18. (genit. maris) (1888).

Chrysis minutula, Schck, Stett. Ent. Zeit. XXXII. p. 254, n. 2. ♂ (non ♀) (1871).

Chrysis Frivaldszkyi, Mocs. Chrys. faun. Hung. p. 52 et 85, n. 14. ♂. tab. II. fig. 2. ♂. (1882).

Chrysis basalis, Destef. Natural. Sicil. VII. p. 140. ♂. (1888) (nec Dhlb.).

Chrysis bicolor, Destef. Natural. Sicil. VII. p. 177. ♀. (1888) (nec Linn.).

Sexus ab invicem valde differunt:

Subparva vel mediocris, oblonga, cinereo-alboque pilosa; cavitate faciali superne depresso-convexa vel subtilius transverse-marginata, margine a fronte remota; antennis brevibus, crassiusculis, nigris, cano-puberulis; genis mediocribus, antennarum articulo secundo æquilongis; vertice dense subtilius, thorace crassius parumque dispersius punctato-reticulatis, punctatura in femina crassiore, quam in mare; occipite utrinque angulo prominulo dentiformi; pronoto sat longo, transverso-rectangulo, antice in medio leviter sulcato; metanoti dentibus postico-lateralibus mediocribus acute-triangularibus; abdomine capite thoraceque simul sumptis longiore, dorso convexo, primo basi trifossulato,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

2—3 basi nigro-æneis, carinula mediana abbreviata sat distincta, tertio supra seriem calloso, foveolis numerosis profundis oblongis, per carinulam medianam interruptis, sæpius parum confluentibus, margine apicali nigro-æneo; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice late aperta, tegulis nigro-æneis.

Femina: cyanea vel parum virescenti-cyanea, pronoto antice plerumque viridi-, mesonoto igneo-aurato; cavitate faciali sat profunda, disco late lævi ac polita, lateribus dense punctato-coriacea; antennarum articulis duobus primis et tertio supra ænescentibus, hoc longitudine mediocri, quarto vix dimidio longiore; abdominis segmentis dorsalibus igneo- vel coccineo-auratis, subcoriaceis, sat dense parum rugosiuscule-punctatis, primo virescenti, interstitiis subtilissime punctulatis; tertio margine apicali centro plus minusve obtuse-producto et utrinque sinuato; ventre nigro-æneo igneoque maculato; femoribus cyaneis, tibiis externe virescentibus, tarsis fusco-rufis. — Long. 6—7 mm.

Mas: virescenti-cyanea; pronoto antice, mesonoto vel toto vel tantum lateribus, nonnunquam etiam facie, fronte et scutello pleurisque viridi-subauratis; cavitate faciali minus profunda, disco spatio minuto lævi ac polito, lateribus dense punctulato-coriacea argenteoque pilosa; antennarum articulis tribus primis viridi-auratis, tertio brevi, quarto vix dimidio longiore; abdominis segmentis dorsalibus feminis similiter, sed multo densius subtiliusque punctatis; primo cyaneo-viridi, parte postica aurata vel viridi-aurata, 2—3 auratis vel coccineo-auratis et plus minusve viridi lavatis, margine apicali nonnunquam viridi- vel cupreo-æneo, apiculo centrali minus distincto magisque obtuso et utrinque in medio leniter sinuato; ventre viridi-aurato; segmento secundo basi utrinque macula et marginibus segmentorum nigro-æneis; femoribus antice tibiisque viridi-auratis, illis postice æneis, tarsis fusco-rufis dilutioribus. — Long. 4½—5 mm.

«*Armure.* La branche du forceps vers l'extrémité rétrécie, allongée et garnie de deux côtés de poils; son bout échancré. Volsella pourvue de poils; sa tenette est de longueur de volsella. Les côtés des crochets parallèles, rondement decoupés vers l'extrémité et allongés en forme cylindrique. Le couvercle génital est de la même forme, que chez le *Chr. Branicki.*» (Rad. l. c. tab. III. fig. 37a, 37b, 37c, 37f, 37i).

Patria: Europa fere tota cum Caucaso et Persia (Rad.).

var. Gribodoi Ab.

Chrysis Gribodoi, Ab. Feuille Jeun. Natural. VII. p. 66, n. V. (1878).
Chrysis bicolor Lep. *var. Gribodoi*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 77 et 93. ♂ ♀. tab. II. fig. 31—33. (segm. anale) (1879). — Frey, Chrys. Helvet. p. 52 et 65. c. tab. III. fig. 13. (segm. anale) (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 78, n. 54. (1887).

Typo simillima; sed sexus uterque pronoto antice et mesonoto læte-auratis vel igneo-auratis, abdominis segmentis dorsalibus duobus primis vel solum primo (præsertim in speciminibus Helveticis) nigro-æneo maculatis; feminæ segmento dorsali tertio margine apicali centro nonnunquam emarginato lateribusque arcuatis vel subarcuatis, nec angulatis. — Patria: Hispania. (Gog.); Gallia (Ab.); Helvetia (Frey).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

var. bicolor Lep.

Chrysis bicolor, Lep. Annal. du Mus. Hist. Nat. VII. p. 127, n. 18, tab. VII. fig. 13. ♂. (1806). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 77 et 93, tab. II. fig. 34—35. (segm. anale) (1879). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 163. (1879). — Mocs. Chrys. faun. Hung. p. 66 et 89. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 52 et 64 - 65. ♂ ♀. tab. III. fig. 20. (margo apical.) (1887).

Chrysis succincta, Panz. Faun. Ins. Germ. fasc. 77, tab. 16. ♂. (1801); Krit. Rev. II. p. 102 (1806). — Dhlb. Monogr. Chrys. Suec. p. 10, n. 5. (1829). — Shuck. Ent. Magaz. IV. p. 166, n. 7. (1837). — Dhlb. Dispos. p. 10, n. 10. (1845). — Först. Verh. nat. Ver. preuss. Rheinl X. p. 305. (1853). — Dhlb. Hym. Europ. II. p. 268, n. 149. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 33, n. 12. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 561, n. 15. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 71. (1858). — Smith, Entom. Annual. p. 91. (1862). — Schck, Progr. Gymn. zu Weilb. p. 11, n. 15. (1870). — Thoms. Opusc. Entom. II. p. 107, n. 10. (1870). — Lampr. Goldwesp. Deutschl. p. 16, n. 39. tab. I. fig. 16. (segm. anale) (1881).

Chrysis Illigeri, Wesm. Bullet. Acad. Brux. VI. p. 176, n. 6. (1839). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 306. (1853). — Chevr. Chrysid. du Léman, p. 43. ♂ ♀. (1862).

Typo simillima; sed femina: abdominis segmento dorsali tertio margine apicali distinctius vel obsoletius quadridenticulato, dentibus vel obtusis vel lateralibus triangularibus; mas: dentibus apicalibus brevibus plerumque triangularibus. — Patria: Europa tota (Lapponia excepta) cum Caucaso.

var. Germari Wesm.

Chrysis nitidula, Germ. Reise nach Dalmat. p. 260, n. 343. ♂. (1817); Faun. Ins. Europ. fasc. IV. tab. 12. ♂. (1817) (nec Fabr.).

Chrysis Germari, Wesm. Bullet. Acad. Brux. VI. p. 177. ♂. (1839.) — Dhlb. Hym. Europ. II. p. 137, n. 76. ♂. (1854). — Schck, Nass. Jahrb. XI. p. 39, n. 18 et p. 75, n. 6. ♂. (1856); Progr. Gymn. zu Weilb. p. 14, n. 4. ♂. (1870). — Lampr. Goldwesp. Deutschl. p. 12, n. 23. ♂. (1881). — Mocs. Chrys. faun. Hung. p. 49 et 84, n. 8. ♂. (excl. ♀.) (1882).

Chrysis aurichalcea, Wesm. Bullet. Acad. Brux. VI. p. 177, n. 7. ♂. (1839) (excl. Lep. syn.) (nec Först., nec Prov.).

Chrysis succinctula, Dhlb. Hym. Europ. II. p. 179, n. 97. ♀. (1854) ex parte. — Schck, Progr. Gymn. zu Weilb. p. 10, n. 6. (1870) ex parte.

Chrysis succincta, Chevr. Chrysid. du Léman, p. 40. ♂ ♀. (1862) ex parte. — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 77 et 93. ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 163. ♀. (1879). — Destef. Natural. Sicil. VII. p. 178, ♀. (1888) (nec Linn.).

Chrysis aeneipes, Tourn. Annal. Soc. Ent. Belg. XXII. p. 94. ♂. (1879).

In sexu utroque *Chrysis succinctae* Linn. simillima; sed facile cognoscitur: scutello in feminis igneo-, in maribus aurato vel læte viridi-aurato, femoribus tibiisque ænescentibus, rarius in maribus viridi-auratis. — Patria: Sardinia (Costa); Sicilia (Destef.); Gallia (Ab.); Helvetia (Chevr.); Germania (Schck); Tyrolis, Morawia, Austria inferior, Carniolia, Istria (Coll. Handlirschi!); Hungaria centralis et meridionalis (Mocs.); Croatia (Germ. et Mus. Hung.); Dalmatia et Servia (Mus. Hung.),

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Animadversio. — Species, in systemate Dahlbomi difficultatem exceptionemque præbens, studio sedulo non satis adhuc subiecta est. Verba enim divi auctoris Linnéi: «C. glabra nitens viridis, *thorace fascia coccinea,* abdomine aureo subtridentato» et porro «*Thorax dorso fascia coccineo-aurea,* uti etiam ipsa basis thoracis parum coccinea» ad huius tantum speciei feminam applicari possunt et non ad varietatem: scutello igneo-aurato (Germari Wesm.). Dahlbomus varietatem cum stirpe univit et Domini Abeille et Frey-Gessner varietatem pro stirpe descripserant. In reliquis haud dubito, quin *Chrysis Germari* Wesm. (nitidula Germ.), a piæ memoriæ viro verbis sequentibus descripta (Reise in Dalmat. p. 260): «Sie ist von der *Chrysis succincta* nur durch ein goldgefärbtes Rückenschildchen unterschieden» sit mas varietatis *Chrysidis succinctae* Linn. (æneipedis Tourn.) et *Chrysis bicolor* Lep. quoque sit tantum *Chrysidis succinctae* Linn. varietas. Hoc certe affirmare possum ex ea circumstantia, quia *Chrysidis succinctae* Linn. et eius varietatum ultra 60 exemplaria ex Hungaria, Helvetia et Gallia coram me iacent, in quibus mutabilitas huius speciei quam maxime observari potest. — Hæc inconstantia non tantum in colore, sculptura et etiam in forma segmenti analis, ita ut mares iam ad Holochrysidas, iam ad Gonochrysidas et *var. bicolor* ad Tetrachrysidas pertinere videantur, aliæque paucæ adhuc exceptiones, me non adduxerunt ad ea, ut systema Dahlbomi propterea reiiciam, quia exceptiones e regula fere in omni opere humano dantur et systema illud propterea quoque utile et conveniens est, præsertim ibi, quum totius orbis terrarum Chrysididæ tractantur. Si enim omnes species exoticas, colore plerumque cyaneo vel viridi-cyaneo gaudentes, in unum cumulassem, tunc determinatio specierum valde difficilis et multi laboris fuisset; donec sic plerumque statim video, ubi animal quærendum sit.

353. **Chrysis discreta** Aar.

Chrysis discreta, Aar. Transact. Amer. Ent. Soc. XII. p. 230. ♀. tab. VIII. fig. 45, (segm. anale) (1885).

«Head and thorax emerald-green with sligth blue reflection, evenly punctured, the punctures a little separated; basin of face cross striated, front carinated, the carina on each side continued upwardly and nearly surrounding the anterior ocellus; prothorax not so long as the head; postscutellum very slightly produced, as in the tridentate species; metanotal spines produced, a little curved, bluntly pointed; abdomen emerald-green with the basal two-thirds of the second segment, broadly on the dorsum, rich blue and purple; punctures equal, even, a little more separated than on the thorax; third segment much narrower at the apex, the lateral margins a little sinuate on each side of the central, slightly produced, rounded lobe; pits medium, close, contained in a strong groove, which ends on each side a little behind the junction of the apical and lateral margins, and which is divided in the middle by a very distinct ridge across the pits reaching the apical lobe; wings slightly infumated, tarsi fuscous; length 4—5 mm. long. ♀.

One specimen. This species belongs to the same group as the Old World species *Leachii* and *succinctula,* but is very distinct from them on account of the blue and green abdomen.»

Patria: America septentrionalis (Carolina septentrionalis).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Subgenus 4. DICHRYSIS Licht.

Abdominis segmenti dorsalis tertii margo apicalis dente unico laterali armatus est.

I. *Corpus totum cum abdomine cyaneum parumque virescens.*

354. **Chrysis Taschenbergi** n. sp.

Mediocris, elongata, subparallela, sat robusta, cyanea parumque virescens, albido-pilosa; cavitate faciali profunda, viridi-subaurata, dense punctato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne acute marginata, margine in medio arcuato utrinque ramulum obliquum convergentem et stemma anticum includentem areamque egregiam triangularem formantem demittente; antennis brevibus, crassis, nigris, articulis tribus primis cyaneo-viridibus, tertio proportionaliter brevi, quarto parum tantum longiore; genis brevibus, articulo antennarum secundo æquilongis; occipite utrinque angulo parvo dentiformi prominulo; vertice dense, sed parum subtilius, thorace supra crasse profundeque regulariter punctato-reticulatis; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; postscutello convexo, basi fovea centrali sat magna et profunda; metanoto dentibus postico-lateribus longis, latis ac acutis; abdominis segmentis dorsalibus cyaneis parumque virescentibus, primo truncatura antica trifossulata, 2—3 imo basi nigro-æneis, secundo carinula mediana minus distincta, omnibus fere æqualiter dense crasseque parum rugosiuscule-punctatis, interstitiis angustis lævibus ac politis, tertio supra seriem convexo, foveolis quattuor centralibus valde magnis ac profundis, lævibus, violascentibus, irregularibus, lateribus duobus minutis haud bene distinctis, margine apicali sat longo, fere lævi, imo margine centro subarcuato, utrinque leniter sinuato, lateribus dente subacuto mediocri, triangulari armato; ventre viridi et cyaneo; femoribus tibiisque et tarsorum articulo primo concoloribus, articulis horum reliquis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis cyaneo-viridibus. — ♂; long. 8 mm.

Species: de verticis area, punctatura, foveolis segmenti dorsalis tertii margineque anali, facile cognoscitur.

Patria: Respublica Argentina (Mendoza, Mus. Halense Saxonum; ab illustrissimo Domino E. H. Taschenberg mecum benevole communicata).

Animadversio. — *Chrysis scitula* Cress. et *aurichalcea* Prov., quas in operibus Cressoni et Aaroni Dichrysidibus insertas invenimus, secundum meam opinionem et secundum figuram segmenti analis ad Tetrachrysidas pertinent.

II. *Abdominis dorsum cupreum; caput et thorax viridia, hoc disco viridi-aenescenti.*

355. **Chrysis bihamata** Spin.

Chrysis bihamata, Spin. Annal. Soc. Ent. France. VII. p. 450, n. VIII. ♀. (1838). — Dhlb. Hym. Europ. II. p. 182, n. 99. ♀. tab. IX. fig. 103. ♀. (abdomen) (1854). — Ab. Annal. Soc. Linn·

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Lyon. XXVI. p. 76 et 89. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 71, n. 44. ♀. (1887).

Descriptio e specimine Spinolæ typico secundum Dahlbom:

«Mediocris robusta 2½ lin. decimal. long. modice punctata nitida griseo-pilosella viridis, thoracis disco dorsali viridi-ænescente, abdominis dorso cupreo, margine apicali concolore: spinis robustis, spatio inter spinas lenissime arcuato.

Observ. Species propter armaturam analem singularis. Corpus robustum oblongo-ovatum nitidum. Caput mediocre, rotundato-triangulum, antice viridissimum, postice et infra cyaneum; occiput nitidum modice punctatum; vertex confertius punctulatum subcoriaceum; cavitas facialis latiuscula subprofunda confertim punctulata nitida l. cyanea l. cyaneo-viridis largiter cano-sericea præsertim ad latera; supra hanc cavitatem et infra stemma anticum adest carinula transversa levissima utrinque biramulosa. Antennæ mediocres, subbreves fuscæ scapo pedicelloque cyaneo-virescentibus. Clypeus mediocris transverso-rectangularis sparse punctatus, disco subconvexus, margine apicali subpiceo, laterali subtestaceo. Mandibulæ nigro-piceæ, basi viridi-maculatæ, ad apicem rufo-piceæ. Thorax mediocris subquadrato-ovatus, dorso convexo-depressus nitidus subcrasse at non confertim sed potius subremote punctatus; pronotum mediocre transverso-rectangulum, disco viridi-auratum non sulcatum, antice paullulum angustius quam postice; truncatura levis subconvexo-declivis, macula centrali cuprea: foveola utrinque; dorsuli pictura variat: aut areæ laterales virides leviter aureo-resplendentes et area media unicolore viridis, aut areæ laterales viridi-cupreæ et area media cupreo-ænea; scutellum l. totum cupreum, l. viride basi cuprea; metanotum viride: postscutellum subgibbum, anguli postico-laterales robusti triangulares punctulato-coriacei aureo-virides; mesopleuræ superne viridi-aureæ; sternum et pedes longius et sparsius pilosa nitidissima sparse punctulata viridia, uno alterove latere secundum situm luminis cyanescentia; pedes tamen extus plerumque subaureo-splendentes, tarsis brunneo-testaceis. Alæ albo-hyalinæ tegulis ænescentibus, venis l. brunneo-testaceis l. piceis, venula transverso-mediali basi leniter arcuato-inflexa; cellula radialis valde incompleta, scil. vena costalis paullo post stigma abrupte desinit et vena radialis desinit longe ante apicem alæ. Abdomen robustum late subquadrato-ovatum, thorace parumper longius at non latius, dorso subcrebre punctulatum nitidum subpolitum cupreum limbo plus minus viridi-resplendens; segmenti primi impressio basalis magna semicircularis sulco mediano distinctiori; segmentum tertium serie foveolarum ante-apicali fere caret, quandoquidem puncta totius segmenti invicem simillima et æqualiter adspersa obveniunt, sed per initium marginis apicalis (paullulum humilioris) locus et vestigium talis seriei significata videntur; margo apicalis ipsi segmenti concolor, brevis arcuatus, spinis 2 lateralibus robustis acute conicis fere subulatis remotis bi-dentatus, hic inter spinas quasi exstat, re vera late transversum et lenissime subarcuatum obvenit; lateraliter inter spinam et segmenti basin est margo leniter et obsolete angulatus; venter l. planus l. concaviusculus viridi-cyaneus nitidus.»

Patria: Hispania (Gog.); Aegyptus (Spin.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Animadversio. — Clarissimus Dominus Gogorza *Chrysidem bihamatam* Spin. et *prasinam* Dhlb. unam eandemque esse speciem opinatur, sed ille hanc ultimam in natura non noverat ; ego e contrario penitus persuasus sum, ambas species — adminimum adinterim — distinquendas esse et Dahlbomi *Chrysidem prasinam* ad Tetrachrysidas pertinere. Sed etiam illud mihi valde probabile esse videtur, quod Dahlbomi *Chrysis prasina* longe alia est species, quam Klugii ; Dahlbomus enim Klugii specimen typicum non vidit, prouti hoc ipse dicit, et species in Klugii opere aliter descripta et delineata est, quam in opere Dahlbomi. Ego igitur ambas species adfero : *Chrysidem prasinam* Klug hoc loco, et *Chrysidem prasinam* Dhlb. (*dubitatam* mihi) apud Tetrachrysidas.

III. *Abdominis dorsum viridi-auratum, medio cupratum ; caput et thorax viridia.*

356. **Chrysis prasina** KLUG.

Chrysis (Spintharis) prasina, Klug. Symb. phys. Dec. V. tab. XLV. fig. 10. ♂. (1845) (nec Dhlb.).

«C. viridis, abdomine supra aurato, tarsis testaceis. Long. lin. 3 1/2.

Habitat ad Doeppe Dongalæ in Aethiopia, Maio horis promeridianis in floribus *Calotropidis procerae.*

Statura præcedentium. Supra confertim punctata, læte viridis. Caput inter oculos pube densa albido-argentea tectum. Mandibulæ nigræ, basi testaceæ. Antennæ, articulo primo viridi-coeruleo excepto, nigræ. Thorax viridis immaculatus. Tegulæ cyaneæ. Alæ hyalinæ, nervis stigmateque fuscis. Pedes viridi-coerulei, tarsis testaceis. Abdomen supra viridi-auratum, medio cupreum, subtus cyaneum. Abdominis ultimum segmentum apice rotundatum, medio truncatum, late subemarginatum, utrinque unidentatum, viridi-cyaneum.

Variat viridi-cuprea, alarum tegulis concoloribus abdomineque toto cupreo-aurato (*Chrysis bihamata* Spin. Ann. de la société entom. de France VII. p. 450. n. VIII.)»

Patria : Nubia seu Aethiopia.

Animadversio. — Prouti ex hac descriptione et figura data segmenti ultimi in opere Klugii optime videtur, divus Auctor nullam facit mentionem de denticulo laterali in initio seriei anteapicalis, quem apud Dahlbomum bene vidimus. In opere enim Dahlbomi animal denticulis quattuor bene distinctis : duobus nempe lateralibus et duobus apicalibus delineatur, et ideo *Chrysidis bihamatae* Spin. mas esse non potest. Non mihi tamen impossibile esse videtur : *Chrysidem bihamatam* Spin. et *prasinam* Klug (non Dhlb.) feminam et marem, seu unam eandemque esse speciem.

IV. *Abdominis dorsum igneo-auratum ; caput et thorax cyanea viridique lavata.*

357. **Chrysis diacantha** n. sp.

Submediocris, elongata, subparallela, minus robusta, cyanea, parcius cinereo-alboque pilosa ; facie, pronoto, mesonoti lobis lateralibus, scutello et pleuris plus minusve viridi-lavatis ; cavitate faciali minus profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata et utrinque iuxta canaliculam anguste subtilissime valde dense suboblique-striata, superne convexa, non marginata ; antennis tenuibus, fusco-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

nigris, articulis tribus primis subaurato-viridibus, tertio brevi, quarto parum tantum longiore; genis sat longis, articulo tertio antennarum æquilongis; vertice dense minus profunde irregulariter punctato-subreticulato; pronoto sat longo, transverso-rectangulo, antice in medio leviter sulcato cum mesonoto et scutello sat sparsim minus crasse irregulariter punctatis interstitiisque subtilissime punctulatis, coriaceis; postscutello convexo subtilius punctato-subreticulato; metanoto dentibus postico-lateralibus brevibus acutis; abdominis segmentis dorsalibus igneo-auratis, dense rugosiuscule-punctulatis, coriaceis, primo punctis aliquot maioribus inmixtis, basi viridi, secunda carinula mediana nulla, tertio supra seriem convexo, foveolis circiter 14 mediocribus, lateralibus minoribus, viridi-subauratis, rotundatis, sat profundis, per carinulam medianam interruptis, margine apicali pure-aurato, centro arcuato leniterque sinuato, utrinque subarcuatim-exciso lateribusque dente obtuse-triangulari, mediocri armato; ventre pedibusque subaurato-viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata fere completa, tegulis viridi-cyaneis. — ♀; long. 6 mm.

Species: cum *Chryside mediocri* Dhlb. multum habet similitudinis.

Patria: Caucasus (Coll. Rad.! et Mus. Hung.).

Subgenus 5. TRICHRYSIS Licht.

Abdominis segmenti dorsalis tertii margo apicalis denticulis tribus plerumque distinctis armatus est.

Animadversio. — Non me latet, e speciebus huius subgeneris, mihi in natura ignotis, unam alteramque ad genus *Chrysogona* Först. pertinere: cellula discoidali prima aperta.

*

I. *Postscutellum muticum; corpus cyaneum, viridi-cyaneum vel viride, saepius in locis certis violascens aut aenescens, viridi-subauratum vel viridi-auratum.*

358. **Chrysis cyanea** Linn.

Chrysis cyanea, Linn. Faun. Suec. Ed. II. p. 414, n. 1667. (1761); Syst. Nat. Ed. XII. T. I. P. II. p. 948, n. 5. (1767). — Muell. Stad. Linnées Natursyst. Bd. II. Theil V. p. 876, n. 5. tab. XXVI. fig. 18. (1775). — Fabr. Syst. Ent. p. 359, n. 11. (1775); Spec. Ins. p. 456, n. 14. (1781); Mant. Ins. I. p. 284, n. 17. (1787). — Vill. Linn. Ent. III. p. 257, n. 5. (1789) excl. Observ. — Rossi. Faun. Etr. II. p. 76, n. 845. (1790). — Oliv. Encycl. Méth. Ins. V. p. 675, n. 19. (1790) excl. Scop. syn. — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2746, n. 5. (1792). — Fabr. Ent. Syst. II. p. 243, n. 20. (1793). — Panz. Faun. Ins. Germ. fasc. 51. tab. 10. (1798). — Donov. Brit. Ins. VII. pl. 235. (1798). — Schrk, Faun. Boica. Tom. II. P. II. p. 345, n. 2199. (1801). — Walcken. Faun. Parisien. II. p. 85, n. 5. (1802). — Panz. Schæfferi Icon. Ins. Ratisbon. p. 95. (1804). — Fabr. Syst. Piez. p. 176, n. 29. (1804). — Latr. Hist. nat. XIII. p. 238, n. 6. (1805). — Lep. Annal. du Mus. Hist. Nat. VII. p. 128, n. 22. (1806). — Panz. Krit. Rev. II. p. 103. (1806). — Illig. Rossi Faun. Etr. Ed. II. Tom. II. p. 122, n. 845. (1807). — Dhlb. Monogr. Chrys. Suec. p. 11, n. 8. ♂♀. (1829). — Shuck. Ent. Mag. IV. p. 167, n. 8. (1837). — Wesm. Bullet. Acad. Brux. VI. p. 177, n. 8. (1839). — Blanch. Hist. nat. III. p. 295, n. 6. (1840). — Zett. Ins. Lapp.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

p. 434, n. 3. (1840). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 304. (1853). — Dhlb. Hym. Europ. II. p. 188, n. 102. ♂ ♀.(1854). — Schck, Nass. Jahrb. XI. p. 36, n. 14. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 556, n. 5. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 69. (1858). — Smith, Entom. Annual. p. 92. (1862). — Chevr. Chrysid. du Léman, p. 53. ♂ ♀. (1862). — Taschb. Hym. Deutschl. p. 151. (1866). — Schck, Progr. Gymn. zu Weilb. p. 10, n. 8. (1870). — Thoms. Opusc. Ent. II. p. 107, n. 8. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 12, n. 23. (1877). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 41. (1879). — Lampr. Goldwesp. Deutschl. p. 14, n. 31. tab. I. fig. 15. (segm. anale) (1881). — Heyd. Ber. Senkenb. Naturf. Ges. p. 249, n. 15. (1882). — Mocs. Chrys. faun. Hung. p. 56 et 86, n. 21. ♂ ♀. tab. I. fig. 13. (segm. anale) (1882). — Frey, Chrys. Helvet. p. 51 et 63. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 124, ♂ ♀. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 19. (genit. maris) (1888).

Chrysis (tertia), Schaeff. Icon. Ins. Ratisbon. Vol. I. P. I. tab. 87, fig. 5. (1766).

Chrysis bidentata, Vill. Linn. Ent. III. p. 256, n. 2. Observ. (1789) (nec Linn.).

Vespa cuprea, Fourcr. Entom. Paris. II. p. 441, n. 27. (1785).

«La guêpe dorée bleue» et «La guêpe dorée verte.» Geoffr. Ins. II. p. 384, n. 22 et 23. (1762).

Parva aut submediocris, elongata, minus robusta, cyanea aut violascens, plus minusve viridi- vel viridi-subaureo-picta, cinereo-alboque densius pilosa; cavitate faciali latiuscula, profunda, plerumque viridi-subaurata, medio longitudinaliter canaliculata et utrinque subtilissime minus regulariter transverse-substriata, lateribus punctulato-coriacea argenteo-sericeoque pilosa, superne in medio plerumque abbreviatim transverse-marginata; antennis crassiusculis, subbrevibus, fuscis, cano-puberulis, articulis duobus primis viridibus vel cyanescentibus, tertio longo, quarto quintoque longitudine subæquali; clypeo apice profunde et late arcuato-emarginato; genis mediocribus, articulo antennarum quarto æquilongis, margine occipitali utrinque spinula brevissima obtusa; vertice thoracisque dorso subtilius punctato-subreticulatis, subcoriaceis; pronoto sat longo, transverso-rectangulo, antice in medio sulcato, lateribus marginatis; metanoti dentibus postico-lateralibus mediocribus, robustis, triangularibus; abdominis segmentis dorsalibus convexis, cyaneis, disco sæpius nigro-violascentibus, margine apicali rarius, sed lateribus sæpius, viridi-subauratis, primis duobus sat sparsim subtiliter punctatis interstitiisque subtilissime punctulatis, primo basi trisulcato, sulco mediano longitudinali crasso et profundo, lateralibus sæpius obsoletis, secundo carinula mediana minus distincta, tertio dense subtiliter punctulato, disco leniter aut lenissime transverse-immerso, supra seriem lenissime convexo-declivi, foveolis crassis circiter 10—12 subconfluentibus, per carinulam medianam in spinam brevem productam interruptis, margine apicali hoc modo tridenticulato, denticulis: centrali distincto, lateralibus acutis vel obtusis, rarissime obsoletis; ventre pedibusque cyaneis plus minusve virescentibus aut viridi-subauratis, tarsis fuscis; alis hyalinis, ad costam cellulæ radialis nonnihil sordidis, venis firmis piceis, cellula discoidali completa, radiali quoque completa vel rarius apice parum aperta, tegulis nigro-æneis. — ♂ ♀; long. 3½—6 mm.

Chrysogonae pumilae Klug valde similis; sed cellula discoidali completa et abdominis segmento dorsali tertio margine apicali tridenticulato, facillime distinguenda.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«*Armure*. La branche du forceps vers l'extrémité allongée, faiblement recourbée et pourvue de poils. Volsella large, vers l'extrémité parsemée de poils minces. Les crochets larges, avec un bordure autour.» (Rad. l. c. tab. III. fig. 38a, 38b, 38i).

Patria: Europa tota cum Asia minore et Caucaso.

359. **Chrysis Polinierii** Guér.

Chrysis Polinierii, Guér. Revue Zoolog. p. 149, n. 18. ♂. (1842).

«Ponctuée, d'un beau vert emarande, avec une tache sur le vertex et trois courtes lignes longitudinales sur le mesothorax, noires. Base du premier segment abdominal échancrée. Base du second et du troisième noire passant au bleu, cette couleur couvrant presque entiérement le second segment; bord posterieur du troisième segment blue tronque carrément, avec les angles latéraux aigues et une petite epine saillante au milieu, provenant d'une caréne mediane. Antennes noiratres, pattes vertes avec les tarses jaunes. Ailes incolores. Long. 7 mm.»

Patria: Senegambia (Senegal).

360. **Chrysis Scioensis** Grib.

Chrysis Scioensis, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 344, n. 8. (1879); XVI. p. 251, n. 1. (1881).

Descriptio secundum auctorem (l. c. XVI. 1881. p. 251—253.):

«Subparva elongata cylindrica cyanea hinc illinc virescens, antennarum flagello tarsisque nigris: capite confertissime punctulato granoso: thorace crasse subregulariter confertim punctato, interstitiis hinc illinc punctulatis: abdomine crassius sed rarius undique uniformiter punctato: margine anali autem confertissime subtiliter punctulato subcoriaceo; capite a facie viso trapezino rotundato magis lato quam alto, ricti lateribus brevissimis concurrentibus: cavitate faciali lata, modice profunda, punctulato-granosa, argenteo-setosa, superne fere bimarginata; plicatura infera indistincta transverse recta, supera valida, biarcuata: clypeo brevissimo transverso, margine late arcuato-emarginato: thorace latitudine capitis vix æquante, cylindrico, lateribus parallelis: prothorace brevi medio leniter impresso: postscutello mutico lenissime gibbulo: mesopleuris inermibus: abdominis segmenti primi basi medio profunde foveato: segmento secundo medio longitudinaliter nullo modo carinulato nec lineato: segmenti tertii area antica leniter depressiuscula: serie anteapicali mediocriter abrupta, regulariter semicirculari, medio interrupta; foveolis paucis (circit. 8—10) crassis profundis rotundatis distinctis: margine anali mediocri, humili, medio longitudinaliter conspicue carinato, apice tridentato: dentibus validis acutis, intermedio conoideo spiniformi, lateralibus triangularibus latioribus: spatiis inter dentem centralem et dentes laterales manifeste convexo-arcuatis; alis hyalinis, cellula radiali elongata acuminata completa.

Long. corp. mill. 7.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Un solo esemplare, probabilmente femmina, di Mahal-Uonz.

Questa specie è somigliantissima alla *C. cyanea* sia per l'aspetto generale che per diversi caratteri; si distingue però subito, e nettamente da essa per la singolare sua scultura, e per la forma dell'ultimo segmento addominale: per i quali caratteri diversifica del pari da tutte le altre specie appartenenti al gruppo della *cyanea* che sono attualmente note.

Il colorito del corpo è uniformemente azurro carico con riflessi verdognoli non ben definiti.

Questa specie è relativamente assai poco brillante, ma piuttosto si direbbe, guardandola, che la il corpo leggermente inoliato. Le antenne ed i tarsi sono neri.

La testa guardata di faccia ha la forma di un trapezio, i cui lati siano curvilinei. L'intervallo fra il punto inferiore degli occhi e la base delle mandibole è multo breve, ed il profilo di questa parte del muso è assai fortemente inclinato verso la bocca. Al disopra della cavità facciale si trova anzitutto una ripiegatura transversale poco pronunziata e rettilinea: poscia sopra a questa se ne vede una seconda ben distincta e rilevata, che è doppiamente curvata; lateralmente quest'ultima sale obliquamente sulla fronte di fianco agli occelli. La punteggiatura della fronte e del vertice è abbastanza fina e granulosa. Sul thorace i punti sono relativamente grossi rotondi regolari vicini fra di loro, ed uniformi su tutta la superficie del medesimo: però sullo scudetto sono alquanto più separati. Il metatorace è bensi sensibilmente gobbo e convesso ma non presenta però alcuna prominenza o tubercolo. La punteggiatura dell' addome è dappertutto regolarissima, uniforme: i punti molto grossi e profondi sono rotondi e distintamente separati da spazi lisci; nel mezzo dell' addome non va ha alcuna traccia nè di carina, ne di qualsiasi rialzo od anche solo di qualche linea liscia, essendo tutti i segmenti punteggiati nel mezzo perfettamente come sui lati. L'area basale del terzo segmento presenta prima del cercine della serie anteapicale due depressioni laterali, confluenti nel mezzo. I buchi della serie sono poco numerosi, grossi, rotondi, e ben distincti fra di loro: il cercine della serie anteapicale è poco alto ed assai declive; è foggiato a semicircolo e nel mezzo si prolunga in una carena ben marcata che attraversa tutto il margine anale e va a finire nel dente di mezzo.

Il margine anale è relativamente breve, leggermente arcuato, e munito di tre robusti denti; il dente centrale ha forma di spina stretta ed allungata; il due laterali invece più piatti e molto larghi alla base presentano piuttosto l'aspetto di un triangolo.

Di questa specie mi venne comunicato un altro esemplare dal Dott. Smith, indicandomelo anch'esso proveniente dall'Africa orientale.»

Patria: Africa æquatorialis (Mahal-Uonz, regnum Scioense, Grib.) et orientalis (Smith).

361. **Chrysis fraterna** n. sp.

Submediocris, elongata, subparallela, minus robusta, cyaneo-viridis, parcius cinereo-alboque pilosa; facie, vertice, pronoto, mesonoti lateribus, scutello postscutelloque plus minusve viridi-subauratis; vertice circa stemmata et mesonoti lobo medio nigro-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

æneis; cavitate faciali profunda, dense punctato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne vix distincte arcuatim marginata; antennis brevibus, crasiusculis, nigris, cano-puberulis, articulis tribus primis viridibus, tertio brevi, quarto vix longiore; genis brevibus, sublinearibus; mandibulis nigris, apice rufis, unidentatis; vertice thoracisque dorso crassius punctato-reticulatis; margine occipitali utrinque angulo parvo prominulo obtuso; pronoto brevi, antice transverso-rectangulo, medio longitudinaliter sulcato, lateribus in medio subarcuatim sat profunde excisis; postscutelli basi foveola centrali minuta; metanoti dentibus postico-lateribus mediocribus, latis, acutis; abdominis segmentis dorsalibus disco cyaneis (in specimine Sansibarensi) vel nigro-violaceis (in speciminibus e Promontorio Bonæ Spei), primo secundoque margine apicali anguste, lateribus late viridi-subauratis, sat crasse, tertio parum subtilius, rugosiuscule-punctatis, subcoriaceis, primo basi trisulcato, sulco mediano lateribus profundiore, 2—3 carinula mediana sat distincta, tertio convexo, supra seriem leniter calloso, foveolis paucis 8—10 tantum distinctis, profundis, cum margine apicali nigro-violaceis, per carinulam medianam in spinam brevem vel mediocrem acutam productam interruptis, margine apicali hoc modo tridenticulato, denticulis lateralibus acute-triangularibus brevibus; ventre pedibusque cyaneo-viridibus vel viridi-subauratis, illo segmento secundo basi macula utrinque et tertio margine apicali nigris, his tarsis albido-testaceis, articulis ultimis infuscatis; alis hyalinis, venis firmis piceis, cellulis: discoidali et radiali lanceolata completis, tegulis cyaneis. — ♂; long. 5½—6½ mm.

Species: antennis, pronoto, punctatura et colore, facile cognoscitur.

Patria: Promontorium Bonæ Spei (Coll. Edmundi André!) et Mombassa Sansibariæ (Mus. Berolinense!).

362. **Chrysis Buyssoni** mihi

Chrysis pellucida, Buyss. Revue d'Entom. VI. p. 183, n. 19. ♂♀. (1887) sec. spec. typ. e coll. Buyssoni (nec *Chrysis* [*Brugmoia*] *pellucida* Rad.).

Submagna, elongata, parallela, capite thorace latiore, cyanea vel virescenti-cyanea, parcius cinereo-alboque pilosa; cavitate faciali profunda, viridi, medio canaliculata et subtilissime transverse-striata, lateribus punctato-coriacea, superne flexuoso-marginata; antennis longis, nigris, scapo viridi, articulo tertio longo, sequentibus duobus simul sumptis longitudine æquali; clypeo subtransverso medio sinuato; genis mediocribus, antennarum articulo quarto æquilongis; vertice dense subtilius, thorace dispersius fortiusque punctato-reticulatis; pronoto transverso-rectangulo, lateribus acute marginatis medioque sinuatis, antice in medio profunde sulcato, truncatura antica spatio polito ac lævi et utrinque foveolis ovalibus instructo; scutello subplanato, metanoto rotundato parum gibboso, dentibus postico-lateralibus subobtusis brevibus; abdominis segmentis dorsalibus lateribus parum viridi-subaureo nitentibus, primo basi trisulcato, sulco mediano profundo, lateribus obsoletis, secundo carinula mediana subpolita, angulis postico-lateribus obtusis, tertio supra seriem anteapicalem incrassato, foveolis per carinulam medianam interruptis magnis ac profundis confluentibus sordide pellucidis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

margine apicali subtruncato, lateribus obtuse angulatis medioque in dentem subacutum producto, emarginaturis oblique subrectis; primo et secundi disco sat sparsim punctatis interstitiisque subtilissime punctulatis, lateribus rugosiusculis, tertio parte basali in medio inæqualiter rugoso; ventralibus viridibus, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, tarsis subnigris; alis subhyalinis, venis fuscis, cellula radiali nec minime angulatim curvata penitus completa, tegulis nigro æneis. — ♂♀; long. 10—11 mm.

Species: corpore parallelo, cavitate faciali subtilissime transverse-striata, pronoto lateribus acute marginatis medioque sinuatis, abdominis basi trisulcata, sed præsertim foveolis magnis confluentibus sordide pellucidis, a congeneribus facile cognoscitur.

Patria: Mons Taurus in Asia minore et China (Coll. Abeillei et Buyssoni!).

363. **Chrysis Singalensis** n. sp.

Submediocris, elongata, subparallela, minus robusta cyaneo-viridis, parcius cinereo-alboque pilosa; facie cum fronte et temporibus, pronoto, scutelli lateribus metathoraceque cum pleuris et pectore viridi-subauratis; vertice circa stemmata et scutello cyaneis; cavitate faciali sat profunda, dense subtilissime punctato-coriacea, medio longitudinaliter canaliculata, superne transversim parum flexuoso-marginata; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridi-subauratis, tertio longo, quarto quintoque simul sumptis fere æquilongo; clypeo in medio carinato-convexo, apice triangulariter exciso nigro-æneo; genis mediocribus, articulo antennarum quarto æquilongis; vertice et pronoto dense, mesonoto dispersius sed fortius, scutello postscutelloque convexo adhuc crassius punctato-reticulatis; margine occipitali utrinque angulo parvo prominulo; pronoto longitudine mediocri, antice transverso-rectangulo medioque leviter sulcato, lateribus marginatis in medio subarcuatim excisis; metanoto dentibus postico-lateralibus mediocribus, latis, acutis, incurvis; abdominis segmentis dorsalibus cyaneis, lateribus et secundo margine apicali viridi-subauratis, primo basi in medio longitudinaliter sulcato, sulco profundo lævi ac polito, lateribus subfoveatis, 2—3 imo basi nigro-æncis, carinula mediana distincta, omnibus sat sparsim minus fortiter ac profunde, parum rugosiuscule-punctatis, tertio disco utrinque parum transverse-immerso, supra seriem modice calloso, foveolis intermediis quattuor profundis sat magnis, rotundatis, lateralibus duabus minutis, per carinulam medianam in spinam valde brevem acutam productam interruptis, margine apicali hoc modo tridenticulato, dentibus lateralibus brevibus acute-triangularibus; ventre pedibusque viridi-subauratis, illo segmento secundo basi utrinque macula, 2—3 margine apicali nigris, his tarsis fuscis; alis hyalinis, venis fuscis, cellulis: discoidali et radiali lanceolata completis, tegulis nigro-æneis, externe virescentibus. — ♀; long. 6½ mm.

Species: maxima ex parte viridi-subaurata, abdominis segmento dorsali primo basi sulco mediano profundo lævi ac polito longitudinali, punctatura et foveolis, facile cognoscitur.

Patria: Ceylon (Mus. Berolinense).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

364. **Chrysis triacantha** n. sp.

Mediocris, elongata, subparallela, sat robusta, cyaneo-viridis, parcius cinereo-alboque pilosa; vertice circa stemmata, mesonoti lobo medio et scutelli disco violascentibus; cavitate faciali profunda, medio longitudinaliter leviter canaliculata, utrinque subtilissime irregulariter transverse-substriata, lateribus punctulato-coriacea argenteo-sericeoque pilosa, superne abbreviatim subarcuato-marginata, margine a fronte parum remoto; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridibus, tertio proportionaliter longo, quarto quintoque simul sumptis æquilongo; genis mediocribus, antennarum articulo quarto æquilongis; vertice thoracisque dorso fere æqualiter crassius punctato-reticulatis; margine occipitali utrinque angulo parvo prominulo; pronoto mediocri, transverso-rectangulo, antice in medio leviter sulcato, lateribus marginatis medioque subarcuatim sat profunde excisis; scutello basi spatio sat lato lævi ac polito subtiliusque punctato; metanoti dentibus postico-lateralibus brevibus, acutis; mesopleuris disco et apice longitudinaliter impressis; abdominis segmentis dorsalibus viridi-cyaneis, secundo margine apicali leviter viridi-subaurato, disco et tertio ante seriem macula transversa abbreviata violascentibus, 2—3 carinula mediana sat distincta, omnibus dense subtilius parum rugosiuscule-punctatis, primo basi sulco mediano longitudinali sat lato lævi ac polito lateribusque fovea levi, tertio supra seriem leniter calloso, foveolis paucis 6 tantum distinctis sat profundis rotundisque per carinulam medianam in spinam brevem acutam productam interruptis, margine apicali hoc modo tridenticulato, dentibus lateralibus brevibus late-triangularibus; ventre, femoribus item tibiisque et metatarso viridi-subauratis, illo segmento secundo basi utrinque macula et segmentorum marginibus nigris, his articulis tarsorum reliquis fuscis; alis subhyalinis, venis firmis piceis, cellulis: discoidali et radiali lanceolata completis, tegulis cyaneis, externe parum virescentibus. — ♀; long. 7 mm.

Statura et magnitudine *Chrysidi trigonae* similis et affinis; sed antennarum articulis duobus primis tantum viridibus, scutello basi spatio lato lævi ac polito subtiliusque punctato, abdominis segmentis dorsalibus immaculatis subtilius rugosiuscule-punctatis, tertio foveolis distinctis, dentibus lateralibus brevioribus late-triangularibus lateribusque ante dentem non sinuatis, distincta.

Patria: Sumatra (Mus. Vindobonense).

365. **Chrysis vestigator** Smith.

Chrysis vestigator, Smith. Journ. Proceed. Linn. Soc. Zoology. II. p. 128, n. 3. (1858).

«Viridis nitens purpureo variegata, punctatissima, abdominis segmentis margine basali nigro-æneis, ano tridenticulato.

Length 3¼ lines. Green, with shades and spots of deep blue; the tarsi, flagellum and mandibles, black; the head and thorax coarsely and deeply punctured, the abdomen more finely so; one or two of the basal joints of the flagellum green above; the

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

region of the ocelli blue. Thorax: a transverse blue line in the middle of the prothorax; the mesothorax with an oblong-quadrate blue shape in the middle; the wings subhyaline with the nervures brown. The abdomen with a central longitudinal smooth line; the middle of the abdomen tinged with rich blue; the apex distinctly tridentate.»

Species quam maxime incomplete descripta, secundum specimen unicum Musæi nostri, est:

Submediocris, gracilis, parallela, cyaneo-viridis, parcius cinereo-alboque pilosa; vertice circa et post stemmata, occipite, collo, pronoto antice anguste fasciaque subarcuata ante marginem apicalem et mesonoti lobis lateralibus ad radicem alarum læte-cyaneis; mesonoti lobo medio nigro-æneo; cavitate faciali minus profunda, dense subtiliter punctulato-coriacea, medio longitudinaliter canaliculata, superne transverse-marginata, margine ramulum utrinque stemma anticum includentem areamque subrotundam insignem et insuper adhuc in medio abbreviatim subarcuate-marginatam emittente; antennis tenuibus, brevibus, fuscis, cano-puberulis, articulis quattuor primis viridibus, tertio longitudine mediocri, quarto parum tantum longiore; genis mediocribus, antennarum articulo quarto æquilongis; vertice dense subtilius, thorace supra crassius dispersiusque punctato-reticulatis; margine occipitali utrinque angulo parvo prominulo; pronoto longo, transverso-rectangulo, antice in medio vix impresso, lateribus marginatis sat profunde subarcuatim excisis; metanoti dentibus postico-lateralibus mediocribus, latis, acutis, parum curvatis; mesopleuris transverse leviter sulcatis; abdominis segmentis dorsalibus duobus primis cyaneo-viridibus, disco macula magna quadrangulari et tertio basi apiceque nigro-violaceis; primo basi sulco mediano sat profundo angusto lævi ac polito longitudinali virescenti lateribusque fovea levi, supra sat sparsim minus fortiter, secundo densius subtiliusque punctatis, interstitiis angustis lævibus, tertio subtilissime coriaceo sparsim punctulato; 2—3 carinula mediana minus distincta cyanescenti; tertio convexo, supra seriem lenissime calloso, foveolis irregularibus magnitudine inæqualibus profundis, latere sinistro tantum tribus, latere dextro e contraio 5 distinctis per carinulam medianam in spinam valde brevem productam interruptis, margine apicali hoc modo tridenticulato, denticulis lateralibus brevibus, acute-triangularibus; ventre, femoribus tibiisque et tarsorum articulis primis supra viridibus, illo segmento secundo basi utrinque macula et marginibus segmentorum nigris, his tarsorum articulis reliquis fuscis; alis hyalinis, venis fuscis, cellulis: discoidali completa, radiali lanceolata incompleta, apice parum aperta, tegulis cyaneis. — ♂; long. 6½ mm.

Species: de area insigni verticis, antennarum articulis quattuor primis viridibus, abdominis segmentis dorsalibus duobus primis macula magna tertioque maxima ex parte nigro-violaceis, huius sculptura subtilissime coriacea sparsimque punctulata et foveolis irregularibus, iam facile cognoscitur.

Patria: Borneo (Smith); Java (Mus. Hung.).

366. **Chrysis seducta** Smith.

Chrysis seducta, Smith, Journ. Proceed. Linn. Soc. Zoology. V. p. 67, n. 4. (1861).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Viridis, nitens, cœruleo-variegata, punctatissima; ano tridentato.

Length 3 1/4 lines. Opake green; head and thorax with strong separate punctures; the abdomen with much finer confluent punctures; the antennæ black; the tarsi fuscous, the basal joint green outside; the abdomen beneath and the legs smooth brillant green; the wings hyaline, the nervures brown; the postscutellum rounded; the lateral angles of the metathorax acute. Abdomen: the segments blue-green, with the apical portion of each bright green, the margin of the apical one tridentate.

This species in closely allied to *C. Bohemanni* of Dahlbom; but it is larger, more robust, and the apical segment of the abdomen is not acutely angular in the middle, but produced into a distinct acute tooth.»

Patria: Celebes (Makassar).

367. **Chrysis trigona** n. sp.

Mediocris, elongata, subparallela, sat robusta, viridi et cyanea, parcius cinereo-alboque pilosa; cavitate faciali profunda, dense punctato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne crasse punctata acuteque abbreviatim marginata, margine a fronte remoto; antennis brevibus, sat tenuibus, nigris, cano-puberulis, articulis tribus primis viridi-subauratis, tertio longitudine mediocri, quarto quintoque simul sumptis subæquali; genis mediocribus, articulo antennarum quarto æquilongis, basi foveatis; vertice thoracisque dorso fere æqualiter crassius punctato-reticulatis; margine occipitali utrinque angulo parvo prominulo spinoideo; pronoto longitudine mediocri, transverso-rectangulo, antice in medio lenissime impresso, lateribus marginatis medioque sat profunde subarcuatim excisis; metanoti dentibus postico-lateralibus mediocribus acute-triangularibus; mesopleuris sat profunde transverse-sulcatis; abdominis segmentis dorsalibus viridi-cyaneis, secundo tertioque lateribus et margine apicali læte-viridibus, omnibus disco utrinque macula sat magna subviolacea ornatis, maculis in primo tertioque non tam distinctis, quam in secundo, primo basi in medio longitudinaliter sulcato, sulco sat lato sublævi, lateribus fovea minuta, secundo carinula mediana distincta, 2—3 imo basi nigro-violaceis; segmentis duobus primis, præsertim secundo, crasse, tertio multo subtilius rugoso-punctatis, hoc convexo, supra seriem vix calloso, foveolis minutis paucis rotundis subobliteratis, margine apicali tridenticulato, denticulis: centrali brevi, acuto, lateralibus parum longioribus acute-triangularibus, emarginaturis subarcuatis, lateribus ante denticulos leniter sinuatis; ventre pedibusque viridi-subauratis, illo segmento secundo basi utrinque macula et marginibus segmentorum nigris, his tarsis fuscis; alis hyalinis, venis fuscis, cellulis: discoidali completa, radiali lanceolata incompleta, apice parum aperta, tegulis viridi-cyaneis. — ♀; long. 7 1/2 mm.

Species: cavitate faciali superne crasse punctata acuteque abbreviatim marginata, margine a fronte remoto, mesopleuris sat profunde transverse-sulcatis, abdominis segmentis dorsalibus maculis sex subviolaceis ornatis, tertii foveolis minutis paucis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

rotundatis subobliteratis, lateribus ante denticulos laterales leniter sinuatis, a congeneribus facile cognoscitur.

Patria: Celebes (Bonthain, Mus. Hung.).

368. **Chrysis aspera** Brullé.

Chrysis aspera, Brullé, Hym. IV. p. 46, n. 35. ♀ (1846).

«Viridis, supra cyanea, abdominis segmentis marginibus lineisque 2 thoracis aureis, alis subhyalinis, scabra, tenuiter punctata, abdominis segmento tertio tri-dentato. Fem.

Il est vert, avec le dessus du corps bleu; l'écusson et le métathorax sont verts; le bord postérieur des segments de l'abdomen, le bourrelet du troisième segment et une ligne longitudinale sur le milieu des lobes moyens du mésothorax, sont d'un vert doré. Les ailes sont presque transparentes.

Le corps est assez finement ponctué, surtout l'abdomen, et les points laissent entre eux des intervalles qui sont élevés, finement rugueux et ressemblent, sur l'abdomen, aux aspérités d'une râpe; les points sont presque confluents sur le dos du thorax. La fossette faciale est profonde, finement plissée et creusée d'impressions inégales, anguleux et comme bilobè. Le prothorax présente en arriére une petite fossette transversale qui est d'un bleu violet. Les sillons interlobulaires du mésothorax sont bien marqués; le métathorax est saillant, sans prolongement: les deux régions concourent à former cette saillie. La base de l'abdomen présente trois fossettes, dont la moyenne est la plus profonde; la ligne moyenne est un peu indiquée, mais elle n'est point lisse; le bourrelet du troisième segment est assez épais et suivi d'une rangée de gros points; le bord présente trois dents saillantes dont les intervalles sont un peu ondulés. — Longueur: 0.007.»

Patria: Manilla in insulis Philippinis.

369. **Chrysis Luzonica** n. sp.

Submediocris, elongata, subparallela, sat robusta, læte-viridis, parcius cinereo-alboque pilosa; vertice circa stemmata, pronoti medio mesonotoque ænescentibus; cavitate faciali profunda, medio longitudinaliter canaliculata, utrinque subtilissime subtransverse-striata, lateribus punctulato-coriacea, superne sat crasse punctata et triangulariter subarcuatim marginata, margine ramulum utrinque stemma anticum includentem areamque cordiformem formantem emittente; antennis tenuibus, nigris, cano-puberulis, articulo primo viridi, secundo supra ænescenti, tertio longitudine mediocri, quarto quintoque simul sumptis æquali; genis brevibus, articulo antennarum secundo vix longioribus; vertice dense minus crasse, thorace supra crassius dispersiusque minus regulariter punctato-reticulatis; pronoto minus longo, transverso-rectangulo, antice in medio leviter sulcato, lateribus marginatis medioque sat profunde subarcuatim excisis; metanoti dentibus postico-lateralibus mediocribus, latis, acutis; abdominis segmentis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

dorsalibus cyaneis, lateribus late et 2—3 margine apicali tertioque etiam supra seriem anteapicalem viridi-subauratis; primo sat sparsim fortius, secundo densius sed subtilius, tertio adhuc magis subtiliter rugosiuscule-punctatis; primo basi in medio longitudinaliter sulcato, lateribus leviter foveatis; secundo carinula mediana distincta; tertio convexo, supra seriem calloso, foveolis paucis, 6 tantum, magnis ac profundis rotundisque per carinulam medianam in spinam brevem acutam triangularem productam interruptis, margine apicali hoc modo tridenticulato, denticulis lateralibus brevibus acute-triangularibus; ventre pedibusque viridi-subauratis, illo segmento secundo basi utrinque macula et marginibus apicalibus nigris, his tarsis fuscis; alis hyalinis, venis fuscis, cellulis: discoidali completa, radiali lanceolata incompleta, apice parum aperta, tegulis viridi-subauratis. — ♀; long. 5½ mm.

Species: de cavitate faciali, vertice circa stemmata, pronoti medio mesonotoque ænescentibus, area insigni cordiformi verticis, punctatura abdominis et huius segmenti tertii foveolis paucis magnis ac profundis, a congeneribus optime distinguenda.

Patria: Luçon in insulis Philippinis (Coll. Rad.).

II. *Postscutellum subconicum parum productum (in Chrys. gibbosa Mocs. gibbo-convexum) apice sublacerum; corpus cyaneum et viride, saepius maculis violaceis vel nigro-violaceis ornatum.*

*

Conspectus specierum mihi cognitarum huius sectionis:

1 (6). Corpore plerumque mediocri, non ultra 8½ mm. magno.

2 (3). Abdominis segmenti dorsalis tertii margine apicali carinula mediana ante marginem summum desinente, in dentem non exeunte, denticulo centrali hoc modo obtuse-arcuato ... ... *truncatella* Dhlb.

3 (2). Abdominis segmenti dorsalis tertii margine apicali carinula mediana in spinam acutam vel subacutam producta.

4 (5). Corpore sat robusto, viridi vel viridi-cyaneo, abdominis segmentis dorsalibus duobus primis macula ampla magnaque et tertii vitta mediana margineque apicali nigro-violaceis; cavitate faciali superne flexuoso-marginata, margine sæpius ramulum utrinque stemma anticum includentem vel abbreviatum emittente ... ... *mucronata* Brullé.

5 (4). Corpore sat gracili, toto cyaneo parumque virescenti, abdominis segmentis dorsalibus sine maculis nigro-violaceis; cavitate faciali superne acute-marginata, margine leniter arcuato, ramulum utrinque ad stemma anticum non emittente ... ... *aliena* n. sp.

6 (1). Corpore plerumque submagno vel magno, 8—12 mm. longo.

7 (8). Postscutello gibbo-convexo: abdominis segmenti dorsalis tertii margine apicali carinula mediana in denticulum brevem late-triangularem producta, ipso margine apicali oblique-truncato ... ... *gibbosa* n. sp.

8 (7). Postscutello subconico parum producto; abdominis segmenti tertii margine

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

apicali carinula mediana in denticulum longiorem subacutam producta, ipso margine apicali transverse- vel subtransverse-truncato.

9(10). Corpore subangusto, parallelo; cavitate faciali superne acute transverse-marginata, margine ramulum utrinque arcuatum stemma anticum includentem areamque insignem formantem et alium adhuc lateralem brevem emittente; abdominis segmenti dorsalis tertii foveolis minoribus separatis, non confluentibus.

Brasiliana GUÉR.

10 (9). Corpore sat robusto vel robusto; cavitate faciali superne flexuoso-marginata, margine ramulum non ita emittente, ut ille aream insignem includeret; abdominis segmenti tertii dorsalis foveolis valde magnis, irregularibus, confluentibus ... ... *tridens* LEP. et SERV.

*

370. **Chrysis mucronata** BRULLÉ.

Chrysis mucronata, Brullé, Hym. IV. p. 45, n. 33. ♀. (1846). — ? Nort. Transact. Amer. Ent. Soc. VII. p. 242. ♂ ♀. (1879).

Chrysis lunigera, Dhlb. Hym. Europ. II. p. 194, n. 104. ♀. (1854). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 19. (genit. maris) (1888).

Chrysis selenia, Costa, Annuario Mus. Zoolog. Napoli. II. p. 67, n. 1968. (1864). — Cam. Biolog. Centr.-Americ. Hym. p. 462, n. 5. (1888).

Submagna vel mediocris, elongata, robusta vel minus robusta, viridis vel viridi-cyanea, parcius cinereo-alboque pilosa; cavitate faciali sat profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne flexuoso-marginata, margine sæpius ramulum utrinque stemma anticum includentem vel abbreviatum, nonnihil etiam adhuc alium lateralem brevem emittente; antennis sat longis, crassis, nigris, articulis tribus primis læte-viridibus vel viridi-cyaneis, tertio proportionaliter brevi, quarto parum tantum longiore; genis mediocribus, articulo antennarum tertio æquilongis; vertice thoracisque dorso fere æqualiter crasse profundeque punctato-reticulatis; pronoto sat longo, transverso-rectangulo, antice sulco mediano sat profundo cum fovea basali postscutelli plerumque violaceis, huius mucrone brevi, sat crasso, apice sublacero; metanoti dentibus postico-lateralibus validis, latis, acutis; abdominis segmentis dorsalibus convexis viridibus vel viridi-cyaneis, primo secundoque macula ampla magnaque, tertii vitta mediana, 2—3 imo basi et tertii margine apicali nigro-violaceis, primo disco crasse sat sparsim, secundo tertioque parum subtilius (ubi macula nigro-violaceæ adsunt), lateribus parum rugosiuscule-punctatis, interstitiis lævibus, 2—3 carinula mediana minus distincta sat lata ac lævi, tertio supra seriem anteapicalem modice calloso, foveolis magnis ac profundis irregularibus confluentibus violaceis lævibus, per carinulam medianam in spinam acutam sat longe-productam, nonnunquam viridem, interruptis, margine summo apicali utrinque truncato, denticulis lateralibus ex utroque angulo apicali-laterali formatis obtusis, vel rarius minutis acute-triangularibus; ventre, femoribus item et tibiis tarsorumque articulis anticis supra viri-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

dibus vel viridi-cyaneis, illo segmento secundo basi utrinque macula et marginibus nigris, his articulis tarsorum reliquis et anticis subtus fuscis; alis parum fumato-hyalinis, venis fuscis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis violaceis. — ♂ ♀ ; long. 6½—8½ mm.

Species: a *Chrys. truncatella* Dhlb. postscutello magis producto, maculis abdominis et segmenti secundi disco sparsim punctato, interstitiis latis, foveolis confluentibus, marginis apicalis carinula in spinam acutam sat magnam producta, ipso margine apicali lævi ac polito, satis superque distincta.

Variat: in uno specimine e Musæo Cæsareo Vindobonensi maculis abdominis nigro-violaceis indistinctis.

«*Armure*. La branche du forceps ressemble à celle de l'espèce précédente (Chrys. cyanea L.), mais la partie allongée est droite. Volsella moins large. Les crochets quoique pareils, mais rétrécis au milieu. Le couvercle génital représenté sur la fig. 39k.» (Rad. l. c. tab. III. fig. 39a, 39b, 39f, 39i).

Patria: Mexico (Brullé, Costa, Mus. Hung. et Coll. Radoszkovszkyi! et Saussurei!); California meridionalis Coll. Saussurei!); America meridionalis (Dhlb.); Brasilia (Blumenau, Mus. Hung. et Vindob.!).

Animadversio. — Nortoni species mihi dubiosa esse videtur, quia ille verbis sequentibus utitur: «Color a brillant green and violet, with black-blue spots upon the tergum (not the band which appear when the tergum is bent). This is probably a variety of C. *parvula*.» — Clarissimus Dom. Aaron quoque *Chrysidem mucronatam* Brullé cum *Chryside parvula* Fabr. eandem esse speciem opinatur verbisque sequentibus utitur (Transact. Amer. Ent. Soc. XII. 1885, p. 231): «The forms of *parvula* and *mucronata* have no constant characters to separate them. The carina acrost the front is sometimes entirely without the upward branches, and there is every intermediate form between this and two strong branching carina on each side, on near the anterior ocellus. Other specimens have the inner carina strong, the outer hardly present. There is also no difference in the projection of the metathorax as mentioned by Brullé. There is a considerable variation in the relative size of the apical teeth, the outer ones in some specimens being only sharp angles of 100° and the median tooth short, while in others the outer teeth are well produced and the median one long and slender, sometimes a little bent down; also all forms between these extremes. The color is from dark blue with purple and some green reflections to emerald-green with no blue or purple. The anteapical series of pits differ in size and shape. Varies in size from 7 11 mm. United States and Mexico. In all fifty-three specimens, including the type of *virens* Cresson, which does not differ.» — Ego e contrario penitus persuasus sum, ambas species bene distinctas et Brulléi *Chr. mucronatam* ad *Chrys. lunigeram* Dhb. esse referendam, prouti hoc e descriptione sequenti Brulléi optime videtur.

«Viridis, abdominis apice violaceo, alis subhyalinis, dense punctata, metathoracis basi producta, abdominis segmento tertio apice carinato, mucronato, vix tri-dentato. Fem.

Il est vert, avec le dos des deux premiers segments de l'abdomen d'un bleu foncé, ainsi que l'extrémité du troisième segment. Les ailes sont presque transparentes, avec le bord de la radiale enfumé.

Le corps est criblé de gros points qui se touchent sur la tête et le thorax et sont un peu écartés sur l'abdomen; les intervalles de ces points sont finement ponctués, au moins sur les côtés de l'abdomen. Les lignes saillantes de la région frontale sont disposées comme dans le précédent (Chrys. producta Brullé), ainsi que la fossette et les sillons interlobulaires des deux premiers anneaux du thorax.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

La première région du métathorax offre à sa base une petite fossette triangulaire et se prolonge à son extrémité en une saillie peu épaisse et presque pointue. La base de l'abdomen est fortement lobée, la ligne moyenne tout à fait insensible ; le troisième segment sans bourrelet distinct, si ce n'est que son bord est indiqué par une rangée de gros points très-irreguliers ; le bord postérieur, qui est lisse à partir de la rangée de gros points, est armé au milieu d'une dent qui naît de la région où cesse le bourrelet et forme une ligne saillante, ou espèce de caréne, qui s'avance au delà du bord ; les angles extérieurs du troisième segment sont à peine avancés.

Longueur : 0,008. »

371. **Chrysis truncatella** Dhlb.

Chrysis truncatella, Dhlb. Hym. Europ. II. p. 195, n. 105. ♀. tab. X. fig. 107. ♀. (1854).

Mediocris, elongata, minus robusta, viridis vel viridi-cyanea plus minusve nigro-violaceo-picta, breviter cinereo-alboque pilosa ; cavitate faciali minus profunda, nitida, punctulato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne transverse-marginata, margine ramulum utrinque stemma anticum includentem areamque insignem formantem emittente ; antennis sat longis, crassis, fuscis, articulis tribus primis viridi-subauratis, tertio brevi, secundo parum tantum longiore ; genis mediocribus, antennarum articulo tertio æquilongis ; vertice et pronoto densius parumque subtilius, mesonoto cum scutello postscutelloque crasse punctato-reticulatis ; pronoto sat longo, antice transverso-rectangulo, sulco mediano longitudinali brevi, sat profundo, subovali, violascenti, lateribus subtus in medio emarginato ; postscutelli mucrone valde brevi, crasso, apice sublacero ; metanoti dentibus postico-lateralibus validis, subacutis ; mesopleuris crasse punctatis ; abdominis segmentis dorsalibus viridibus vel viridi-cyaneis, disco nigro-violascentibus, segmenti primi parte truncata in medio leviter canaliculata, utrinque fortius impressis, secundo carinula mediana abbreviata et tertii apicali distinctis, imo basi late nigro-violaceis sparsim crasse punctatis ; primo crasse sat sparsim, secundo densius subtiliusque, tertio adhuc subtilius parum rugosiuscule-punctatis, interstitiis impunctatis, tertio supra seriem convexo, foveolis tantum sex distinctis magnis ac profundis, per carinulam medianam ante marginem summum desinentem et in dentem non exeuntem interruptis, cum margine apicali truncato subtridenticulato sparsimque punctulato violaceis, denticulis : centrali obtuse-arcuato, lateralibus ex utroque angulo apicali-laterali formatis acute- vel subacute-triangularibus ; ventre, femoribus tibiisque et tarsorum articulis supra viridibus, his subtus fuscis ; alis parum fumato-hyalinis, venis piceis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis viridi-cyaneis. — ♀ ; long. 8. mm.

Species : forma marginis apicalis tantum *Chrys. gibbosa* mihi similis.

Patria : Brasilia (Dhlb. ; Blumenau, Mus. Hung.).

372. **Chrysis aliena** n. sp.

Mediocris, elongata, sat gracilis, parallela, parcius cinereo-alboque pilosa, tota cyanea, solum orbitis internis, metapleuris, abdominisque segmentis dorsalibus duobus

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

primis margine apicali anguste parum virescentibus; cavitate faciali planiuscula, dense punctato-coriacea, lateribus parcius argenteo-sericeo-pilosa, superne acute marginata, margine leniter arcuato; antennis tenuibus, sat longis, fuscis, articulis tribus primis viridi-cyaneis, tertio longitudine mediocri, quarto quintoque simul sumptis parum breviore; macula circa stemmata, vitta mediana scutelli postscutellique nigro-violaceis; pronoto brevi, transverso-rectangulo, antice in medio leviter sulcato; vertice, pro- et mesonoto dense minus crasse, scutello postscutelloque parum crassius punctato-reticulatis, postscutelli mucrone valde brevi, late-subconico, apice sublacero; abdominis segmentis dorsalibus: duobus primis dense sat crasse, tertio parte basali densius subtiliusque subrugoso-punctatis, secundo tertioque carinula mediana sat lata, lævi ac polita, tertio supra seriem non incrassato, foveolis violaceis magnis ac profundis circiter 8 confluentibus et lateralibus minutis circa 6 violaceis medio per carinulam denticulo parvo subacuto terminatam interruptis, margine apicali subtilissime punctulato, depresso, truncato, denticulis lateralibus ex utroque angulo apicali-laterali formatis; ventre, femoribus item tibiisque et tarsorum articulis externe cyaneis; alis subhyalinis, iridescentibus, cellula radiali lanceolata subcompleta, tegulis cyaneis. — ♀; long. 7 mm.

Chrysidi truncatulae Dhlb. similis et affinis; sed minor, magis gracilis, tota cyanea, fronte aliter marginata, supra ubique multo densius subtiliusque punctato-reticulata, punctatura abdominisque multo densiore, segmento tertio margine apicali denticulo centrali parvo subacuto (non late-obtuso-arcuato), bene distincta.

Patria: Brasilia (Blumenau, Mus. Hung.).

373. **Chrysis Brasiliana** Guér.

Chrysis brasiliana, Guér. Revue Zoolog. p. 146, n. 8. (1842).
Chrysis producta, Brullé, Hym. IV. p. 44, n. 32. ♀. (1846).

Mediocris vel submagna, elongata, minus robusta, viridis vel viridi-cyanea, parcius cinereo-alboque pilosa; vertice circa stemmata, pronoti sulco et fovea basali postscutelli nigro-violaceis; cavitate faciali profunda, dense punctato-coriacea, medio longitudinaliter canaliculata, utrinque dense cinereo-pilosa, superne acute transverse-marginata, margine ramulum utrinque arcuatum stemma anticum includentem areamque insignem formantem et alium adhuc lateralem parum divergentem brevem cum oculis parallelum emittente; antennis longitudine mediocribus, crassis, nigris, cinereo-puberulis, articulis tribus vel quattuor primis viridibus vel viridi-cyaneis, tertio sat longo, quarto quintoque simul sumptis tamen breviore; clypeo nonnunquam ænescenti, medio carinato-convexo, apicis medio triangulariter exciso nigroque æneo; labro exserto semicirculari, gibbo; genis sat longis, articulo antennarum quarto æquilongis; mandibulis nigris, unidentatis; vertice post stemmata thoraceque supra crasse regulariter punctato-reticulatis; margine occipitali utrinque angulo parvo subspinoideo; pronoto longo, transverso-rectangulo, antice in medio sulco longitudinali levi; scutello basi

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

fovea centrali profunda, postice obtuse-conico, brevi, crasso, apice prominulo sublacero; metanoti dentibus postico-lateralibus robustis, triangularibus, subacutis; abdominis segmentis dorsalibus viridibus vel viridi-cyaneis, sæpius violascentibus, margine apicali et foveolis semper violascentibus; primo basi in medio leniter sulcato, utrinque profunde fossulato, sulco et fossulis lævibus ac politis, 2—3 plerumque carinula mediana lævi ac polita sat lata, rarius angusta et minus distincta; primo crasse sat sparsim, reliquis densius subtiliusque subrugose-punctatis (punctatura in mare parum fortiore, quam in femina); tertio supra seriem non calloso foveolis irregularibus magnis, lateralibus minutis, 12—14 per carinulam medianam in spinam brevem subacutam productam interruptis, margine apicali longo, sublævi, truncato, hoc modo tridenticulato, denticulis lateralibus parvis, subacutis, centrali vix longioribus, emarginaturis utrinque leniter subarcuatis; ventre, femoribus tibiisque et tarsorum articulis supra viridibus vel viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis subtus fuscis; alis parum subfumato-hyalinis, venis firmis piceis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis cyaneis vel violascentibus. — ♂♀; long. 8½—10 mm.

Chrys. tridenti Lep. et Serv. (parvulæ Dhlb.) simillima; sed minor, magis elongata minusve robusta, area insigni verticis, carinula segmentorum dorsalium abdominis 2—3 magis distincta et latiore, tertio foveolis minoribus separatis, non confluentibus, marginis apicalis denticulo centrali dimidio breviore subacuto, denticulis quoque lateribus minoribus, bene distincta.

Patria: Brasilia (Rio-Janeiro, Guér.; Blumenau in Prov. Sta Catharina, Mus. Hung.; prov. des Mines, Brullé).

374. **Chrysis gibbosa** n. sp.

Magna, robusta, viridis et cyanea: *Chrys. Brasilianae* Guér., *tridentis* Lep. et Serv. et *truncatellae* Dhlb. socia; sed ab omnibus postscutello gibbo-convexo apiceque sublacero; a *Chrys. Brasiliana* insuper: corpore robusto, abdominis segmento dorsali primo crassius punctato, tertio marginis apicalis carinula in denticulum adhuc breviorem latetriangularem producta, ipso margine utrinque oblique-truncato, denticulis lateralibus ab ipso angulo laterali-apicali formatis triangularibus; a *Chrys. tridente* insuper: area insigni verticis (sicut in Chrys. Brasiliana), foveolis abdominis segmenti dorsalis tertii minoribus magisque distinctis, ipso margine apicali utrinque oblique-truncato, denticulis non sat magnis et acutis; a *Chrys. truncatella* insuper, margine apicali abdominis simillima: corpore magno ac multo robusto, verticis margine præter aream insignem alium adhuc ramulum brevem lateralem oculis parallelum demittente, abdominis segmenti dorsalis tertii foveolis multo minoribus — optime distinguenda.

Patria: Mexico (Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

375. **Chrysis tridens** Lep. et Serv.

? *Chrysis parvula*, Fabr. Syst. Piez. p. 176, n. 30. (1804). — Dhlb. Hym. Europ. II. p. 191, n. 103. ♂ ♀. tab. X. fig. 106 (1854). — Nort. Transact. Amer. Ent. Soc. VII. p. 242. (1879). — Aar. Transact. Amer. Ent. Soc. XII. ♂ ♀. tab. VIII. fig. 46. (postscutell.), fig. 47. (segm. anale) (1885) excl. *Chr. mucronatae* Brullé syn. — Cam. Biolog. Centr.-Amer. Hym. p. 462, n. 4. tab. XX. fig. 6, 6a (1888) excl. *Chrys. mucronatae* Brullé syn.

Pyria tridens, Lep. et Serv. Encycl. Méth. X. p. 495, n. 3. ♀. (1825).

Chrysis carinata, Say, Contrib. Maclur. Lyc. I. p. 82, n. 2. (1828). — Lec. Ins. of North Amer. I. p. 384, n. 2. (1859) (nec Guér., nec Dhlb.).

Chrysis truncata, Guér. Revue Zoolog. p. 146, n. 7. ♂ ♀. (1842).

Chrysis mexicana, Guér. Revue Zoolog. p. 147. (1842); Icon. regn. anim. Insect. p. 418, pl. 68, fig. 9. (1844) (nec Cam.).

Chrysis tridentata, Dhlb. Dispos. p. 13, n. 22. (1845).

Chrysis tridens, Brullé, Hym. IV. p. 46, n. 34. ♀. (1846).

Chrysis unicolor, Brullé, Hym. IV. p. 42, n. 30. ♀. (1846) (nec Dhlb., nec Luc.).

Chrysis virens, Cress. Proceed. Entom. Soc. Philad. IV. p. 309, n. 5. ♀. (1865).

Chrysis Brulléi, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 42. (1879).

Submagna vel magna, elongata, sat robusta vel robusta, viridi-cyanea vel cyaneo-viridis, rarius viridis parumque viridi-subaurata (mexicana Guér.), parcius cinereo-alboque pilosa; cavitate faciali submagna, sat profunda, plerumque viridi, nitida, punctato-coriacea, in locis minutis subtiliter minus distincte transverse-striata, secundum medium subcarinulata, lateribus cano-sericeo-pilosa, superne transverse flexuoso-marginata, margine utrinque nonnunquam biramuloso aream distinctam non includente; antennis crassis, longitudine mediocribus, fuscis, cinereo-puberulis, articulis tribus vel quattuor primis viridibus vel viridi-cyaneis, tertio sat longo, quarto quintoque simul sumptis parum breviore; clypeo mediocri, sparsim punctato, rarius viridi-subaurato, medio carinato, apice nigro-æneo, centro triangulariter exciso; labro exserto semicirculari, gibbo; genis sat longis, crasse punctatis, articulo antennarum tertio æquilongis; margine occipitali utrinque spinula minuta armato; vertice thoracisque dorso crasse profundeque regulariter punctato-reticulatis; pronoto longo, transverso-rectangulo, antice in medio sulco longitudinali levi; postscutello conico, basi fovea centrali rotundata, apice prominulo, obtuso, sublacero; metanoti dentibus postico-lateralibus robustis, triangularibus, subacutis; abdominis segmentis dorsalibus cyaneis vel viridi-cyaneis, rarius violascentibus vel viridibus et segmento secundo disco subviolaceo-maculato (mexicana Guér.), 2—3 imo basi nigro-æneis; primo basi in medio profunde sulcato, utrinque profunde fossulato, sulco fossulisque lævibus supra crasse sat sparsim, secundo tertioque densius subtiliusque subrugoso-punctatis; secundo carinula mediana plerumque sat distincta; tertio supra seriem vix calloso, foveolis valde magnis, violaceis, irregularibus confluentibusque per carinulam medianam in spinam sat longam acutam productam interruptis, margine apicali longo, truncato, plerumque violaceo, sublævi, hoc modo tridenticulato, denticulis lateralibus acute-triangularibus centrali brevioribus, emarginaturis subtransversis; ventre, femoribus tibiisque et tarsorum articulis supra

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

viridibus vel viridi-subauratis, illo segmento secundo basi utrinque macula nigra, his subtus fuscis; alis parum subfumato-hyalinis, venis firmis nigro-piceis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis violascentibus vel viridi-cyaneis. — ♂ ♀ ; long. 8—12 mm.

Patria: America septentrionalis (Status Uniti [United States], Musæa omnia; Mexico, Guér., Dhlb., Mus. Hung. et Coll. Saussurei!; California, Coll. Saussurei!; Guatemala, Nicaragua, Panama, Cam. — Brasilia??

Animadversio. — Descriptio *Chrysidis parvulae* apud Fabricium sequens est: «Viridis, nitida, abdomine subcœrulescente; ano integro. Habitat in America meridionali Dom. Smidt. Mus. Dom. Lund. Parva. Caput et thorax scabra, viridia, immaculata. Antennæ nigræ; articulo primo subtus viridi. Abdomen cœrulescens ano omnino integro. Alæ obscuræ.» Dubium iustum oritur, an Dahlbomus re vera specimina typica ante se habuerit, quamvis dicat: «secundum specimina typica in Museis Havniensi et Kiliensi æstate 1847 a me examinata.» — quia hæc verba animali descripto nec minime conveniunt. Si Dahlbomus re vera vidit specimina typica, tunc denominatio divi Fabricii satis erronea et descriptio incompleta et quam maxime falsa est. Species enim una Chrysididarum (in quibus exemplaria a 3—20 mm. longitudine gaudent et plerumque non ultra 10 mm. magnitudinis sunt), 8—12 mm. longa «parvula» dici non potest. Synonyma diversa inde orta sunt. Quia porro species Americam meridionalem haud inhabitat, quoniam ego in exemplaribus numerosis Musæorum coram me iacentibus talem non inveni, quæ circumstantia quoque dubium iustum de specie Fabriciana involvit; et in scientia contradictio iam in se et falsa denominatio subsistere non possunt: Lepeletieri et Servillei denominationem optime introducendam et animal *Chrysidem tridentem* vocandum esse censeo.

376. **Chrysis Olivieri** Brullé.

Chrysis Olivieri, Brullé. Hym. IV. p. 43, n. 31. ♀. (1846).

«Viridis, alis fuscis, dense punctata, metathorace producto, truncato, basi foveolato, segmento tertio tridentato.

Il ressemble beaucoup au précédent (Chrysis unicolor Brullé) et comme lui il est vert, avec les quatre premiers articles des antennes de cette couleur et même entiérement verts ou à peu près. Les ailes sont enfumées, avec le bord de la radiale plus obscur.

Le corps est criblé de point qui se touchent presque et sont assez écartés sur l'abdomen. Les intervalles qui séparent les points sont très-finement ponctués sur l'abdomen et le sont plus fortement sur le reste du corps. La fossette de la face est creusée d'un sillon et son bord postérieur est saillant, finement ondulé et un peu arqué. La fossette du prothorax n'est guère indiquée que par un trait brun. Le lobe median du mésothorax est brun en arrière, comme dans le précédent; les sillons interlobulaires sont très-étroits. La première région du métathorax se prolonge et un lobe triangulaire, plat en dessous, tronqué à l'extrémité; la base de cette région présente une petite fossette double. La base de l'abdomen offre une grande impression trilobée; la ligne moyenne est peu indiquée et finement ponctuée; la partie postérieure du troisième segment est lisse et creusée, de chaque côté de la ligne moyenne, d'une fossette dans lequelle ou remarque quelques gros points; la ligne moyenne se prolonge, au-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

delà du bord qui est droit, en forme de dent et les angles latéraux se prolongent aussi en manière de dent plus courte que celle du milieu et accompagnée en dedans d'un légère échancrure.

Longueur: 0,011.

Hab. les Dardanelles; Olivier. C. M.

Obs. Le sillon de la fossette faciale, la saillie tronquée de la première région du métathorax, à légère échancrure au côté interne de chaque dentelure extérieure du bout de l'abdomen; tels sont à peu près les caractères distinctifs de cette espèce, tellement voisine de la précédente (Chrys. unicolor Brullé) que, sans la différence de l'habitation, on serait tenté de les réunir.»

Patria: ad Dardanellas.

Animadversio. - - Patria certe falsa est et species e fauna Europæa iuste expellenda vel solum, verisimiliter ex America, navibus importata.

III. *Postscutellum in spinam longam acutam vel subacutam productum; corpus cyaneum et viride, maculis nigro-violaceis ornatum.*

377. **Chrysis Amazonica** n. sp.

Submagna, elongata, subparallela, minus robusta, parce cinereo-alboque pilosa, læte-viridi-cyanea; cavitate faciali, oculorum orbitis internis et temporalibus, postscutelli mucronis carina, pleuris, abdominis segmento primo dorsali lateribus et secundo margine apicali anguste ventreque aurato- vel subaurato-viridibus; macula minuta verticis circa stemmata et aliis magnis mesonoti ad basin et lobi medii parte postica abdominisque segmentis dorsalibus duobus primis imo basi nigro-violaceis; colli medio, sulco transverso inter lobum medium mesonoti et postscutellum, fovea postscutelli et seriei anteapicalis utrinque ad carinulam medianam segmenti tertii tegulisque alarum læte-violaceis, lævibus ac politis; cavitate faciali profunda, dense punctato-coriacea, medio canaliculata, superne acute transverse-marginata, margine utrinque ad oculos supra subtusque ramulum perpendicularem parallelum abbreviatum emittente; antennis crassiusculis, longis, nigro-fuscis, articulis tribus primis viridibus, tertio supra cyanescente, longitudine mediocri, quarto dimidio longiore; clypei apice nigro-æneo, medio exciso, supra carinato; genis mediocribus, articulo primo flagelli æquilongis; vertice thoracisque dorso dense crasseque punctato-reticulatis; pronoto longitudine mediocri, transverso-rectangulo, antice in medio non sulcato; postscutello mucronato, mucrone valido, longo, triangulari, apice subacuto, supra carinato, carina lævi ac polita, splendidissima, utrinque scrobiculato (fere sicut in Chryside lyncea Fabr., mucrone tamen non tam obtuso), mesopleuris scrobiculatis interstitiisque subtiliter punctatis, subtus triangulariter productis, acute marginatis, apice mucronatis, mucrone sat magno, obtusedentiformi; abdominis segmentis dorsalibus: primo basi in medio profunde longitudinaliter sulcato lateribusque profunde fossulatis, supra sat sparsim crasse, secundo tertioque multo densius subtiliusque rugoso-punctatis, secundo tertioque carinula mediana

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

distincta sublævi, hoc apicem versus fortiter angustato supra seriem non incrassato, foveolis irregularibus paucis, lateralibus circiter tribus parvis, rotundis, duabus centralibus per carinulam centralem in denticulum parvum triangularem acutum exeuntem divisis valde magnis fossulatis, margine apicali sparsim punctato denseque subtilissime punctulatis, dentibus duobus lateralibus acute-triangularibus, parvis, emarginaturis minus profundis, leniter arcuatis; ventre segmento secundo basi utrinque macula elongata nigra notato lateribusque læte viridi-auratis; femoribus tibiisque et tarsorum articulis supra cyaneo-viridibus, his subtus fuscis; alis parum subfumato-hyalinis, iridescentibus, venis piceis, cellula radiali lanceolata fere completa. — ♀; long. 10 mm.

Species hæc eximia: characteribus allatis a congeneribus facillime distinguenda.

Patria: Brasilia ad Amazonas (Villa Bella, Mus. Hung.).

378. **Chrysis Ritsemæ** n. sp.

Parva, elongata, sat robusta, læte-viridis subaureo nitens, parcius cinereo-alboque pilosa; vertice post stemmata, collo, pronoto antice in medio, lobo medio mesonoti antice posticeque et lateralibus anguste, linea longitudinali scutelli, fovea minuta basali postscutelli, macula magna discoidali in abdominis segmentis dorsalibus primo secundoque, 2—3 parte basali late, carinula mediana tertii et huius parte apicali nigro-violaceis; cavitate faciali profunda, dense subtiliter irregulariterque transverse-substriata, lateribus cinereo-pilosa, superne arcuatim leniter abbreviatimque marginata; antennis crassiusculis, brevibus, fusco-nigris, cinereo-puberulis, articulis tribus primis læte-viridibus, tertio brevi, quarto parum tantum longiore; genis brevibus, articulo antennarum secundo æquilongis; vertice et thoracis dorso crasse punctato-reticulatis; pronoto sat longo, transverse-rectangulo, antice in medio parum impresso; postscutello mucronato, mucrone triangulari sat longo, acuto, spiniformi; metanoti dentibus postico-lateralibus longis, acutis, incurvis; abdominis segmentis dorsalibus: primo basi longitudinaliter profunde sulcato lateralibusque profunde impresso, 2—3 carinula mediana acuta; primo sparsim crasse, reliquis densius subtiliusque parum subrugoso-punctatis, tertio supra seriem convexo, foveolis duabus lateralibus parvis, rotundis, centrali utrinque valde magno, fossulæformi, per carinulam medianam ante apicem desinentem et in denticulum non exeuntem interruptis, margine apicali subtruncato, denticulis tantum lateralibus duobus valde parvis subacute-triangularibus distinctis. centro lenissime arcuato; ventre, femoribus item et tibiis tarsorumque articulis supra læte-viridibus, illo segmento secundo utrinque basi nigro-maculato, tarsis subtus fuscis; alis fumato-hyalinis parumque violaceo-nitentibus, venis piceis, cellulis: discoidali propter venulas pallidas non satis visibili, radiali lanceolata subcompleta, apice parum aperta, tegulis viridi-cyaneis. — ♀; long. 5½ mm.

Species eximia: colore, mucrone postscutelli foveolisque duabus valde magnis centralibus fossulæformibus abdominis segmenti dorsalis tertii, facile cognoscitur.

Patria: America meridionalis (Guaiana Batavorum seu Suriname, Mus. Lugdunense Batavorum).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Subgenus 6. TETRACHRYSIS Licht.

Abdominis segmenti tertii dorsalis margo apicalis dentibus vel denticulis quattuor plus minusve distinctis armatus, vel solum leniter undulatus et sic quadriangulatus.

*

I. *Corpus totum cum abdomine violaceum, cyaneum vel viride, aut his coloribus variegatum et rarius aeneo- vel viridi-aureo parcius irroratum vel marginatum, sed nunquam pure igneo- vel cupreo-auratum.*

1) *Abdominis segmentum dorsale tertium serie-anteapicali omnino caret.*

379. **Chrysis punctatissima** Spin.

Chrysis fasciata, Fabr. Syst. Piez. p. 175, n. 27. (1804). — Lep. Annal. du Mus. Hist. Nat. VII. p. 126, n. 14. (1806). — Dhlb. Hym. Europ. II. p. 197, n. 106. ♂ ♀. tab. XI. fig. 108. (segm. anale) (1854). — Cam. Biolog. Central-Americ. Hym. p. 463, n. 6. (1888) (nec Oliv.).
Chrysis punctatissima, Spin. Annal. Soc. Ent. France. Sér. 1. tom. IX. p. 200, n. 48. ♂ ♀. (1840).
Chrysis carina, Brullé, Hym. IV. p. 35, n. 18. ♂ ♀. (1846).

Magna, elongata, sat robusta, viridi-cyanea vel maxima ex parte cyanea aut virescens, rarius viridi-subaureo picta, parce cinereo-alboque pilosa; cavitate faciali angusta, dense punctato-coriacea et albo-sericeo-pilosa, superne non marginata; antennis brevibus, crassiusculis, nigris, cinereo-puberulis, duobus primis viridibus vel cyanescentibus, tertio longitudine mediocri, quarto vix dimidio adhuc longiore; genis brevibus, antennarum articulo secundo æquilongis; mandibulis unidentatis, apice rufis; vertice thoraceque supra concinne crasse punctato-reticulatis; pronoto longo, antice in medio non impresso; postscutello gibbo vel plerumque in medio carinula brevi parum elevata subarcuataque instructo; thorace supra maculis et abdominis segmentis dorsalibus 2—3 ante marginem apicalem fascia nigro-violaceis ornatis, secundo carinula mediana subelevata lævi nigro-violacea, tertio depresso-convexo, serie anteapicali nulla, primo sat sparsim crasse, 2—3 subtilius densiusque punctatis, interstitiis lævibus, tertio dentibus quattuor brevibus acutis, emarginaturis: centrali triangulari, lateralibus arcuatis, margine laterali parum flexuoso; ventre cyaneo vel viridi-cyaneo aut viridi-subaurato, segmento secundo basi utrinque nigro-maculato; pedibus concoloribus, tarsis subtus et apice fuscis; alis anticis plerumque disco sordidis, cellula radiali lanceolata apice sat late aperta, posticis hyalinis. — ♂ ♀; long. 9—11 mm.

Species: facie cum fronte angusta, carinula postscutelli et abdominis segmento dorsali tertio toto depresso-convexo, serie punctorum anteapicali nulla, facile cognoscenda.

«The specimen from Guetamala is brilliant emerald-green, the abdomen green with a decided bluish tinge; and, if anything, the punctuation seems stronger than usual.» (Cameron, l. c.).

Patria: Mexico (Presidio, Mus. Hung. et Coll. Saussurei!); Guatemala, Panama (Cameron); Guiana (Brullé); Cayenne (Spin. et Coll. Saussurei!); Brasilia (Pernam-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

buco, Mus. Turicense!; Parana, Mus. Halense Saxon.!; Santarem et Blumenau, Mus. Hung.); Republ. Argentina (Mendoza, Mus. Halense Saxonum!; Buenos-Aires, Coll. Perézi! et Saussurei!); Uruguaj (Montevideo, Mus. Vindob.! et Coll. Saussurei!).

380. **Chrysis Montezuma** Cam.

Chrysis montezuma, Cam. Biolog. Central-Americ. Hym. p. 463, n. 7. (1888).

«Dark purple, with brassy and greenish reflections. Head and thorax coarsely and strongly punctured, the punctures on the scutellum longer, rounded, and more widely separated; the second and third segments of the abdomen uniformly punctured; the first segment with the punctures larger and more widely separated. The sides of the basin of the face are striated and covered with longish white hair; the centre is almost impunctate. The third abdominal segment is depressed transversely near the base; there is no depression nor foveæ before the apical teeth, which are large, acutely triangular, and of nearly uniform size. Antennæ black, the scape dull bronzy. Wings hyaline, slightly infuscated, the stigma and nervures pale fuscous.

Length 11 millim.

Besides the differences in coloration this species is considerably broader and stouter than *C. fasciata;* and the basal segment of the abdomen is not so strongly trilobed. The third segment becomes gradually narrowed towards the apex, which is not quite so truncated as in *C. fasciata;* the depression at its base is more sharply defined, and the punctuation is deeper and stronger; the teeth are shorter and the incisure narrower. The separation between the pro-, meso-, and metathorax is more clearly marked, especially if looked at from the side.

An example of what is perhaps the same species agrees with the type in all tangible points, except that the apex of the third abdominal segment is depressed, the depression separating the tooth-bearing part from the rest of the segment, an that this part is almost impunctate.»

Patria: Mexico (Valladolid in Yucatan).

381. **Chrysis postica** Brullé.

Chrysis postica, Brullé, Hym. IV. p. 36, n. 20. ♀. (1846).

«Viridis, fusco subfasciata, alis subobscuris, dense punctata, abdominis segmento tertio postice lævi, quadridentato. Fem.

Il'est d'un vert à peine nuancé de bleu; des bandes obscures peu prononcées se remarquent sur l'abdomen; les ailes sont un peu obscures, avec le bord antérieur de la radiale enfumé.

Tout le corps est criblé de gros points qui se touchent presque sur la tête et sur le thorax et qui sont un peu écartés sur l'abdomen. La fossette susantennaire est très-prononcée, comme striée et sans rebord saillant. La fossette antérieure du thorax est

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

peu marquée et les sillons interlobulaires ne sont point distincts; la première région du métathorax est saillante et avancée en arrière, sans pointe, ni carène. La base de l'abdomen offre un large échancrure trilobée; sa ligne moyenne est assez marquée et lisse; la partie postérieure du troisième segment est lissé et decoupée en quatre dentelures triangulaires et également distantes: cette portion dépourvue de points se prolonge sur les côtés jusqu'à la base et un petit bourrelet la sépare de la portion ponctuée; la rangée de gros points manque.

Longueur: 0,008.»

Patria: Brasilia (prov. des Mines).

2) *Abdominis segmentum dorsale tertium serie anteapicali plus minusve distincta semper instructum; licet foveolae confluentes fossulam magnam medio interruptam nonnunquam forment.*

A) *Postscutellum mucronatum vel submucronatum.*

382. Chrysis fumipennis SMITH.

Chrysis fumipennis, Smith, Journ. Proceed. Linnean Soc. Zoolog. V. p. 67, n. 3. (1861).

«Laete purpurea; capite thoraceque fortiter, abdomine delicatule punctatis; alis fusco-hyalinis.

Length 4¾ lines. Opake purple-blue; the legs and two basal joints of the antennæ bright green; the abdomen green beneath, the vertex with a larger triangular black macula; the postscutellum produced into a triangular acute tooth. Abdomen: the segments darkest at their base; the apical margin of the terminal segment rounded, and armed with four minute acute teeth.

This species is distinguished by a much broader and more depressed form than in usual in the genus.»

Patria: Celebes (Makassar).

383. Chrysis Tolteca n. sp.

Submagna, elongata, viridi-cyanea, parce albo-pilosa; collo, pronoti impressione basali, mesonoti lobo medio antice posticeque, scutelli basi, postscutelli et metanoti disco posticeque violaceis; cavitate faciali profunda, viridi, punctulato-coriacea, lateribus albo-sericeo-pilosa, fronte triangulariter marginata insignique area semicirculari stemma anticum excipiente determinata et utrinque ramulum longitudinalem oblique demittente; genis brevibus; antennarum scapo et flagelli articulis duobus primis supra viridi-cyaneis, his reliquis fuscis, articulo secundo sat longo, tertio fere dimidio longiore; vertice et thorace supra concinne punctato-reticulatis; postscutello et metanoti disco gibbosis, scrobiculatis, hoc centro insuper carinula abbreviata obtusa instructo; abdomine cyaneo, segmentis dorsalibus dense crasseque cribrato-punctatis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

primo ante marginem apicalem indistincte, secundo in medio concinne violaceo-fasciatis, tertio disco violaceo, 2—3 basi late nigro-violaceis, secundo carinula mediana lævi nigro-ænea, tertio disco transverse leniter concaviusculo-immerso, supra seriem fortiter calloso, serie anteapicali foveis et foveolis profundis, rotundis, violascentibus, lævibus, confluentibus et sic fossulam magnam transversam formantibus, lateralibus minutis, margine apicali sparsim crasse punctato, dentibus quattuor mediocribus, triangularibus, acutis, in arcum dispositis, emarginaturis profunde arcuatis, centrali externis paulo angustiore; ventre cyaneo-viridi; femoribus et tibiis tarsorumque articulo primo supra viridi-cyaneis, alis hyalinis, venis piceis, cellula radiali lanceolata apice sat late aperta, tegulis violascentibus, lævibus. — ♀; long. 10 mm.

Species hæc eximia: corpore viridi-cyaneo violaceoque maculato, punctatura, frontis area semicirculari, metanoti carinula abbreviata, abdominis segmento dorsali secundo in medio violaceo-fasciato, tertio foveis et foveolis magnitudine inæqualibus etc. iam facile cognoscitur.

Patria: Mexico (Coll. Rad.).

384. **Chrysis Panamensis** Cam.

Chrysis panamensis, Cam. Biolog. Central.-Americ. Hym. p. 464, n. 9. tab. XX. fig. 8, 8a. (1888).

«Brillant emerald-green; a band across the mesonotum, a mark on the metanotum, and two broad bands, united by a longitudinal one, on the second abdominal segment, violet. Head and thorax coarsely and uniformly punctured; basal segment of the abdomen covered with large, round, clearly separated punctures; the other segments with the punctures much smaller and shallower, but stronger on the apex of the third. Basin of face punctured, but very slightly in the centre; above it the vertex is reticuled, an there is a (hoofshaped) keel which encloses the lower ocellus. The teeth on the third abdominal segment are short and triangular; the incision broad and shallow; the foveæ are placed in a shallow narrow groove; there are two large central foveæ, the others being small and indistinct; in front of the groove the segment bears some small, scattered, shallow punctures. The base of the abdomen has three shallow depressions. The apex of the metathorax in the middle projects into a bunt, curved, nipple-like projection, above which the metanotum is raised.

Length 12 millim.

A longer and narrower (compared with the length) insect than *C. coerulans,* and inter alia readily from it by the projecting middle of the metathorax. The wings, moreover, are not so dark, especially at the base; and the sculpture is stronger.»

Patria: Panama (Volcan de Chiriqui 2000 to 3000 feet).

385. **Chrysis Nisseri** Dhlb.

Chrysis Nisseri, Dhlb. Dispos. p. 14, n. 27. (1845); Hym. Europ. II. p. 206, n, 112. ♂. (1854).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

« Mediocris elongata subrobusta sublinearis 2 3/4 lin. decimal. long. capite thoraceque confertim subrasse punctatis, abdomine modice punctato viridi-cyanea nitida, scutello depresso-plano, postscutello submucronato, abdominis dorso mutico nec carinulato, segmento tertio disco leniter subconcaviusculo-immerso, postice supra seriem modice convexiusculo-marginato, margine laterali elongato obliquo subrecto, alis sordide hyalinis, cellula radiali subcompleta.

Observ. Chrysidi nitidulae ad habitum quodammodo similis.

Corpus cinereo-pubescens. Vertex, thoracis dorsum et latere abdominisque segmentum dorsale primum modice punctatissima. Caput transversum triangulariter suborbiculatum, lateraliter utrinque infra oculos marginatum. Vertex amplus convexo-depressus. Oculi mediocres ovato-rotundati. Cavitas facialis mediocris subquadrata nitida virescens punctulato-coriacea, ad latere albo-sericeo-pubescens, superne per marginem verticinum transversum biarcuatum limitata. Antennæ breves robustæ fuscæ, basi viridi-cyanescentes. Clypeus brevis transversus punctulatus viridis nitens, medio convexiusculus ad centrum marginis apicalis subemarginatus. Mandibulæ normales. Palpi fusci breves tenues pubescentes. Pagina capitis inferior nitida viridis sublævis, utrinque postice angulo valido obtuse spinoideo armata. Postscutelli margo posticus ad centrum obtusangulo prominulus et hinc quasi mucronatus. Metanoti anguli posticolaterales mediocres acute triangulares. Pectus viride nitens; mesopleuræ crassissime punctato subreticulatæ; sternum et pedes punctulati cyaneo-virides cinereo-pubescentes, tarsis apice fuscis. Alarum venæ firmæ piceæ; cellula radialis angusta lanceolato-acuminata, apice angustissime aperta et hinc subcompleta. Abdomen ovale longitudine capitis thoracisque simul sumtorum, dorso modice convexum et modice punctatum segmento primo crasse punctatissimo: segmenta primum et secundum utrinque angulo laterali-apicali spinoideo minuto munita; segmenti tertii series anteapicalis foveolis numerosis rotundis minutis separatis, margo apicalis prominulus convexo-depressus punctulatus nitidus, dentes inæquales: externi breviores triangulares, centrales maiores spinoidei nonnihil decurvi, emarginaturis arcuatis subæqualibus, centrali reliquis forte paullulum latiori profundiori. Venter viridi-cyaneus punctulato-coriaceus pubescens. »

Patria: Columbia (Remedios).

386. **Chrysis propingua** n. sp.

Submanga vel magna, elongata, sat robusta, cyaneo-viridis vel viridi-cyanea, parcius cinereo-alboque pilosa; capite thoraceque supra plus-minusve cyaneo-maculatis; cavitate faciali minus profunda lata sæpius viridi-subaurata, dense punctato-coriacea, lateribus albo-sericeo-pilosa, superne transverse marginata, margine in medio triangulariter exciso ramulum ad verticem divergentem emittente, qui in speciminibus e Brasilia ortis minus distinctus est; antennis mediocribus, crassiusculis, nigris, cano-puberulis, articulis duobus primis et tertii basi viridibus vel viridi-cyaneis, hoc longo, secundo duplo longiore; genis mediocribus, antennarum articulo quarto æquilongis; pronoto brevi,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

capite breviore, transverso-rectangulo, antice in medio leviter sulcato; scutello convexo, postscutello margine postico ad centrum prominulo, mucrone brevi, arcuato, tenui; vertice et thoracis dorso fere æqualiter crasse punctato-reticulatis; metanoti dentibus postico-lateralibus sat longis acute-triangularibus; abdominis segmentis dorsalibus plus-minusve cyanescentibus vel violascentibus, 2—3 basi nigro-violaceis, primo basi trisulcato, secundo carinula mediana plus minusve distincta, primo sat crasse minus profunde subreticulatim, 2—3 densius subtiliusque parum rugosiuscule-punctatis, illo interstitiis disco subtiliter punctulatis, tertio convexo, supra seriem leniter calloso, foveolis haud profunde immersis mediocribus minus distinctis subconfluentibus, margine apicali brevi, quadridentato, dentibus duobus intermediis sat longis acutis decurvis, lateralibus duobus parum brevioribus acute-triangularibus, emarginaturis subæqualibus arcuatis; ventre pedibusque viridibus vel cyanescentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis parum fumatis violascentibus, venis piceis, cellula radiali lanceolata apice parum aperta, tegulis violascentibus. — ♂♀; long. 9—11 mm.

Chrys. Nisseri Dhlb. propinqua esse videtur; sed capite thoraceque supra fere æqualiter crasse punctato-reticulatis, abdomine non modice punctato et alis non sordide-hyalinis, distincta.

Patra: Mexico (Cordova, Coll. Saussurei!; Orizaba, Mus. Vindob.!) et Brasilia (Mus. Hung.; Blumenau, Mus. Vindob.!).

387. **Chrysis imbecilla** n. sp.

Parva, elongata, sublinearis, fere parallela, viridi-cyanea, parcius cinereo-alboque pilosa; collo, mesonoto antice, postscutello tegulisque nigro-violaceis; cavitate faciali angusta, dense punctato-coriacea, superne cum fronte confluente convexa, non marginata; antennis brevibus, tenuibus, nigris, cinereo-puberulis, scapo læte-viridi, articulis duobus primis flagelli viridi-cyaneis, huius secundo mediocri, primo duplo longiore; genis brevibus, articulo antennarum secundo æquilongis; vertice valde convexo cum thorace supra æqualiter crasse punctato-reticulatis, pronoti interstitiis subtilissime punctulatis; pronoto sat longo, capite angustiore, transverso-rectangulo, antice in medio non sulcato; mucrone postcutelli haud longo, subtriangulari, angusto, apice sublacero; abdomine apicem versus angustato, capite thoraceque simul sumptis æquilongo, dorso convexo, viridi-cyaneo, segmentis 2—3 basi nigro-violaceis, primo sparsim crasse profundeque, 2—3 multo subtilius densiusque parum rugosiuscule-punctatis, secundo carinula mediana nulla, tertio convexo, supra seriem non calloso, foveolis quattuor intermediis tantum bene distinctis rotundatis submagnis per carinulam brevem interruptis, lateralibus minutis indistinctis, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus in lineam transversam dispositis sat longis, æqualibus, acute-triangularibus, emarginaturis arcuatis fere æquilatis; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fusco-rufis;

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

alis hyalinis, modice fumatis nitore violaceo, cellula radiali valde incompleta, apice late aperta. — ♂; long. 5 mm.

Species: de forma corporis, facie angusta, superne cum fronte confluente convexa, punctatura crassa verticis, mucrone postscutelli et segmento abdominis ultimo, facile cognoscitur.

Patria: Brasilia (Blumenau, Mus. Hung.).

B) *Postscutellum gibbo-convexum vel convexum, inerme.*

388. **Chrysis Taurica** n. sp.

Parva, elongata, cyanea, parce albo-pilosa; clypeo, antennarum scapo, femoribus tibiisque viridi-cyaneis; genis sat longis; cavitate faciali minus profunda, medio canaliculata, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte marginata, vertice dense reticulato-, thorace supra inæqualiter non profunde punctato, punctis maioribus minoribusve; abdomine cyaneo, segmento primo dorsali disco sparsim crassius, secundo tertioque dense subtilius rugoso-punctatis, segmento secundo, carinula mediana nulla, tertio disco leniter concaviusculo, postice supra seriem parum calloso, serie anteapicali per carinulam brevem interrupta foveolis circa 6 distinctis suboblongis, margine apicali dentibus mediocribus triangularibus, subacutis, in arcum dispositis, intermediis externis paulo longioribus, emarginaturis minus fortiter arcuatis, ad invicem fere æquilatis; ventre viridi-cyaneo nigroque maculato; antennarum flagelli articulis duobus primis supra viridibus, reliquis fuscis, tarsis fusco-testaceis, flagelli articulo secundo longo, tertio quartoque simul sumptis paulo longiore; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata penitus completa, tegulis cyaneis. — ♀; long. 5 mm.

Chrys. indigoteae Duf. et Perr. similis et affinis; sed multo, fere dimidio minor, vertice indistincte marginato, thorace supra et abdomine multo subtilius densiusque punctatis, segmento secundo carinula mediana nulla, tertio margine laterali non tam fortiter oblique-flexuoso dentibusque minoribus triangularibus, non acutis, in arcum (non in lineam rectam transversam) dispositis, genis longioribus, est certe distincta.

Patria: Tauria [Krim] (Coll. Rad.).

389. **Chrysis Ragusæ** Destef.

Chrysis Ragusae, Destef. Natural. Sicil. VII. p. 125 et 218. ♂. (1888).

«♂. C. Subrobusta, violacea, cinereo-pubescente, cavitate faciali viridi parce argenteo-tomentosa, superne haud marginata. Mandibulis piceis, basi viridibus. Antennarum scapo et articulo primo secundoque viridibus, reliquis fuscis. Capite confertim punctulato coriaceo, oculis ovalibus. Clypeo magno viridi, punctulato, antice truncato. Thorace planiusculo, dorso confertim modice punctato reticulato; pronoto transverso, sulco mediano obsoleto; scutello, postscutello metathoraceque præsertim punctulatis.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Alis hyalinis, venis fuscis, tegulis cyaneis. Thorace fortiter, abdomine minus punctulato convexoque; primo segmento punctis minus frequentibus, truncatura antice virescente concaviuscula; basi segmenti secundi ænea; segmento tertio brevi valde convexo. disco haud immerso, foveolis profundis confluentibus, margine apicali quadridentato, denticulis lateralibus brevioribus. Ventre, pectore, pedibusque virescentibus, tarsis testaceis. Long. 5 1/2 mm.

Questa specie, di cui conosco il solo maschio, è nettamente distincta dalle non poche specie di *Chrysis* a color uniformente violaceo che sinoggi si conosco. Carattere principalissimo di questa *Chrysis* si è la forma dorsale del terzo segmento dell'addome. Dalle specie descritte dal Dahlbom nella VI. falange e comprese nella sua seconda tribù, nella quale la mia specie rientrerebbe, ne se distingue per avere il dorso del terzo segmento perfettamente convesso, anzi multo convesso, non esiste nessuna traccia, per quanto leggiera, di depressione.

La specie che più vi si avvicina sarebbe la *C. dentipes*, Grav.,* ma da questa è anche ben distincta. La *C. dentipes* ha il vertice carenato, cosí, pure la parte superiore della cavità facciale, inoltre essa ha la base del secondo segmento verde e nella parte mediana di questo segmento porta una carena longitudinale rilevata, il segmento terzo poi in questa *Chrysis* è *immersum*.

Or tutti questi caratteri mancano nella mia specie e la ritengo quindi come inedita.»

Patria: Sicilla.

390. **Chrysis indigotea** Duf. et Perr.

? *Chrysis indica*, Schrk, Faun. Boica. II. p. 345, n. 2201. (1801).

Chrysis indigotea, Duf. et Perr. Annal. Soc. Ent. France. IX. p. 38, n. 18. (1840). — Dhlb. Hym. Europ. II. p. 208, n. 113. ♂. (1854). — Schck, Nass. Jahrb. XI. p. 76, n. 13. (1856). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 304, n. 32, tab. IV. fig. 20. (1866). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 11. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 14, n. 25. ♂ ♀. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 42 et 44. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Lampr. Goldwesp. Deutschl. p. 15, n. 35, tab. I. fig. 18 (segm. anale) (1881). — Heyd. Ber. Senkenb. naturf. Ges. p. 249, n. 16. (1882). — Mocs. Chrys. faun. Hung. p. 57 et 86, n. 22. ♂ ♀. (1882).

Chrysis janthina, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 318, n. 79. ♂. (1853).

Mediocris, elongata, sublinearis, tota cyanea vel parum violascens vel virescens, longius cinereo-alboque pilosa; cavitate faciali lata minus profunda, dense punctulato-coriacea argenteo-sericeoque pilosa, superne per carinulam transversam utrinque angulato-deflexam limitata; antennis mediocribus, crassiusculis, nigris, articulis duobus primis cyaneis vel viridi-cyaneis, tertio longo, dimidio adhuc longiore; genis mediocribus, antennarum articulo quarto fere æquilongis; pronoto brevi, transverso, antice in medio parum impresso, postscutello convexo; metanoti dentibus postico-lateralibus mediocribus

* *Animadversio.* — Grav. (Gravenhorst) ne unam quidem descripserat Chrysididam. *Chrysidem dentipedem* Clar. Dom. Radoszkovszky e Turkestania fecit publici iuris.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

late-triangularibus; vertice dense subtilius, thorace supra dispersius fortiusque punctato-subreticulatis interstitiisque subtilissime punctulatis, postscutello regulariter punctato-reticulato; abdominis segmentis dorsalibus: primo sat sparsim minus crasse profundeque, 2—3 multo subtilius parumque densius punctatis interstitiisque subtilissime punctulatis, secundo carinula mediana bene distincta, tertio supra seriem leniter incrassato valde dense punctulato, foveolis numerosis mediocribus subprofundis, non bene separatis, sed hinc illic confluentibus, margine apicali parum prominulo, convexo-depresso, punctulato, quadridentato, dentibus mediocribus triangularibus rectis, emarginaturis arcuatis invicem subæqualibus; margine laterali oblique-flexuoso, parte basali convexo-arcuato, apicali leniter arcuato-emarginato; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis, disco nonnihil parum sordidis, cellula radiali lanceolata fere completa. — ♂ ♀; long. 6—7 mm.

«Les ♂ different des ♀ par le troisième segment bien plus large, avec les dents situées sur la même ligne et la courbe des côtés plus fortement arrondie.» (Abeille l. c.)

Chrys. nitidulae Fabr. similis et affinis; sed plerumque multo minor ac gracilior et abdominis segmento tertio longe aliter constructo, facile cognoscenda.

Patria: Suecia (Dhlb.); Gallia (Duf. et Perr.); Germania (Först.); Tyrolis (Kohl); Austria inferior (Coll. Handlirschi!); Hungaria meridionalis, rara (Mocs.); Istria (Pola, Coll. Handlirschi!); Sibiria et Turkestania (Rad.).

var. Daghestanica mihi.

Typo simillima; sed facie, verticis lateribus, pronoto et abdominis segmentis dorsalibus duobus primis margine apicali, femoribus item et tibiis ventreque viridi-subauratis. — Patria: Caucasus (Daghestan, Coll. Rad.).

391. **Chrysis nitidula** Fabr.

Chrysis nitidula, Fabr. Syst. Ent. p. 359, n. 13. (1775); Spec. Ins. I. p. 457, n. 16. (1781); — Mant. Ins. I. p. 284, n. 19. (1787). — Oliv. Encycl. Méth. Ins. V. p. 676, n. 20. (1790). — Christ, Naturg. p. 402. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2746, n. 19. (1792). — Fabr. Ent. Syst. II. p. 243, n. 21. (1793); Syst. Piez. p. 176, n. 31. (1804). — Lep. Annal. du Mus. Hist. nat. VII. p. 126, n. 15. (1806). — Dhlb. Monogr. Chrys. Suec. p. 11, n. 7. ♂ ♀. (1829); Exercit. Hym. p. 30, n. 9. (1831); Dispos. p. 13, n. 24. (1845). — ? Brullé, Hym. IV. p. 38, n. 23. ♂ ♀. (1846). — Dhlb. Hym. Europ. II. p. 214, n. 117. ♂ ♀. (1854) (excl. Chrys. purpurata Fabr. syn.). — Schck, Nass. Jahrb. XI. p. 34, n. 13. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 69. (1858). — Chevr. Chrysid. du Léman, p. 59. ♀. (1862). — Taschb. Hym. Deutschl. p. 151. (1866). — Thoms. Opusc. Ent. II. p. 108, n. 15. (1870). — Schck, Progr. Gymn. zu Weilb. p. 10, n. 9. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 15, n. 27. ♂ ♀. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 42 et 44. ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Lampr. Goldwesp. Deutschl. p. 15, n. 14. tab. I. fig. 17. (segm. anale) (1881). — Mocs. Chrys. faun. Hung. p. 57 et 87, n. 23. ♂ ♀. (1882). — Aar. Transact. Amer. Ent. Soc. XII. p. 236. ♂ ♀. tab. IX. fig. 62—63. (segm. anale) (1885). — Frey, Chrys. Helvet. p. 53 et 70. ♂ ♀. (1887).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis cyanea, Vill. Linn. Ent. III. p. 257, n. 5. Observ. (1789) (nec Linn.).
Chrysis Iris, Christ, Naturg. p. 405, tab. 45, fig. 4. (1791).
Chrysis violacea, Schrk, Faun. Boica. Tom. II. P. II. p. 344, n. 2196. (1802) (nec Panz.).
Chrysis cyanochroa, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 316, n. 78. ♀. (1853).
Chrysis coerulans, Rad. Horæ Soc. Ent. Rossicæ. III. p. 305, n. 33, tab. IV. fig. 19. ♂. (1866) (nec Fabr.).
Chrysis soluta, Rad. Horæ Soc. Ent. Rossicæ. III. p. 305, n. 34. ♀. tab. IV. fig. 21. ♀. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 16, n. 28. ♂ ♀. (1877) sec. spec. typ. e coll. Rad. (nec Dhlb.).

Submagna, elongata, robusta, viridi-cyanea, longius cinereo-pilosa; vertice, thorace supra, pectore, lateribus abdominis, marginibus segmentorum apicalibus, ventre pedibusque plus minusve viridi vel viridi-subaureo-pictis; cavitate faciali lata minus profunda, dense punctato-coriacea, argenteo-sericeo-pilosa, viridi, superne transverse-marginata, margine distincto vel subobsoleto, modice arcuato; antennis longiusculis, crassis, fusco-nigris, cano-puberulis, articulis tribus primis viridibus vel viridi-cyaneis, tertio longo, quarto fere duplo longiore; genis mediocribus, articulo antennarum quarto æquilongis; pronoto brevi, transverso, antice in medio longitudinaliter profunde sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, triangularibus, coriaceis, punctulatis; vertice densius, thorace parum dispersius sat crasse punctato-subreticulatis interstitiisque subtiliter punctulatis, postscutello regulariter punctato-reticulato; abdominis segmentis dorsalibus viridibus vel cyaneis plus minusve violascentibus, primo sat sparsim crassius, secundo parum densius subtilius, tertio adhuc magis subtilius punctatis, punctis nonnunquam purpurascentibus, interstitiisque subtiliter punctulatis, secundo carinula mediana plerumque bene distincta, tertio ante seriem lenissime calloso foveolis numerosis rotundatis sat magnis plerumque distinctis, rarius confluentibus et subtransversis, margine apicali prominulo, convexo-depresso, dense punctulato, quadridentato, dentibus robustis, mediocribus, triangularibus, subæqualibus, emarginaturis modice arcuatis, centrali plerumque latiore; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis sordide-hyalinis, venis firmis piceis, cellula radiali lanceolato-acuminata completa vel subcompleta, tegulis viridi-cyaneis vel violascentibus. — ♂ ♀; long. 10—11 mm.

Mas, in collectionibus valde rarus, a femina nonnisi colore magis cyaneo differt.

Parasita *Odyneri murarii* Linn. teste Fr. Sickmann in litt. ad me.

De speciminibus Americæ septentrionalis Clariss. Dom. Aaron sequentia scripserat:

«Twenty specimens in the collection from the following localities: Massachusetts, Pennsylvania, Delaware, Lake Superior region, Canada in the collections of M. Provancher. The general color is blue with green reflections and some purple. Two specimens are the head and thorax emerald-green with very little blue and the abdomen blue only on the first and second segments All the specimens but those from Oregon (Mt. Hood) have cupreous, scarlet, golden and green reflections (in appearance like the colors of the spectrum) in a line, bordering the posterior margin of the anterior

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

area of the third segment, just above the pits. A variety, represented by two specimens have Colorado, has the entire third segment uniformly cupreous with a dull, even purple tint. A specimen from Massachusetts has this color distinct only in certain lights; in other lights the segment is green or blue. The specimens from Mt. Hood, Oregon, have also the margin directly above the pits a little swollen or lobed in the extreme middle, and trough the form of the apical teeth are the same it may by a distinct species. Head, thorax and abdomen for the most part densely punctured the punctures finest on the third segment, largest on the metathorax and the first abdominal segment, separated on the sides of the first segment and the apical portion of the second. Pits medium, distinct, contained in a moderately strong groove, ending nearer the base of segment. Apical teeth seem to be quite constant in form and relative distance. The central emargination, is shown in the figure, is broader and less profond than the lateral ones. ♂ ♀.»

Patria. Europa tota, inde a Suecia et Fennia meridionali usque ad Caucasum, Turkestaniam Sibiriamque (Coll. Rad.!), in meridionali in regionibus montanis. — Etiam Americæ borealis (New-York, Tennesse, Coll. Saussurei!) et meridionalis (Brasilia, Mus. Vindob.!) incola.

392. **Chrysis Blanchardi** Luc.

Chrysis Blanchardi, Luc. Explor. de l'Algér. Zoolog. III. p. 308, n. 348. Hym. tab. XVII. fig. 6. (1849). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 40 et 42. (1879).

«Long. 6 millim. enverg. 12 millim.

Omnino viridis; capite punctato, in medio subvirescente tincto; antennis fusco subtomentosis, primo articulo viridi metallico; prothorace metathoraceque subcyaneo tinctis; abdomine subtiliter punctato, ultimo segmento ad basim cyaneo; pedibus viridi-metallicis, tarsis rufo-testaceis.

Entièrement vert. La tête, ponctuée, est légèrement teintée de vert clair entre les yeux. Les mandibules sons d'un brun roussâtre. Les antennes sont d'un brun légèrement tomenteux, avec le premier article d'un vert métallique. Tout le thorax est parsemé de points semblables à ceux de la tête, avec le prothorax et la base du métathorax légèrement teintés de bleu. Les ailes, à nervures d'un brun foncé, sont incolores et transparentes. L'abdomen, un peu plus finement ponctué que la tête, est remarquable par la base de son dernier segment, qui est blanc; en dessous, il est entièrement vert, ainsi que les pattes, dans lesquelles les tarses sont d'un roux testacé.

C'est près du *C. cyanea* de Fabricius que vient sa placer cette espèce, avec lequel elle ne pourra être confondue, à cause de sa couleur verte et de la base de son dernier segment, qui est bleu. Il est aussi à noter que les tarses du *C. Blanchardi* sont d'un roux testacé, tandis que ces mêmes organes dans le *C. cyanea* sont noirs.

Recontré en juin, aux environs d'Hippône; je n'ai trouvé qu'un seul individu de cette jolie espèce.» (Lucas l. c.)

«J'ai entre les mains un sujet appertenant à M. Fallou fils, et qui me parait se rapporter au souvenir que j'ai gardé du type de M. Lucas. Je ne puis mieux faire, du

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

reste, que de copier la note prise par moi au Museum : «Cette espèce me parait différer du *Nitidula* par la forte ponctuation du dernier segment abdominal, l'absence de fossette bien marquée au milieu du pronotum, et de l'*Indigolea* par sa ponctuation générale plus forte et plus serrée etc.» L'exemplaire de M. Fallou provient de Biskra.» (Abeille l. c.)

Patria : Algeria (Hippône, Luc. ; Biskra, Ab.).

393. **Chrysis Mionii** Guér.

Chrysis Mionii, Guér. Revue Zoolog. p. 149, n. 17. ♀. (1842).

«Ponctuée, d'un beau vert émerande avec la base des second et troisième segments de l'abdomen noire passant à une teinte bleue qui se fond ensuite avec le vert. Extrémité du dernier segment quadridentée à dents peu saillantes. Extrémité des antennes noirâtre. Dessous et pattes verts, avec les tarses d'un brun jauâtre. Ailes incolores (femelle). — Long. 8 mill.»

Patria : Senegalia.

394. **Chrysis Senegalensis** Mocs.

Chrysis viridis, Brullé, Hym. IV. p. 41, n. 28. ♂ ♀. (1846) (nec Oliv.).
Chrysis Senegalensis, Mocs. Term. Füz. XI. p. 17. (1887).

«Viridis, thoracis dorso et abdominis fasciis cyaneis, alis subhyalinis, dense punctata, segmento tertio quadridentato. Mas. Fem.

Il est vert, avec le lobe médian du mésothorax, la base des deux derniers segments de l'abdomen et quelquefois aussi une grande tache sur le deuxième segment d'un bleu foncé ; le bord postérieur du troisième segment est aussi de cette même couleur. Les ailes sont transparentes, avec le bord extérieur de la radiale enfumé.

Le corps est criblé de points gros et rapprochés, dont les intervalles offrent çà et là de très-petits points. Le bord postérieur de la fossette sus-antennaire est plus ou moins droit avec les extrémités repliées en avant ; le fond de la fossette elle-même est anguleux. La fossette du prothorax est peu indiquée ; les sillons interlobulaires du mésothorax sont étroits et crénelés ; la base de l'abdomen offre une large fossette trilobée ; la ligne moyenne est peu prononcée ; le bourrelet du troisième segment est peu développé et suivi d'une rangée de gros points quelquefois allongés ; le bord postérieur est decoupé en quatre dentelures peu saillantes et également espacées.

Longueur : 0,008.»

Patria : Senegalia.

395. **Chrysis Westermanni** Dhlb.

Chrysis Westermanni, Dhlb. Hym. Europ. II. p. 232, n. 128. ♀. (1854).

«Submagna robusta 3 1/4 lin. decimal. long. viridis nitida abdominis segmento tertio limbo cyaneo, alis violascentibus, (abdominis) segmenti tertii serie ante-apicali interrupta foveolis mediocribus numerosis æqualibus rotundatis, dentibus brevibus triangula-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ribus, emarginaturis modice arcuatis subæqualibus, fronte inter oculos nonnihil latiore, mesopleuris utrinque apice et postice crenulato-denticulatis.

Observ. Præcedenti (Chrys. amethystinæ Fabr.) simillima et maxime affinis, at per notas sequentes præcipue certissimeque distinguitur, scil.: Corpus totum viride, macula verticis centrali nigro-æneo purpurascente opaca, mesonoti disco leviter cyaneo-irrorato, abdominis segmenti secundi latera et segmenti tertii totus ambitus cyanea; caput et thorax crassius punctata, minus nitida; vertex minus convexus potius convexo-depressus et frons inter oculos magis latus; cavitas facialis latior brevior quadrata; thorax cylindricus dorso depresso-convexus, postscutello convexo-prominulo crassissime punctato-reticulato; mesopleuræ utrinque in margine et apicali et postico-laterali crenulatæ et hinc obsolete multidenticulatæ; abdominis segmentum tertium mediocre subsemilunatum: regio antica tota modice convexa, regio postica (= margo apicalis) subconvexo-depressa humilis prominula parce subtilissime punctulata; series anteapicalis tenuissime interrupta foveolis omnibus mediocribus profundis et rotundatis; dentes apicales breves triangulares; emarginaturæ modice arcuatæ subæquales, scil. exteriores centrali parumper latiores. In reliquis omnibus notis cum individuis normalibus *Chrysidis amethystinae* exacte congruit.»

Patria: Guinea.

396. **Chrysis laeta** Dhlb.

Chrysis laeta, Dhlb. Hym. Europ. II. p. 223, n. 122. ♂ ♀. (1854).

«Mediocris $2^1/_3$—$2^1/_2$ lin. decimal. long. subcrasse punctata læte viridis tarsis fuscis, abdomine coeruleo- l. cyaneo-picto, segmenti tertii serie anteapicali immersa interrupta foveolis numerosis inæqualibus, dentibus brevibus robustis triangularibus, emarginaturis modice arcuatis subæqualibus.

Observ. ♀. Corpus cinereo-pilosellum. Caput et thorax crasse aut subcrasse punctato-subreticulata. Caput læte viride, verticis macula centralis ænea. Antennæ, clypeus et mandibulæ normales; cavitas facialis subrectangularis subprofunda confertim punctulato-coriacea, superne transverse marginata: margine leniter et inæqualiter arcuato. Dorsuli area media disco nonnihil violaceo-irrorata. Abdominis segment. dorsal. primum læte viride subcrasse punctatum, secundum subcoerulescenti-viride modice punctatum, tertium confertim punctulato-coriaceum cyaneum apice virens, margo sive regio apicalis regione basali nonnihil humilior, hinc series apicalis quasi immersa, foveolis numerosis inæqualibus scil. nonnulis mediocribus et nonnullis parvis, margo lateralis pone dentem exteriorem leniter arcuatus. Venter viridi-cyaneus aut vice versa, pedes concolores tarsis fuscis. Alæ aut hyalinæ aut sordide hyalinæ: cellula radiali lanceolata aliis completa, aliis subcompleta, aliis distincte aperta. Mas aut feminæ simillimus, aut dignoscitur: copore paullulum breviore, abdominis dorso interdum toto subcrasse punctato, segmentis secundo et tertio dorsalium totis coeruleis nec nisi leviter viridi-irroratis.»

Patria: Guinea et Promontorium Bonæ Spei (Dhlb.); Angola (Welwitsch, Rad.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

397. **Chrysis dira** Mocs.

Chrysis dira, Mocs. Magy. Akad. Term. Értek. (Dissertationes physicæ Academiæ scientiarum Hungaricæ). XIII. Nr. 11, p. 17, n. 21. ♀. (1883).

Submediocris, elongata, sat robusta, viridis, parcius cinereo-pilosa; mesonoti lobo medio et tegulis cyanescentibus; cavitate faciali subangusta minus profunda, medio longitudinaliter canaliculata, utrinque dense subtilissime transverse-striata, lateribus punctulato-coriacea, superne transverse-marginata, margine medio subtus parum sinuoso; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis quattuor primis viridibus, tertio mediocri, quarto duplo longiore; genis longis, articulo antennarum tertio adhuc parum longioribus; pronoto longo, longitudine capitis, transverso, antice in medio longitudinaliter fossulato; metanoto convexo, dentibus postico-lateralibus mediocribus, late-triangularibus, apice incurvis; mesopleuris subtus triangularibus, acute-marginatis; vertice et mesonoto dense sat crasse punctato-subreticulatis, subcoriaceis; pronoto, scutello et postscutello regulariter punctato-reticulatis; abdominis segmentis dorsalibus viridibus, tertio parum cyanescenti, 2—3 basi nigro-violaceis, secundo carinula mediana nulla, 1—2 sparsim sat crasse, tertio densius subtiliusque rugosiusculepunctatis, interstitiis lævibus, tertio convexo, ante seriem convexo-depresso, foveolis circiter 8 mediocribus, subrotundis, medio interruptis, reliquis lateralibus minus distinctis, margine apicali sat longo, dense punctulato, quadridentato, dentibus mediocribus, triangularibus, subacutis, fere æquilongis, leniter arcuatim dispositis, emarginaturis arcuatis, centrali externis angustiore et paulo profundiore; ventre pedibusque viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis fumato-hyalinis, violascentibus, venis firmis piceis, cellula radiali lanceolata apice sat late aperta. — ♀; long. 6½ mm.

Species: de cavitate faciali, antennis, genis, pronoto, punctatura et alis, facile cognoscitur.

Patria: Guinea superior Africæ occidentalis (Ashanti, Mus. Hung.).

398. **Chrysis Guineensis** n. sp.

Submediocris, elongata, sat robusta, viridis, parum cyanescens, parcius cinereo-pilosa; cavitate faciali minus profunda, medio longitudinaliter canaliculata, utrinque dense subtiliter transverse-striata, lateribus punctulato-coriacea argenteo-sericeoque pilosa, fronte abbreviatim subtilius transverse-marginata, margine ramulum utrinque non satis distinctum ad stemma anticum emittente; antennis brevibus, crassiusculis, nigris, articulis tribus primis viridibus, 2—4 lateribus argenteo-pubescentibus, tertio sat brevi, secundo vix duplo longiore; genis longis, dense punctatis, articulo antennarum tertio longioribus; pronoto longo, capite longiore, transverso, antico in medio longitudinaliter sulcato; mesonoto sat crasse minus dense punctato-subreticulato; vertice dense subtilius, pronoto, scutello et postscutello parum dispersius fortiusque punctato-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

reticulatis; abdominis segmentis dorsalibus 2—3 basi nigro-violaceis, secundo carinula mediana minus distincta, duobus primis sat dense, tertio parum subtilius rugosiusculepunctatis interstitiisque hinc illic punctulatis, tertio convexo, supra seriem convexodepresso, foveolis mediocribus rotundatis, centralibus bene distinctis, secundariis (lateribus nempe duarum centralium) confluentibus profundis, margine apicali sat lato, punctulato, quadridentato, dentibus brevibus late-triangularibus, centralibus duobus parum longioribus magisque acutis, emarginaturis æquilatis, lateralibus arcuatis, centrali subtriangulari; ventre pedibusque cyaneis et viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis fumato-hyalinis, violascentibus, venis firmis piceis, cellula radiali lanceolata apica sat late aperta. — ♂; long. 6½ mm.

Chrys. dirae Mocs. similis et affinis; sed antennarum articulis primis tribus tantum viridibus, tertio multo breviore, abdominis segmento dorsali tertio foveolis parum maioribus, secundariis confluentibus, margine apicali dentibus brevioribus late-triangularibus, distincta. — De cetero forsan tantum eius mas est?

Patria: Guinea Africæ occidentalis (Mus. Berolinense).

399. **Chrysis aurolimbata** n. sp.

Submediocris, elongata, sublinearis, viridis, breviter cinereo-alboque pilosa; mesonoti lobo medio parte basali nigro-æneo, parte apicali, macula scutelli, postscutelli et sulco mediano pronoti nigro-violaceis; cavitate faciali minus profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne non marginata, fronte subangustata cum vertice valde convexa; antennis brevibus, tenuibus, nigris, cano-puberulis, articulis tribus primis viridibus, tertio longo, quarto quintoque simul sumptis æquilongo; clypeo viridi-aurato, apice truncato nigro-æneo; genis longis, articulo antennarum tertio æquilongis vel adhuc parum longioribus, dense punctulatis, mandibulis apice rufis bidentatis; pronoto sat longo, capite tamen breviore, transverso, antice in medio longitudinaliter profunde sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, obtusis; mesonoto sat sparsim crassius punctato interstitiisque subtilissime punctulatis coriaceis, pronoto et scutello densius similiter punctatis, vertice et metanoto dense subtilius punctato-subreticulatis; abdomine viridi-cyaneo, segmentis disco late nigro-violaceis, 1—2 margine apicali sat late viridi-aureo-limbatis, tertio ante seriem viridi-aureo-subfasciato; segmentis fere æqualiter sat crasse denseque punctatis, a latere visis parum rugosiusculis, secundo carinula mediana indistincta, tertio supra seriem convexo, foveolis sat profunde immersis, sat magnis, circiter 6 tantum bene distinctis per carinulam medianam brevem interruptis, lateralibus minutis, non satis distinctis, nigro-violaceis, margine apicali sat longo, nigro-violaceo, dense punctulato, dentibus mediocribus, triangularibus, centralibus externis parum longioribus, emarginaturis: centrali subtriangulari, externis latioribus; ventre pedibusque viridibus, illo segmento secundo basi utrinque et marginibus segmentorum nigris, his tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali subcompleta. — ♀; long. 6½ mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: corpore sublineari, mesonoti lobo medio parte basali nigro-æneo, parte apicali, macula scutelli, postscutello et sulco mediano pronoti nigro-violaceis, sculptura thoracis, abdominis segmentis dorsalibus disco late nigro-violaceis, 1—2 margine apicali sat late viridi-aureo-limbato, a congeneribus iam facile cognoscitur.

Patria: Guinea superior Africæ occidentalis (Ashanti, Mus. Hung.).

400. **Chrysis Angolensis** Rad.

Chrysis angolensis, Rad. Jorn. Scienc. Mathem. Phys. e Natur. Lisboa. Nr. XXXI. p. 219, n. 215. (1881). — ?Gib. Annali Mus. Civ. Stor. Nat. Genova. Sér. 2. tom. I. p. 319, n. 61. ♂. (1884) (vel n. sp. *callaina* Grib.).

«Magna; caput virescens, punctato reticulatum, cavitas facialis subprofunda superne marginata, margine cohærente cum area semicirculari stemma anticum excipiente; thorax profunde scrobiculatus, cyaneo-viridis; abdominis segmento primo viridi, secundo cyaneo-viridi, tertio cyaneo concaviusculo immerso; ano quadridentato, dentes inæquales, externi acutis spinoideis, centralibus triangularibus. Alis fumatis.

Long. 10 mill.

Tête verte, scrobiculé-réticulé; cavité faciale nue, chagrinée, sa marge supérieure est rélevée; à l'extrémité de cette marge abouti une carène en arc demicirculaire, qui s'étend sur le vertex et entoure la première ocelle. Chaperon petit échancré au milieu.

Thorax grossièrement scrobiculé, prothorax vert, mésothorax bleu verdâtre, la moitié de son compartiment interne bleu foncé; post-écusson réticulé bleu, les dents latérales du metanotum fortes et d'une couleur verte.

Abdomen régulièrement scrobiculé; son premier segment vert; la base du second verte, le reste de ce segment bleu verdâtre et vers l'extrémité bleu portant sur son dos une faible carène; troisième segment bleu violacé, faiblement concave, sa marge anteapicale épaisse, points de la série assez grands et profonds, leur nombre huit; le bord de ce segment inégalement quadridenté, les dents externes aiguës et placées à l'extrémité du bord, les deux dents du milieu sont très rapprochées et triangulaires.

Ailes enfumées.» (Rad. l. c.).

«Un esemplare maschio raccolto a Daimbi negli Adda-Galla presenta la maggior parte dei caratteri di questa specie descritta dal Generale Radoszkowsky sopra esemplari d'Angola, unitamente però a talune notevoli differenze: nell' esemplare di Scioa infatti manca completamente la carene longitudinale mediana del secondo segmento abdominale, il cercine anteapicale del terzo segmento non è punto inspessito, nè rigonfio: i fori delle serie sono in numero circa doppio di 8: e finalmente i quattro denti del-l'ano sono quasi equidistanti, e di forma poco diversa fra di loro. Queste differenze potrebbero forse essere solamente sessuali; ad ogni modo sono cosi importanti da lasciare il dubbio sulla identità delle due specie, e l'incompleta descrizione del Radoszkowsky, tacendo diversi particolari assai importanti, contribuisce a lasciare incerti sul giudizio da darsi. Credo utile quindi di dare una compiuta descrizione dell' esemplare che ho sott' occhio.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Insetto di media statura, robusto, col corpo leggermente appiattito, a fianchi quasi paralleli. Testa mediocre, di figura trapezia quando la si guardi di faccia; occhi abbastanza sporgenti, le guancie lunghe quanto lo spessore medio delle antenne, i loro profili sono paralleli: il clipeo è abbastanza sviluppato, e profondamente intagliato ad arco nel mezzo del margine anteriore. La cavità facciale assai larga e profonda, ha la sua superficie fortemente e densamente punteggiato-granulosa: essa è limitata da una linea elevata o piega, sia lateralmente che superiormente: nella parte superiore questa linea è molto sporgente foggiata ad arco regolare colla concavità in alto, questo arco emette alle estremità due rami discendenti poco marcati che abbracciano la cavità facciale e due altri ascendenti marcatissimi incurvati che vengono a riunirsi sopra all' ocello anteriore, che trovasi cosi racchiuso in una fossetta quasi esattamente circolare a bordi ben marcati, analoga a quella che vedesi negli *Stilbum :* è questo un carattere assai notevole, e nel genere poco comune.

Il torace è di forma leggermente conica: il margine anteriore del protorace è sensibilmente più breve del posteriore: i margini laterali sono lievemente incavati: lo scudetto ed il postscudetto sono lievissimamente tumefatti: nel mezzo della base di entrambi si osserva un irregolare incavatura: gli angoli dentiformi del metathorace nulla presentato di notevole Invece nelle mesopleure vedesi al basso una profonda, larga ed irregolare fossa transversale (olte ad un' altra piccola verticale) il cui margine inferiore porta due forti, acuti tubercoli dentiformi.

L'addome alla base è alquanto più largo del torace, ha i suoi fianchi pochissimo convergenti, ed all' estremità è, si può dire tagliato nettamente a squadra. La sua base porta tre incavature distinte ; di esse la mediana è forte, allungata, profonda ma stretta, le due laterali invece, molto larghe, ma brevi e poco sentite. Nessuna carena, o linea elevata, o spazio nudo trovasi sul secondo segmento. Il terzo segmento ha la sua parte od area basale regolarmente convesso-declive, con una più che lievissima depressione nel mezzo; il cercine che limita questa parte del terzo segmento non si rileva affatto sulla sua superficie: esso ha uno spessore mediocre; i suoi fori sono numerosi, abbastanza grossi, irregolari, taluni confluenti. Il margine anale ha poca sporgenza, ma è largo transversalmente quanto la base del 3° segmento: esso porta quattro denti brevi ma molto larghi: essi sono prodotti da tre intagli assai larghi, poco profondi, arcuati, quasi uguali fra loro (il mediano è appena leggerissimamente più stretto dei laterali): siccome il lato esterno dei denti laterali è costituito dal fianco stesso del segmento, ed è quasi normale al margine anale, cosi ne viene che i due denti laterali sono alquanto più acuti che i centrali.

La punteggiatura della testa e del torace è fittissima; lo è meno, ma pur sempre molto densa sull' addome. Sulla testa, sul protorace e sul mesotorace essa è assai irregolare, i punti presentando dimensioni diversissime; posteriormente però sul mesonoto comincia a regolarizzarsi, ed i punti ivi sono tutti ugualmente assai grossi e profondi.

Sullo scudetto e sul metatorace la punteggiatura è regolarissima, forma quasi una rete di punti uguali rotondi, larghi, poco profondi. Ben regolare, uniforme, ed abbas-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

stanza grossa è la punteggiatura di tutto l'addome, eccezion fatta pel margine anale, i cui punti sono rari, irregolari ed assai minuti.

La testa, il torace, ed i due primi segmenti dell' addome son verdi con qua e là delle macchie o dei riflessi azzurri; il terzo segmento poi è di color azzurro-violaceo. Le ali assai affumicate alla base son quasi transparenti al margine estremo, e presentano riflessi violacei. La statura di 8 millimetri.

Molto affine a questa è pure la *C. fumipennis*, Brullé delle Isole Filippine, e forse si tratta sempre della medesima specie: anzi la vera *angolensis* non presenta il realtà a parer mio alcuna differenza dalla *fuscipennis*, mentre la specie di Scioa differisce per l'addome non carenato, e per la dentellatura dell' ano.» (Gribodo l. c.).

Patria: Angola Africæ occidentalis (Welwitsch, Rad.); ? Africa æquatorialis (Daimbi, Grib.).

401. **Chrysis Reichei** Dhlb.

Chrysis Reichei, Dhlb. Hym. Europ. II. p. 218, n. 119. ♀. (1854) excl. Spin. syn. (nec *Pyria Reichei* Spin.).

«Mediocris elongata robusta 3 lin. decimal. long. punctatissima punctis modicis, vix nitida, saturate cyanea abdominis dorso violaceo-purpureo, capitis cavitate superne marginata, occipite inermi, abdominis segmenti tertii margine laterali recto, alarum cellulis discoidali completa, radiali subcompleta.

Observ. Similis et affinis *Chrys. nitidulae,* at pictura et punctura abdominis certe dignoscitur. Corpus robustum cinereo-fusco pubescens et pilosum. Caput et thorax confertissime punctata subreticulata parum nitida subopaca punctis mediocribus, pure cyanea; guttula ad singulum quodque stemma, orbitæ oculorum, pronoti margo posticus et centrum dorsuli leviter virescentia; cavitas facialis, basis antennarum, clypeus, pectus et pedes cœrulescenti-viridia aut viridi-cyanescentia. Caput robustum; vertex amplus transverso-rectangularis convexo-depressus. Cavitas facialis quadrata confertim punctulato-coriacea, superne transverse marginata, margine leniter bis arcuato; clypeus transversus brevis subsemilunatis crebre modice punctatus, disco gibbo-convexus, ad centrum marginis apicalis subtruncatus l. potius lenissime arcuato-emarginatus. Antennæ mediocres- l. respectu magnitudinis corporis subreves, apice fuscæ, scapus cyaneo-virescens, articuli secundus et tertius cyanei. Labrum mediocre semilunatum convexum ciliatum mandibulæque nigro-picea ænescentia, hæc macula basali viridi-cyanea. Palpi fusci. Thorax crassus cylindricus. Pronotum maculis 2 nigro-æneis, una polita et immersa in centro partis anticæ, altera opaca in centro partis posticæ; scutellum convexo-depressum et postscutellum convexum basi nonnihil nigro-ænescentia, suturæ dorsuli concolores crenulatæ. Metanoti anguli postico-laterales magni robusti lati triangulares coriacei sparse crasse punctati. Pedes viridi-cyanei tarsis fuscis. Alæ sordide hyalinæ venis firmis piceis; cellula discoidalis completa; cellula radialis elongata triangulariter lanceolata, apice anguste aperta. Abdomen subellipticum, basi truncatum, thorace paullulum angustius, longitudine capitis thoracisque simul sumtorum;

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

dorso modice convexum, creberrime modice punctatum et punctulatum, vix nitidum subopacum pulchre violaceo-purpurascens, lineola mediana planiuscula subelevata nitida fusco-viridiænea, in segmento secundo continua, in primo autem et tertio tantum apicem versus distincta; segmenta: secundum marginibus basali et apicali, tertium margine basali quoque ænescentia; segmenti tertii series anteapicalis medio breviter interrupta, utrinque foveolis numerosis maiusculis profundis rotundatis separatis nec confluentibus; dentes apicales mediocres triangulares, emarginaturis modice arcuatis invicem subæqualibus; margo lateralis (segm. tertii) obliquus subrectus et vix nisi obsoletissime flexuosus.»

Patria: Promontorium Bonæ Spei.

402. **Chrysis longigena** n. sp.

Mediocris, elongata, sat gracilis, cyanea, parcius cinereo-alboque pilosa; vertice, fascia angusta pronoti et lobo medio mesonoti violascentibus, parte reliqua thoracis parum violaceo picta; cavitate faciali, a stemmatibus valde remota, lata, frontem versus angustata, viridi-cyanea, medio indistincte longitudinaliter canaliculata, utrinque dense transverse-striata, lateribus punctulato-coriacea, superne depresso-convexa, non marginata; antennis brevibus, sat tenuibus, nigris, scapo viridi, articulis duobus primis flagelli viridi-cyaneis, huius articulo secundo longitudine mediocri, tertio quartoque simul sumptis æquilongo; clypeo brevi, apice nigro-æneo subtruncato; genis valde longis, dense punctulato-coriaceis, articulis 2—3 flagelli simul sumptis æquilongis; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus subacutis; vertice dense subtilius, pro- et mesonoto scutelloque sat sparsim crassius punctato-subreticulatis, thorace insuper instertiis punctatis, postscutello dense subtilius punctato-reticulato; mesopleuris dense punctatis et punctulatis; abdominis segmentis dorsalibus nigro-violaceis, 1—2 margine apicali et tertio ante seriem virescentibus, 2—3 basi nigro-æneis, secundo carinula mediana nulla, duobus primis dense æqualiter subtilius, tertio parum fortius punctatis, tertio convexo, foveolis sat profunde immersis, intermediis sex per carinulam brevem convexam interruptis sat magnis subrotundis, lateralibus minoribus minus distinctis, margine apicali mediocri, dense punctulato, quadridentato, dentibus mediocribus, acute-triangularibus, equilongis, emarginaturis quoque fere æquilatis, arcuatis, centrali externis profundiore; ventre subaurato-viridi, segmento secundo basi utrinque nigro-maculato, pedibus violascenti-cyaneis, tibiis apice parum virescentibus, tarsis fuscis; alis modice fumato-hyalinis, iridescentibus, venis fuscis, cellula radiali lanceolata subcompleta. — ♀; long. 7½ mm.

Species: de corpore sat gracili, cavitate faciali, genis valde longis, punctatura thoracis abdominisque, iam facile cognoscitur.

Patria: Promontorium Bonæ Spei (Mus. Cæs. Vindob.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

403. **Chrysis laborans** Costa.

Chrysis laborans, Costa, Annuario Mus. di Napoli. II. p. 68, n. 1971. (1864).

«Elongata, subrobusta, capite thoraceque confertim crasse punctatis, abdomine punctato; scutello mutico; abdominis segmento tertio transverse concavo, serie anteapicali foveolis 12 discretis, ano quadridentato, dentibus æqualibus, triangularibus, duobus mediis magis inter se, quam cuivis laterali approximatis; viridis, abdominis segmento tertio viridi-cyaneo, secundo ventrali nigro-bimaculato; antennis fuscis, basi viridi. Long. 10 mm.»

Patria: Africa meridionali-orientalis (Port Natal).

404. **Chrysis Zuluana** n. sp.

Mediocris, elongata, sat robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice circa et post stemmata, pronoti truncatura antica, mesonoti lobo medio et metanoto postice subtus violascentibus; cavitate faciali viridi, lata, minus profunda, dense punctato-coriacea, parcius argenteo-sericeo-pilosa, superne transversim acute arcuato-marginata; antennis brevibus, tenuibus, fuscis, scapo violaceo, articulis flagelli: primo supra viridi, secundo violascenti, hoc longitudine mediocri, tertio parum tantum longiore; genis mediocribus, articulo antennarum quarto æquilongis; pronoto brevi transverso-rectangulo, antice in medio vix impresso: metanoto convexo, dentibus posticolateralibus robustis, late-triangularibus, brevibus; vertice dense minus crasse punctato-subreticulato; pro- et mesonoto sat dense crassius, scutello et postscutello parum fortius punctato-reticulatis, pronoti interstitiis subtilissime punctulatis; abdominis segmentis dorsalibus duobus primis viridi-cyaneis, margine apicali et lateribus viridi-subaureis, tertio toto nigro-cyaneo; primo basi violaceo dense fortius punctato, in medio et lateribus haud foveatis, secundo carinula mediana minus distincta; primo sat sparsim fortius punctato interstitiisque subtiliter punctulatis, secundo densius sed subtilius punctato, tertio convexo, dense subtilius parum rugosiuscule-punctato, supra seriem sat fortiter incrassato, foveolis sat profunde immersis, circiter 12 minutis rotundisque, margine apicali brevi, quadridentato, dentibus in arcum dispositis, externis a margine laterali remotis, acute-triangularibus, mediocribus, intermediis duobus externis parum longioribus, emarginaturis modice arcuatis fere æquilatis, margine laterali leniter bisinuato; ventre viridi-cœruleoque vario, segmento secundo basi utrinque nigro-maculato, marginibus fuscis; pedibus nigro-violaceis, tarsis fuscis; alis subfumato-hyalinis violascentibus, venis fuscis, cellula radiali lanceolata subcompleta. — ♂; long. 6½ mm.

Species: de cavitate faciali, genis, pronoti et abdominis segmenti primi dorsalis punctatura duplici, segmento tertio nigro-cyaneo, serie anteapicali, dentibus et alis a congeneribus facile cognoscenda.

Patria: Caffraria (Mus. Cæs. Vindob.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

405. **Chrysis Sibylla** n. sp.

Submediocris, elongata, sat gracilis, viridi-cyanea, longius cinereo-alboque pilosa; vertice circa stemmata, pronoti truncatura antica in medio, mesonoti loborum lateralium lateribus et lobo medio vitta mediana violascentibus; mesonoti lobo medio vittis duabus lateralibus nigro-æneis; cavitate faciali sat profunda et lata, viridi-subaurata, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne flexuoso-marginata, margine ramulum levem indistinctum ad stigma anticum emittente; antennis sat longis, valde tenuibus, nigris, articulis duobus primis viridibus, tertio cyanescenti, hoc mediocri, quarto duplo longiore; genis brevibus, antennarum articulo secundo vix longioribus; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter parum profunde sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, subacutis, apice incurvis; vertice, pro- et mesonoto dense minus crasse punctato-subreticulatis, scutello et postscutello fortius punctato-reticulatis; abdominis segmentis dorsalibus viridi-cyaneis, secundo tertioque basi utrinque macula subquadrata nigro-ænea, tertio basi et apice nigro-violaceis; secundo carinula mediana angusta sat distincta; primo basi in medio et lateribus leviter foveatis, cum secundo subtilius sat dense minus profunde punctato, secundo a latere viso parum, tertio densius subtiliusque rugosiuscule-punctatis, hoc subcoriaceo, convexo, ante seriem parum calloso, foveolis circiter 14 minutis suboblongis per carinulam medianam interruptis violaceis, margine apicali sat brevi, dense punctulato, quadridentato, dentibus in arcum dispositis, intermediis duobus mediocribus acute-triangularibus, externis duobus multo brevioribus subacutis, emarginaturis: centrali angustiore sed profundiore; ventre pedibusque viridibus parumque cyanescentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta. — ♀ ; long. 6½ mm.

Species: colore mesonoti et abdominis, cavitate faciali, punctatura, dentibus analibus et alis, facile cognoscitur.

Patria: Caffraria (Mus. Cæs. Vindob.).

406. **Chrysis delicatula** Dhlb.

Chrysis delicatula, Dhlb. Oefvers. K. Vetensk. Acad. Förhandl. p. 138, n. 4. (1850); Hym. Europ. II. p. 227, n. 126. (1854).

«Parva gracilis linearis 1½ lin. decimal. long. confertissime subreticulato-punctata viridi-cyanea parumper nitida tarsis brunneis, abdominis segmentis secundo et tertio margine basali nigro-æneis, segmento tertio disco utrinque subdepresso supra seriem ante-apicalem convexiusculo, serie interrupta foveolis numerosis submediocribus rotundatis subpellucidis, dentibus apicalibus parvis triangularibus, emarginaturis: centrali modice arcuata, externis latis obliquis subtransversis l. lenissime arcuatis.

Observ. Quoad habitum *Chrysidi Bohemanni* similis. Corpus angustum lineare parumper cinereo- et cano-pubescens, pulchre læte cyaneum aut subcœruleum; orbitæ

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

oculorum, cavitas facialis, clypeus, pronotum, scutellum, pectus, pedes, abdominisque segmenta primum et secundum margine apicali et tertium ante seriem, a colore virescente plus minus micant. Caput rotundato-subcubicum sublongiusculum, regione supera verticem valde convexum, oculos et partem occipitis superiorem comprehendente subglobosum, regione infera inter verticem, oculos et mandibulas sita subquadratum; cavitas facialis planiuscula normaliter sculpta, medio subtiliter canaliculata, superne non marginata. Antennæ mediocres fuscæ, basi viridi-cyaneæ. Clypeus subbrevis transversus punctulatus, disco parum convexus, ad centrum marginis apicalis leviter arcuato-emarginatus. Thorax cylindricus dorso depresso-convexus; in pronoti regione antica et humili adest area centralis polita nigro-ænea utrinque foveolata; regione pronoti postica et maxima transverso-rectangula antice truncata postice leviter arcuato-emarginata. Dorsuli area media violaceo-purpurascens. Postscutellum gibbo-convexum. Metanoti anguli postico-laterales minuti acute triangulares. Abdomen elongatum capite thoraceque simul sumtis fere longius, angustum lineare rectangulum, dorso modice convexum; segmenti tertii regio maxima et basalis semicircularis regione apicali paullulum altior, disco utrinque paullulum depressa, supra seriem lenissime convexo-immersa; margo (s. regio) apicalis (segmenti tertii) prominulus subdepressus subtilissime punctulato-coriaceus: emarginatura centralis mediocris et modice arcuata, emarginaturæ exteriores valde obliquæ latæ levissime arcuatæ et usque ad angulum laterali-apicalem ductæ, hinc dentes centrales nonnihil approximati, dentes autem externi valde distantes remoti l. quasi retracti et ex ipsis angulis laterali-apicalibus efficiuntur. Alæ hyalinæ venis tenuibus brunneo-testaceis, cellula radiali lanceolata subcompleta scil. apice angustissime aperta.»

Patria: Caffraria.

407. Chrysis littoralis n. sp.

Parva, elongata, angusta, parallela, viridi-cyanea, parcius cinereo-alboque pilosa; facie et metanoti lateribus virescentibus; cavitate faciali sat lata et profunda, dense subtilissime, lateribus fortius punctulato-coriacea; fronte area reniformi insigni; antennis sat longis, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridibus, tertio brevi, secundo vix longiore; genis longis, articulo antennarum secundo duplo longioribus; pronoto brevi, transverso-rectangulo, convexo, nec minime impresso vel sulcato; vertice et thoracis dorso dense subtiliter punctato-subreticulato, subcoriaceo; metanoto convexo, dentibus postico-lateralibus mediocribus, triangularibus, apice incurvis; abdominis segmentis dorsalibus: primo basi leviter trifoveato, secundo carinula mediana nulla, segmentis omnibus fere æqualiter dense leviter punctatis, subcoriaceis, 2—3 basi nigro-æneis, secundo margine apicali subtiliter punctulato, tertio supra seriem convexo, foveolis aliquot minutis haud bene distinctis rotundis, margine apicali brevi, dense subtilissime punctulato, quadridentato, dentibus minutis triangularibus, in arcum levem dispositis, fere æqualibus, emarginaturis leniter arcuatis, centrali externis multo angustiore; ventre pedibusque cyaneo-viridibus, illo segmento secundo basi utrinque macula

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

et marginibus segmentorum et his tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice parum aperta. — ♂; long. 5 mm.

Chrys. delicatulae Dhlb. socia esse videtur; sed frontis area reniformi insigni, iam satis distincta.

Patria: Delagoa bay Africæ meridionali-orientalis (Mus. Berolinense).

408. **Chrysis areata** n. sp.

Magna, elongata, robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice circa stemmata et mesonoti lobo medio violascentibus; cavitate faciali sat profunda, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse acute-marginata; fronte area insigni semicirculari stemma anticum excipiente et per carinulam arcuatam determinata; antennis longis, sat tenuibus, nigris, articulis duobus primis viridibus, 3—4 cyanescentibus, tertio longo, secundo duplo longiore; genis brevibus, antennarum articulo secundo adhuc parum brevioribus; occipite utrinque angulo laterali spinoideo; pronoto brevi, antice parum arcuato, medio sat profunde impresso; vertice sat dense et crasse, mesonoto cum scutello postscutelloque multo fortius punctato-reticulatis; pronoto sparsim crassius inæqualiter punctato, interstitiis sublævibus, hinc illic punctulatis; abdominis segmentis dorsalibus duobus primis virescentibus, tertio toto cyaneo; primo basi cyaneo, crasse punctato, medio longitudinaliter canaliculato et utrinque parum impresso, secundo carinula mediana indistincta, duobus primis sparsim minus crasse profundeque punctatis, interstitiis sublævibus, in primo hinc illic punctulatis, tertio multo densius subtiliusque punctato, subcoriaceo, convexo, supra seriem sat fortiter calloso, foveolis immersis circiter 14 mediocribus suboblongis, margine apicali sat longo, subcoriaceo, quadridentato, dentibus in arcum dispositis, externis a margine laterali remotis, brevibus, triangularibus, intermediis parum longioribus, emarginaturis leniter arcuatis, centrali externis multo angustiore; ventre, femoribus item et tibiis tarsorumque articulis duobus primis cyaneis et viridibus, illo segmento secundo basi utrinque nigro-maculato, his articulis reliquis fuscis; alis subfumato-hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata completa. — ♀; long. 11 mm.

Species: de frontis area insigni, genis brevibus, punctatura pronoti, dentibus analibus alisque facile cognoscitur.

Patria: insula Madagascar (Mus. Hung.).

409. **Chrysis fasciolata** Klug.

Chrysis (Spintharis) fasciolata, Klug, Symb. phys. Dec. V. tab. XLV. fig. 12. (1845).

Submediocris, elongata, robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice, collo, mesonoti lobo medio tegulisque alarum violaceis; cavitate faciali sub-angusta, minus profunda, dense subtiliter punctulato-coriacea, argenteo-sericeo-pilosa, superne convexa, non marginata; antennis brevibus, sat crassis, brunneis, articulis duobus

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

primis viridibus, tertio mediocri, quarto quintoque simul sumptis breviore; genis sat longis, articulo antennarum tertio parum tantum brevioribus; vertice ante stemma anticum virescenti impresso; pronoto brevi, convexo, antice in medio leniter longitudinaliter sulcato; mesonot lobo medio antice nigro-æneo, scutello virescenti sparsim punctato; vertice et pronoto densius parumque subtilius, mesonoto fortius punctato-subreticulatis, postscutello punctato-reticulato; metanoti dentibus postico-lateralibus triangularibus acutis mediocribus; abdominis segmentis dorsalibus nigro-violaceis, 1—2 margine apicali sat late viridibus, fere æqualiter dense minus crasse parum rugosiuscule-punctatis, secundo carinula mediana nulla, tertio convexo, foveolis minutis obliteratis nec minime immersis, margine apicali sat longo, dense punctulato, quadridentato, dentibus subtransverse dispositis, intermediis late-triangularibus brevibus, externis parum maioribus acutis, emarginaturis minus profundis subæqualibus; ventre pedibusque cyaneis et viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis testaceis; alis hyalinis, venis pallide-fuscis, cellula radiali fere completa. — ♀; long. 6 mm.

Species: de fronte convexa, fascia thoracis abdomineque supra nigro-violaceis, serie anteapicali obliterata, dentibus intermediis late-triangularibus, facile cognoscenda.

Patria: Nubia («Ambukohl Aethiopiæ mense Septembre»).

410. **Chrysis chlorospila** Klug.

Chrysis chlorospila, Klug, Symb. phys. Dec. V. tab. XLV. fig. 3. (1845).

«C. cœrulea, thorace inter alas, abdomine basi utrinque viridibus. Long. lin. 4.

Statura fere *C. ignitae.* Læte cœrulea, confertim impresso-punctata. Caput antice impressum, albido-pilosum, fronte reticulata viridi, antennis apice nigricantibus. Mesothorax utrinque ante alas viridi-cœruleus, postice inter alas aurato-viridis. Alæ hyalinæ, medio vix infuscatæ, nervis stigmateque fuscis. Tegulæ cyaneæ. Pedes pubescentes cyanei, tarsis fuscescentibus, tibiarum spinulis albidis. Abdomen segmento primo utrinque aurato-viridi, secundo basi, sequentibus omnino violaceis. Segmentum ultimum acute quadridentatum.»

Patria: Nubia («ad Ambukohl Aethiopiæ mense Julio capta»).

411. **Chrysis Aethiopica** mihi.

Chrysis dubia, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 148, n. 104. (1876) sec. spec. typ. e coll. Rad. (nec Cresson).

Submagna, elongata, subparallela, tota viridi-cyanea, longius albido-pilosa; mesonoti lobo medio, scutello et abdominis segmentis dorsalibus duobus primis violascentibus; cavitate faciali planiuscula, lata, dense punctato-coriacea, superne transverse acute-marginata, margine medio parum flexuoso; antennis longis, proportionaliter tenuibus, nigris, cano-puberulis, articulis tribus primis viridi-cyaneis, quarto supra cyanescenti, tertio longo, sequentibus duobus simul sumptis æquali; genis sat longis, articulo antennarum secundo fere duplo longioribus; occipite utrinque angulo spinoideo munito;

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

pronoto brevi, transverso-rectangulo, antice in medio parum impresso: metanoto convexo, dentibus postico-lateralibus brevibus, robustis, late-triangularibus, subacutis; vertice dense sat crasse punctato-subreticulato; thorace supra parum fortius sed dispersius punctato-subreticulato interstitiisque subtiliter punctulatis; abdominis segmentis dorsalibus: primo basi fortius longitudinaliter trisulcato, secundo carinula mediana sat distincta subtilissime sparsim punctulata, tertio disco utrinque parum concaviusculo-immerso, supra seriem leniter calloso dense punctulato, foveolis sat profunde immersis, circiter 10, per carinulam medianam convexam interruptis, violascentibus, intermediis parum confluentibus maiusculis, margine apicali sat longo, dense punctulato, quadridentato, dentibus in arcum dispositis, mediocribus, subacute-triangularibus, intermediis modice longioribus, emarginaturis parum arcuatis, centrali externis modice angustiore; segmentis omnibus fere æqualiter sat crasse parum rugosiuscule-punctatis interstitiisque punctulatis; ventre pedibusque viridi-cyaneis, tarsorum articulis ultimis et subtus fuscis; alis modice fumato-hyalinis violascentibus, venis firmis piceis, cellula radiali lanceolata subcompleta, apice parum aperta. — ♂; long. 9 1/2 mm.

Species cum *Chryside coeruleanti* Fabr. multum habet similitudinis.

Patria: Abyssinia.

Animadversio. — *Chrysis dubia*, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 144, n. 37. (1879) e Caucaso verisimiliter alia est species.

412. **Chrysis palliditarsis** Spin.

Chrysis palliditarsis, Spin. Annal. Soc. Ent. France. VII. p. 449, n. 6. (1838). — Dhlb. Hym. Europ. II. p. 225, n. 123. (1854). — ? Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 16, n. 30, tab. I. fig. 11. (1877).

Descriptio secundum Dahlbom:

«Mediocris 2 1/2 lin. decimal. long. capite thoraceque irregulariter modice punctatis subrugulosis cœruleo-viridis tarsis albo-testaceis, abdominis segmenti tertii serie anteapicali lenissime immersa continua foveolis circiter 10 rotundatis maiusculis, dentibus brevissimis late triangularibus, emarginaturis leniter arcuatis: lateralibus latioribus.

Observ. Affinis et similis *Chrysidi laetae*. Corpus elongatum læte viride, totum dorso lateribusque confertim et modice at irregulariter h. e. subruguloso-punctatum. Pronoti margo anticus, dorsuli area centralis, tegulæ, abdominisque segmenta secundum et tertium basi, cœrulea. Antennarum scapus et pedicellus virides, flagellum ferrugineum aut læte brunneum. Cavitas facialis normalis, superne marginata: margine transverso, utrinque ramulo deflexo longitudinali brevissimo. Alæ albo-hyalinæ venis brunneis, cellula radiali triangulariter lanceolata, apice late aperta. Abdominis segmenti tertii series anteapicalis cyanea; margo apicalis mediocris prominulus convexo-depressus punctulatus, summus tenuissimus testaceus; margo lateralis obliquus, leniter flexuosus.»

Patria: Aegyptus (Spin., Dhlb.); ? Turkestania (Rad.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

413. **Chrysis maculicornis** KLUG.

Chrysis (Spintharis) maculicornis, Klug, Symb. phys. Dec. V. tab. XLV. fig. 6. (1845).

«Viridi-cœrulea, antennis testaceis, nigro-maculatis. Long. lin. 3 1/2.

Præcedente *(xanthocera)* minor. Punctata, viridi-cœrulea. Caput antice albido-pubescens. Antennæ testaceæ, articulo primo secundoque viridibus, reliquis subtus apice nigris. Thorax immaculatus. Alæ albo-hyalinæ, nervis stigmateque testaceis. Tegulæ læte cyaneæ. Pedes virides, tibiis latere interno tarsisque testaceis. Abdomen lateribus viridi-cyaneum, apice acute quadridentatum.»

Patria: Aegyptus (Alexandria).

414. **Chrysis coelestina** KLUG.

Chrysis coelestina, Klug, Symb. phys. Dec. V. tab. XLV. fig. 4. (1845).

«Punctata, cœrulea, alis albo-hyalinis, antennis nigris. Long. lin. 4.

Statura fere et magnitudine præcendentis *(chlorospila).* Viridi-cœrulea, confertim punctata. Caput antice viride ad oculos argenteo-sericeum, antennis mandibulisque nigris. Mesothoracis lobus intermedius læte cyaneus. Tarsi pubescentes fusci. Alæ albo-hyalinæ, nervis stigmateque nigris. Abdominis segmentum secundum basi læte cyaneum, ultimum acute quadridentatum.»

Patria: Aegyptus (Faium, mense Julio).

415. **Chrysis diversa** DHLB.

Chrysis diversa, Dhlb. Hym. Europ. II. p. 226, n. 125. ♀. (1854). — ? Rad. Feldts. Reise in Turkest. Hym. Chrysid. p. 17, n. 32. tab. II. fig. 1. ♀. (1877).

«Mediocris 2 1/2 lin. decimal. long. confertim modice punctata cyanea viridi-picta tarsis, abdominis segmento tertio toto modice convexo, serie ante-apicali distincta fuscis, continua: foveolis numerosis mediocribus rotundatis, dentibus brevibus triangularibus, emarginaturis modice arcuatis exterioribus æqualibus.

Observ. Simillima *Chrysidi orientali,* sed colore corporis magis cyaneo et præcipue segmenti tertii serie anteapicali conspicua certe distinguitur. Corpus lineare, breviter cano- et fusco-pubescens, cyaneum aut cœrulescens; vertex, pronoti regio postica, dorsuli areæ laterales et abdominis segmentum tertium supra seriem plus minus viridia aut viridi-irrorata; scutellum, pectus et margines apicales interdum quoque laterales segmentorum primi et secundi læte viridia. Caput mediocre rotundato-subcubicum; vertex convexus; cavitas facialis rectangularis planiuscula confertim punctulato-coriacea, medio subtiliter canaliculata, superne leviter transverse marginata, marginulo bis arcuato. Antennæ breves subrobustæ fuscæ scapo viridi-cyaneo. Clypeus mediocris transversus subtrapezinus punctulatus viridis nitidus marginibus: lateralibus testaceis, apicali piceo, disco lenissime et subtilissime carinulatus, utrinque leviter impressus, ad centrum marginis subtruncatus l. potius late et brevissime triangulariter emarginatus.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Thorax subcylindricus, dorso depresso-convexus; metanoti anguli postico-laterales parvi acute triangulares. Abdomen obtuse subrectangulum thorace paullulum longior at eiusdem latitudine, dorso modice convexum et modice confertim punctatum; segmenti tertii dentes apicales in una eademque linea transversa positi, omnes breves triangulares, at exteriores robustiores, centrales breviores obtusiusculi, emarginatura centralis paullo minus profunda paulloque minus lata quam singula quaque exteriorum; margo laterialis obliquus lenissime et obsoletissime flexuosus l. subrectus. Pedes cyaneo-virides aut viridi-cyanei tarsis fuscis; calcaria, margines apicales tibiarum articulorumque tarsorum brunneo-testacea. Alæ hyalinæ venis mediocribus piceis, cellula radiali triangulariter lanceolata apice aperta.»

Patria: Aegyptus (Dhlb.); ? Turkestania (Rad.).

416. **Chrysis Branickii** Rad.

Chrysis Branicki, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 107, n. 31. ♂. tab. II. fig. C. (1876) sec. spec. typ. e coll. Rad.

Chrysis Branickii, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 18. (genit. maris) (1888).

Mediocris, elongata, minus robusta, cyanea parum violascens, parcius cinereo-alboque pilosa; facie cum fronte, pleuris, mesonoti lobis lateralibus et abdominis segmento dorsali secundo margine apicali virescentibus; cavitate faciali angusta, dense punctulato-coriacea, argenteo-sericeo-pilosa, superne indistincte transverse-marginata; antennis brevibus, sat tenuibus, fuscis, cano-puberulis, articulis duobus primis viridibus, tertio longitudine mediocri, quarto parum tantum breviore; genis mediocribus, antennarum articulo quarto æquilongis; pronoto longo, longitudine capitis, transverso, dorso convexo, antice in medio longitudinaliter valde leviter sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, sat latis, triangularibus, acutis; vertice densius parumque subtilius, pro- et mesonoto scutelloque modice fortius punctato-subreticulatis, punctis nonnullis in scutello adhuc minoribus, postscutello minus fortiter punctato-reticulato; abdominis segmentis dorsalibus: 2—3 basi nigro-æneis, primo basi leviter trifoveato, segmentis omnibus convexis fere æqualiter dense minus crasse punctatis, secundo carinula mediana nulla, tertio supra seriem convexo, foveolis vix immersis parvis rotundis circiter 10, per carinulam medianam convexam interruptis, margine apicali brevi, quadridentato, dentibus duobus intermediis undulato-flexuosis minutis late-triangularibus, externis duobus multo maioribus acutis triangularibus, emarginaturis leniter arcuatis, centrali externis angustiore multo minusque profunda; ventre violaceo, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, calcaribus tarsisque albido-testaceis, his apice infuscatis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice late aperta, tegulis cyaneis. — ♂; long. 7 mm.

Species: colore, pronoto, foveolis dentibusque analibus, facile cognoscitur.

«*Armure.* La branche du forceps se rétrécie progressivement vers l'extrémité, qui est richement et régulièrement garnie de poils. Volsella plus large et plus longue que le forceps, parcemée de poils courts fins. Les crochets recourbés et pointus à l'extré-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

mité. Le couvercle génital représenté sur la fig. 36k.» (Rad. l. c. tab. III. fig. 36a, 36b, 36c, 36i.)

Patria: Aegyptus.

417. **Chrysis angularis** n. sp.

Magna, elongata, sat robusta, viridi-cyanea, longius cinereo-pilosa; facie, pectore et abdominis segmentis dorsalibus primi secundique margine apicali virescentibus; cavitate faciali planiuscula, dense punctato-coriacea, superne transversim flexuoso-marginata; antennis fuscis, articulis tribus primis viridi-cyaneis, tertio longo, secundo duplo longiore; genis mediocribus, articulo secundo antennarum æquilongis; pronoto brevi, transverso, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus robustis acute-triangularibus, longiusculis; vertice densius et subtilius, pro- et mesonoto dispersius fortiusque punctato-subreticulatis interstitiisque subtiliter punctulatis, scutello et postscutello fortiter, sed minus profunde punctato-reticulatis; abdominis segmentis dorsalibus: primo fortius, secundo subtilius minus crasse ac profunde punctatis interstitiisque subtiliter punctulatis, secundo carinula mediana sat distincta, 2—3 basi nigro-æneis, tertio dense subtiliter punctato, lateribus rugosiusculo, subcoriaceo, convexo, supra seriem parum incrassato, foveolis minus profunde immersis sat magnis subpellucidis circiter 12 violaceis suborbiculatis per carinulam medianam depresso-convexam interruptis, margine apicali sat longo, dense punctulato, quadridentato, dentibus duobus centralibus sat longis, triangularibus, subacutis, externis duobus ex apice marginis lateralis arcuato formatis fortiter angulatis obtusiusculis (sicut in *Chryside fasciata* Oliv.), emarginaturis: intermedia arcuata, externis duabus latioribus obliquis; ventre pedibusque viridi-cyaneis, tarsis supra violascentibus, apice et subtus fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, apice parum aperta, tegulis cyaneis. — ♀; long. 11 mm.

Species: punctatura thoracis abdominisque, sed præsertim forma marginis apicalis singulari, iam primo intuitu facillime cognoscenda.

Patria: Aegyptus (Mus. Cæs. Vindob.).

418. **Chrysis albipilis** n. sp.

Mediocris, robusta, cyaneo-viridis, longius albo-pilosa; collo, mesonoti lobo medio et loborum lateralium lateribus metathoraceque cyanescentibus; clypeo, vertice pronotoque viridi-subaureo-nitentibus; cavitate faciali minus profunda, lata, medio longitudinaliter canaliculata, utrinque subtilissime transverse-striata, lateribus punctulato-coriacea argenteo-sericeoque pilosa, superne transversim, medio flexuoso acute-marginata; antennis longis, crassiusculis, nigris, cano-puberulis, articulis duobus primis et tertii basi viridibus, hoc valde brevi, secundo vix longiore; genis valde brevibus, antennarum articulo quarto æquilongis; pronoto brevi, transverso, antice in medio vix impresso; metanoto convexo, dentibus postico-lateralibus mediocribus, robustis, subobtusis; ver-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tice, pro- et mesonoto dense minus crasse, scutello et postscutello parum fortius punctato-reticulatis, illis interstitiis hinc illic punctulatis; abdominis segmentis dorsalibus viridi-cyaneis basi late violascentibus, primo margine apicali leviter, secundi latius intensiusque viridi-subauratis; primo basi leniter trifoveato, secundo carinula mediana sublævi distincta, primis duobus æqualiter dense minus fortiter punctatis, a latere visis parum rugosiusculis, tertio convexo, densius subtiliusque punctato, foveolis minus profunde immersis, circiter 10, mediocribus, rotundatis, margine apicali brevi, dense punctulato, quadridentato, dentibus in arcum levem dispositis mediocribus acute-triangularibus, intermediis duobus longioribus, emarginaturis: centrali angusta arcuata, externis duplo latioribus minus profunde arcuatis, margine laterali ante dentes leniter sinuato; ventre pedibusque viridibus, illo segmento secundo basi utrinque nigro-violaceo-maculato, his tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis viridibus. — ♂; long. 8 mm.

Species: de cavitate faciali, antennis, genis, colore abdominis punctaturaque et segmento anali, facile cognoscitur.

Patria: Aegyptus (Coll. Saussurei).

419. **Chrysis viridissima** Klug.

Chrysis (Spintharis) viridissima, Klug, Symb. phys. Dec. V. tab. XLV. fig. 11. (1845).
Chrysis viridissima, Grib. Annali Mus. Civ. Stor. Nat. Genova. Ser. 2. tom. I. p. 322, n. 62. (1884).

Descriptio secundum Auctorem:

«C. pubescens, viridi-cœrulea, tarsis pallidis. Long. lin 3 1/2.

Statura *C. ignitae*. Læte viridi-cœrulea, pube tenui alba præsertim lateribus tecta. Caput inter oculos pubescens, argenteum. Antennæ fusco-nigræ, articulo primo secundoque cœruleo-viridibus. Thorax viridis, mesothoracis dorso et metathorace supra cyaneis, rarius immaculatus. Tegulæ plerumque basi cyaneæ. Alæ albo-hyalinæ, nervis stigmateque fuscis. Pedes cœruleo-virides, tarsis pallidis. Abdomen immaculatum.»

«Un esemplare raccolto a Let-Marefià corrisponde perfettamente sia alla descrizione che alla figura del Klug, fatta eccezione pel colore dei tarsi, che il Klug dice essere *pallidis* ed invece nel- l'esemplare di Scioa son di colore nero intenso con lievi riflessi verdognoli: siccome la colorazione di questa parte del corpo è generalmente assai meno soggetta a variare in questa famiglia che altrove, cosi ritengo indispensabile il farne parola in modo speciale.

Essendo assolutamente troppo breve la descrizione del Klug, credo utile il farne qui una più completa, riferendomi però sempre alla figura delle *Symbolae Physicae,* di cui l'assieme ed anche molti dettagli corrispondono assai bene all' esemplare che ho sott' occhio.

Il corpo è relativamente tozzo, robusto, appiattito: la tinta generale è di un verde leggermente azzurognolo: il colore azurro predomina mettamente sulla fronte, sull' area mediana del mesothorace e sulla base dei segmenti addominali.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

La testa, guardata di faccia, ha forma triangolare; gli occhi sono mediocremente sporgenti, le guancie abbastanza allungate, lo spazio cioè che intercede fra il termine degli occhi, e la base delle mandibole è assai lungo, all' incirca quasi come il quarto articolo delle antenne; il clypeo è, relativamente, assai sporgente; la cavità facciale è poco profonda; la sua punteggiatura molto densa, granulosa, ed abbastanzo grossolana: una sottile ma ben distincta ruga transversale biarcuata la limita superiormente: la fronte ed il vertice hanno punteggiatura fittissima, più larga e più regolare che quella della faccia. Nel torace i punti sono più larghi, più regolari, assai fitti tanto da formare coi loro margini una specie di rete: nell' area mediana del dorsulo sono più larghi che altrove: invece (cosa assai rara in questo genere) sullo scudetto e sul metatorace sono alquanto più piccoli è più distaccati: nulla di singolare trovasi oltre a ciò da notare sul torace; l'abdome è largo, alquanto appiattito, coi segmenti lievemente strozzati alla base: la sua punteggiatura è grossa profonda, abbastanza densa, regolarissima ed uniforme su tutta la sua superficie: l'area basale del terzo segmento è convessa; la serie anteapicale ben marcata; i suoi buchi grossi, irregulari, taluni confluenti; la figura del margine anale risulta assai bene nella figura del Klug. La cellula radiale è quasi completa. Non conosco altri esemplari di questa specie.» (Grib. l. c.)

Secundum figuram: margo apicalis medio leniter undulatus, dentes laterales parvi, acuti.

Patria: Aegyptus (Saccahra et provincia Faium, mense Julio, Klug); Africa æquatorialis (Let-Marefia, Grib.).

420. **Chrysis quadrispina** Buyss.

Chrysis quadrispina, (Ab.) Buyss. Revue d'Entom. VI. p. 187, n. 23. ♀. (1887).

« ♀. Corpore mediocri, læte viridi, elongatulo, subparallelo. Antennis nigris, scapo, articulisque 2—3 viridibus; cavitate faciali læte viridi, concaviuscula, punctulato-coriacea, lateribus albo-sericeo-pubescente, superne margine verticali transverso, circumflexo limitata; vertice rotundato, reticulato-punctato. Pronoto brevi, lateribus antice convergentibus, in medio obsolete sulcato, truncatura antica haud abrupta, cærulescente. Thorace omnio profunde punctato-reticulato; area mediana mesonoti tegulisque cærulescentibus; postscutello subrotundo. Alis sat fumosis, cellula radiali subcompleta. Abdomine elongato, crasse profundeque punctato: segmentis 2—3 basi cæruleis; secundo segmento subcarinato, angulis laterali-apicalibus spinulis minutis; tertio segmento disco depressulo, quadrispinoso, lateribus ante dentes exteriores sinuatis; serie anteapicali vix distincta in medio, foveolis paucis, utrinque circa 5, rotundatis, in lateribus distinctis, in apice nullis; margine apicali leniter prominulo; dentibus spinosis, acutissimis, subæqualibus, centralibus nonnihil recurvis, emarginatura mediana acuta, emarginaturis exterioribus profunde arcuatis. Ventre viridi nigro-maculato. Pedibus viridibus, tarsis rufo-brunneis. — Long., 6½ mill.

Le *Chr. 4-spina* est bien reconnaissable à son troisième segment abdominal dé-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

primé sur le disque, puis bordé avant la série anteapicale par un leger bourrelet convexe qui est surtout sensible sur les côtés. Le série antéapicale est nulle au milieu, les côtés seuls portent des points séparés, petits, arrondis, obsolètes, presque fermés, environ cinq de chaque côté. Les côtés du troisième segment commencent les dents externes et forment un léger sinus arrondi avant celles-ci. Les quatre dents sont subégales, lancéolées, trés aiguës; les deux internes sont légèrement arquées en dehors et sont assez rapprochées à leur naissance pour que le sinus qui les sépare soit aigu; les deux autres sinus extérieurs sont profondément arrondis. La base des seconde et troisième segments abdominaux est bleu foncé. La ponctuation générale du corps est forte et profonde. Le premier article tarsal est plus de deux fois plus long que le suivant.»

Patria: Aegyptus (Coll. Abeillei).

421. **Chrysis lætabilis** Buyss.

Chrysis laetabilis, Buyss. Revue d'Entom. VI. p. 188, n. 24. ♀. (1887).

«♀. *Chr. laeta* Dr. maxime affinis, sequentibus tamen notis præcipue dignoscitur. Corpore subparvo, subparallelo, elongatulo, læte viridi. Vertice omnino viridi, sine macula centrali ænea; dorsuli area media disco nullo modo violaceo-irrorata sed incerte cærulescente. Abdominis segmentis 1—2 basi atque margine apicali cæruleis. Dentibus apicalibus obtusis, haud arcuatis, subscariosis, centralibus leniter approximatis, exterioribus paulo distantibus. Ventre viridi, nigro-maculato. Pedibus viridibus, tarsis et antennarum flagellis rufo-brunneis, scapo articulisque 2—3 viridibus. Tegulis subscariosis, rufo-æneis; alis hyalinis, venis rufis; cellula radiali lanceolata, subcompleta; oviscapo testaceo. — Long., 5½ mill.

Cette espèce est, comme le *Chr. laeta,* entièrement d'un vert gai, sauf la base des seconde et trioisième segments et la marge apicale qui sont franchement bleus. La ponctuation est forte, assez serrée. La cavité faciale peu profonde, à pubescense blanc sale, régulièrement couverte de petits points subcoriacés et limitée vers le vertex par une marge obsoléte légèrement arquée. Le pronotum est sans sillon apparent sur la partie antérieure et le postécusson légèrement bombé.»

Patria: Aegyptus (Coll. Abeillei).

422. **Chrysis minutissima** Rad.

Chrysis minutissima, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 147, n. 103. tab. III. fig. 5. (1876) ♂ (non ♀) sec. spec. typ. e coll. Rad.

Parvula, elongata, sat robusta, læte-viridis, mesonoto et abdominis segmento secundo dorsali parum viridi-subaureo-nitentibus, longius cinereo-pilosa; cavitate faciali planiuscula, lata, dense punctulato-coriacea, medio longitudinaliter canaliculata, canalicula sublævi, superne centro transverse-marginata, margine abbreviato; antennis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

brevibus, tenuibus, fuscis, articulis duobus primis viridibus, tertio valde brevi, quarto parum breviore; genis proportionaliter sat longis, articulo antennarum quarto æquilongis; pronoto brevi, transverso, antice in medio convexo, non impresso; metanoto convexo, dentibus postico-lateralibus brevibus, sat latis, subacutis; vertice thoracisque dorso sat dense crassius irregulariter punctato-subreticulatis; abdominis segmentis dorsalibus: 2—3 basi nigro-æneis, secundo carinula mediana sat distincta, segmentis omnibus dense minus crasse rugosiuscule-punctatis, tertio convexo, supra seriem vix incrassato, foveolis circiter sex tantum distinctis minus profundis subrotundis, margine apicali brevi, dense punctulato, quadridenticulato, dentibus parvis, triangularibus subacutis, in arcum levem dispositis, fere æquilongis, emarginaturis parum arcuatis, centrali externis angustiore; ventre pedibusque viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis testaceis; alis pure-hyalinis, venis pallidis, cellula radiali triangulariter lanceolata completa. — ♂; long. 4 mm.

Species: corpore parvo, læte-viridi, cavitate faciali, antennis, foveolis dentibusque analibus, facile cognoscitur.

Patria: Aegyptus.

423. **Chrysis communis** Walk.

Chrysis communis, Walk. List of Hym. collect. by Lord in Egypt. p. 8, n. 34. ♂ ♀. (1871).

«Male and female. — Green, with cinereous pubescence, thickly punctured. Antennæ black; first join green. Scutum bluish green; the two parallel furrows well defined. Hind border of the metathorax with a stout spine on each side. Abdomen with three large segments and with an extremely slight keel; hind border of the third segment quadridentate. Tarsi black. Wings cinereous; weins black. Var. β. — Bluish green. Var. γ. — Purplish blue. Length of the body 2½—3 lines.»

Patria: Africa circa Mare rubrum (Tajura) et Arabia (Wâdy Ferran.).

424. **Chrysis fuscipennis** Brullé.

Chrysis fuscipennis, Brullé. Hym. IV. p. 38, n. 24. ♀. (1846).
Chrysis amethystina, Dhlb. Hym. Europ. II. p. 229, n. 127. ♂ ♀. (1854) (excl. Fabr. syn., nec Fabr.).
Chrysis pulchellus (!), Cam. Proceed. Manch. Lit. and Philos. Soc. XXVI. p. 10. (1887) (nec. Spin.).
Chrysis erratica, Buyss. et *var. mossulensis,* Buyss. Revue d'Entom. VI. p. 189–190, n. 26—27. ♂ ♀. (1887).

Species valde late diffusa: magnitudine coloreque quam maxime variabilis est.

Mediocris vel magna, elongata, robusta, viridis, cyanea vel nigro-violacea vel his coloribus variegata, cinereo-alboque pilosa; cavitate faciali elongata, subrectangula, minus profunda, frontem versus valde angustata, dense punctato-coriacea, supra medium fovea centrali, lateribus parcius argenteo-sericeo-pilosa, superne transverse acute-marginata, margine ramulos duos supra stemma anticum concurrentes areamque subhæmisphæricam insignem formantes et ex utroque apice ramulum obliquum longitudinalem ad latera cavitatis descendentem emittente; antennis crassis, mediocribus, in

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

mare brevioribus, fuscis, articulis duobus (♂) vel tribus primis viridibus vel cyaneis vel viridi-cyaneis, tertio longitudine mediocri, in mare parum breviore, quarto dimidio tantum adhuc longiore; genis brevibus, antennarum articulo secundo vix longioribus; occipite utrinque angulo spinoideo munito; pronoto sat longo, longitudine fere capitis, antice evidenter angustato, transverso-rectangulo, sulco mediano obsoleto; vertice, pronoto cum lobo medio mesonoti dense crassius punctato-subreticulatis; lateralibus loborum lateralium mesonoti sparsim crassius rugoso-punctatis punctis minutis inmixtis; scutello est postscutello regulariter punctato-reticulatis; metanoto convexo, dentibus postico-lateralibus magnis, late-triangularibus; mesopleuris crasse punctato-reticulatis, subtus fovea magna lævi, apice lobo utroque emarginato et sic fortiter crasse obtuseque bidentato seu quasi bimucronato; abdominis segmentis dorsalibus valde convexis fere æqualiter minus dense crassius punctatis, interstitiis angustis lævibus; primo basi leniter trifoveato, secundo carinula mediana sat lata sublævi vel subtilissime punctulata, tertio supra seriem leniter calloso, foveolis magnis profundis inæqualibus, circiter 12—14 subrotundatis vel parum sulciformibus, rarius confluentibus, per carinulam medianam plus minusve distinctam interruptis, margine apicali in femina lato, in mare multo breviore, dense punctulato, quadridentato, dentibus brevibus, centralibus: in femina acute-triangularibus, in mare subacutis, externis acutis, omnibus fere æquilongis, emarginaturis: centrali externis angustiore regulariter, externis parum oblique arcuatis; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis apice et subtus fuscis; alis anticis fumato-hyalinis violaceis vel violascentibus, basi et apice nonnihil dilutioribus, venis firmis piceis, cellula radiali lanceolata subcompleta vel latius aperta, posticis subfumato-hyalinis plerumque parum tantum violascentibus. — ♂♀; long. 8—11 mm.

Species: de area insigni verticis, punctatura mesonoti, fovea magna lævi dentibusque duobus apicis mesopleurarum et alis, a congeneribus facile cognoscenda.

Patria: inde a Syria et Mesopotania (Buyss.!) fere per totam Asiam (Sibiria: Amur [Mus. Hung. et Coll. Rad.!]; China [Buyss. et Mus. Hung.]; Himalaya [Coll. Rad.!]; India: Ceylon [Cam.], Bengalia [Dhlb.]; Anam in Cochinchina [Coll. Rad.!]; Insulæ Sundaicæ: Sumatra [Mus. Vindob.!], Java [Mus. Hung. et Coll. Rad.!], Borneo [Mus. Hung.], Celebes [Mus. Hung.]; Insulæ Philippinenses [Brullé; Luzon, Coll. Rad.!]) Australiamque (Coll. Saussurei!).

Animadversio. — Dahlbomus in errore versabatur, quum eximiam hanc speciem cum Fabricii *Chryside amethystina* eandem esse censeret, quamvis dicat: «secundum specimen in Collectione Fabriciana Mus. Universit. Kil asservatum, anno 1847 a me examinatum» — quia specimen typicum teste Smith (Transact. Ent. Soc. London. 1874, pag. 467) e collectione Bankiana Londini in Musæo Brittanico asservatur; sed etiam ipsa descriptio divi Fabricii (Syst. Entom. p. 359, n. 12): «C. viridis, nitens, abdomine cœruleo: ano quadridentato. Habitat in nova Hollandia, Mus. Bankianum. Statura præcedentium. Antennæ fuscæ, basi virides. Thorax viridis, scutello prominulo, convavo. Alæ obscuræ.» — huic animali quam maxime aliena est et verba illa «scutello prominulo, concavo» tantum ad *Chrys. cyanurae* Forst. *var. amethystinam* Fabr. applicari possunt.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

425. **Chrysis Kokandica** Rad.

Chrysis kokandica, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 18, n. 35. ♀. tab. II. fig. 4. (1877).

«Parva gracilis angusta confertim scrobiculato-punctata, viridi-cyanea; cavitas facialis coriacea, margine superno arcuato; clypeus subbrevis margine arcuato; mandibulæ piceæ; antennæ fuscæ; thorax dorsulo metanotoque cyaneo; scutello viridi-aureo, metanoti anguli postico-laterales mediocres triangulares subcurvi; abdominis segmento secundo purpurascente, margine viridi-fasciato, carinula mediana; tertio cyaneo-violascente serie anteapicali subobliterata, foveolis magnis, profundis interruptis, dentibus triangularibus, nec per rectam lineam currentibus; tarsis albidis; venter nigrocyaneus.

Long. 5,5 mm.»

Patria: Turkestania (Ferghana, prope Schahimardan).

426. **Chrysis Maracandensis** Rad.

Chrysis maracandensis, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 14, n. 24, tab. I. fig. 8. (1877) sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 23. (genit. maris) (1888).

Mediocris, sat robusta, viridi-cyanea parumque violascens et virescens, parcius cinereo-alboque pilosa; cavitate faciali viridi, frontem versus valde angustata, dense punctulato-coriacea argenteo-sericeoque pilosa, superne indistincte marginata; antennis sat longis, tenuibus, rufo-brunneis, scapo et articulo primo flagelli supra viridibus, tertio brevi, quarto fere æquilongo; genis brevibus, articulo antennarum secundo æquilongis; pronoto brevi, transverso, antice parum angustato, in medio sat profunde late-sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, robustis, acute-triangularibus; vertice, pronoto, mesonoti lobo medio et scutello crassius punctato-reticulatis; mesonoti lobis lateralibus et postscutello pleurisque irregulariter punctato-subreticulatis; abdomine brevi, capite thoraceque simul sumptis vix longiore, segmentis dorsalibus valde convexis, æqualiter dense crassius punctato-subreticulatis, primo basi leviter trifoveato, secundo carinula mediana minus distincta, 1—2 basi nigro-æneis, tertio supra seriem nec minime calloso, foveolis magnis subrotundis confluentibus haud numerosis violaceis, margine apicali brevi, violaceo, dense punctulato, quadridentato, dentibus valde brevibus æqualibus, fere in lineam rectam transversam dispositis, intermediis duobus late-triangularibus, externis triangularibus subacutis, emarginaturis leniter arcuatis, centrali externis parum latiore ac profundiore; ventre pedibusque cyaneo-, viridi- et violaceo-variegatis, illo segmento secundo basi utrinque nigro-maculato, his tarsis albo-testaceis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♂; 6—7 mm.

Species: fronte, antennis, punctatura thoracis abdominisque, foveolis, dentibus analibus et alis facile cognoscitur.

«*Armure.* La branche du forceps allongée vers l'extrémité et de tous les côtés

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

garnie de poils longs. Volsella garnie de poils. Les crochets à l'extrémité sont échancrés du côté interne.» (Rad. l. c. tab. IV. fig. 50a, 50b, 50c, 50f, 50i).

Patria: Turkestania (Vallis Sarafschan et deserta prope Taschkend, Coll. Rad.! et Mus. Hung.).

427. **Chrysis fulvicornis** n. sp.

Mediocris, elongata, cyanea, parce albo-pilosa; genis brevibus, cavitate faciali minus profunda, subangusta, punctulato-coriacea, dense argenteo-sericeo-pilosa, superne transverse-marginata, margine medio biarcuato, vertice punctato-reticulato; antennarum scapo et articulo primo flagelli supra viridibus, reliquis fulvis (2—3 tantum obscure), subtus nigris, secundo valde brevi, tertio æquali, his simul sumptis quarto longitudine æqualibus; thorace supra densius sat crasse punctato-subreticulato; abdomine cyaneo, segmentis dorsalibus fere æqualiter dense punctato-subreticulatis, secundo carinula mediana indistincta, tertio convexo, non calloso, serie anteapicali sat profunde immersa foveolis circiter 8 magnis et profundis, subrotundis, margine apicali quadridentato, dentibus mediocribus, acutis, æquilongis, fere in lineam rectam transversam dispositis subpellucidis, emarginaturis profunde arcuatis, centrali externis latiore; ventre, femoribus item et tibiis cyaneis, tarsis rufo-testaceis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis cyaneis. — ♂; long. 8 mm.

Præcedenti similis et affinis; sed cavitate faciali frontem versus parum latiore, superne distincte transverse-marginata, antennarum flagello maxima ex parte fulvo, dentibus analibus multo longioribus, acutis, secundo angulo laterali-apicali denticulato (non rotundato), tertio margine laterali a lateralibus parum remoto profundius sinuato, est species certe distincta.

Patria: Turkestania (Taschkend, Coll. Rad.).

428. **Chrysis dentipes** Rad.

Chrysis dentipes, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 15, n. 26. tab. I. fig. 9. ♀. (1877) sec. spec. typ. e coll. Rad.

Submagna, tota cyanea, haud virescens, parcius cinereo-alboque pilosa; cavitate faciale profunda, lata, dense punctulato-coriacea parumque subrugulosa, lateribus argenteo-sericeo-pilosa, superne transverse-marginata, margine flexuoso sursum ter angulato ramulosque duos in verticem, supra stemma anticum concurrentes et aream subreniformem efformantes non satis distincte emittente; antennis sat tenuibus, fuscis, cano-puberulis, scapo et articulis duobus primis flagelli supra cyaneis, huius articulo secundo longo, sequentibus duobus simul sumptis longitudine æquali; genis mediocribus, articulo primo flagelli æquilongis; clypeo brevi, apice in medio arcuatim emarginato; vertice dense sat crasse subreticulatim, thorace supra dispersius crassiusque punctato-subreticulatis; prothorace brevi, transverso, antice in medio profunde sulcato, postscutello convexo, parum elevato, mesopleuris supra sub tegulis alarum utrinque

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

viridi-aureo-maculatis, ad areas distinctas non divisis, metathorace subtus quadrifossulato; dentibus postico-lateralibus robustis, late-triangularibus, apice acutis, incurvis; abdomine cyaneo, segmentis dorsalibus duobus primis sat profunde, tertio subtilius densiusque cribato-puntatis, primi institiis subtiliter punctulatis, secundo carinula mediana indistincta, tertio ante seriem anteapicalem leniter incrassato-convexo, foveolis circiter 14 profundis magnis subrotundis, lateralibus fere sulciformibus, margine apicali sat lato crassius punctato quadridentato, dentibus sat longis, acute-triangularibus, fere in lineam rectam transversam dispositis, intermediis duobus externis parum longioribus, emarginaturis profunde arcuatis fere æquilatis, centrali externis multo profundiore; ventre pedibusque cyaneis, illo maculis aliquot viridibus, his tarsis fuscis; alis hyalinis, parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis cyaneis. — ♀; long. 8½—9½ mm.

Chrys. nitidulae Fabr. similis et affinis; sed paulo robustior, magis cyanea, verticis area subreniformi, punctatura ubique fortiore, metathorace subtus quadrifossulato, dentibus metanoti postico-lateralibus validioribus longioribusque, abdominis segmentis dorsalibus secundo tertioque carinula mediana distincta non instructis, tertio ante seriem anteapicalem leniter incrassato-convexo, foveolis maioribus aliterque formatis etc. iam satis distincta.

Patria: Turkestania (Vallis Sarafschan, Coll. Rad.!).

Animadversio. — Denominatio non est conveniens, quoniam in pedibus penitus normalibus nullum dentem aliumque characterem, a reliquis diversum, inveni; sed etiam ipse Clarissimus Auctor talis dentis nullam facit mentionem.

429. **Chrysis volatilis** Smith.

Chrysis volatilis, Smith, Transact. Ent. Soc. Lond. p. 459, n. 8. ♀. (1874).

«Female. — Length 5 lines. Elongate, narrow, and of a violet colour, with slight tints of green on the head and thorax. Head: the margin of the vertex and inner orbits of the eyes green; the scape, and two following joints of the antennæ, green above. The sides of the thorax nearly parallel; the anterior angles of the prothorax acute; the posterior angles of the metathorax green; wings subhyaline, the nervures fuscous. Head and thorax strongly and closely punctured; abdomen finely puctured; the basal margin of the first segment with a deep central fovea, and a broader lateral one.»

Patria: China septentrionalis (Shanghai).

430. **Chrysis janthina** Smith.

Chrysis janthinus (!), Smith, Transact. Ent. Soc. Lond. p. 459, n. 9. ♀. (1874) (nec. *Chrys. janthina* Först.).

«Female. — Length 5 lines. Bright violet, with shades of blue and green. The face and three basal joints of the antennæ bright green, the legs and entire body of the insect beneath bright green; the vertex violet, a narrow green line at the inner margin

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

of the eyes. Thorax: the sides nearly parallel or very slightly narrowed anteriorly; the prothorax with the anterior angles rounded, of a violet colour, with a narrow green border at its posterior margin; the central portion of the mesothorax purple, the lateral portions violet; the scutellum and metathorax green; wings slightly fuscous. Abdomen violet; the sides of the first segment and the posterior margin of the second greenish, the margin widest laterally. The head and thorax very strongly punctured; abdomen evenly and strongly punctured, most strongly so at the base.»

Patria: China septentrionalis (Shanghai).

Animadversio. — An *Chrysis fuscipennis* Brullé?

431. **Chrysis fossulata** Smith.

Chrysis fossulatus (!), Smith, Transact. Ent. Soc. Lond. p. 459, n. 10. (1874).

«Length 4½ lines. Head and thorax green, slightly tinged with blue; the abdomen violet. Face and body beneath bright green; the legs green, tinged with blue above; the vertex green. Thorax narrowed from the tegulæ towards; the anterior angles of the prothorax acute, the margin hollowed to the curvature of the head; the sides of the mesothorax tinged with green, as are also the lateral angles of the metathorax; the posterior margin of the basal segment of the abdomen green; there is also, in certain lights, a tinge of green on the sides of the two following segments and also on their apical margins; the apical margin of the posterior segment armed with four acute teeth, the two central ones approximating; a smooth central line down the second and third segments; on each side of the central carina on the third segment are four deep oblong fossulets in the place of the usual row of puntures.»

Patria: China septentrionalis (Shanghai).

432. **Chrysis gracilenta** n. sp.

Submediocris, elongata, gracilis, viridi-cyanea, longius cinereo-alboque pilosa; macula verticis, collo, mesonoti lobo medio, macula indistincta scutelli et alarum tegulis violascentibus; cavitate faciali sat lata, dense punctulato-coriacea, medio abrupte longitudinaliter canaliculata, superne transverse parum flexuoso-marginata; antennis sat longis, tenuibus, nigris, articulis tribus primis viridi-cyaneis, tertio sat longo, secundo fere duplo longiore; genis mediocribus, articulo antennarum secundo æquilongis; vertice valde convexo cum thorace dense sat crasse minus regulariter punctato-subreticulatis; pronoto brevi, transverso, antice in medio leniter longitudinaliterque sulcato; metanoto convexo, dentibus postico-lateralibus longis acutis; abdominis segmentis dorsalibus: 2—3 basi violascentibus, primo basi in medio longitudinaliter sulcato et utrinque impresso, secundo carinula mediana distincta, primis duobus sat dense minus crasse ac profunde punctatis interstitiisque subtilissime punctulatis, punctatura secundi a latere visa parum subrugosa, tertio disco parum concaviusculo-depresso leviter punctato,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

supra seriem modice calloso subtiliter punctulato, foveolis sat numerosis immersis rotundis mediocribus parumque confluentibus per carinulam brevem depresso-convexam interruptis, margine apicali longo, subtiliter punctulato, quadridentato, dentibus mediocribus triangularibus subacutis, in arcum levem dispositis, intermediis externis parum longioribus, emarginaturis: centrali modice angustiore profundioreque, quam externis; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata subcompleta. — ♀; long. 6 mm.

Species: de corpore gracili, fronte, punctatura thoracis et præsertim abdominis, metanoti dentibus margineque apicali, facile cognoscenda.

Patria: China (Hong-Kong, Mus. Cæs. Vindob.).

433. **Chrysis pubescens** Smith.

Chrysis pubescens, Smith, Annals und Magaz. Nat. Hist. Ser. 2. tom. IX. p. 45. (1852).

«Length 3 1/2 lines. Head and thorax brassy-green, rugose-punctate; the eyes and antennæ black, except the basal joint, which is brassy-green; the anterior margin of the prothorax deeply incurved, receiving the vertex of the head, the metathorax produced laterally into obtuse spines; the tegulæ and legs brassy-green, the tarsi rufo-testaceous; the wings dark fuscous, somewhat paler at their apical margins. Abdomen green, with a bleu reflection, the apical segment chalybeous, quadridentate; the whole abdomen deeply punctured, and having, as well as the head and thorax, a short thin pubescence.

This species is parasitic on *Pelopaeus;* the following are Capt. Downes's remarks: «A nest of *Pelopaeus* was taken on the wall of my room; several of the cells were broken down whilst removing them, and various sorts of spiders fell out; one of the cells was a little denuded of its mud, so that I could see inside; this hole was repaired next day by a thin substance like talc, and if the cell reaches you safely, you will see what I mean; although the substance has been broken a little, it *was* quite perfect, and had the appearance of a little window. In another exposed cell was a *Chrysis:* by some means those enemies to everything, the red ant, found it out, and soon exposed the pupa; hovever, it was in a sufficiently forward state to show what it would have been. The *Pelopaeus* made its appearance on the 4 th of Juli; the nest just finished was taken on the 11 th June 1848.»

The «thin substance like talc» was the pupa-case spun by the *Pelopaeus;* it still lines the mud cell, is transparent, and of brown colour.»

Patria: India orientalis (Bombay).

Animadversio. — An *Chrysis fuscipennis* Brullé?

434. **Chrysis dissimilis** Dhlb.

Chrysis dissimilis, Dhlb. Hym. Europ. II. p. 202, n. 109. ♀. (1854).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Submediocris 2 lin. decimal. long punctata viridis, pectore pedibusque concoloribus, tarsis fuscis, scutello aureo, segmentis basi cyaneis; segmenti tertii serie anteapicali continua, margine apicali prominulo depresso-convexo sparse punctulato, alis subhyalinis, ad marginem cellulæ radialis costalem sordidis, cellula radiali lanceolata incompleta apice distincte aperta.

Observ. Habitus *Chrysidis succinctae* maioris. Corpus griseo-pilosellum nitidum læte viride, dorso modice punctatum. Vertex, pronoti particula antica colliformis, dorsuli area media, et basis segmentorum abdominis dorsalium cyanea. Antennæ breviusculæ, scapus virescens, flagellum fuscum. Mandibulæ normaliter pictæ. Scutellum viridi-aureum, postscutellum aurato-viride. Abdominis segmentum dorsale tertium totum modice convexum, series anteapicalis continua nec interrupta, foveolis mediocribus rotundis, quarum nonnullis confluentibus; margo apicalis, ut ipsum segmentum, convexo-depressus prominulus sparse punctatus: dentibus lateralibus triangularibus distinctis, centralibus (quæmadmodum in *Chrys. assimili)* brevissimis latis subarcuato-obtusis. Venter cyaneo-viridis nigro-maculatus.»

Patria: India orientalis (Bengalia).

435. **Chrysis obliterata** Mocs.

Chrysis orientalis, Dhlb. Hym. Europ. II. p. 225, n. 124. ♀. (1854) (nec Guér.). — ? Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 17, n. 31, tab. I. fig. 12. (1877).
Chrysis obliterata, Mocs. Term. Füz. XI. p. 15. (1887).

Descriptio secundum Dahlbom:

«Submediocris 2½ lin. decimal. long. confertim modice punctata viridissima dorsulo abdomineque cyaneo-pictis, tarsis fuscis, abdominis segmento tertio toto modice convexo, serie ante-apicali subobliterata: foveolis tantummodo perpaucis, dentibus mediocribus triangularibus, emarginaturis modice arcuatis subæqualibus.

Observ. Habitus omnino proxime præcedentium. Corpus viridissimum dorsulo abdominisque segmentis secundo et tertio basi cyaneis. Alæ hyalinæ, disco sordidæ. Ventrer viridis nigro-maculatus.»

Patria: India orientalis (Dhlb.); ? Turkestania (prope Taschkend, Rad.).

Animadversio. — Dahlbomi descriptio quam maxime incompleta est animalque rite difficile cognoscitur. — Radoszkovszkyi specimen typicum non vidi.

436. **Chrysis Annamensis** n. sp.

Submediocris, elongata, sublinearis, viridi-cyanea, parcius cinereo-pilosa; vertice circa ocellos, mesonoti lobo medio, macula scutelli et abdominis segmentis 2—3 basi nigro violaceis; cavitate faciali minus profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne arcuatim transverse-marginata; antennis mediocribus, tenuibus, fuscis, cano-puberulis, articulis quattuor primis viridi-cyaneis, tertio sat longo,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

secundo duplo longiore; genis brevibus, articulo antennarum quarto æquilongis; vertice, pro- et mesonoto minus dense crassius punctulato-subreticulatis, scutello et postscutello regulariter punctato-reticulatis; pronoto brevi, transverso, antice in medio leniter impresso, postscutello convexo, metanoti dentibus postico-lateralibus sat longis acute-triangularibus; abdominis segmentis dorsalibus: primo parum fortius, reliquis subtilius minus crasse ac profunde non dense punctatis interstitiisque hinc illic subtiliter punctulatis; primo basi in medio longitudinaliter minus profunde sulcato et utrinque leviter impresso, secundo carinula mediana sat distincta, tertio disco utrinque concaviusculo-immerso, ante seriem leniter calloso dense subtilissime punctulato, foveolis sat magnis rotundatis, lateralibus minoribus, circitier 14, per carinulam medianam interruptis, violaceis, margine apicali longo, irregulariter dense punctulato, quadridentato, dentibus mediocribus, triangularibus, acutis, intermediis duobus externis longioribus, emarginaturis: centrali parum angustiore, sed profundiore; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata completa. — ♀; long. 6½ mm.

Chrysidi gracilentae Mocs. similis; sed abdominis segmentis dorsalibus dispersius parumque fortius punctatis, interstitiis tantum hinc illic punctulatis, non rugosiusculis, species mihi distinguenda esse videtur.

Patria: Cochinchina (Annam, Coll. Rad.).

437. **Chrysis Hecate** n. sp.

Submediocris, elongata, gracilis, cyanea, longius cinereo-pilosa; vertice circa stemmata, mesonoti lobo medio et abdominis segmentis dorsalibus 2—3 basi nigro-violaceis; cavitate faciali sat profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne parum flexuoso transverse-marginata, margine utrinque ramulum brevem indistinctum ad stemmata emittente; antennis brevibus, tenuibus, nigris, cano-puberulis, articulis tribus primis cyaneis, tertio sat brevi, secundo vix duplo longiore; genis brevibus; vertice thoracisque dorso dense sat crasse punctato-reticulatis; pronoto sat longo, capite tamen breviore, transverso, antice in medio vix impresso, metanoto convexo, dentibus postico-lateralibus sat longis, triangularibus, acutis; abdominis segmentis dorsalibus: primo basi leniter trisulcato, secundo tertioque carinula mediana distincta, illius segmenti late lævi ac polita; segmentis omnibus fere æqualiter minus dense sat crasse punctatis, tertio convexo, disco nec minime concaviusculo-immerso, foveolis profundis sat magnis haud numerosis subrotundis per carinulam medianam interruptis, supra seriem segmento subtiliter punctulato, margine apicali sat longo, subtiliter punctulato, quadridentato, dentibus brevibus, triangularibus subacutis fere æqualibus, in arcum dispositis, emarginaturis leniter arcuatis, centrali externis angustiore, margine laterali recte-truncato; ventre pedibusque cum tarsorum articulis primis supra viridi-cyaneis parumque violascentibus, illo segmento secundo basi utrin-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

que nigro-maculato, his tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata subcompleta, — ♀; long. 6½ mm.

Species: de corpore toto cyaneo parumque violascenti, abdominis segmentorum dorsalium 2—3 carinula mediana, secundi sat late lævi ac polita, tertio basi nec minime concaviusculo-immerso dentibusque analibus, facile cognoscitur.

Patria: Java (Mus. Hung.).

438. **Chrysis chlorosoma** Dhlb.

Chrysis chlorosoma, Dhlb. Hym. Europ. II. p. 210, n. 114. (1854). — Schck, Nass. Jahrb. XI. p. 85. (1856); Progr. Gymn. zu Weilb. p. 15, n. 12. (1870) (ex Dhlb., at patria falsa). — Lampr. Goldwesp. Deutschl. p. 15, n. 36. (1881) (ex Schck, at patria falsa).

Descriptio secundum Dahlbom:

«Mediocris oblongata angusta sublinearis 2¼ lin. decimal. long. modice punctata viridis, dorsuli lobo centrali abdominisque segmentis dorsalibus basi cyaneis, segmenti tertii serie anteapicali interrupta foveolis utrinque distinctioribus rotundis, dentibus apicalibus mediocribus triangularibus, alis sordide hyalinis cellula radiali completa lanceolata.

Habitat in Java, Mus. D, Westermann. Tantummodo unicum exemplar vidi.

Observ. Corpus gracile cinereo-pubescens. Caput dorsum et latera thoracis abdominisque segmentum dorsale primum confertim punctata subreticulata, cetera segmenta abdominis dorsalia modice punctata vel potius punctulata. Color corporis primarius læte viridis; macula verticis, truncatura pronoti antica, lobus centralis dorsuli et margines basales segmentorum abdominis dorsalium cyanescentes l. cœrulescentes. Caput rotundato-triangulum pronoto paullulum latius; vertex amplus depresso-convexus; oculi ovati; cavitas facialis mediocris punctulato-coriacea, superne per carinulam transversam rectam limitata; antennæ et mandibulæ mediocres normaliter pictæ; clypeus brevis inæqualis parce punctulatus ad centrum marginis apicalis subtruncatus. Pronoti regio postica sulco mediano brevi. Alarum venæ piceæ. Tarsi apice fusci. Abdominis segmenti tertii regio antica transversaliter et leniter per totum discum concaviusculo-immersa, Venter viridis nigro-maculatus.»

Patria: Java (Dhlb.).

Animadversio. — *Chrysis chlorosoma* Dhlb. e fauna Germaniæ delenda est. Error enim inde oritur, quia Dahlbomus huius speciei patriam in tabula synoptica ad paginam 197 Javam, Germaniam et Galliam dicit maxime ex confusione, et pagina 210 verbis sequentibus utitur «Habitat in Java. Mus. D. Westermann. Tantummodo unicum exemplar vidi». Quæ specimina sunt ergo Germanica et Gallica? — Nos in collectione Musæi Nationalis Hungarici exemplar unum non optime conservatum habemus e Sumatra, ad quod descriptio Dahlbomi utcunque applicari potest.

439. **Chrysis purpurea** Smith.

Chrysis purpurea, Smith, Journ. Proceed. Linn. Soc. Zoology. III. p. 26, n. 1. (1859).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Læte purpurea, capite thorace abdominisque basi rugosis punctatis, segmentis abdominis secundo et tertio delicatule punctatis, apice quadridentato.

Length 3 lines. Bright purple; the head, thorax and base of the abdomen strongly and coarsely punctured, the rest of the abdomen finely punctured; the disk of the thorax and apical margins of the segments of the abdomen reflecting bright tints of green, the wings subhyaline, the nervures dark fuscous; the apical margin of the third segment of the abdomen with four teeth, the two central ones approximating, separated by a deep notch, the lateral teeth more distinct, separated from the others by a wide emargination.»

Patria: Celebes.

440. **Chrysis interceptor** Smith.

Chrysis interceptor, Smith, Transact. Ent. Soc. Lond. p. 457, n. 5. (1874).

«Length 4 1/4 lines. Green, with shades of blue above; the face and body beneath golden-green. A blue spot in the middle of the prothorax, the central portion of the mesothorax, and the second and third segments of the abdomen, blue; the apical margins of the segments green. The head, thorax and base of the abdomen with close, large, semi-confluent punctures; the abdomen closely and more finely punctured: the two intermediate teeth rather more approximating than the outer ones to the intermediate ones.»

Patria: Australia (Hunter River, New South Wales).

441. **Chrysis versuta** Mocs.

Chrysis intrudens, Smith, Transact. Ent. Soc. Lond. p. 458, n. 6. ♀. (1874) (nec *Chrys. intrudens* Smith, 1865, e Nova Guinea).
Chrysis versuta, Mocs. Term. Füz. XI. p. 15. (1887).

«Female. — Length 4 lines. Varied with blue and green, beneath entirely green. The mesothorax above, the tegulæ, scutellum and second and third segments of the abdomen blue, the apical margin tinged with green. The thorax narrowed from the tegulæ to the anterior angles of the prothorax. The head and thorax strongly punctured, the punctures close and in parts confluent; wings subhyaline, the nervures fuscous. The abdomen strongly punctured; a smooth shining carina runs from the base of the second segment to the apex of the abdomen, the margin with four very acute teeth, the two central ones approximating, the lateral teeth being separated widely from them; the central teeth produced beyond the lateral ones.»

Patria: Australia.

442. **Chrysis simulans** n. sp.

Mediocris, elongata, parallela, minus robusta, viridi-cyanea, longius cinereo-alboque pilosa; vertice circa et post stemmata, occipite, collo, pronoti truncatura antica, meso-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

noti lobo medio et lateralibus antice, alarum tegulis, abdominis item segmentis dorsalibus: primo basi, secundi tertiique post marginem basalem nigro-æneum et macula magna elongata longitudinali in medio secundi tertiique margine apicali nigro-violaceis; cavitate faciali viridi, planiuscula, dense punctulato-coriacea argenteo-sericeoque pilosa, superne transverse flexuoso-marginata nitore viridi-aurato; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridi-cyaneis, tertio brevi, quarto parum tantum longiore; genis brevibus, antennarum articulo secundo vix longioribus; vertice et thoracis dorso fere æqualiter dense sat crasse punctato-subreticulatis; pronoto, interstitiis angustis subtilissime punctulatis, proportionaliter valde brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus latis acutis incurvis; abdominis segmentis dorsalibus subcoriaceis: primo parum crassius, quam reliquis, dense subtilius rugosiuscule-punctatis, secundo carinula mediana nulla, tertio valde convexo, ante seriem nec minime calloso, foveolis circiter 14 submediocribus rotundis pellucidis, margine apicali brevi, dense irregulariter minus crasse punctato, quadridentato, dentibus acute-triangularibus, intermediis longioribus, in arcum levem dispositis, emarginaturis: centrali externis parum latiore, arcuatis, margine laterali ante dentem externum leniter sinuato; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his femoribus posterioribus postice violascentibus, lævibus ac politis, tarsis fuscis; alis pure-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta. — ♂; long. 7 mm.

Species: de maculis violaceis, antennis, fronte, pronoti punctatura duplici, abdominis segmentis dorsalibus, foveolis, margine apicali tibiisque posterioribus, facile cognoscenda.

Patria: Australia meridionalis (Coll. Saussurei).

443. **Chrysis impostor** Mocs.

Chrysis parallelus (!), Smith, Transact. Ent. Soc. Lond. p. 458, n. 7. (1874) (nec Brullé).
Chrysis impostor, Mocs. Term. Füz. XI. p. 15. (1887).

«Length 3 1/2 lines. Head and thorax blue above, with tints of green in parts; abdomen olive-green, with the margins of the segments bright green. Head: the face green, and with a white pubescence. Thorax: the posterior lateral angles of the metathorax bright green, as well as the legs and body beneath; wings subhyaline, the nervures black. The sides of the thorax parallel. The head and thorax very strongly punctured, the punctures very close and most coarse on the scutellum and postscutellum. The abdomen strongly punctured, the teeth at its apex short, not very acute, the two central ones approximating and slightly produced beyond the lateral ones.»

Patria: Australia.

444. **Chrysis Novarae** n. sp.

Mediocris, elongata, subparallela, sat robusta, viridis, parcius cinereo-pilosa; vertice et occipite, pro- et mesonoto abdominisque segmentis dorsalibus duobus primis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

disco et antice atro-virentibus; cavitate faciali lata planiuscula, dense punctulato-coriacea argenteo-sericeoque pilosa, superne transverse parum flexuoso-marginata, margine ramulum utrinque stemma anticum includentem areamque subhæmisphæricam minus distincte formantem emittente; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis duobus primis et tertii basi viridibus, hoc longo, sequentibus tribus simul sumptis fere æquilongo; genis sat longis, articulis antennarum 4—5 simul sumptis adhuc parum longioribus; vertice thoracisque dorso æqualiter dense crasseque punctato-reticulatis; pronoto brevi, valde convexo, transverso, antice in medio sat profunde longitudinaliter sulcato, metanoto convexo, dentibus postico-lateralibus longis, acute-triangularibus, parum curvatis; abdominis segmentis dorsalibus duobus primis sat dense crassius, tertio parum subtilius fere cribrato punctatis, interstitiis angustis impunctatis, tantum segmenti primi disco punctulis aliquot intermixtis; 1—2 margine apicali tertioque parum viridi-subauratis; primo basi leniter trifoveato, secundo carinula mediana indistincta, tertio convexo, ante seriem nec minime calloso, foveolis profundis numerosis, intermediis sex magnis, lateralibus minutis, rotundis, margine apicali brevi, dense punctulato, quadridentato, dentibus mediocribus, acute-triangularibus, fere æquilongis, in lineam rectam transversam dispositis, emarginaturis profunde arcuatis, centrali externis vix angustiore, margine laterali ante dentem externum leniter sinuato; ventre pedibusque læte-viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fusco-rufescentibus; alis sordide-hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata completa. — ♂; long. 8 mm.

Species: colore, antennis, area verticis indistincta, punctatura thoracis abdominisque, foveolis item et dentibus analibus, facile cognoscitur.

Patria: Australia (Sidney, Mus. Cæs. Vindob.; in expeditione «Novaræ» collecta).

445. **Chrysis coeruleans** Fabr.*

Chrysis coerulans, Fabr. Syst. Piez. p. 172, n. 10. (1804). — Lep. Annal. du Mus. Hist. Nat. VII. p. 126, n. 8. (1806). — Aar. Transact. Amer. Ent. Soc. XII. p. 236, tab. IX. fig. 64—67. (segm.

* Conspectus specierum Tetrachrysidarum Americæ septentrionalis secundum Aaron est sequens:

Prothorax much shorter than the head.

As seen from the sides the lateral margins of third segment are bisinuate, slightly near the middle and distinctly just before the outer teeth.

Emerald-green, golden and cupreous ... *Meta* Aar.

From dark blue and purple to emerald-green, with nothing more than brassy reflections.

Basin of face smooth (more largely just below the cross carina), anterior margin of the groove containing the pits of third segment straight; pits normal rounded.

Median teeth short, stout and rounded ... *dorsalis* Aar.

Median teeth long, slender at pointed ... *montana* Aar.

Basin of face striated, anterior margin of the groove containing the pits of third segment arched inwardly by the increased size of the median pits ... *Frey-Gessneri* Grib.

Basin of face finely punctured.

Each side of the face covered with long white hairs; as seen from the side outer apical teeth are long and slender and decidedly turned down (Aaroni mihi) ... *hirsuta* Aar.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

anale) (1885). — Cam. Biolog. Central.-Americ. Hym. p. 464, n. 8, tab. XX, fig. 11, 11a. (1888) (excl. *C. nitidulae* Brullé et Radoszk. syn.).

? *Chrysis caerulans,* Brullé, Hym. IV. p. 37, n. 21. ♂ ♀. (1846). — Prov. Petit. Faun. Canad. II. Hym. p. 579, n. 1. ♂ ♀. (1883).

Chrysis coeruleans, Dhlb. Hym. Europ. II. p. 212, n. 116. ♂ ♀. tab. XI. fig. 110. (segm. anale (1854).

Chrysis bella, Cress. Proced. Ent. Soc. Phila. IV. p. 312, n. 10. ♀. (1865).

Antennis longis, crassiusculis, fusco-nigris, cano-puberulis, scapo viridi, articulis duobus primis flagelli vel concoloribus vel cyanescenti-viridibus, huius secundo longo, tertio quartoque simul sumptis tamen parum breviore; genis sat longis, articulo tertio flagelli æquilongis; abdominis segmentis dorsalibus margine apicali plus minusve viridibus vel subaurato-viridibus. — Long. 9½—11 mm.

«The collection contains forty specimens, all of which, after careful examination. I have decided to place with this species. The localities are Canada, Maine, Massachusetts, New Jersey, Delaware, Virginia, North Carolina, Georgia, Kentucky, Illinois, Wisconsin, Colorado, California, Oregon, Washington Territory and Vancouver's Island. The variations in the apical teeth are best shown by the figures; other specimens, including *bella* of Cresson, resemble *Nortoni,* while several agree with Dahlbom's figure and description. The color is blue, with more or less green and some purple reflections; some specimens are deep blue with much purple, others entirely emerald-green

No long white hairs covering the face; the outer apical teeth as seen from the side are abrupt, triangular and projecting in a line with the lateral margin.
  Median teeth closer together than the median and outer teeth; outer teeth, hardly projecting, about six or eight distinct large semi-transparent luteous pits, forming a deep broad groove *pellucidula* Aar.
  Median teeth farther apart than the median and outer teeth; outer teeth rather strong, about ten or twelwe indistinct medium pits, not apparently semi-transparent *Pattoni* Aar.
As seen from the side the lateral margins of third segment are straight, or slightly arched inwardly.
  Basin of face striate *venusta* Cress.
  Basin of face punctured.
    Median teeth separated by a shallow, evenly curved arcuation, farther apart than the median and outer teeth *nitidula* Fabr.
    Teeth, and the emarginations between them, subequal, or with the median teeth separated by a deeper rounded emargination and nearer together than the median and outer teeth *coeruleans* Fabr.
As seen from the side the lateral margins of the third segment are sinuate, or arcuate, just before the outer apical teeth.
  Anterior margin of the groove containing the pits abrupt, forming a distinct swelling or declivity, and as seen from above the apical portion of segment with is lateral margins nearly parallel, very far within the overhanging margins of the groove *inflata* Aar.
  Anterior margin of the groove rising only slightly above the pits, and as seen from above the apical portion of segment with its lateral margins connivent, nearly equal with the lateral margins of the basal portion *Nortoni* Aar.
As seen from the side the lateral margins of the third segment are arched outwardly, nearly straight just before the outer apical tooth *peracuta* Aar.
Prothorax as long, or longer than the head.
  Lateral margins of the third segment straight *tripartita* Aar.
  Lateral margins of third segment bisinuate.
    Teeth tolerably long and slender, pointed, the median much longer than the outer *propria* Aar.
    Teeth short, rounded at the apices, subequal *lauta* Cress.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

with no blue; basin of face punctured; head and thorax densely punctured; abdomen with the punctures more or less separated, close on the dorsum of the second segment in some specimens, in others separated. One or two specimens have a few scattered finer punctures between the larger ones on first segment. The lateral view of the third segment, the pits and the groove, as in *nitidula.*» (Aaron l. c.)

Patria: America septentrionalis cum insula Sancti Dominici (Brullé); Mexico, Guetemala, Costa Rica, Panama (Cameron); Cayenne (Dhlb.); Peru, Mus. Vindob.!).

446. **Chrysis Servillei** Brullé.

Chrysis Servillei, Brullé, Hym. IV. p. 37, n. 22. ♀. (1846).

«Viridis, dorso partim cyaneo, alis subhyalinis, dense punctata, abdomine tenuius punctato, segmento tertio quadridentato. Fem.

Cette espèce se rapproche de la précédente (cœrulans Lep.) au point qu'on pourrait ne pas l'en distinguer, si ce n'est par la position relative des dentelures du troisième segment de l'abdomen, dont les deux moyennes sont plus écartées. Les intervalles qui séparent ces dentelures sont peu échancrés. Le thorax et la tête sont en grande partie nuancès de bleu. Les ailes sont presque transparentes.

Longueur: 0,011.»

Patria: America septentrionalis (Montagnes Rocheuses, Rocky Mountains).

Animadversio. — Est forsan *Chrys. nitidula* Fabr.?

447. **Chrysis dorsalis** Aar.

Chrysis dorsalis, Aar. Transact. Amer. Ent. Soc. XII. p. 234, tab. IX. fig. 51. (segm. anale) (1885).

«From dark blue, purple and green, to emerald-green and no purple; head and thorax closely and equally punctured; basin of face smooth in the middle, very finely punctured on each side; abdomen closely and about equally punctured, the punctures becoming a little confluent and slightly larger on the apical half of third segment; on the basal three-fourths of the dorsum of each segment of a deeper and duller color, black in the green specimens, purplish black in the blue; pits medium, or a little large, round, separated, contained in a shallow groove, which ends midway on the lateral margin; some specimens differ from the figure by having the median teeth as far apart as the median and outer teeth, and somewhat pointed, wings hyaline, infumated on the basal half, in one specimen fusco-flavescent; 6—7 mm. long.

Colorado, California, Washington Territory, Montana and Vancouver's Island; ten specimen.»

Antennis mediocribus, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridibus, tertii basi cyanescenti, hoc longo sequentibus duobus simul sumptis æquali; genis sat longis, articulo antennarum quarto duplo longioribus; fronte angustata, vertice depresso-convexo.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: de segmento anali facile cognoscitur.

Patria: America septentrionalis.

448. **Chrysis montana** Aar.

Chrysis montana, Aar. Transact. Amer. Ent. Soc. XII. p. 234. ♀. tab. IX. fig. 52—53 (segm. anale) (1885).

«Blue with emerald-green to emerald-green with a little blue; head and thorax closely and evenly punctured; basin of face smooth, punctured on each side; abdomen with the punctures very little separated, almost as close as on the thorax, larger on the sides and towards the apex of third segment; pits large, shallow, slightly separated, forming a large, distinct, though shallow groove, which extends midway on the lateral margin; wings almost clear hyaline; 6 mm. ♀.

Montana; two specimens.»

Patria: America septentrionalis.

449. **Chrysis Frey-Gessneri** Grib.

Chrysis Frey-Gessneri, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 333, n. 10. ♀. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 234. tab. IX. fig. 54—55. (segm. anale) (1885).

Descriptio Gribodoi sequens est:

«Mediocris gracilis cylindrica parum nitida obscure-viridis: capite thoraceque confertissime irregulariter punctulatis subcoriaceis (scutello et postscutello punctato-reticulatis): abdomine confertim regulariter punctulato-granoso: capite antice viso quadrato-rotundato, cavitate faciali ampla parum profunda supra et ad latera marginata: postscutello planiusculo declivi: abdomine apice fere tam lato quam basi, capite thoraceque simul sumptis paullulum longiore: segmento tertio toto et undique uniformiter convexo, idest serie anteapicali omnino dificiente, et area anali haud immersa, sed contra in eodem situ foveam maximam profundissimam erosam, medio plane interruptam, conspicue biarcuatam præbente: margine anali quadridentato: dentibus robustis productis acute triangularibus, subæqualibus: emarginaturis arcuatis æqualibus: alis lenissime sordidis, limbo pure hyalinis. ♀.

Long. corp. mill. 7.

Il carattere piu importante di questa specie consiste nella configurazione singolare del terzo segmento: in cio si avvicina alla *C. excavata,* Brullé, ma ne differesce pel colore, per la scultura, la mancanza della carinula abdominale, e finalmente per la doppia incurvatura delle fossa del terzo segmento.

Un esemplare statomi regalato dal dott. Frey-Gessner.»

«Varies from 7—8.5 mm. The color is emerald-green with some blue reflections; basin of face very finely and narrowly striate. Gribodo is hardly correct and a little difficult to understand when he says: «anteapical series entirely wanting», but farther

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

on the explains, «forming in the same position a very large and deep erose fovea», which means in the same position as the anteapical series of pits. This fovea, which being «interrupted in the middle», forming two, is nothing more than the two median pits greatly enlarged, becoming confluent with the others and disturbing the evenness of the posterior margin of basal area of segment, causing it to be arched. The size of these large pits, however, varies, and in one specimen hardly cuts the before mentioned margin. The apical teeth also vary in length.» (Aaron l. c.).

Patria: America septentrionalis (Texas, Grib.; New York, Texas and Washington Territory, Aaron).

450. **Chrysis Aaroni** mihi.

Chrysis hirsuta, Aar. Transact. Amer. Ent. Soc. XII. p. 235. ♂ ♀. tab. IX. fig. 56—57. (segm. anale) (1885) (nec Gerst.).

«One specimen deep blue with dull purple reflections, the other green and blue with black and dull purple on the dorsum of the second abdominal segment; head, thorax and abdomen densely and equally punctured; in one specimen the punctures on the dorsum of the second segment becoming largely confluent, or running together in rows; basin of face finely punctured on each side (best seen in certain directions and light) with long coarse white hairs; pits very large and confluent in a rather deep groove, which ends midway on the lateral margin; teeth unusually long and slender and much turned down; wings clear hyaline; 4.5—6 mm. ♂ ♀.

Montana and Utah; two specimens.»

Patria: America septentrionalis.

451. **Chrysis pellucidula** Aar.

Chrysis pellucidula, Aar. Transact. Amer. Ent. Soc. XII. p. 235. ♀. tab. IX. fig. 58—59. (segm. anale) (1885).

«Green and blue, deep purple and black on the dorsum of the second abdominal segment and a little deeper blue on the first segment; basin of face punctured; head and thorax densely and equally punctured; abdomen with the punctures separated, especially so in the second segment, closer and a little confluent on the sides of the third segment; pits very large, confluent, luteous and when held towards the light somewhat transparent; the median separation very narrow; apical margin abrupt, sharp; teeth coming to sharp points; wings hyaline, very slightly infumated; 5.5 mm. ♀.

Virginia; one specimen.»

Patria: America septentrionalis.

452. **Chrysis Pattoni** Aar.

Chrysis Pattoni, Aar. Transact. Amer. Ent. Soc. XII. p. 235. ♀. tab. IX. fig. 60. (seg. anale) (1885).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Emerald-green with blue reflections; basin of face punctured; head and thorax with the punctures rather fine, dense and equally distributed; abdominal punctures hardly separated, about equal, close and a little confluent on the third segment; pits medium, rather indistinct, dark colored, the groove moderate, ending near the base of segment, little raised above the pits on its anterior border at the extreme dorsum; apical margin not very abrupt; wings rather strongly infumated nearly to the apex; 6 mm. ♀.

Colorado; one specimen.»

Patria: America septentrionalis.

453. **Chrysis inflata** Aar

Chrysis inflata, Aar. Transact. Amer. Ent. Soc. XII. p. 237. ♂ ♀. tab. IX. fig. 68—69. (segm. anale) (1885).

«Head and thorax emerald-green with more or less deep blue reflections, closely and equally punctured; basin of face punctured; abdomen emerald-green with deep blue and some dull purple on the dorsum, the blue more or less broadly diffused, sometimes covering a larger part of the second and third segments; abdominal punctures close and about equal; pits medium, rounded, distinct, contained at the bottom of a deep declivity which forms the anterior margin of the groove, and which is somewhat swelled, reaching a little towards the apex and overhanging the lateral margin nearly or quite to the base of the segment; teeth strong; wings hyaline, slightly infumated: 6—9 mm. ♂ ♀.

Southern California, Colorado and Utah; eight specimens. In one specimen the swelling above the groove is much exaggerated.»

Cavitate faciali lata superne transverse-marginata; antennis sat longis, crassiusculis, nigris, articulis tribus primis viridibus vel cyanescenti-viridibus, tertio longo, quarto quintoque simul sumptis tamen breviore; genis sat longis, articulo quarto antennarum æquilongis; abdominis segmentis dorsalibus: primo basi trifossulato, secundo carinula mediana distincta, tertio disco parum concaviusculo-immerso, supra seriem incrassato-convexo, foveolis profunde immersis. — Mariposa in California (Mus. Lugdunense Batavorum!) et Mexico (Coll. Saussurei! et Mus. Turicense!).

Patria: America septentrionalis cum Mexico.

454. **Chrysis Nortoni** Aar.

Chrysis Nortoni, Aar. Transact. Amer. Ent. Soc. XII. p. 237. ♂ ♀. tab. X. fig. 70—73. (segm. anale) (1885).

«From deep blue with green and slight purple reflections to emerald-green with very little blue; head and thorax densely and equally punctured; abdomen with the base of the second segment and sometimes the third blue, or darker green; punctures a

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

little separated, about equally distributed, in some specimens close on the dorsum and others with finer punctures scattared among the larger, on portions of the first segment; pits small, subdistinct and rounded, or sometimes somewhat confluent, contained in a medium groove, which ends near the base of the segment; teeth greatly turned down; wings hyaline, slightly infuscated; 6—9 mm. ♂ ♀.

Canada, Maine, Pennsylvania, Illinois, Colorado, Montana, Washington Territory, Oregon; seventeen specimens. The apical teeth vary, some specimens have the outer and median teeth much farther apart than the median, and vice versa.»

Patria: America septentrionalis.

455. **Chrysis peracuta** Aar.

Chrysis peracuta, Aar. Transact. Amer. Ent. Soc. XII. p. 237, tab. X. fig. 74—75. (segm. anale) (1885).

Chrysis peregrina, Buyss. Revue d'Entom. VI. p. 189, n. 25. ♀. (1887).

«Blue and green with dull purple reflections; basin of face striated; head and thorax densely and equally punctured; abdominal punctures somewhat separated, largest on the first segment, close on the third; pits medium, or a little large, distinct and close, in a shallow but distinct groove, ending on each side near the base of segment; wings hyaline on the extreme margin, broadly infuscated on the middle and somewhat towards the base; apical margins are thin, sharp, the teeth pointed; 8—10 mm.

Kentucky, Georgia, Florida; four specimen. In the form of the margins and in the general shape of the third segment the species is allied to *C. fasciata* Fabr., from Mexico, but differs by having distinct pits contained in a deep groove. The abdomen of this species is considerably longer than the head and thorax combined.»

Capite parvo, latitudine partis anticæ pronoti, hoc valde brevi, antice fortiter angustato; cavitate faciali angusta, superne acute transverse-marginata; antennis mediocribus, crassiusculis, nigris, articulis duobus primis viridibus, tertio cyaneo, longo, quarto quintoque simul sumptis subæquali; genis mediocribus, articulo antennarum quarto æquilongis; occipite utrinque angulo spinoideo munito; abdominis segmentis dorsalibus dilatatis, 2—3 carinula mediana distincta sublævi, secundi angulis lateraliapicalibus acutissimis, tertio margine apicali longo, sparsim sat crasse punctulato, dentibus acute-triangularibus, latis, emarginatura centrali plerumque recte triangulari. — Tennessee (Col. Saussurei!) et Texas (Mus. Hung. et Coll. Saussurei!).

Patria: America septentrionalis.

456. **Chrysis tripartita** Aar.

Chrysis tripartita, Aar. Transact. Amer. Ent. Soc. XII. p. 238. ♀. (1885).

«Head and thorax, wirh the metathorax and abdomen, emerald-green with very slight dull blue and darker green reflections; mesothorax deep blue with slight dull

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

purple reflections; basin of face very narrowly striated; closely and about equally punctured all over, on the abdomen the punctures a little more separated; posterior surface of the postscutellum as viewed laterally not evenly rounded, but angled and almost projecting; pits medium, rounded, distinct, in a shallow groove that ends about midway on the lateral margin, or a little nearer the base of segment; apical teeth short, broad, round at the apices, the median teeth somewhat longer than the outer, much closer together and separated by a deeper emargination than the median and outer teeth; lateral margins about straight; wings infuscated, paler on the outer margin; 10·5 mm. long. ♀.

Arizona; one specimen. The posterior of the apical teeth resembles that of *C. pellucidula*. The deep blue mesothorax divides the anterior and posterior portions of the insect, which are bright green, into three parts of color; a very odd character.»

Patria: America septentrionalis.

457. **Chrysis propria** Aar.

Chrysis propria (!), Aar. Transact. Amer. Ent. Soc. XII. p. 238. ♂ ♀. tab. X. fig. 76—77. (segm. anale) (1885).

«Green with slight blue reflections, some specimens with distinct brassy reflections; basin of the face striated; head and thorax closely and evenly punctured; abdomen with the punctures varying in different specimens, in some close and equally distributed, in others separated and with finer punctures scattered between; punctures close on the third segment in all the specimens, in some subconfluent; pits medium, in one specimen a little large, distinct, rounded, within luteous, semi-transparent when held against the light; groove shallow and with the pits ending on the lateral margin near the base of the segment; wings almost clear hyaline, a little infumated, in some specimens the radial cell is infuscated; 6—7.5 mm. ♂ ♀.

Montana, California, Colorado and Arizona; eight specimens.»

Cavitate faciali planata, medio longitudinaliter canaliculata et utrinque subtiliter dense irregulariter transverse-striata, lateribus punctato-coriacea, parcius argenteo-sericeo-pilosa, superne medio subarcuatim transverse-marginata, margine utrinque ramulum obliquum deorsum versus emittente; antennis mediocribus, crassiusculis, nigris, cano-puberulis, articulis in feminis tribus, in maribus tantum duobus primis viridibus vel viridi-cyaneis, tertio brevi, in mare adhuc breviore, articulo quarto subæquali; genis valde brevibus, articulo antennarum secundo tantum æquilongis; abdominis segmento dorsali secundo angulis laterali-apicalibus denticulo parvo, acuto. — Texas (Mus. Berolinense!), Mexico (Mus. Hung.)

Patria: America septentrionalis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

458. **Chrysis lauta** Cress.

Chrysis lauta, Cress. Proceed. Ent. Soc. Philad. IV. p. 310, n. 6. ♀. (1865). — Aar. Transact. Amer. Ent. Soc. XII. p. 238, tab. X. fig. 78–81. (segm. anale) (1885).
Chrysis prasinus (!) Cress. Proced. Ent. Soc. Philad. IV. p. 310, n. 6. ♀. (1865) (nec Klug.).
Chrysis pulcherrima, Cress. Proced. Ent. Soc. Philad. IV. p. 311, n. 8. ♂. (1865) (nec Lep.).
Chrysis chlorophana, Mocs. Term. Füz. XI. p. 16. (1887).

«Eleven specimens; the localities are Washington Territory, California, Colorado, Arizona and Texas. The varieties (all of which we have in the collection together with the gradational forms) are shown in Mr. Cresson's excellent descriptions. We have not one of the three types in the collection; however, the descriptions agree perfectly. The median space of the mesothorax in *prasinus* being deep blue and black is very odd, but in cannot be considered a constant or important character. Our specimen of *prasinus* proper is from Arizona, not from Colorado. One specimen of *lauta*, from Colorado, is emerald-green with very bright golden and brassy reflections with the median space on mesothorax anteriorly black in the middle. An extreme variety from Texas is deep blue with very little green. Basin of face in some specimens narrowly striated or smooth, in others broadly striated. In *pulcherrima* the appressed white pubescence on each side of the face is not a constant character, as specimens have to a less degree, and in some it is wanting altogether. Pits small or moderate, distinct or confluent, rounded or oblong, contained in an distinct, sometimes shallow groove, ending midway on the lateral margin. In one specimen the pits are entirely confluent, forming a broad, deep sulcus upon the surface; 7—10 mm.

This is the most variable species belonging to the genus *Chrysis* with which I am acquainted, but the variations are not fairly correlated and are gradational, are therefore cannot properly separate the forms.» (Aaron l. c.)

Cavitate faciali frontem versus valde angustata superne depresso-convexa, non marginata; antennis mediocribus, crassiusculis, nigris, articulis tribus primis viridibus vel aurato-viridibus, tertio brevi, secundo vix duplo tantum longiore; genis valde brevibus sublinearibus; vertice thoracisque dorso valde convexis, pronoto longo medio longitudinaliter sulcato; abdominis segmenti secundi angulis laterali-apicalibus subrectis non denticulatis.

Patria: America septentrionalis.

459. **Chrysis venusta** Cress.

Chrysis venusta, Cress. Proceed. Ent. Soc. Philad. IV. p. 311, n. 9. ♂. (1865). — Aar. Transact. Amer. Ent. Soc. XII. p. 236. ♀. tab. IX. fig. 61. (1885) (nec Mocs.).

Descriptio secundum Cresson:

«Green, changing to blue on second and third segments of abdomen, apex of the latter armed with four long acute teeth and deeply foveolated before; wings subhyaline.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Golden-green, densely and rather coarsely punctured, slightly pubescent; head not wider than the thorax; eyes rather longer, ovate; face behind the antennæ flattaned, and clothed with a dense, appressed, silvery-white pubescence, the depression bounded above by a well-defined, twice angular carina; antennæ opaque-black, scape green. Thorax: disk of prothorax sulcate; dorsal lines of mesothorax deeply impressed, the scape between them tinged behind with bluisch; posterior angles rather prominent and obtuse; tegulæ green. Wings subhyaline, having a slight fuscous tinge about the middle; nervures black. Legs golden-green, changing to blue in certain lights; tarsi fusco-testaceous. Abdomen short, rather broad and parallel, subconvex, closely and deeply punctured, those on the basal middle; second and third segment blue-green, the latter segment about half the length of the former and much narrower, the apical margin armed with four long, acute, very prominent, equidistant teeth, and before the apex a transverse row of deep foveæ, the two middle ones very large and deep, the others becoming smaller and less deep towards the sides of the segment; venter deeply concave. Length 4 lines.»

«Three specimens in the collection from Colorado (the type), Arizona and Texas. One specimen with the first abdominal segment partly and the second with all but a narrow space on the posterior margin showing black, with a faint tinge of purple; the teeth vary.» (Aaron l. c.)

Patria: America septentrionalis.

460. **Chrysis superba** Cress.

Chrysis superba, Cress. Proceed. Ent. Soc. Philad. IV. p. 106. ♂. (1865) (nec Rad., nec Tourn.).

Mediocris, robusta, longius cinereo-alboque pilosa, cyaneo-viridis; vertice circa stemmata, collo, pronoti truncatura antica, mesonoti lobo medio, metathorace, alarum tegulis abdominisqne segmentis dorsalibus pedibusque ex parte nigro-violaceis; capite parvo, angusto, cavitate faciali læte-viridi, angusta, medio longitudinaliter sulcata, utrinque dense subtiliter transverse-striata, lateribus punctato-coriacea et argenteo-sericeo-pilosa, superne transverse acute-marginata; antennis brevibus, crassis, apicem versus fortiter attenuatis, nigris, cano-puberulis, articulis duobus primis viridibus, tertio brevi, secundo parum tantum longiore; genis brevibus, articulo antennarum tertio æquilongis; pronoto sat longo, antice angustato, centro parum impresso; vertice densius, sed subtilius, thorace supra crassius punctato-reticulatis; metanoto convexo, dentibus postico-lateralibus longis, triangularibus, latis, subacutis; mesopleuris apice subtus exciso-bidentatis; abdomine lato, convexo, thorace multo latiore ac longiore, segmentis dorsalibus: primo basi trifossulato, margine apicali et lateribus virescentibus, secundo carinula mediana lata subtiliter punctulata, tertio carinula basali minus distincta, duobus primis minus dense, sed crasse profundeque cribrato-punctatis interstitiis lævibus, tertio basi similiter, sed subtilius punctato utrinque transverse concaviusculo-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

immerso, supra seriem leniter calloso, foveolis circiter 12 sat magnis ac profundis rotundatis, margine apicali sat longo, sparsim subtilius punctato, quadridentato, dentibus longis, acutis, spinoideis, intermediis subrectis, externis obliquis, in arcum levem dispositis, emarginaturis profunde arcuatis, centrali externis parum angustiore; ventre viridi et nigro-violaceo vario, segmento secundo basi utrinque macula parva nigro-ænea; pedibus cum tarsorum articulis anticis supra viridibus, his apice et subtus fusco-rufescentibus; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali lanceolata apice late aperta. — ♂; long. 8 mm.

Species: capite, antennis, mesopleuris, abdomine dentibusque analibus facile cognoscitur.

Patria: insula Cuba (Cress. et Mus. Vindob.!).

461. **Chrysis purpuriventris** Cress.

Chrysis purpuriventris, Cress. Proceed. Ent. Soc. Philad. IV. p. 106. ♂. (1865).

Mediocris, elongata, crassiuscula, sed minus robusta, cyaneo- vel læte-viridis, parcius cinereo-alboque pilosa; thorace supra leviter, sed abdomine semper toto nigro-violaceis; cavitate faciali sat lata, planata, medio leviter sulcata et utrinque fortius subarcuatim transverse-strigosa, lateribus punctato-coriacea, superne transverse-marginata, margine utrinque ramulum perpendicularem ab oculo remotum ad clypeum demittente; antennis brevibus, minus crassis, nigris, articulis tribus primis cyaneis vel viridibus, tertio sat longo, secundo duplo longiore; genis longis, aciculato-sculptis, articulo antennarum tertio æquilongis; pronoto mediocri, convexo, antice non angustato, transverso; metanoto convexo, dentibus postico-lateralibus longis acutis; vertice thoracisque dorso crasse profundeque punctato-reticulatis; abdominis segmentis dorsalibus: primo parte truncata spatio lato lævi ac polito, in medio supra longitudinaliter sulcato et utrinque leniter foveato; secundo carinula mediana nulla, convexo; tertio basi utrinque parum concaviusculo-immerso, supra seriem fortiter calloso, foveolis profunde immersis, circiter 10, magnis rotundatis per carinulam depressam interruptis, margine apicali sat longo, dispersius punctato, quadridentato, dentibus mediocribus, triangularibus, acutis, in arcum dispositis, emarginaturis arcuatis, centrali externis parum angustiore; segmentis omnibus fere æqualiter crasse profundeque subrugoso-punctatis; ventre viridi et cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus vel cyaneis vel viridibus, tarsis subtus et apice fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata subcompleta. — ♂ ♀; long. 7½—8½ mm.

Species: de cavitate faciali, genis, punctatura, abdominis segmentis primo et tertio, facile cognoscitur.

Patria: insula Cuba (Cress., Coll. Saussurei! et Mus. Vindobonense!).

462. **Chrysis oblonga** Cress.

Chrysis oblonga, Cress. Proced. Ent. Soc. Philad. IV. p. 106. ♀. (1865).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Elongate, green, abdomen deep blue; wings subhyaline; third abdominal segment with a transverse fold before the apex, and behind the fold a row of deep punctures, apical margin with four acute teeth.

Female. — Head grossly punctured, bright metallic green, slightly bluish on the vertex, across with there is a sharply defined carina which continues down the orbits, on each side of the face, to the base of the mandibles; the excavation behind the antennæ transversely striated; clypeus golden-green, depressed, the apical margin emarginate and coppery; cheeks carinate; mandibles long, acute, bronze-black, carinate and green at base; antennæ black, with a slight purplish-blue reflection, the two basal joints blue-green. Thorax elongate, narrowed in front, grossly punctured, slightly pubescent, bright metallic green; disk of mesothorax with two well impressed longitudinal lines, between which the surface is more or less blue; pleura golden-green; metathorax deep blue on the dorsal surface, the posterior angles large, divergent and acute; tegulæ blue-green. Wings subhyaline, tinged with pale fuscous, especially towards the base, the nervures stout, very distinct and blackish. Legs blue-green, pubescent. Abdomen oblong, convex, deeply, uniformly and closely punctured, of a brilliant deep azure-blue, tinged with purple at base and greenish on the sides; third segment more sparsely punctured at base, with a large transverse fold on the apical third, behind which, on each side, there is a row of deep punctures; the apical margin armed with four teeth, one on each extreme side, and two, more approximate and acute, on the middle; venter deeply concave, brilliant blue-green, polished. Length 4—4½ lines; expanse of wings 6—7 lines.

Two specimens.

Readily recognized by the narrow elongate form, and the brilliant deep azure-blue abdomen.»

Patria: Cuba.

463. **Chrysis clypeata** n. sp.

Magna, lata ac robusta, cyanea parumque violascens, densius longiusque cinereo-alboque pilosa; cavitate faciali angusta, sed profunda, cum fronte viridi, medio dense subtiliter irregulariterque transversa-striata, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne depresso-convexa, non marginata; clypeo longo, porrecto, densius subtiliter punctato, apice nigro-piceo subtruncato; genis mediocribus, mandibulis nigris, apice rufis, bidentatis; vertice, circa stemmata viridi-subaureo-maculato, dense minus crasse punctato-subreticulato; pronoto sat longo, capite tamen breviore, transverso, antice in medio profunde latius sulcato, sat crasse, sed minus profunde, scutello et postscutello gibbo-convexo parum fortius punctato-reticulatis; mesonoto dense sat crasse, sed minus profunde irregulariter punctato-subreticulato, metanoti dentibus postico-lateralibus mediocribus, acute-triangularibus, incurvis; abdomine capite thoraceque simul sumptis parum longiore, segmentis dorsalibus: primo, basi utrinque impresso, sat dense minus fortiter ac profunde punctato interstitiisque microscopice punctulatis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

secundo carinula mediana minus distincta, tertio convexo, supra seriem nec minime calloso, foveolis profunde immersis magnis rotundatis circiter 14 per carinulam convexo-depressam interruptis, nonnullis subconfluentibus, margine apicali brevi, dense subtilius punctato, quadridentato, dentibus triangularibus brevibus subobtusis, in lineam fere transversam dispositis, subæqualibus, emarginaturis minus profunde arcuatis, centrali externis multo latiore; 1—2 dense minus profunde punctato-subreticulatis; ventre nigro-violaceo, segmento secundo basi utrinque nigro-maculato; pedibus cyaneis, tarsis apice et subtus fusco-rufescentibus; alis hyalinis, cellula radiali parum sordida lanceolata apice valde late aperta, tegulis nigro-violaceis. — ♂; long. 9 mm.

Species: de cavitate faciali, clypeo, punctatura, abdominis segmento anali et alis, facile cognoscitur.

Patria: Mexico (Chapultepek, Mus. Cæs. Vindobonense).

464. **Chrysis rastellum** Brullé.

Chrysis rastellum, Brullé, Hym. IV. p. 32, n. 14. ♀. (1846).

«Cyanea, alis hyalinis ad marginem infuscatis, dense punctata, abdominis linea media lævi, segmento tertio margine crasso, dentibus quattuor æqualibus acutis. Fem.

Il est bleu ou d'un vert bleuâtre, avec les ailes enfumées sur le bord antérieur de la radiale et à la base de la cubitale seulement.

Le corps est criblé de gros points qui ne se touchent pas et dont les interstices sont finement ponctués çà et là, au moins sur le thorax. La tête présente une ligne saillante et sinueuse, ou même trilobée entre la face et le vertex. Le prothorax offre une impression en avant. Les lignes interlobulaires sont plus finement ponctuées que le mésothorax. La base de l'abdomen offre trois échancrures; la ligne moyenne de l'abdomen n'est pas élevée, mais elle est lisse et assez large sur les deux tiers postérieurs du deuxième segment; le troisième segment offre un bourrelet épais et cependant peu indiqué en avant: ce bourrelet dépasse les bord latéraux qui sont sinueux et il est suivi de très-gros points qu'il recouvre presque complétement; le bord postérieur est armé de quatre dents saillantes, étroites et égales entre elles, qui semblent situées au milieu du segment, à cause de la saillie du bourrelet sur chacun des côtés.

Longueur: 0,011.»

Patria: Mexico.

465. **Chrysis Parthenope** n. sp.

Submagna, elongata, robusta, parallela, viridis, parum subaureo-nitens, longius cinereo-alboque pilosa; mesonoti lobo medio et abdominis segmentis dorsalibus duobus ultimis basi nigro-violaceis; cavitate faciali subangusta, sat profunda, medio leviter longitudinaliter canaliculata, utrinque valde dense subtilissime minus regulariter transverse-striata, lateribus dense punctulato-coriacea et argenteo-sericeo-pilosa, superne depresso-convexa, non marginata; antennis mediocribus, crassis, nigris, cano-puberulis, articulis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

duobus primis viridi-subauratis, tertio sat longo, quarto dimidio adhuc longiore; clypeo sat longo, dense subtilius punctato; genis mediocribus, articulo antennarum secundo parum longioribus; pronoto sat longo, capite parum tantum breviore, transverso-rectangulo, antice in medio leniter longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus brevibus, subacute-triangularibus: vertice, pro- et mesonoto dense subtilius minus profunde, scutello et postscutello parum fortius punctato-subreticulatis; abdominis segmentis dorsalibus: duobus primis dense subtilius minus profunde, tertio adhuc parum subtilius punctato-subreticulatis, secundo carinula mediana abbreviata minus distincta, tertio convexo, supra seriem non calloso, foveolis rotundis profunde immersis nigro-violaceis subconfluentibus, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus in arcum dispositis brevibus, intermediis duobus obtuse-, externis subacute-triangularibus, emarginaturis: centrali parum arcuata externis profundius arcuatis duplo latiore; ventre viridi et cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali basi infuscata lanceolata, apice sat late aperta, tegulis viridi-cyaneis. — ♂; long. 8 mm.

Species: de cavitate faciali, clypeo, punctatura, foveolis et segmento anali, facile cognoscitur.

Patria: Mexico (Coll. Saussurei).

466. **Chrysis viridis** Oliv.

Chrysis viridis, Oliv. Encycl. Méth. Ins. V. p. 672, n. 2. (1790) (nec Brullé).

«Viridis, ano quadridentato, cœrulescente.

5—6 lines longue, sur une et un tiers de largeur; il est vert, mat en dessus, brillant en dessous, très-pointille, presque chagriné. Antennes et joues noires, l'écusson n'a point d'enfoncement; en quoi il differe du *Chrys. amethystina* Fabr. Les ailes sont noires. L'abdomen a dans son milieu une ligne longitudinale élevée; le second anneau est mélange de bleu; l'extrémité du troisième est bleu et muni de quatre dentilures.

Cet insecte approche beaucoup de celui que Fabricius désigné sous le nom l'*amethystine;* mais nous le croyons différent.»

Patria: Cayenne.

467. **Chrysis conica** Brullé.

Chrysis conica, Brullé, Hym. IV. p. 32, n. 15. ♂ ♀. (1846).

«Cyaneo-viridis, abdomine subviolaceo, alis obscuris, dense punctata, abdominis segmento tertio postice bifoveolato, clathrato, quadridentato. Mas. Fem.

Il est vert, avec le dos du premier segment de l'abdomen, la base des deux segments suivants et l'extrémité du troisième d'un bleu violet; quelquefois aussi le thorax est en partie d'un bleu violet. Les ailes sont enfumées, avec l'extrémité pâle.

Le corps est criblé de gros points qui se touchent sur la tête et le thorax et se confondent même sur le dos du mésothorax; les points de l'abdomen paraissent plus

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

gros et sont un peu écartés. La tête présente, entre la face et le vertex, une ligne saillante et à peine arquée. Le prothorax est marqué d'un sillon longitudinal étroit: c'est une simple rangée de points plus petits; les sillons interlobulaires du mésothorax sont étroits et plus finement ponctués que les lobes; la base de l'abdomen offre une large impression trilobée, ou trois impressions dont les deux latérales sont plus prononcées; la ligne moyenne de l'abdomen est lisse et bien marquée: le bourrelet du troisième segment est suivi de deux fossettes larges et profondes qui renferment des cloisons longitudinales dont les intervalles, allongés eux-mêmes, répondent aux points gros et profonds qui se voient dans les autres espèces; le bord postérieur est découpé en quatre dentelures triangulaires et saillantes, dont les deux moyennes sont plus rapprochées et plus longues que les deux extérieures.

Longueur: 0,012.»

Patria: Cayenne.

Animadversio. — Forsan eadem est species ac *Chrysis viridis* Oliv.?

468. **Chrysis distinctissima** Dhlb.

Chrysis fasciata, Spin. Annal. Soc. Ent. France. Sér. I. tom, IX. p. 202, n. 50. ♂. (1840) (nec Oliv., nec Fabr.) excl. Fabr. syn.
Chrysis intricans, Spin. Annal. Soc. Ent. France. Sér. I. tom. IX. p. 202. (1840).
Chrysis distinctissima, Dhlb. Hym. Europ. II. p. 211, n. 115. ♂ ♀. (1854).

Mediocris, elongata, sat robusta, cyanea aut viridis et cyanea, longius cinereo-alboque pilosa; cavitate faciali subangusta, sat profunda, viridi, dense punctulato-coriacea, superne transverse subarcuatim marginata; antennis brevibus, crassiusculis, nigris, canopuberulis, articulis tribus primis viridibus vel viridi-cyaneis, tertio mediocri, secundo duplo longiore; genis mediocribus, antennarum articulo secundo æquilongis vel parum longioribus; pronoto brevi, transverso-rectangulo, antice in medio leniter impresso; metanoto convexo, dentibus postico-lateralibus longis, acute-triangularibus; mesopleuris apice utrinque tuberculato-tridentatis; vertice et thorace supra dense minus fortiter punctato-reticulatis; abdominis segmentis dorsalibus margine vel parte basali plus minusve late nigro-violaceis, margine apicali virescentibus, primo basi trifossulato, 2—3 carinula mediana bene distincta nigro-violacea, in segmento secundo lata, in tertio usque ad marginem apicalem continua elevata, dense subtilissime punctulata; segmentis fere omnibus æqualiter, tertio tamen parum rugosiuscule, minus dense sat crasse punctatis, interstitiis angustis lævibus; segmento tertio subconvexo, foveolis profunde immersis utrinque 3—5 maximis sublinearibus et subpellucidis, lateralibus mediocribus, rotundatis, plus minusve confluentibus, margine apicali prominulo punctulato, depressiusculo, quadridentato, dentibus mediocribus spinoideis, in arcum dispositis, centralibus approximatis, externis distantibus longioribus, emarginaturis: centrali profundius arcuata modice lata, externis non profundis, sed duplo latioribus obliquis, margine laterali longo obliquo-subrecto; segmentis 1—2 angulo laterali-apicali utrinque

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

spinoideis; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis apice et subtus fuscis; alis hyalinis, cellula radiali lanceolata parum sordida incompleta, apice sat late aperta. — ♂♀; long. 8—9 mm.

Species: mesopleuris, punctatura abdominis, carinula mediana, foveolis et margine apicali, facile cognoscenda.

Patria: Guaiana (Coll. Rad.!); Cayenne (Spin. et Mus. Vindob.!); Ecuador (Coll. Rad.!); Brasilia (São Paulo, Mus. Hung.); Republ. Argentina (Mendoza, Mus. Halense Saxonum !).

Animadversio. — De sua *Chryside intricante* Spin. piæ memoriæ vir sequentia scripserat: «Arête qui sépare le vertex et le front, transversale, droite, n'atteignant pas le bord des yeux et terminée à une petite distance par deux lignes droites pareillement élevées, descendant sur le front parallélement aux orbites internes: ligne médiane des second et troisième anneaux, en côte arrondie. Troisième anneau, sans bourrelet, ayant néanmoins une série de gros points enfoncés sub-marginaux: bords latéraux, droits; bord postérieur, quadridenté: dents, égales entre elles et équidistantes: échancrures intermediaires, égales entre elles et transversales.»

469. **Chrysis chlorata** n. sp.

Mediocris, elongata, subangusta, cyanescenti-viridis, longius cinereo-alboque pilosa; vertice circa stemmata, collo, pro- et mesonoto scutelloque maculis nigro-violaceis; cavitate faciali lata, planata, dense punctato-coriacea, parcius argenteo-sericeo-pilosa, superne distincte, medio transverse flexuoso-marginata; antennis longiusculis, sat crassis, nigris, cano-puberulis, scapo viridi, articulis sequentibus tribus primis cyanescentibus vel viridi-cyaneis, tertio sat longo, secundo duplo longiore; genis longis, articulo antennarum tertio æquilongis vel adhuc parum longioribus; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus late-triangularibus, subacutis, apice parum curvatis; vertice, pro- et mesonoto fere æqualiter dense crassius minus profunde, scutello et postscutello parum fortius magisque regulariter punctato-reticulatis; abdominis segmentis dorsalibus plus minusve nigro-violascentibus, primo basi concolore utrinque fortius impresso, 1—2 in medio distincte carinatis, tertio carinula abbreviata minus distincta, depresso-convexo, supra seriem vix incrassato, foveolis circiter 8 tantum sat magnis violaceis rotundatis, per carinulam brevem convexo-depressam interruptis, margine apicali sat longo, dense punctulato, quadridentato, dentibus sat longis, acute-triangularibus, externis parum brevioribus, emarginaturis arcuatis, centrali parum profundiore latioreque; segmentis omnibus fere æqualiter dense sat crasse minus profunde subrugoso-punctatis; secundo angulo postico-laterali recto, tertio margine laterali obliquo, recto; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsorum articulis ultimis et subtus fuscis; alis hyalinis, modice sordidis, venis firmis piceis, cellula radiali lanceolata subcompleta, apice parum aperta. — ♀; long. 7—7½ mm.

Species: fronte, antennis, genis, punctatura abdominis segmentorum dorsalium, carinis, foveolis et dentibus analibus, facile cognoscitur.

Patria: Brasilia (Coll. Edm. André! et Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

470. **Chrysis cavifrons** Brullé.

Chrysis cavifrons, Brullé, Hym. IV. p. 34, n. 17. ♂ ♀. (1846).

»Viridis, abdomine fasciis flavis (?), alis subhyalinis, dense punctata, facie profunde excavata, segmento tertio quadridentato. Mas. Fem.

Il est vert, avec des bandes d'un violet foncé sur l'abdomen; le thorax est peu ou point nuancé de violet. Les alis sont légèrement enfumées dans l'intervalle des nervures.

Le corps est criblé de gros points qui ne se touchent pas et sont un peu plus écartés sur l'abdomen que sur la tête et le thorax; les intervalles qui les séparent sont finement punctués. La fossette sous-antennaire est très-profunde, comme striée et séparée de la région frontale par une saillie qui ne présente pas de ligne élevée; le prothorax n'offre pas de fossette; les lobes dorsaux du mésothorax sont un peu élevés; mais les lignes interlobulaires sont peu distinctes; la base de l'abdomen offre une impression trilobée; la ligne moyenne des deux derniers segments est large et distincte, non ponctuée; le troisième segment n'offre pas de bourrelet, mais il est marqué en arrière d'une rangée de gros points peu nombreux; son bord postérieur est découpé en quatre dentelures triangulaires dont les intervalles sont à peu près égaux.

Longueur: 0,009.«

Patria: America meridionalis.

471. **Chrysis inclyta** n. sp.

Mediocris, elongata, subparallela, minus robusta, subtus læte-, supra cyanescenti-viridis, parcius cinereo-alboque pilosa; vertice circa stemmata, collo, mesonoti lobo medio antice posticeque, fascia item abdominis segmentorum dorsalium 1—2 ante marginem apicalem et 2—3 basi secundoque insuper etiam disco nigro-violaceis; cavitate faciali profunda, viridi-subaurata, medio sublævi ac polita, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne arcuatim minus acute marginata; antennis tenuibus, nigris, cano-puberulis, articulis tribus primis læte-viridibus, ultimis rufescentibus, tertio sat brevi, secundo vix dimidio adhuc longiore; genis mediocribus, articulo antennarum secundo æquilongis; vertice dense minus crasse, thorace supra dispersius crassiusque punctato-reticulatis; pronoto sat longo, capite tamen breviore, transverso-rectangulo, antice in medio nec minime sulcato; metanoto convexo, dentibus postico-lateralibus robustis obtuse-triangularibus; mesopleuris lateribus acute-marginatis; abdominis segmentis dorsalibus: primo basi leviter trifoveolato, supra sparsim crassius punctato interstitiisque subtilissime punctulatis; 2—3 carinula mediana sat lata nigro-violacea sublævi, secundo sat dense minus fortiter, tertio adhuc parum subtilius punctatis; 1—2 margine apicali, tertio ante seriem viridi-subauratis; tertio convexo, ante seriem anteapicalem nec minime calloso, sed in unum confluente, foveolis circiter 12 mediocribus rotundatis minus profundis, per carinulam medianam usque ad apicem

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

continuam interruptis, margine apicali violascenti-cyaneo, sat parsim subtilius punctato, longo, quadridentato, dentibus brevibus in arcum levem dispositis, acutis, intermediis duobus externis parum longioribus, emarginaturis subæqualibus, centrali tamen externis profundiore, margine laterali recto; ventre pedibusque læte-viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis rufis; alis hyalinis, ad costam cellulæ radialis lanceolatæ apiceque late apertæ sordidis, venis fuscis. — ♂; long. 8 mm.

Chrysidi cavifronti Brullé similis et affinis esse videtur; sed cavitate faciali medio sublævi ac polita et abdominis segmento dorsali tertio foveolis haud magnis, mihi distincta esse videtur.

Patria: Brasilia (Lagoa sancta, Mus. Halense Saxonum).

472. **Chrysis excavata** Brullé.

Chrysis excavata, Brullé, Hym. IV. p. 33, n. 16. ♂. (1846).

«Viridis, maculis fasciisque violaceis, alis hyalinis, dense punctata, abdominis segmento tertio postice excavato, clathrato, quadridentato. Mas.

Il est vert, avec des taches et bandes d'un violet foncé, savoir : une tache interocellaire, une bande sur le devant et deux taches sur le dos du prothorax, une large tache sur le dos du mésothorax avec un espace vert sur l'arrière du lobe moyen, deux taches à la base et une bande en travers du premier segment de l'abdomen, deux larges taches transversales sur les angles externes de la base du deuxième segment et une grande tache triangulaire sur le dos de ce même segment; enfin, deux bandes sur le troisième segment, l'une à la base, l'autre à l'extrémité. Les ailes sont presque transparentes, avec le bord antérieur de la radiale un peu enfumé.

Le corps est criblé de gros points qui se touchent presque sur la tête et le thorax, où leurs interstices sont finement ponctués, et qui sont plus écartés sur l'abdomen. La tête offre en avant des ocelles une ligne sinueuse ou bilobée; le prothorax est marqué en avant d'une fossette longitudinale; les lignes interlobulaires du mésothorax sont bien marquées et les lobes un peu élevés; l'abdomen est creusé à la base de trois fossettes ou échancrures; la ligne moyenne est large, bien visible sur les deux derniers segments et très-finement ponctué; le troisième segment est dépourvu de bourrelet, mais il offre en arrière, de chaque côté de la ligne moyenne, une large depression creusée de cavités profondes et peu nombreuses, ou de gros points irréguliers et allongées; le bord postérieur est découpé en quatre dentelures triangulaires, dont les deux moyennes sont un peu plus écartées que les latérales: l'intervalle entre les deux dentelures moyennes est moins échancré que les intervalles latéraux.

Longueur: 0,011.»

Patria: Brasilia.

473. **Chrysis fraterna** n. sp.

Mediocris, elongata, subparallela, minus robusta, viridis violaceo-picta, parcius cinereo-alboque pilosa; vertice circa stemmata, fascia mediana pronoti, mesonoti lobo

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

medio antice et lateralium lateribus internis, linea longitudinali scutelli, alarum tegulis, abdominis segmentis dorsalibus: primo fascia mediana, 2—3 basi, secundi macula magna discoidali, carinula mediana 2—3 et tertii margine apicali nigro-violaceis; cavitate faciali minus profunda, lata, dense punctato-coriacea, lateribus parcius argenteo-sericeo-pilosa, superne arcuatim minus fortiter transverse-marginata; antennis mediocribus, sat tenuibus, nigris, articulis tribus primis viridi-cyaneis, tertio longitudine mediocri, quarto parum tantum longiore; genis sat longis, articulo antennarum tertio adhuc parum longioribus; pronoto brevi, transverso-rectangulo, antice in medio leviter longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus late-triangularibus, subacutis, parum curvatis; mesopleuris in medio transversaliter profunde impressis, lateribus posticis subtus per emarginaturam bidentatis; vertice densius, sed subtilius, thorace supra parum dispersius, scutello postscutelloque adhuc crassius punctato-reticulatis; abdominis segmentis dorsalibus: primo basi leniter trifoveato, 2—3 distincte carinulato, carinula mediana lata, tertii usque ad apicem producta, subtilissime punctulata; segmentis omnibus fere æqualiter sat sparsim profundius punctatis, interstitiis: primi hinc illic microscopice punctulatis, 2—3 lævibus; tertio convexo, ante seriem leniter calloso, foveolis profunde immersis magnis confluentibus, sulcum subtransversum profundum, per carinulam medianam continuam in duas partes divisum formantibus, margine apicali lato, sparsim subtilius punctato, quadridentato, dentibus in arcum levem dispositis mediocribus, acute-triangularibus, emarginaturis: centrali externis parum angustiore profunde-arcuata, externis subobliquis minus profundis; segmentorum 1—2 angulis laterali-apicalibus acute-denticulatis, tertii margine laterali medio leniter sinuato; ventre viridi-cyaneo et violaceo vario, segmento secundo utrinque basi nigro-maculato; pedibus cyaneo-viridibus, femoribus posterioribus postice atro-violaceis lævibus ac politis, tarsorum articulis ultimis et subtus fuscis; alis modice fumato-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♂; long. 8½ mm.

Chrysis excavatae Brullé fraterna esse videtur; sed minor, cavitate faciali superne non sinuoso-marginato et abdominis segmenti dorsalis tertii marginis apicalis emarginatura centrali profunde-arcuata, mihi distinguenda esse videtur.

Patria: Brasilia (Blumenau, Mus. Cæs. Vindob.).

474 **Chrysis Brasiliensis** Brullé.

Chrysis Brasiliensis, Brullé, Hym. IV. p. 35, n. 19. ♀. (1846).

«Viridis, supra subcyanea, alis subobscuris, margine infuscatis, dense punctata, abdominis punctis elongatis, segmento tertio quadridentato. Fem.

Il est vert avec le dessus du corps nuancé de violet et les ailes un peu enfumées, le long surtout du bord antérieur.

Le corps est criblé de gros points qui ne se touchent pas et dont les intervalles sont ponctués çá et lá; les points de l'abdomen sont serrés et un peu alongés. Le bord

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

saillant de la fossette sus-antennaire est sinueux. Le prothorax présente en avant une fossette longitudinale. Les sillons inter-lobulaires du métathorax sont étroits. La première region du métathorax est saillante ou élevée, sans être prolongée en arrière. La base de l'abdomen est marquée de trois dépressions dont les deux extérieures sont plus profondes que celle du milieu; la ligne moyenne est peu saillante et fortement ponctuée; le troisième segment offre un bourrelet qui n'est visible qu'en arrière et suivi d'une rangée de gros points peu nombreux et d'un rouge violet; le bord postérieur est découpé en quatre dentelures triangulaires, également distantes et dont les intervalles sont régulièrement arqués. Ce dernier caractère distingue surtout cette espèce du *Ch. cavifrons* dont elle se rapproche, mais dans lequel les échancrures du troisième segment sont anguleuses.

Longueur: 0,009.»

Patria: Brasilia (prov. des Mines, Brullé).

475. **Chrysis Diana** n. sp.

Submagna, elongata, robusta, cyanescenti-viridis, longius cinereo-alboque pilosa; vertice circa stemmata, collo, fascia pronoti medio subinterrupta minus distincta, lobo medio mesonoti antice et lobis lateralibus latere interno, alarum tegulis, abdominis segmentis dorsalibus: primo fascia discoidali, 2—3 basi, 2—3 carinula mediana in tertio segmento usque ad marginem continua, macula 2-di discoidali et tertii margine apicali nigro-violaceis; cavitate faciali minus profunda, lata, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne subarcuatim minus acute transverse-marginata; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridibus, tertio supra cyanescenti brevi, secundo vix dimidio adhuc longiore; genis sat longis, articulo antennarum tertio adhuc parum longioribus; pronoto sat longo, capite tamen parum breviore, transverso-rectangulo, antice in medio leviter impresso; metanoto convexo, dentibus postico-lateralibus robustis, late-triangularibus, subobtusis; mesopleuris in medio fovea lævi ac polita, subtus lateribus posticis late-arcuato-excisis bidentatisque; vertice dense minus crasse, thorace supra parum dispersius fortiusque punctato-reticulatis, mesonoti lobo medio et lobis lateralibus antice punctis aliquot minutis inmixtis; abdomine thorace parum latiore, segmentis dorsalibus: primo basi trifossulato, 2—3 distincte carinulato, carinula lata dense subtilissime punctulata, 1—2 sat sparsim fortius, 3-tio parum densius cribrato-punctatis, interstitiis lævibus ac politis, tertio convexo, supra seriem vix incrassato, foveolis profunde immersis magnis oblongis centralibus duabus confluentibus, per carinulam interruptis, circiter 10, margine apicali longo, sparsim subtiliter punctato, quudridentato, dentibus acutis, mediocribus, fere æqualibus, in lineam subtransversam dispositis, emarginaturis sat profunde arcuatis, centrali externis parum latiore; ventre viridi et cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, femoribus posterioribus postice nigro-violaceis lævibus ac politis, tarsis subtus fuscis; alis modice sordide-hyalinis, apice

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

parum dilutioribus, venis fuscis, cellula radiali lanceolata apice sat lata aperta. — ♂; long. 9½ mm.

Species: colore corporis violaceo-variegato, antennis, punctatura abdominis carinulaque lata mediana segmentorum 2—3, foveolis et margine apicali, facile cognoscitur.

Patria: Brasilia (provincia Piauchy, Mus. Hung.).

476. **Chrysis carinulata** n. sp.

Submagna, elongata, robusta, viridis, parcius cinereo-pilosa; vertice circa stemmata, maculis indistinctis utrinque pronoti, carinula mediana scutelli nigro-æneis; abdominis segmentis dorsalibus: 2—3 basi et carinula mediana, in tertio segmento continua apice lævi ac polita viridique subaurata, in secundo subtilissime punctulata, foveolis item nigro-violaceis; cavitate faciali profunda, medio abrupte longitudinaliter canaliculata, utrinque fortius irregulariter transverse-striata, lateribus punctato-coriacea, superne arcuatim transverse acute-marginata; antennis mediocribus, crassiusculis, nigris, cano-puberulis, articulis tribus primis viridi-subauratis, quarto supra cyanescenti, tertio mediocri, secundo vix duplo longiore; genis sat longis, articulo tertio antennarum æquilongis; pronoto sat longo, capite tamen breviore, transverso-rectangulo, antice in medio leniter longitudinaliter fossulato; scutello subelevato-carinato; metanoto convexo, dentibus postico-lateralibus robustis, late-triangularibus, subobtusis; vertice dense subtilius, thorace supra parum dispersius fortiusque punctato-reticulatis; mesopleuris subtus triangulariter acute-marginatis, supra latere postico per emarginaturam profundam obtuse-bidentatis, spatiis duobus lævibus ac politis; abdominis segmentis dorsalibus: primo basi trifoveato, tertio convexo, ante seriem vix calloso; segmentis duobus primis sat sparsim fortius, tertio parum densius subtiliusque cribrato-punctatis, interstitiis lævibus ac politis; tertio foveolis profunde immersis magnis sulciformibus 14, per carinulam interruptis, margine apicali longo sparsim punctato, quadridentato, dentibus in arcum dispositis, acute-triangularibus, mediocribus, externis parum longioribus magisque angustis, emarginaturis: centrali externis parum angustiore centro triangulariter excisa, externis sat profunde arcuatis; segmentis 1—2 angulo postico-laterali in dentem acutum productis; tertio margine laterali ante apicem leniter sinuato; ventre pedibusque viridi-auratis, illo segmento secundo basi utrinque nigro-maculato, his femoribus posterioribus postice nigro-violaceis lævibus ac politis, tarsis subtus fuscis; alis modice fumato-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♀; long. 10 mm.

Species: de cavitate faciali, segmento anali et presertim de carinula scutelli nigro-ænea, a congeneribus iam primo intuitu facillime cognoscenda.

Patria: Brasilia (prov. Piauchy, Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

477. **Chrysis longirostris** Grib.

Chrysis longirostris, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 334, n. 11. ♀. (1879).

«Submagna cylindrica depressiuscula parum nitida viridis, dorsuli area centrali abdominisque segmentis secundo et tertio basi obscure cyaneo-violaceis: capite confertissime irregulariter punctato et punctulato: thorace confertim irregulariter subcrasse punctato: abdominis segmento primo creberrime et crasse, segmentis secundo et tertio subconfertim et minus crasse, regulariter punctatis: capite antice viso acutissime triangulari, ore valde porrecto, clypeo longitudinali longissimo triangulari, a forma *Chrysidum* normali maxime aberrante, lineis genarum longissimis concurrentibus: cavitate faciali modice profunda punctulato-granosa densissime argenteo-setosa, superne biarcuato marginata: prothorace medio longitudinaliter sat profunde foveolata, foveola lineari: postscutello transversim perlenissime gibbescente: abdomine lato depresso apice subovato, longitudine capitis thoracisque simul sumptorum, basi latissime sed parum profunde excavato, apice quadridentato: segmenti tertii area antica haud depressa; serie anteapicali parum abrupta; foveolis magnis, centralibus rotundis separatis, lateralibus confluentibus: area anali brevi et angusta: dentibus acutis triangularibus æqualibus adproximatis in lineam rectam dispositis: emarginaturis arcuatis æqualibus: alis hyalinis, disco subfumatis. ♀.

Long. corp. mill. 10,5.

Importantissima specie, che si distingue da tutte quelle conosciute per un carattere di primo ordine, la forma cioè del muso che è allungatissima, e foggiato a rostro: somiglia a quello degli *Stilbum,* ma è anche più allungato ed acuminato, il clipeo d'altronde ha il margine anteriore angoloso sporgente, non già smarginato. Nella monografia delle *Chrysidi,* che sto preparando, ho creduto bene di stabilire per questa singolare specie un sottogenere speciale col nome di *Parachrysis.*

Un esemplare della collezione Drewsen.»

Patria: Brasilia (Minas Geræs).

Animadversio. — Subgenus hoc delendum esse censebam, quoniam clypeum longum habent etiam aliæ species, nempe: *Chrysis pallidicornis, manicata, clypeata, gibba,* etc. et ipsa vox *longirostris* speciei characterem iam satis designat.

478. **Chrysis gibba** Brullé.

Chrysis gibba, Brullé, Hym. IV. p. 31, n. 13. ♂. (1846). — Spin. Gay's Hist. fisica de Chile. Tom. VI. p. 407, n. 4. (1851).

Chrysis Gayi, Spin. Gay's Hist. fisica de Chile. Tom. VI. p. 406, n. 3. (1851). — Dhlb. Hym. Europ. II. p. 203, n. 110. ♂. (1854).

Mediocris aut submagna, robusta, læte-cyanea parumque violascens, parcius cinereo-alboque pilosa; cavitate faciali planata, sat lata, dense punctulato-coriacea, lateribus parcius argenteo-sericeo-pilosa, superne depresso-convexa, non marginata, sed in fronte adsunt duæ lineæ obliquæ ad stemmata convergentes, aream completam tamen non

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

formantes (forsan tantum in femina? mihi solum cognita); antennis brevibus, crassiusculis, nigris, articulis tribus primis cyaneis, tertio sat longo, secundo duplo longiore; capite longiusculo, ovato-triangulari, clypeo depresso, longo, paullulum longiore, quam in plurimis aliis speciebus, subtrapezino, apice subarcuato-obtusiusculo; genis longis, articulo antennarum tertio adhuc parum longioribus; pronoto longo, capite evidenter longiore, in medio sulco levi longitudinali; postscutello parum gibbo-convexo, dentibus postico-lateralibus brevibus, robustis, obtusis; mesopleuris inermibus; vertice dense subtilius, pro- et mesonoto parum fortius minus profunde punctato-subreticulatis, subcoriaceis, scutello postscutelloque punctato-reticulatis; abdominis segmentis dorsalibus modice convexis, primo basi trifossulato, 2—3 carinula mediana indistincta, tertio supra seriem nec minime calloso, foveolis circiter 10, profundis magnitudine inæqualibus, centralibus magnis rotundis, per carinulam medianam convexo-depressam sat latam interruptis, margine apicali lato, dense punctato, quadridentato, dentibus in arcum levem dispositis, brevibus, robustis, latis, arcuato-obtusis, externis paullulum brevioribus triangularibus, emarginaturis leniter arcuatis, centrali externis parum angustiore; segmentis omnibus fere æqualiter sat dense punctatis; segmento secundo angulo postico-laterali rotundato, tertio lateralibus ante apicem parum sinuatis; ventre pedibusque læte-cyaneis, tarsis fuscis; alis hyalinis, parum sordidis, venis piceis, cellula radiali triangulariter lanceolata apice sat late aperta. — ♀; long. 9—10 mm.

Species: de cavitate faciali, clypeo, genis, pronoto, colore corporis et segmento anali, facile cognoscitur.

Patria: Chile (Brullé, Spin., Dhlb.); Respublica Argentina (Mendoza, Mus. Halense Saxonum!).

479. **Chrysis carinata** Guér.

Chrysis carinata, Guér. Revue Zoolog. p. 147, n. 9. ♀. (1842) (nec Dhlb.).
Chrysis grandis, Brullé, Hym. IV. p. 30, n. 11. ♀. (1846).
Chrysis chilensis, Spin. Gay's Hist. fisica de Chile. Tom. VI. p. 404, n. 1. Atlas, tab. IV. fig. 6. (1851). — Dhlb. Hym. Europ. II. p. 204, n. 111. ♂ ♀. tab. IX. fig. 109. (abdomen) (1854).

Magna aut maxima, valde robusta ac lata, cyanea, hinc illic leviter viridi-picta, longius cinereo-alboque pilosa; cavitate faciali sat profunda, lata, viridi-cyanea nitida, dense punctato-coriacea, superne acute transverse-marginata; antennis longiusculis, crassis, nigris, articulis tribus vel quattuor primis viridibus aut viridi-cyaneis, tertio in femina longo, in mare mediocri, secundo duplo longiore; clypeo mediocri, transverso, punctulato, disco convexo utrinque concaviusculo-depresso, ad centrum marginis apicalis late et leniter arcuato-emarginato; genis sat longis, articulo antennarum secundo duplo longioribus; pronoto sat brevi, capite breviore, transverso-rectangulo, antice in medio leniter impresso; scutello et postscutello parum gibbo-convexis; metanoti dentibus postico-lateralibus validis, latis, obtusis; mesopleuris crasse punctatis, utrinque ad apices sterno proprius arcuato-emarginatis et hinc utrinque crasse et breviter bidentatis; thorace supra crasse profundeque parum subreticulatim punctatis interstitiisque punctis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

minutis inmixtis, postscutello regulariter fortiterque punctato-reticulato; abdomine robusto, latitudine metanoti, capite thoraceque simul sumptis longiore, obtuse-rectangulo, dorso modice convexo, segmento primo basi profunde trifossulato, 2—3 carinula mediana elevata acuta, tertio utrinque transverse-concavo, postice supra seriem anteapicalem fortiter incrassato-prominulo, foveolis numerosis maiusculis rotundatis separatis, margine apicali quadridentato, dentibus robustis acute-triangularibus, in arcum levem dispositis, centralibus approximatis, emarginaturis arcuatis, centrali externis angustiore; segmentis 1—2 utrinque angulo laterali-apicali valido, spinoideo, tertii margine laterali oblique-subrecto, non sinuato; segmentis 1—2 crasse profundeque, tertio parum densius subtiliusque cribrato-punctatis interstitiisque hinc illic punctulatis; ventre pedibusque viridibus et cyaneis, tarsis subtus fuscis; alis hyalinis, disco leviter sordidis, cellula radiali elongata lanceolata apice modice aperta, venis firmis piceis. — ♂♀; long. 10—14 mm.

Species: corpore magno, crasso ac lato, a sequentibus tribus simillibus, iam primo intuitu facile cognoscenda.

Patria: Chile (Guér., Brullé, Spin. et Musæa omnia).

480. **Chrysis Guérini** Mocs.

Chrysis episcopalis, Guér. Revue Zoolog. p. 147, n. 11. ♀. (1842) (nec Spin.).
Chrysis Guérini, Mocs. Term. Füz. XI. p. 14. (1887).

Mediocris vel submagna, elongata, sat robusta, læte-cyanea parumque violascens, longius cinereo-alboque pilosa; cavitate faciali minus profunda, sat lata, dense punctato-coriacea, superne transversim acute-marginata, margine medio sinuato; antennis mediocribus, crassiusculis, nigris, articulis tribus primis cyaneis vel virescentibus, tertio longitudine mediocri, secundo duplo longiore; genis sat longis, articulo antennarum tertio æquilongis; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus late-triangularibus, robustis, incurvis; mesopleuris subtus utrinque acute-marginatis; vertice dense minus crasse, thorace supra parum dispersius fortiusque punctato-subreticulatis; abdominis segmentis dorsalibus convexis, primo basi leniter trifoveato, secundo carinula mediana nulla vel indistincta, tertio utrinque tantum leniter transverse-concavo, postice supra seriem anteapicalem fortiter incrassato-prominulo, foveolis haud numerosis, circiter 10 tantum mediocribus, rotundatis, separatis, margine apicali sat longo, leviter minus dense punctato, quadridentato, dentibus duobus intermediis externis longioribus acutis, externis brevioribus acute-triangularibus, emarginaturis fere æquilatis, centrali externis profundius arcuata; segmentis 1—2 utrinque angulo laterali-apicali subrecto, tertio margine laterali ante apicem profundius sinuato; segmentis omnibus fere æqualiter crassius cribrato-punctatis, parum rugosiusculis interstitiisque subtilissime punctulatis; ventre femoribusque læte-cyaneis, tibiis et tarsorum articulis supra viridi-cyaneis, subtus fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta. ♂♀; long. 8—10 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: a *Chrys. carinata* Guér. corpore minore minusque lato, et cum sequentibus duabus: mesopleuris inermibus et carinula mediana segmentorum dorsalium secundi vel duorum ultimorum nulla, optime distinguenda.

Patria: Chile (Guérin, Coll. Saussurei! et Mus. Vindob.!).

481. **Chrysis subfoveolata** Brullé.

Chrysis subfoveolata, Brullé, Hym. IV. p. 31, n. 12. ♂. (1846). — Spin. Gay's Hist. fisica de Chile. Tom. VI. p. 405, n. 2. (1851).

Mediocris, elongata, minus robusta, viridi-cyanea, longius cinereo-alboque pilosa; cavitate faciali minus profunda, lata, dense punctato-coriacea, superne transverse medio sinuoso-marginata; antennis sat longis, tenuibus, nigris, articulis quattuor primis cyaneo-viridibus, tertio longo, articulo secundo fere ter longiore; genis longis, articulo tamen antennarum tertio brevioribus; pronoto valde brevi, transverse-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus, subobtusis, mesopleuris subtus ad apicem sterno proprius arcuato-emarginatis et sic utrinque bidentatis; thorace supra crassius punctato-reticulato; abdominis segmentis dorsalibus: primo basi trifossulato, secundo carinula mediana sat distincta, tertio utrinque tantum leniter transverse-concavo, postice supra seriem ante-apicalem fortiter incrassato-prominulo, foveolis profunde immersis, numerosis, mediocribus rotundatis, separatis, margine apicali quadridentato, dentibus fere æqualibus subacutis, in arcum dispositis, mediocribus, emarginaturis fere æquilatis, centrali externis tamen parum profundiore; segmentis omnibus fere æqualiter crasse profundeque subreticulatim-punctatis, 1—2 utrinque angulo laterali-apicali subrecto, tertio margine laterali ante apicem leniter bisinuato; ventre viridi et cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tarsis subtus fuscis; alis hyalinis, venis firmis piceis, cellula radiali lanceolata apice subcompleta. — ♀; long. 8 mm.

Species: a præcedente colore viridi-cyaneo, antennarum articulis quattuor primis cyaneo-viridibus, tertio multo longiore, thorace regulariter punctato-reticulato, abdominis segmentis dorsalibus quoque crassius subreticulatim punctatis, secundi carinula mediana sat distincta mesopleurisque bidentatis; a sequente: colore, carinula mediana segmenti abdominis secundi non tam crassa elevataque, secundo utrinque angulo postico-laterali non denticulato, punctatura magis regulari et non tam forti, optime distinguenda.

Patria: Chile (Brullé); Respublica Argentina (Mus. Dresdense!).

482. **Chrysis callosa** n. sp.

Mediocris, elongata, sat robusta, cyanescenti-viridis, abdomine læte-cyaneo, longius cinereo-alboque pilosa; cavitate faciali planata, lata, dense punctato-coriacea, superne transverse, medio sinuoso-marginata; antennis longiusculis, tenuibus, nigris,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

articulis in mare quattuor, in femina quinque primis cyaneis, tertio in sexu utroque longo, secundo ter longiore; genis longis, aciculato-sculptis, articulo antennarum tertio fere æquilongis; pronoto valde brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus, subobtusis, incurvis; mesopleuris subtus utrinque sterno propius arcuato-emarginatis et hinc crasse breviterque subacute-bidentatis; vertice thoracisque dorso minus regulariter crassius punctato-reticulatis; abdominis segmentis dorsalibus: primo basi leviter trifossulato, 2—3 carinula mediana elevata crassa, tertio utrinque transverse-concavo, postice supra seriem anteapicalem fortiter incrassato-prominulo calloso, foveolis profunde immersis mediocribus rotundis, circiter 10, separatis, margine apicali brevi, irregulariter leviterque punctato, quadridentato, dentibus mediocribus, acutis, in arcum dispositis, intermediis duobus vix vel parum brevioribus, emarginaturis: centrali profundius arcuata externis angustiore; segmentis omnibus fortiter profundeque rugoso-punctatis subreticulatis; secundo utrinque angulo laterali-apicali acute-denticulato, tertio margine laterali ante apicem leniter sinuato; ventre pedibusque læte-cyaneis, tarsis subtus fuscis; alis hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. 7½—8½ mm.

Species: de colore corporis punctaturaque forti abdominis, a congeneribus facillime distinguenda.

Patria: ignota, forsan Chile? mihi a Clariss. Domino Léon Fairmaire in speciminibus numerosis benigne donata (Mus. Hung.).

II. *Corpus cyaneum et viride, supra plus minusve nigro-violaceo vel nigro-aeneo maculatum; abdominis segmentis dorsalibus fasciis nigro-violaceis, tertio margine laterali ad basin albo-pellucido seu albo-testaceo-scarioso.*

*

Conspectus specierum huius sectionis:

1 (4). Postscutello convexo vel gibbo.
2 (3). Postscutello convexo; vertice area stemma anticum includente; pronoti lateribus marginatis; abdominis segmento dorsali tertio foveolis longis sulciformibus *leucocheila* n. sp.
3 (2). Postscutello gibbo; vertice sine area; pronoti lateribus non marginatis; abdominis segmento dorsali tertio serie foveolarum nulla ... *albomarginata* n. sp.
4 (1). Postscutello vel metanoti basi mucronato.
5 (8). Postscutello mucronato; cavitatis facialis area insigni non obcordata.
6 (7). Corpore minuto, subangusto, lineari; postscutello mucrone oblique-horizontali robusto, latiusculo; abdomine apicem versus fortiter angustato, segmento dorsali tertio supra seriem nec minime calloso, dentibus a margine laterali non remotis mediocribus acute-triangularibus ... ... *leucophris* n. sp.
7 (6). Corpore magno, robusto; postscutelli mucrone antice gibbo, postice lato,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

arcuato, apice planato; abdomine apicem versus leniter angustato, segmento dorsali tertio supra seriem fortiter incrassato-convexo, dentibus a margine laterali longe remotis valde brevibus late-triangularibus ... ... *marginalis* BRULLÉ.

8 (5). Metanoti basi mucronato, mucrone tereti sat longo oblique-horizontali angusto; cavitate faciali superne area insigni obcordata.

9 (10). Corpore mediocri, minus robusto; cavitate faciali medio late lævi ac polita; alis subfumato-hyalinis violascentibus ... ... *leucostigma* n. sp.

10 (9). Corpore submagno, robusto; cavitate faciali dense subtiliter punctulato-coriacea; alis subhyalinis vel leviter sordidis ... ... *spinigera* SPIN.

*

483. Chrysis leucocheila n. sp.

Submediocris, elongata, angustula, viridi-cyanea aut cyaneo-viridis, parcius cinereo-alboque pilosa; thorace supra maculis et abdominis segmentis dorsalibus duobus primis in medio fascia minus distincta nigro-violaceis; cavitate faciali valde angusta, profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne minus distincte transverse-marginata, sed margine utrinque ramulum convergentem areamque stemma anticum includentem emittente; oculis magnis ovalibus valde exsertis; antennis brevibus, tenuibus, nigris, cano-puberulis, articulis duobus primis viridibus, tertio mediocri, secundo vix duplo longiore; genis linearibus, fere nullis; occipite utrinque angulo prominulo spinoideo; vertice valde convexo; pronoto sat longo, transverso-rectangulo, antice in medio non impresso, lateribus acute-marginatis; metanoto convexo, dentibus postico-lateralibus late-triangularibus, mediocribus, subacutis, postice truncatis, mesopleuris subtus triangulariter marginatis; vertice thoraceque supra dense minus crasse et profunde regulariter punctato-reticulatis; abdominis segmentis dorsalibus basi utrinque fortius fossulatis, secundo carinula mediana minus distincta, tertio basi transverse concaviusculo-immerso supra seriem incrassato-convexo, foveolis numerosis longis sulciformibus, margine apicali brevi sublævi, quadridentato, dentibus a margine laterali longe remotis acute-, vel subacute-triangularibus, mediocribus, centralibus externis parum longioribus, in arcum levem dispositis, emarginaturis subæqualibus, centrali externis profundius arcuata; secundo angulo laterali-apicali subrecto, tertio margine laterali ad basin albo-pellucido postice valde obliquo arcuato-flexuoso; segmentis: primo subdisperse fortius, secundo densius, sed parum subtilius, tertio adhuc levius modice rugosiuscule-punctatis; ventre pedibusque cyanescenti-viridibus, tarsorum articulis ultimis et subtus rufescentibus; alis hyalinis modice sordidis, venis fuscis, cellula radiali lanceolata incompleta, apice sat late aperta. — ♀; long. 6½—7 mm.

Patria: Mexico (Mus. Hung.; Cordova, Coll. Saussurei!) et Brasilia (Cantagallo et Neu-Freiburg, Mus. Halense Saxonum!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

484. **Chrysis albomarginata** n. sp.

Mediocris, elongata, subangusta, cyanescenti-viridis, longius cinereo-alboque pilosa; vertice circa stemmata, fascia mediana pronoti, mesonoti lobo medio et loborum lateralium internis, macula scutelli et metanoti, abdominis segmentis dorsalibus duobus primis fascia mediana, 2—3 basi et tertio fere toto nigro-violaceis; cavitate faciali valde angusta, profunda, medio longitudinaliter canaliculata, canalicula lævi, utrinque dense punctulato-coriacea argenteo-sericeoque pilosa, superne vix distincte transverse-marginata; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis tribus primis læte-viridibus, tertio sat brevi, secundo duplo tantum longiore; genis linearibus, fere nullis; vertice valde convexo; pronoto sat longo, transverso-rectangulo, antice in medio non impresso neque lateribus marginatis; postscutello gibbo, dentibus metanoti postico-lateralibus validis, brevibus, late-triangularibus; mesopleuris subtus triangulariter marginatis; vertice thoracisque dorso fere æqualiter dense sat crasse punctato-reticulatis; abdominis segmentis dorsalibus: primo parte truncata nigro-violaceo fortius trifossulato, secundo carinula mediana sat lata lævi ac polita, nigro-violacea, tertio superficie tota valde convexa, serie foveolarum anteapicali nulla, sed in eius loco arcuatim impresso seu potius arcuatim leviter sulcato, margine apicali sat longo sparsim punctulato, sublævi, nigro-violaceo, quadridentato, dentibus a margine laterali non remotis in arcum levem dispositis, mediocribus, acutis, emarginaturis fere æquilatis, externis centrali parum profundioribus; secundo angulo laterali-apicali recto, tertia anguste albo-marginato, tertio margine laterali ad basin albo-pellucido postice arcuato-flexuoso; segmentis omnibus fere æqualiter fortius minus dense parum rugosiuscule cribrato-punctatis; ventre pedibusque viridibus, illo segmentorum margine apicali cyanescenti, his tarsis fuscis; alis hyalinis, modice sordidis, venis fuscis, cellula radiali lanceolata incompleta, apice sat late aperta. — ♂; long. 7 mm.

Patria: Brasilia (Rio-Janeiro, Mus. Cæs. Vindob.).

485. **Chrysis leucophris** n. sp.

Parva, elongata, angusta, linearis, viridis, parcius cinereo alboque pilosa; vertice circa stemmata, fascia mediana pronoti, lobo medio mesonoti et loborum lateralium latere interno, abdominis segmentis dorsalibus duobus primis fascia mediana et macula discoidali tertiique margine apicali nigro-æneis; secundo margine apicali anguste nigro-violaceo, lævi ac polito; cavitate faciali angusta, viridi-aurata, profunda, medio lævi ac polita, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne transverse acute-marginata, margine ramulos duos laterales superne convergentes et stemma anticum includentes aliumque medianum perpendicularem ad stigma anticum emittente; antennis brevibus, tenuibus, fusco-rufescentibus, cano-puberulis, articulis duobus primis viridibus, tertio valde brevi, secundo parum tantum longiore; genis brevibus, articulo antennarum secundo æquilongis; vertice valde convexo, post stemmata spatio trans-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

verso sublævi, nigro-æneo; pronoto sat longo, valde convexo, transverso-rectangulo, antice in medio non impresso neque lateribus marginatis; postscutello mucronato, mucrone sat longo elevato, obliquo-horizontali, robusto, latiusculo, apice sublacero; metanoto postice fovea magna violacea; mesopleuris subtus triangulariter marginatis; vertice thoracisque dorso fere æqualiter crasse punctato-reticulatis; abdominis segmentis dorsalibus: primo parte truncata oblique bicarinata spatio lato lævi nigro-violaceo utrinque parum impresso, secundi carinula mediana indistincta, sed tertii usque ad apicem producta elevata acuta, tertio apicem versus valde angustato, supra seriem nec minime calloso, foveolis haud numerosis, circiter 10 tantum per carinulam interruptis, duabus intermediis sat magnis, reliquis minutis orbiculatis, margine apicali longo, sparsim punctulato, quadridentato, dentibus a margine laterali non remotis acute-triangularibus, æquilongis, mediocribus, emarginaturis: centrali profunde-arcuata, externis fere duplo latiore; secundo angulo laterali-apicali recto, anguste albo-marginato, tertio margine laterali ad basin albo-pellucido postice ante dentem externum leniter flexuoso; segmentis: primo sat sparsim fortius cribrato-punctato interstitiisque subtilissime punctulatis, 2—3 densius subtiliusque punctatis; ventre pedibusque viridi-subauratis, his tarsis fuscis; alis fumato-hyalinis violaceoque nitentibus, venis firmis piceis, cellula radiali lanceolata incompleta, apice late aperta, tegulis violaceis. — ♂; long. 6½ mm.

Patria: Brasilia (Fonteboa ad Amazonas, Mus. Hung.).

486. **Chrysis leucostigma** n. sp.

Mediocris, elongata, sat robusta, viridis, parcius cinereo-alboque pilosa; vertice circa stemmata, pronoti fascia mediana medio interrupta, mesonoti lobo medio et loborum lateralium latere interno, macula ad basin scutelli metanotique nigro-æneis, abdominis segmentis dorsalibus: primo secundoque fascia mediana, 2—3 basi et tertii margine apicali carinulaque mediana secundi nigro-violaceis; cavitate faciali angusta, viridi-aurata, profunda, medio late lævi ac polita, lateribus subtilissime microscopice punctulato-coriacea parciusque argenteo-sericeo-pilosa, superne adest in vertice area obcordata insignis per lineolam elevatam determinata stemma anticum excipiens, basi eiusdem areæ arcuato-emarginata ramulum utrinque longitudinalem demmittente; antennis sat longis, in mare tenuibus, in femina crassiusculis, nigris, cano-puberulis, articulis tribus primis læte-viridibus, tertio brevi, secundo vix duplo tantum longiore; genis brevibus, articulo antennarum secundo æquilongis; oculis magnis ovalibus valde exsertis; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter sulcato, lateribus non marginatis; postscutello gibbo, apice lacero; centro metanoti ad basin mucronato, mucrone tereti sat longo, oblique-horizontali, angusto, apice subtruncato-obtuso; metanoti dentibus postico-lateralibus robustis, brevibus, late-triangularibus, subacutis; mesopleuris subtus triangulariter marginatis, margine postico crenulato; vertice et pronoto parum subtilius, parte reliqua thoracis crasse profundeque punctato-reticulatis; abdominis segmentis dorsalibus: primo basi utrinque profunde fossulato

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

medioque longitudinaliter canaliculato, canalicula lævi ac polita, secundo tertioque carinula mediana sat distincta, tertio basi tantum leniter subimmersa supra seriem fortiter incrassato-convexo, foveolis immersis minutis numerosis rotundatis, margine apicali sat longo, sparsim punctulato, quadridentato, dentibus a margine laterali remotis in arcum dispositis, in femina sat longis acute-triangularibus subæqualibus, in mare brevibus, subacute-triangularibus, emarginaturis subæqualibus, in femina profundius arcuatis; secundo angulo laterali-apicali recto, anguste albo-marginato, tertio margine laterali ad basin albo-pellucido, postice ante dentem externum arcuato-flexuoso; segmentis 1—2 margine apicali viridibus fortiter tumidis; primo sparsim crasse, secundo densius subtiliusque, tertio adhuc subtilius punctatis, interstitiis lævibus ac politis; ventre pedibusque læte-viridibus viridi-subaureo-nitentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis apice et subtus fuscis, femoribus posterioribus postice nigro-violaceis lævigatis; alis subfumato-hyalinis violascentibus, venis firmis piceis, cellula radiali lanceolata incompleta, apice latius aperta, tegulis nigro-violaceis. — ♂♀; long. 8 mm.

Chrys. spinigerae Spin. simillima; sed minor, minus robusta, cavitate faciali medio late lævi ac polita, postscutello fortius gibbo, apice sublacero, abdominis segmentis dorsalibus 1—2 margine apicali fortius tumidis, tertio basi minus concaviusculo-immerso, foveolis æqualibus non interruptis, alis fortius fumatis, mihi distinguenda esse videtur.

Patria: Brasilia (Massauary et Fonteboa ad Amazonas, Mus Hung.).

487. **Chrysis spinigera** Spin.

Chrysis spinigera, Spin. Annal. Soc. Ent. France. Sér. I. tom. IX. p. 201, n. 49. ♀. (1838). — Dhlb. Hym. Europ. II. p. 233, n. 129. ♀. (1854).

Submagna, elongata, robusta, viridis vel cyaneo-viridis, parcius cinereo-alboque pilosa; vertice circa stemmata, collo, fascia mediana pronoti medio late interrupta, mesonoto lobo medio antice posticeque et lobis lateralibus latere interno postice, macula ad basin scutelli et postscutelli, abdominis item segmentis dorsalibus duobus primis fascia mediana, 2—3 basi et serie anteapicali foveolarum nigro-violaceis; cavitate faciali angusta, profunda, dense subtiliter punctulato-coriacea, lateribus parcius argenteo-sericeo-pilosa, superne in vertice adest area obcordata insignis per lineolam elevatam determinata stemma anticum excipiens, basi eiusdem areæ arcuato-emarginata ramulum utrinque longitudinalem demittente; antennis sat longis, crassiusculis, nigris, cano-puberulis, articulis tribus primis cyaneo-viridibus, tertio longo, secundo duplo longiore; genis brevibus, sublinearibus, articulo antennarum secundo adhuc brevioribus; oculis magnis, ovatis, valde exsertis; pronoto brevi, transverso-rectangulo, antice in medio sat profunde impresso, lateribus non marginatis; postscutello parum gibbo; centro metanoti ad basin mucronato, mucrone tereti sat longo, oblique-horizontali, angusto, apice subtruncato-obtuso; metanoti dentibus postico-lateralibus robustis, late-triangularibus, subacutis; mesopleuris subtus triangulariter marginatis, margine postico crenulato;

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

vertice thoracisque dorso fere æqualiter crasse profundeque punctato-reticulatis; abdominis segmentis dorsalibus: primo basi trifossulato, secundo carinula mediana nigro-violacea lævi ac polita, tertio disco leniter immerso, spatio lævi ac polito, supra seriem incrassato-convexo, serie anteapicali per carinulam medianam viridem interrupta, utrinque ad carinulam fovea magna sulciformi longitudinali et lineari, reliquis foveolis numerosis parvis rotundis, sat profunde immersis; margine apicali longo, sublævi, quadridentato, dentibus a margine laterali remotis in arcum dispositis, robustis, acute-triangularibus, subæqualibus, emarginaturis externis arcuatis, centrali subtriangulari; segmentis: 1—2 margine apicali vix tumidis, primo sparsim crasse, secundo densius subtiliusque, tertio adhuc parum subtilius punctatis, interstitiis lævibus ac politis; secundo angulo laterali-apicali recto, anguste albo-marginato; tertio margine laterali ad basin albo-pellucido, postice ante dentem externum arcuato-flexuoso; ventre pedibusque viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsorum articulis ultimis et subtus fuscis; alis subhyalinis aut levissime sordide-hyalinis, secundum costam cellulæ radialis nonnihil fumatis, venis firmis brunneis, cellula radiali lanceolata, incompleta, apice sat late aperta. — ♀; long. 9½—11 mm.

Patria: Cayenne (Spin.); Brasilia (Mus. Cæs. Vindob!).

var. imperforata Grib.

Chrysis imperforata, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 330, n. 7. (1879).

«*Chrysidi spinigerae*, Spin. affinissima et simillima, atque forsitan eiusdem solum conspicua varietas. tantummodo differt serie anteapicali medio integerrima abrupta polita impunctata; foveolis duabus magnis sulciformibus *C. spinigerae* haud prædita.

Non avendo sott' occhio che un piccolo numero di esemplari sia di questa forma (3 soli) che della *spinigera* tipica (4) sono ancora in dubbio se si tratti veramente di una specie distinta, oppure solo di una varietà molto rimarchevole. Ad ogni modo il carattere che le distingue, abbenché solo, è molto importante. Nella *spinigera* la serie anteapicale presenta nel mezzo due grossi fori che si prolungano assai sotto la forma di solco nel margine anale: lateralmente a questi due stanno poi numerosi altri buchi assai più piccoli, e di dimensioni e posizione normali come nella maggior parte delle *Chrysis* (mentre i due grossi fori centrali sono, credo, proprii a questa sola specie): invece nella *imperforata* il cercine della serie anteapicale è anzitutto più verticale, poi non presenta traccia alcuna dei detti fori, ma anzi nel mezzo in luogo loro ha una superficie liscia, intiera (forma assai poco comune anche questa), la quale solo nell' angolo d'unione col margine anale lascia scorgere una sottilissima fenditura transversale; sui lati poi, ma solo più vicino alla base, presenta i fori ordinarii. La punteggiatura del terzo segmento è alquanto più densa nella *spinigera:* la disposizione dei denti anali è pure diversa tra le due specie. Non trattasi di differenze sessuali essendo tutte femmine gli individui esaminati si dell' una che dell' altra specie.» — Patria: Cayenne (Grib.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Animadversio. — Mas. *Chys. spinigerae* Spin. adhuc ignotus est et detecto mare forsan nostra *Chrys. leucostigma* quoque tamquam eius varietas erit consideranda?

488. **Chrysis marginalis** BRULLÉ.

Chrysis marginalis, Brullé, Hym. IV. p. 41, n. 29. ♀. (1846) (nec Schenck).

Magna, robusta, parallela, viridi-cyanea vel cyanea parumque violascens, parcius cinereo-alboque pilosa; thorace supra maculis et abdominis segmentis dorsalibus duobus primis fascia mediana, 2—3 basi et tertio fere toto nigro-violaceis; cavitate faciali angusta, profunda, dense punctulato coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte transverse-marginata, sed in vertice adest area insignis subquadrata per ramulos duos laterales parallelos et alium triangularem superiorem stemma anticum includentes formata, ramulo hoc superiore ramulum utrinque brevem obliquem ad ocellos emittente; antennis mediocribus, crassis, nigris, cano-puberulis, articulis tribus primis viridibus, tertio longo, secundo duplo longiore; genis brevibus, sublinearibus, articulo antennarum secundo parum brevioribus; pronoto longo, longitudine fere capitis, transverso-rectangulo, antice in medio non impresso, sed lateribus acute-marginatis, margine parum crenulato; postscutello antice gibbo, postice in mucronem latum, arcuatum, apice planatum producto; metanoti dentibus postico-lateralibus validis, latis, triangularibus, subacutis; mesopleuris subtus postice per emarginaturam profundam obtuse-bidentatis; vertice thoracisque dorso fere æqualiter crasse profundeque punctato-reticulatis; abdominis segmentis dorsalibus: primo basi trifossulato, secundo carinula mediana minus distincta, tertio basi profunde concaviusculo-immerso, supra seriem fortiter incrassato-convexo, foveolis obliteratis minus distinctis minutis, margine apicali longo, subtilissime coriaceo, in medio serie arcuato-transversa punctorum maiorum, sed non profundorum, apice quadridentato, dentibus valde brevibus, late-triangularibus, in arcum dispositis, subæqualibus, a margine laterali longe remotis, emarginaturis leniter arcuatis, centrali externis duplo latiore; segmentis: primo sparsim crasse profundeque punctato interstitiisque hinc illic microscopice punctulatis, 2—3 multo densius subtiliusque punctatis; secundo angulo postico-laterali subrotundo, tertio margine laterali ad basin late albo-pellucido, postice parum sinuatim arcuato; ventre viridi, segmento secundo basi utrinque nigro-maculato; pedibus viridibus et cyaneis, femoribus posterioribus postice nigro-violaceis, lævibus, tarsorum articulis ultimis et subtus fuscis; alis subfumato-hyalinis, violascentibus, venis firmis piceis, cellula radiali lanceolata incompleta, apice late aperta, tegulis nigro-piceis. — ♀; long. 13—14 mm.

Species in hac sectione maxima et elegantissima: de area verticis, mucrone postscutelli et segmento anali, facile cognoscitur.

Patria: Guyana (Brullé); Brasilia (Villa Bella ad Amazonas, Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

III. *Corpus viridi-cyaneum parum violascens; thorace ex parte saturate purpurascenti-violaceo; vertice toto laete igneo-aurato.*

489. **Chrysis diademata** n. sp.

Submagna, sat robusta, viridi-cyanea, in locis certis violascens; pronoti lateribus margineque postico, mesonoti lateribus, scutello, meso- et metapleuris saturate purpurascenti-violaceis; vertice toto læte igneo-aurato; cavitate faciali profunda, dense punctulato-coriacea, argenteo-sericeo-pilosa et antennarum articulis duobus primis viridibus, his reliquis tarsisque fuscis; fronte inter oculos angustata; vertice sat convexo, antice in medio profunde impresso insignique area semicirculari stemma anticum excipiente et per carinulam arcuatam determinata, quæ carinula cohæret cum cavitatis facialis margine supero transverso utrinque ramulum longitudinalem oblique demittente; vertice, pronoto, mesonoti lateribus, scutello, postscutello et pleuris crasse scrobiculatis; abdomine cyaneo, segmento primo dorsali virescenti, 1—2 disco sparsim, tertio densius cribrato-punctatis, secundo carinula mediana abbreviata, haud distincta instructo, tertio violascenti depresso-convexo, quadridentato, dentibus apicalibus mediocribus, subacute-triangularibus, intermediis paulo longioribus, emarginaturis mediocribus, arcuatis: utraque laterali latiore, quam centrali; serie anteapicali profunde immersa foveolis circiter 18 rotundis, magnis et profundis; ventre viridi et cyaneo nigroque bimaculato; alis fortiter fumatis, violascentibus, cellula radiali lanceolata apice valde anguste aperta. — ♂; long. 11 mm.

Species hæc magnifica: vertice toto læte igneo-aurato, thorace ex parte saturate purpurascenti-violaceo, sculptura et alarum colore, iam facile cognoscenda.

Patria: Insulæ Philippinæ (Coll. Rad.).

Animadversio. — Animal inscriptionem «Mindano Brasiliæ» habuit; sed quia locus talis in Brasilia non existit, ego quidem locum talem frustra quærebam: non puto me errasse, quum eius patriam imperium Mindanao Insularum Philippinarum opinor.

IV. *Corpus purpurascenti-violaceum, vertice et dorsulo auratis, vel fronte et mesonoto cupreis.*

490. **Chrysis episcopalis** Spin.

Chrysis episcopalis, Spin. Annal. Soc. Ent. France. VII. p. 449, n. 4. ♀. (1838). — Dhlb. Hym. Europ. II. p. 199, n. 107. ♀. (1854). — Rad. Horæ Soc. Ent. Rossicæ. XII. p. 146, n. 101. (1876) (nec Guér.).

Chrysis Syriaca, Guér. Revue Zoolog. p. 147, n. 10. ♀. (1842).

Submagna, elongata, robusta, purpurascenti-violacea, nitida, griseo-alboque pilosa; facie subtus cum clypeo, genis, temporibus, vertice post ocellos et mesonoto læte igneo-auratis; fronte et vertice usque ad ocellos læte viridi-auratis; cavitate faciali planiuscula, dense punctulato-coriacea, sulco mediano continuo aureo, lateribus argenteo-sericeo-pilosa, superne indistincte marginata; antennis mediocribus, crassiusculis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

nigris, cano-puberulis, articulis tribus primis purpurascenti-violaceis, tertio longo, sequentibus duobus simul sumptis æquali; genis valde longis, articulo antennarum tertio æquilongis; mandibulis piceis, bidentatis, apice rufis; occipite utrinque angulo subacuto; pronoto sat longo, capite tamen breviore, transverso-rectangulo, antice in medio longitudinaliter impresso; vertice thoracisque dorso fere æqualiter crassius punctato-reticulatis; postscutello convexo, dentibus metanoti postico-lateralibus longis, acute-triangularibus, apice incurvis; abdominis segmentis dorsalibus: primo basi trifossulato, nigro-æneo, coriaceo, sparsim punctulato, secundo carinula mediana indistincta, tertio toto depresso-convexo, serie anteapicali obsoleta, foveolis nonnullis, circiter 8—9 tantum irregularibus, margine apicali sat longo, subtilius punctato, quadridentato, dentibus acute-triangularibus, externis parum longioribus magisque acutis, emarginaturis arcuatis, centrali externis angustiore; segmentis: primo parum fortius, reliquis subtilius minus profunde punctatis, interstitiis disco primi secundique subtiliter punctulatis; secundi angulo postico-laterali subrotundo, tertio lateribus ante apicem leniter sinuato; ventre pedibusque purpureo-violascentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis, unguiculis et tibiarum calcaribus brunneo-testaceis; alis hyalinis, disco sordidis, venis firnis piceis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. 10 mm.

Patria: Aegyptus (Spin. et Coll. Rad.!); Nubia (Chartum, Mus. Vindob.!); Syria (Guér.).

491. **Chrysis Sinaica** WALK.

Chrysis sinaica (rect. sinaitica), Walk. List of Hym. collect. by Lord in Egypt. etc. p. 7, n. 30. ♀. (1871).

«Female. — Purple, thickly punctured. Head bright cupreous between the eyes; face black. Eyes piceous. Antennæ black; first joint bluish green. Scutum cupreous, with two parallel furrows. Metathorax with a stoute spine on each side. Abdomen with three large segments; third segment green at the base, near which three is a slight transverse depression; tip quadridentate. Tarsi black. Wings cinereous; weins black. Length of the body 5 1/2 lines.

Mount Sinai.»

Patria: Arabia.

Animadversio. — Forsan cum priore eadem est species, sed ex illa descriptione animal hoc, sicut et reliquæ species Walkeri quam maxime incomplete descriptæ, cognosci nequeunt. Auctor enim de Chrysididis earumque characteribus specificis ne ideam quidem habuit.

V. *Corpus totum coeruleum aut viride et cyaneum; abdominis segmento dorsali secundo (vel etiam tertio parte basali aut solum lateribus) aurato; dentes apicales breves, obtusi et sic margo summus quasi undulatus.*

492. **Chrysis Sehestedti** DHLB.

Chrysis Sehestedti, Dhlb. Hym. Europ. II. p. 238, n. 131. (1854).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Mediocris circ. 2'/₂ lin. decimal. long. confertim modice punctata cœrulea abdominis segmento secundo aureo.

Observ. Magnitudo et statura fere *Chrysidis ignitae.* Corpus cœruleum; abdominis segmentum dorsale secundum aureum; segmentum (abdominis) dorsale tertium toto convexo-depressum nec supra seriem incrassatum, margo apicalis prominulus planus, series anteapicalis distincta foveolis mediocribus non confluentibus, dentes apicales breves obtusi unde margo summus quasi undulatus obvenit. Antennæ basi æneo-virides, apice lutescentes, postice fusco-maculatæ.»

Patria: regnum Maroccanum (Tanger).

Animadversio. — E descriptione nimium brevi et incompleta species difficile cognoscitur nescioque an nostra sit forsan species: *Chrys. Ariadne?*

493. **Chrysis zonata** Dhlb.

Chrysis zonata, Dhlb. Hym. Europ. II. p. 244, n. 135. (1854).

«Subparva 1'/₂—1³/₄ lin. decimal. long. confertim modice punctata subcoriacea viridis, dorsuli area media cyanea, abdominis segmento secundo aureo.

Observ. Statura fere *Chrysidis ignitae* parvæ. Pictura *Chrysidi sorori* valde similis et affinis, at corpore multo minore et angustiore, punctatura multo minus crassa, abdominis segmenti tertii dentibus apicalibus obtusis brevissimis obsoletissimis facile dognoscitur.— Corpus confertim punctatum subcoriaceum punctis permediocribus. Caput viride; cavitas facialis subangusta rectangularis profunda, medio subtiliter canaliculata, lateribus et superne punctulato-coriacea, superne transverse marginata: margine utrinque ramulum brevem longitudinalem deorsum versus emittente; antennæ mediocres basi virides, flagellum læte brunnescens. Clypeus transversus mediocris subtrapezinus disco convexus margine apicali truncatus. Mandibulæ et instrumenta cibaria normalia. Thorax viridis: pronoti truncatura antica, dorsuli area media et metanoto segmento postico leviter viridi-irrorato, cyaneis. Pedes virides tarsis brunneis. Alæ subhyalinæ venis subtenuibus brunneis; cellula radialis subtriangulariter lanceolata, apice anguste aperta. Abdomen ut in *Chryside semicincta* simillime constructum, at segmenti tertii margo proprius apicalis brevior, dentes autem et emarginaturæ simillimam præbent formam; segmentum primum cyaneo-viride: margine apicali aurato; segmentum secundum igneo-aureum: margine basali tenuiter nigro-æneo; segmentum tertium viride: fascia basali violacea; series ante-apicalis interrupta: foveolis utrinque 4—5 cœruleis maiusculis profundis rotundatis. Venter planiusculus, viridi-cyaneo- et nigro-pictus, superficie normali.»

Patria: Asia minor.

494. **Chrysis Ariadne** n. sp.

Species: colore parum variabilis.

Mediocris, elongata, sat robusta, viridi-cyanea vel cyanescenti-viridis, parcius

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cinereo-alboque pilosa; mesonoti lobo medio et alarum tegulis plus minusve violascentibus; cavitate faciali minus profunda, subangusta, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte marginata; antennis mediocribus, crassiusculis, fuscis, cano-puberulis, articulis duobus primis viridibus, tertio brevi, quarto parum tantum longiore; genis brevibus, articulo antennarum secundo parum longioribus; pronoto sat longo, transverso-rectangulo, antice in medio longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus brevibus, acute triangularibus, apice incurvis; vertice thoracisque dorso dense minus crasse punctato-reticulatis; abdominis segmentis dorsalibus cyanescenti-viridibus, secundo fascia lata mediana medio plus minusve interrupta vel segmento maxima parte et tertio quoque basi vel solum lateribus auratis; primo supra nonnunquam parum aureo-nitenti basi leniter trifoveato, 2—3 basi late nigro-æneis, secundo carinula mediana indistincta, tertio supra seriem incrassato-convexo, foveolis minus profunde immersis haud numerosis circiter 8 tantum mediocribus rotundatis, margine apicali brevi, quadridenticulato, dentibus brevibus, obtusis, lateralibus magis acutis quam intermediis, emarginaturis leniter arcuatis, centrali externis angustiore; segmentis omnibus dense minus crasse (in speciminibus e Daghestania et territorio Transcaspico ortis parum fortius) subrugoso-punctatis; secundo angulo postico-laterali subrotundo, tertio margine laterali apice parum remoto ante dentem externum lenissime sinuato; ventre pedibusque cyaneis et viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis sordide-testaceis; alis hyalinis disco modice sordidis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta. — ♂; long. 6½—7 mm.

Patria: Græcia (Morea, Mus. Cæs. Vindob.! et Mus. Hung.); Caucasus (Daghestan, Coll. Rad.!); territorium Transcaspicum (Coll. Rad.!).

VI. *Corpus cyaneum vel viridi-cyaneum; abdominis segmentis dorsalibus: secundo et tertii basi lateribus viridi-auratis: dentes apicales acuti, fere aequales.*

495. **Chrysis speciosa** Rad.

Chrysis speciosa, Rad. Fedt. Reise in Turkest. Hym. Chrysid. p. 17, n. 33. ♀. tab. II. fig. 1. (1877) sec. spec. typ. e coll. Rad.

Mediocris, elongata, sat robusta, cyanea vel viridi-cyanea parumque violascens, densius cinereo-alboque pilosa; cavitate faciali planiuscula, minus lata, dense subtiliter punctulato-coriacea, argenteo-sericeoque pilosa, medio longitudinaliter canaliculata, canalicula tenui, superne indistincte marginata; antennis sat longis, tenuibus, fusco-rufescentibus, articulo primo seu scapo solum viridi-cyaneo, tertio sat brevi, quarto dimidio tantum longiore; genis longis, articulo antennarum tertio æquilongis; pronoto quoque longo, capite æquilongo, transverso-rectangulo, antice in medio sat profunde longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus subacute-triangularibus, apice incurvis; vertice densius, thorace supra parum dispersius crassiusque punctato-reticulatis; abdominis segmentis dorsalibus: secundo utrinque macula

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

magna et tertio ad basin minuta viridi-auratis, 2—3 basi nigro-æneis, secundo carinula mediana minus distincta, tertio convexo, foveolis haud immersis paucis, 8 tantum bene visibilibus mediocribus rotundatis, margine apicali brevi, densius punctato, quadridentato, dentibus sat longis, acute-triangularibus, decurvis, externis parum brevioribus, emarginaturis sat profunde arcuatis subæqualibus; segmentis primo secundoque fere æqualiter minus dense punctatis, illius interstitiis subtiliter punctulatis, huius lævibus ac politis, tertio parum rugosiuscule-punctatis; secundo angulo postico-laterali subrotundo, tertio margine laterali parum remoto ante dentem externum leniter sinuato; ventre pedibusque cyaneis et viridibus parumque violascentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis sordide-testaceis; alis hyalinis, venis fuscis, cellula radiali lanceolata completa, tegulis violascentibus. — ♂; long. 8—8½ mm.

Patria: Sibiria occidentalis (Altai, Mus. Lugdun. Batavorum!); Turkestania (deserta prope Taschkend, Coll. Rad.! et Mus. Hung.).

VII. *Corpus viride, vertice et mesonoti lobo medio nigro-aeneis; abdominis segmentis dorsalibus: secundo utrinque macula laterali tertioque vitta mediana viridi-auratis; dentes apicales breves, triangulares, aequales.*

496. **Chrysis aureo-maculata** Dhlb.

Chrysis aureo-maculata, Dhlb. Hym. Europ. II. p. 239, n. 132. ♂. (1854).

«Subparva 2 lin. decimal. long. confertim modice punctata viridis, verticis macula dorsulique area centralibus nigro æneis, abdominis segmentis secundo utrinque macula laterali tertioque vitta mediana viridi-aureis.

Observ. Statura fere *Chrysidis succinctae.* Corpus subangustum sublineare, confertissime modice punctatum, breviter cano- et cinereo-pubescens. Caput normale; cavitas facialis subrectangularis fortiter excavata, subtiliter transverse strigosa, canalicula mediana interrupta desinente in foveola centrali, lateribus punctulato-coriacea albo-sericea, superne transverse marginata: marginulo arcuato, utrinque sursum in verticem ramulum obliquum pone stemma desinentem emittente, hinc in vertice exstat area subtriangularis aut subsemicircularis. Antennæ breves fuscæ, basi virides. Clypeus brevis transversus parce punctulatus, disco parum convexus, ceterum depresso-planiusculus, margine apicali summo piceo truncato. Mandibulæ breves robustæ nigro-piceæ, ante apicem rufo-piceæ, basi macula læte viridi. Palpi maxillæque nigro-fuscescentes; margo occipitalis utrinque angulo brevi dentiformi. Thorax cylindricus, antice posticeque truncatus et hinc subrectangularis, dorso depresso-convexus, dorsuli suturæ medianæ rectæ parallelæ, postscutellum gibbo-convexum, metanoti anguli postico-laterales robusti punctato-coriacei convexo-depressi acute triangulares. Sternum et pedes magis nitida quam ceterum corpus at eiusdem coloris scil. læte viridia et punctulata, tarsis fusco-brunneis. Alæ hyalinæ, tegulis cyaneis, venis mediocribus brunneis, cellula radiali elongata subangusta lanceolato-acuminata completa. Abdomen sublineare obtuse subre-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ctangulum, latitudine thoracis, hoc paullulum longius, dorso modice convexum, confertissime modice et regulariter punctatum; segmentum primum læte viride, fovea centrali triramosa cyanea; segmentum secundum luxuriose pictum, scil. 1) margo lateralis summus et macula disci maxima rotundata virides, 2) marginis basalis linea transversa angusta nigro-ænea utrinque cum macula laterali obliqua cyanea cohærens, 3) margo summus apicalis et macula utrinque lateralis rotundata viridi-aurati; segmentum tertium cyaneum: regio antica s. *basalis* depresso-convexa, convexo-terminata et hinc in limite ornata fasciola tenui aureo-viridi antice bis arcuato-emarginata et ramulum centralem (instar vittæ) in discum sursum emittente,— regio postica (= margo *apicalis*) modice prominula nitida parce punctulata humilior (quam regio antica); series ante-apicalis brevissime interrupta foveolis profundis inæqualibus, scil. quibusdam magnis subquadratis, aliis l. mediocribus l. parvis rotundatis; dentes apicales breves triangulares æquales, emarginaturæ modice arcuatæ, invicem subæquales et exteriores nonnihil obliquæ; margo lateralis proprius oblique rectus. Venter fornicatus nitidus punctulatus pubescens viridis, margine anali testaceo.»

Patria: Guinea (Dhlb.); Gabon (Fairmaire).

VIII. *Corpus viride vel parum cyanescens, mesonoti lobo medio cyaneo nonnihil viridi-irrorato; abdominis segmentis dorsalibus: secundo fascia apicali ampla et tertio ad basin utrinque macula laterali viridi-auratis.*

497. **Chrysis soror** Dhlb.

Chrysis soror, Dhlb. Hym. Europ. II. p. 240, n. 133. ♂. (1854).

«Mediocris 2 1/2 lin. decimal. long. confertim modice punctata viridis abdominis segmentis secundo fascia apicali ampla et tertio ad basin utrinque macula laterali viridi-aureis.

Observ. Similis et nimis affinis *Chrysidi alternanti* et forsitan ut huius varietas considerata; at dignoscitur: colore corporis primario viridi, abdominis segmento primo non fasciato, segmenti tertii emarginaturis apicalibus levioribus, dentibus intermediis subobtusis, tarsis pallide testaceis, cavitatis facialis margine supero quinque-ramuloso, etc. — Caput viride; vertex amplus depresso-planus; cavitas facialis profunda, superne leniter transverse marginata: margine quinque-ramuloso ramulis brevissimis, 3 sursum ductis, intermedio stemma tangente, 2 deorsum versis. Antennæ breves robusta fuscæ, basi virides. Clypeus brevis transversus punctatus, disco carinato-convexus, ad centrum marginis apicalis subtruncatus. Mandibulæ et palpi nec non angulus marginis occipitalis utrinque prominulus omnino ut in *Chryside alternante.* Thorax et pedes virides, tegulæ cyaneæ margine externo viridi; dorsuli area media cyanea nonnihil viridi-irrorata. Tarsi eximie albo-testacei. Abdominis segmentum primum viride; segmentum secundum margine basali tenuiter nigro-æneum, tum lætius viride et demum in parte apicali maximaque læte viridi-aureum; segmentum tertium confertim punctato-coriaceum læte

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

viride, utrinque macula laterali marginali indeterminata viridi-aurea, margo apicalis sparse punctulatus viridi-cœruleus; series ante-apicalis foveolis mediocribus circ. 10; dentes apicales breves triangulares marginem leniter undulatum efformantes, margo lateralis proprius obliquus leviter arcuato-flexuosus. Alæ hyalinæ, disco nec non ad costam cellulæ radialis nonnihil sordidæ, venis firmis piceis, cellula radiali triangulariter lanceolata apice late aperta. Venter modice fornicatus læte viridis nitidissimus, subtilissime punctulatus pubescens.

Patria: insula Rhodus.

Animadversio. — *Chrysis soror,* Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 18, n. 34. ♂ ♀. tab. I. fig. 3. ♂. (1877) e valle Sarafschan, secundum etiam ipsum Auctorem, alia est species, a me tamen non visa.

IX. *Corpus laete-viride, lobo medio mesonoti et abdominis segmentis dorsalibus: 2—3 basi obscure-cyaneis, segmento secundo apice fascia lata coccineo-aurata; dentes apicales robusti, acuti, triangulares, subaequales.*

498. **Chrysis Abeillei** Grib.

Chrysis Abeillei, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 332, n. 9. ♀. (1879).

«Mediocris cylindrica nitida læte viridis, dorsuli area centrali maculisque duabus ad tegulas, segmentorum abdominis dorsalium 2—3 basi obscure cyaneis, segmento secundo apice fascia lata medio angulatim coccineo-aurea: capite confertissime irregulariter punctulato: pronoto mesopleurisque confertim irregulariter crasse punctatis et punctulatis; segmentis dorsalibus abdominis primo et secundo subconfertim, tertio confertim subcrasse punctatis: segmentis secundo et tertio lineola mediana longitudinali nitida præditis: capite antice viso subquadrato, linea genarum brevi verticali, hinc ore latissimo: cavitate faciali parum profunda, superne bene marginata, carinula subrecta apice utrinque duos ramulos emittente: postscutello plano declivi: abdomine lenissime conico, capite thorace simul sumptis paullulum longiore, basi haud excavata, tantum medio leniter foveolata: segmenti tertii area antica lenissime depressiuscula; serie anteapicali sat abrupta, haud interrupta; foveolis mediocribus, distinctis, subæqualibus: area anali producta, supra visa conspicue angustiori quam area antica, dentibus quatuor armata: his robustis, acutis, triangularibus, subæqualibus: emarginaturis arcuatis, centrali paullulum angustiori quam lateralibus: alis basi hyalinis, disco (præsertim ad cellulam radialem) fumatis. ♀.

Long. corp. mill. 10.

Questa specie è vicina alla *C. soror,* Dahl., ne differesce però nettamente oltre che per la diversa colorazione del corpo, anche per la forma della bocca, e del margine anale, per il fronte stretto, per la poca profondità della cavità facciale, e la diversa orlatura, e finalmente per i tarsi affatto neri: l'intaglio del margine anale serve pure a distinguerla in modo sicuro dalla *C. Sehestedti,* Dahl. colla quale ha molta affinità nella colorazione.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Un esemplare della mia collezione.»
Patria: Syria.

X. *Corpus viride vel laete-viride in locis certis nitore aureo, abdominis segmento secundo utrinque macula sat magna coccineo-aurea vel aurea; dentes apicales acuti.*

499. **Chrysis aurimacula** n. sp.

Submediocris, sat robusta, parcius albo-pilosa, læte-viridis parumque subaurata splendida; vertice, collo et mesonoti lobo medio antice segmentoque secundo dorsali cyanescentibus, hoc ante marginem apicalem utrinque macula coccineo-aurea eximie ornato; cavitate faciali minus profunda, lata, dense punctulato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne acute transverse-marginata, margine ramulum utrinque perpendicularem ad oculos demittente; antennarum articulis duobus primis læte-viridibus, reliquis fuscis, tertio valde brevi, secundo subæquali; genis mediocribus, articulo secundo flagelli parum longioribus; vertice densius, thorace supra, præsertim mesonoti lobo medio, scutello et metanoto dispersius crassiusque punctato-reticulatis; abdominis segmentis dorsalibus: primo sat sparsim, reliquis densius, parum subrugose punctatis, tertio convexo, supra seriem anteapicalem parum incrassato foveolis irregularibus circiter decem sat profundis subrotundisque, margine apicali quadridentato, dentibus a margine laterali parum remotis acutis, spinoideis sat longis, æqualibus, in arcum levem dispositis, emarginaturis profunde arcuatis fere æqualibus; segmento secundo angulo postico-laterali acuto, tertio margine laterali obliquo ante dentem externum profundius sinuato; ventre viridi et cyaneo; pedibus viridibus, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice parum aperta, tegulis viridibus. — ♂; long. 6½ mm.

Patria: Algeria (Bône, Coll. Pérezi).

500. **Chrysis psittacina** Buyss.

Chrysis psittacina, Buyss. Revue d'Entom. VI. p. 186, n. 22. ♂. (1887) sec. spec. typ. e coll. Abeillei.

Mediocris, elongata, parallela, læte-viridis parumque viridi-subaureo nitens, parcius cinereo-alboque pilosa; collo, mesonoti lobo medio alarumque tegulis cyanescentibus; cavitate faciali minus profunda, lata, dense puntato-coriacea argenteo-sericeoque pilosa, superne transverse-marginata, margine utrinque ramulum brevem obliquum ad oculos demittente; antennis longis, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridi-subauratis, tertio brevi, secundo parum tantum longiore; genis sat longis, articulo antennarum quinto æquilongis; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus sat validis, late-triangularibus, subacutis; vertice densius, thorace supra parum dispersius fortiusque punctato-reticulatis, mesonoto et scutello punctis etiam aliquot minoribus inmixtis;

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

abdominis segmentis dorsalibus: 1—2 basi violascentibus, primo basi in medio profunde fossulato, secundo carinula mediana indistincta, ante marginem apicalem macula utrinque magna aurata, tertio convexo, ante seriem calloso, foveolis profunde immersis irregularibus, maioribus et minoribus, haud numerosis, margine apicali dense punctulato, quadridentato, dentibus acute-triangularibus mediocribus in arcum levem dispositis, externis parum brevioribus, a margine laterali parum remotis, emarginaturis profunde-arcuatis, externis centrali latioribus; segmentis omnibus fere æqualiter sat crasse parum rugosiuscule-punctatis; secundo angulo postico-laterali recto, tertio margine laterali oblique-subarcuato; ventre pedibusque viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis modice fumato-hyalinis, venis firmis piceis, cellula radiali lanceolata incompleta, apice parum aperta. — ♂; long. 8 mm.

Chrys. aurimaculae similis et affinis; sed maior, antennis longioribus crassioribusque, thorace supra fortius punctato-reticulato, abdominis segmento dorsali secundo macula utrinque pure-aurea, dentibus apicalibus brevioribus, non spinoideis, haud æquilongis, alis modice fumato-hyalinis, distincta.

Patria: Persia.

XI. *Corpus laete-viride plus minusve auratum, lobo medio mesonoti coerulescente; antennarum articulis 5—13 subtus rufo-testaceis, supra brunneo-maculatis; abdominis segmentis dorsalibus: secundo utrinque macula magna igneo-aurata, tertio lateribus leniter ignitis, margine apicali viridi-cyaneo; dentes apicales breves, externi acuti, intermedii obtusi.*

501. **Chrysis annulata** Buyss.

Chrysis annulata, Buyss. Revue d'Entom. VI. p. 192, n. 30. ♂. (1887) sec. spec. typ. e coll. Abeillei.

Mediocris, elongata, minus robusta, læte-viridis subaureo-nitens, longius niveo-pilosa; occipite et mesonoti lobo medio violascentibus, alarum tegulis violaceis; cavitate faciali sat lata, minus profunda, viridi-aurata, dense punctulato-coriacea argenteo-sericeoque pilosa, medio leniter longitudinaliter canaliculata, superne transverse-marginata, margine medio undulato, lateribus ramulum brevem deorsum versus oblique demittente; antennis mediocribus, crassiusculis, articulis duobus primis viridibus, 3—4 æqualibus, valde brevibus, ænescentibus, reliquis subtus rufo-testaceis, supra brunneo-maculatis; genis brevibus, antennarum articulo tertio vix longioribus; pronoto sat lato, transverso-rectangulo, antice in medio profundius impresso; metanoto convexo, dentibus postico-lateralibus sat longis, spinoideis, apice incurvis; scutelli basi et mesopleuris transverse-sulcatis: vertice thoracisque dorso fere æqualiter dense crassius, scutello dispersius, minus profunde punctato-reticulatis: abdominis segmentis dorsalibus læte-viridibus parumque subaureo-nitentibus, 2—3 basi nigro-violaceis, secundo carinula mediana elevata distincta, tertii obsoleta, secundo utrinque macula magna, tertio basi utrinque minuta igneo-auratis, tertio-convexo, supra seriem leniter calloso, foveolis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

minus profunde immersis magnis oblongis circiter 10, margine apicali brevi, viridi-cyaneo, dense punctulato, quadridentato, dentibus fere in lineam transversam dispositis, externis mediocribus acute-triangularibus, intermediis minoribus obtusis, emarginaturis subæqualibus, externis centrali parum profundioribus; segmentis omnibus fere æqualiter crasse, tertio parum densius, modice rugosiuscule-punctatis; secundo angulo postico-laterali subrecto, tertio margine laterali modice oblique-flexuoso; ventre pedibusque viridi-auratis, illo violaceo-nigroque maculato, his tarsis rufescenti-testaceis; alis hyalinis, disco modice sordidis, venis fuscis. — ♂; long. 6½ mm.

Patria: Syria (Tiberias [Tabarieh], Coll. Abeillei).

XII. *Abdomen cyaneum aut violaceum, fascis aureis vel viridi-aureis, saepius etiam maculis distinctissimis.* Species pulcherrimæ.

502. Chrysis cingulata Först.

Chrysis cingulata, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 323, n. 83. ♂. (1853).

«Viridis, supra plus minus violacea; fronte transversim, genisque acute carinatis; antennarum flagello tarsisque nigro-fuscis; alis infuscatis, area radiali subclausa, radio parum curvato, vena humerali transversa fere interstitiali; abdomine segmentis basi obscure violaceis, margine postico viridi-subaurato, ultimo ante apicem profundius impresso, margine postico quadridentato.

♂. Lg. 6 Millim.

Die Grundfarbe dieser ausgezeichneten Art ist ein tiefes, nicht lebhaftes Grün. Am Kopfe ist das Gesicht nebst der Stirn heller und lebhafter grün; die Stirne oben durch eine wellenförmig gebogene Querleiste von dem Scheitel getrennt. Dieser letztere violett, um die Nebenaugen herum sogar schwärzlich, der Augenrand aber überall grün. Die Leiste auf den Wangen hier besonders scharf, hoch hinaufsteigend bis zu der Höhe der Netzaugen, also weiter reichend, als bei irgend einer andern mir bekannten Art. An den Fühlern der Schaft, das Stielchen und selbst das erste Geisselglied grün. Der Mittelleib grün, violett sind eine Querbinde auf dem Vorderbrustrücken, der Mittelbrustrücken mit Ausnahme des Seitenrandes und eines kleinen Fleckchens auf dem mittlern Lappen, dann das Schildchen in der Mitte. Auch an dem Hinterbrustrücken geht die grüne Farbe stellenweise in eine blaue über. Am Kopf ist die Stirn fein querrunzlig mit groben Punkten, der Scheitel sehr grob und sehr dicht punktirt, die Zwischenräume sehr schmal und höchstens in der Nähe des Augenrandes mit wenigen, sehr feinen Pünktchen besetzt. Am Mittelleib der Vorderbrustrücken viel dichter punctirt als der Mittelbrustrücken und das Schildchen, die Zwischenräume daher sehr eng und ohne feinere Pünktchen, wärend bei den letzteren die Zwischenräume breiter und die eingestreuten, feinen Pünktchen auf denselben sehr deutlich in die Augen fallen. Die Beine lebhaft grün, mit schwarzbraunen Tarsen. Die Flügel bräunlich, nur an der Basis ein wenig heller. Die Radialzelle eng, nur unvollständig

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

geschlossen, der Radius vor seiner Mitte schwach gebogen; die erste Diskoidalzelle auf der vorderen, mittlern Schulterzelle kaum aufsitzend, indem die Schulterquerader gleich hinter der Mündung der Grundader entspringt. Die Farbe des Hinterleibes zum Theil grün, zum Theil dunkelviolett, das erste Segment nämlich an der Basis in der Mitte und querüber vor dem Hinterrande violett, der breite Seiten- und der viel schmälere Hinterrand goldgrün. Das zweite Segment weit über die Mitte hinaus violett, der Seiten- und Hinterrand goldgrün. Das dritte Segment an der Basis violett, dann bis zu dem Quereindruck hin goldgrün, hinter dem Quereindruck aber dunkelgrün. Auf allen drei Segmenten wird die violette Farbe, bevor sie in den goldgrün gefärbten Theil übergeht, von einem schmalen, nicht scharf begränzten, blaugrünen Saum eingefasst. Der Quereindruck des letzten Segments tief, die Grübchen nicht durch eine glänzende Brücke von einander getrennt, nur in der Mitte ist eine solche vorhanden. Der hinter dem Quereindruck liegende Randabschnitt dieses Segments fünfmal ausgebuchtet, mit 4, aus breiter Basis kurz zugespitzten, graden Zähnchen. Die Punktirung des ersten Segments ziemlich zerstreut, die Zwischenräume zwischen den groben Punkten mit sehr feinen und auch gröberen Punkten besetzt; auch das zweite Segment noch etwas zerstreut punktirt, in der Mittellinie und an den Seiten mit feinerem Pünktchen in den Zwischenräumen, das dritte Segment jedoch etwas dichter und weniger grob punktirt als das zweite und so weit die violette Färbung reicht, in den Zwischenräumen äusserst fein lederartig-runzlig.

Auch diese Art erhielt ich von dem Herrn Dr. Rosenhauer, sie stammt wohl ebenfalls aus dem südlichen Europa.»

Patria: incerta; forsan Europa meridionalis?

503. **Chrysis decorata** n. sp.

Mediocris, elongata, parallela, viridi-cyanea, parce cinereo-alboque pilosa; cavitate faciali planiuscula, lata, subaurato-viridi, dense punctato-coriacea, medio longitudinaliter leviter canaliculata, lateribus argenteo-pilosa, superne convexa; clypeo et eius lateribus auratis; genis valde longis dense crassius punctatis, articulis antennarum 3—4 simul sumptis adhuc parum longioribus; margine occipitali utrinque angulo parvo prominulo; antennis brevibus, nigris, tenuibus, articulis: primo viridi-cyaneo, 2—3 supra cœrulescentibus, tertio brevi, quarto dimidio vix longiore; macula verticis circa et post stemmata, collo, pronoti truncatura et sulco mediano longitudinali minus lato, mesonoti lobo medio et tegulis suturisque metanoti violaceis; pronoto utrinque ad sulcum viridi-aureo maculato; mesonoti suturis longitudinalibus sparsim transverse-striatis; mesonoti lobis lateralibus vitta lata aurea ornatis, scutello in medio et metanoto postice et lateribus cyaneis; vertice valde convexo et mesonoto cum scutello sat sparsim et profunde punctatis, interstitiis subtilissime punctulatis, subcoriaceis, pronoto et metanoto punctato-subreticulatis; metanoto convexo, dentibus postico-lateralibus brevibus, acute-triangularibus; abdominis segmentis dorsalibus viridi-, nigro-violaceo- et

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

áureo-variegatis, segmento nempe primo lateribus late, margine apicali anguste auratis, disco macula transversa magna nigro-violacea; secundo parte basali ultra medium nigro-violaceo, parte apicali utrinque late, in medio anguste igneo-auratis et antice viridi-aureo limbatis; tertio parte basali nigro-violaceo, supra seriem macula transversa aurata; omnibus sparsim profunde punctatis interstitiisque subtilissime punctulatis, subcoriaceis, punctis secundi a latere visis parum rugosiusculis, tertio supra seriem parum incrassato-convexo, foveolis profundis haud numerosis, rotundis, circiter 10, magnitudine inæqualibus, per carinulam medianam convexam sat latam interruptis, foveolis secundariis utrinque maximis, margine apicali cyanescenti-viridi, quadridentato, dentibus lateralibus minutis, triangularibus, centralibus longioribus, subacute-triangularibus, in arcum levem dispositis, emarginaturis externis leniter arcuatis, intermedia anguste triangulariter profunde excisa; ventre cyanescenti-viridi, nitido, aureo-nigroque maculato; pedibus læte-viridibus, tarsis rufo-testaceis, articulis ultimis parum infuscatis; alis hyalinis, venis fuscis, cellula radiali lanceolata completa. — ♀; long. 6½ mm.

Præcedenti valde similis esse videtur; sed fronte convexa (non undulato-marginata), facie punctato-coriacea, pronoto sine fascia violacea, tarsis rufo-testaceis, alis hyalinis, cellula radiali completa, speciem distinguendam esse censebam, et quidem tanto magis, quia auctor: de corpore elongato, parallelo notisque aliis nullam facit mentionem.

Patria: ignota; forsan est species Africana? (Mus. Vindob.).

504. **Chrysis elegantula** Spin.

Chrysis elegantula, Spin. Annal. Soc. Ent. France. VII. p. 451, n. 9. ♂. (1838).
Chrysis cincta, Brullé, Hym. IV. p. 39. n. 25. ♀. (1846).
Chrysis alternans, Dhlb. Hym. Europ. II. p. 236, n. 130. ♂. (1854). ex parte (*var. c.* solum).

«Je ne regarde cette espèce que comme une variété assez remarquable de la *Chr. semicincta, Lepell., Ann. du Mus., t. VII. p. 127, n. 21.* Elle n'en diffère que par les couleurs du thorax. Dans notre exemplaire, le dos a une teinte générale vert métallique à reflets bleuâtres. La bande bleue du mésothorax n'existe plus. La *Chr. semicincta* habite de Cap de Bonne-Espérance. M. de docteur Klug m'en a communiqué les deux sexes sous le nom de *Poecilocera alternans.* Je ne connais pas les caractères de ce genre *Poecilocera.* Dans cette femelle, les couleurs sont précisément celles du mâle figuré *Ann. du Mus., loc. cit.,* pl. 7, fig. 15. Celles du mâle sont plus ternes. Le rouge éclatant de la femelle n'est plus qu'un vert métallique à reflets dorés. Cet individu se rapproche davantage de notre *elegantula.*» (Spin. l. c.).

«Vertex et thoracis dorsum viridi-irrorata nec ullo modo aureo-picta, abdominis segmenta primum et secundum apice fascia ampla viridi-aurea, segmentum tertium ante apicem leviter viridi-irroratum. *Chrysis elegantula Mus. Spinolae.*» (Dhlb. l. c.).

Descriptio secundum Brullé:

«Cyanea, viridi-nitens, abdominis fasciis viridi-aureis, alis obscuris, dense punctata interstitiis punctulatis, segmento tertio quadridentato. Fem.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Il est bleu avec la tête et le tour du thorax verts, ainsi que les côtés et le bord postérieur des segments de l'abdomen. Les pattes et la base des antennes sont vertes. Les ailes sont un peu obscures, surtout au bord antérieur de la cellule radiale.

Le corps est criblé de points qui ne se touchent pas et sont un peu moins gros sur l'abdomen que sur le reste du corps: ils semblent confluents sur le milieu du thorax; les intervalles sont finement ponctués. Le bord postérieur de la fossette sus-antennaire est saillant et sinueux; le prothorax est marqué d'une fossette; les sillons interlobulaires du mésothorax sont étroits et finement crénelés. La base de l'abdomen est largement échancrée et comme trilobée; la ligne moyenne est assez marquée et finement ponctuée; le troisième segment est un peu déprimé en avant du bourrelet, qui est suivi d'une rangée de gros points; le bord postérieur est découpé en quatre dentelures triangulaires, dont les deux moyennes sont plus rapprochées que les deux extérieures et séparées par un intervalle plus profond.

Longueur: 0,010.»

Patria: Promontorium Bonæ Spei (Brullé); Aegyptus (Spin.); ? Arabia (Wâdy Genneh, Walker).

505. **Chrysis electa** Walk.

Chrysis electa, Walk. List of Hym. collect. by Lord in Egypt etc. p. 8, n. 33. ♂. (1871).

«Male. — Golden green, with cinereous pubescence, thickly punctured. Head with silvery pubescence on each side in front. Scutum purple between the two parallel furrows. Metathorax with a stout tooth on each side of the hind border. Abdomen with three large segments and with an extremely slight keel; second and third segments blue about the fore border; hind border of the third with four teeth. Legs green; tarsi piceous, pale testaceous at the base. Wings pellucid; veins black. *Var.* β. — Tarsi wholly piceous. Length of the body 4—4½ lines.»

Patria: Arabia (Wâdy Ferran).

Animadversio. — Descriptio quam maxime incompleta speciesque forsan eadem est ac præcedens?

506. **Chrysis Mocsáryi** Rad.

Chrysis Mocsáryi, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 29. ♀. (1888) sec. spec. typ. e coll. Rad.

Mediocris, elongata, parallela, sat robusta, violascenti-cyanea, parcius cinereo-alboque pilosa; vertice circa stemma anticum, clypeo, genis, pronoto utrinque ad sulcum medianum, scutello et mesopleuris viridi-auratis; cavitate faciali minus profunda, sat lata, dense punctulato-coriacea, argenteo-sericeo-pilosa, superne transverse minus acute-marginata, margine medio biarcuato ramulumque ad stemma anticum minus distinctum et utrinque alium obliquum ad oculos demittente; antennis brevibus, tenuibus, brunneo-rufis, cano-puberulis, articulis duobus primis viridibus, tertio supra cyanescenti, sat longo, secundo duplo longiore; genis brevibus, articulo antennarum secundo æquilongis; pronoto longo, longitudine capitis, transverso-rectangulo, antice in medio minus profunde

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

longitudinaliter impresso; metanoto convexo, dentibus postico-lateralibus brevibus, tenuibus, acute-triangularibus, incurvis; mesopleuris apice triangulariter marginatis; vertice densius, pro- et mesonoto metanotoque parum dispersius crasse punctato-subreticulatis, scutello disco sparsim punctato, interstitiis lævibus punctis aliquot minutis inmixtis; abdomine concinne violaceo, segmentis dorsalibus: primo supra toto, secundo margine apicali et tertio ante seriem foveolarum fascia lata igneo-aurata, antice viridi-aureo-limbata, eximie modo ornatis, fasciis secundi tertiique antice in medio triangulariter productis; 1—2 basi late nigro-æneis, secundo carinula mediana acuta bene distincta, tertio convexo, foveolis haud immersis irregularibus, circiter 6 tantum distinctis mediocribus rotundatis, per carinulam depresso-convexam interruptis; margine apicali brevi, sparsim leviter punctato, quadridentato, dentibus sat longis, acute-triangularibus, apice testaceo-pellucidis, in arcum levem dispositis, fere æquilongis, emarginaturis profunde-arcuatis, centrali externis parum angustiore; segmentis omnibus fere æqualiter sat crasse minus dense cribrato-punctatis, interstitiis lævibus; secundo angulo postico-laterali subrotundo, tertio ante dentem externum oblique-sinuato; ventre viridi-aurato nigroque maculato; femoribus tibiisque externe viridi-cyaneis, femoribus intus nigro-violaceis lævibus ac politis, tarsis fuscis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice late aperta. — ♀; long. 8 mm.

Species elegantissima: e descriptione facile cognoscitur.

Patria: Mongolia (Kobden, a Dom. Potanin detecta, Coll. Rad.).

507. **Chrysis aurifascia** Brullé.

Chrysis aurifascia, Brullé, IV. p. 40, n. 27. (1846).
Chrysis alternans, Dhlb. Hym. Europ. II. p. 236, n. 130. (1854) ex parte (*var. a* solum).

Mediocris vel submagna, elongata, subparallela, sat robusta, violascenti-cyanea, longius cinereo-alboque pilosa; vertice, pronoto et scutello viridi-auratis, facie, post-scutello et mesopleuris viridibus vel viridi-subauratis; cavitate faciali minus profunda, lata, dense punctato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne transverse acute-marginata, margine utrinque ramulum obliquum perbrevem demittente; antennis brevibus, sat tenuibus, fuscis, cano-puberulis, articulis duobus primis viridibus vel cyaneis, tertio sat longo, secundo duplo longiore; genis mediocribus, articulo antennarum secundo parum longioribus: pronoto sat longo, capite tamen breviore, transverso-rectangulo, antice in medio sat profunde impresso; metanoto convexo, dentibus postico-lateralibus mediocribus, minus latis, apice acutis mucroniformibus incurvis; vertice densius, thorace supra parum dispersius crasse punctato-reticulatis, interstitiis hinc illic punctulatis; abdomine violaceo, segmentis dorsalibus: primo supra toto, secundo margine apicali fascia lata, tertio supra seriem macula cuneata aureis vel viridi-aureis eximie modo ornatis, fascia segmenti secundi antice in medio triangulariter producta; 1—2 basi nigro-æneis; secundo carinula mediana bene distincta, angulo postico-laterali subrotundo; tertio convexo, supra seriem vix calloso, foveolis

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

leniter immersis in femina vix bene distinctis, in mare circiter 8—10 evidentioribus, mediocribus, rotundatis, margine apicali sat longo, sparsim subtilius punctato, quadridentato, dentibus brevibus, latis, triangularibus, æqualibus, in arcum levem dispositis, emarginaturis modice arcuatis invicem quoque subæqualibus, dentibus externis a margine laterali parum remotis, hoc ante dentes hos leniter oblique-arcuato; segmentis: primo parum dispersius, secundo tertioque densius minus crasse cribrato-punctatis, duobus ultimis a latere visis parum rugosiusculis; ventre in femina violaceo aureoque, in mare viridi et aureo variegato, segmento secundo basi utrinque nigro-maculato; pedibus violascentibus vel cyaneis, tarsis fuscis; alis hyalinis, disco sordidis, venis firmis piceis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. $7^{1}/_{2}$—$9^{1}/_{2}$ mm.

Species: mesonoto toto læte violascenti-cyaneo et dentibus apicalibus brevibus, latis, triangularibus, facile cognoscitur.

Patria: Promontorium Bonæ Spei (Brullé, Mus. Halense Saxonum! et Mus. Vindob.!) — ? Arabia (Wâdy Genneh, Walker).

Animadversio. — Secundum meam opinionem Dahlbomus sub nomine *Chrysis alternans* duas confundebat species bene distinctas. — Et insuper de una varietate verbis sequentibus meminit *(var. b. ♀)*: «Vertex cyaneus antice lateribusque viridi-irroratus; pronotum, scutellum et postscutellum viridi-aurea, illud (pronotum) interdum maculis 2 l. 3 nigro-æneis; abdominis omnia segmente dorsalia apice fascia ampla viridi-aurea» — quæ mihi non obvenit et quam ego etiam ad *Chrysidem aurifasciam* referendam censeo.

508. **Chrysis eximia** n. sp.

Mediocris, elongata, subparallela, minus robusta, cyanescenti-viridis, parcius cinereo-alboque pilosa; cavitate faciali sat profunda, cyanescenti-viridi, medio longitudinaliter canaliculata et utrinque subtilissime sat late concinne transverse-striata, lateribus punctulato-coriacea argenteo-sericeoque pilosa, superne acute marginata, margine transverso inæquali utrinque ramulum longitudinalem obliquum deorsum et sursum versus ad ocellos demittente; antennis tenuibus, nigris, articulis ultimis parum rufescentibus, scapo cyanescenti-viridi, articulo primo flagelli supra viridi, secundo longitudine mediocri, tertio vix adhuc dimidio longiore; genis brevibus sublinearibus, articulo secundo antennarum vix longioribus; fronte et verticis lateribus ad oculos viridi-auratis, circa et post ocellos cyaneis; pronoto transverso, brevi, mesonoti loborum omnium vitta, scutello, postscutello, metanoti disco et vitta mesopleurarum concinne viridi- et pure auratis, parte reliqua mesonoti cum tegulis violascenti-cyaneis; vertice, thorace supra cum abdominis segmentis dorsalibus duobus primis tertioque in medio concinne sat crasse punctato-reticulatis; segmento primo viridi- et parum igneo-aurato, parte truncata cyaneo-viridi, secundo basi nigro-violaceo sparsim punctato, interstitiis subtilissime punctulatis, medio sat distincte carinato, parte apicali ample viridi- et igneo-aureo concinne fasciato, fascia medio antice producta, tertio nigro-violaceo macula cuneata viridi-, parumque igneo-aurata ante seriem leniter callosam ornato, basi nigro-æneo

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

sparsim sat profunde punctato, serie anteapicali foveolis circiter 12, magnitudine inæqualibus sat profundis, intermediis parum sulciformibus, margine apicali sat longo, ænescenti parumque subviolaceo tincto, dense punctato, quadridentato, dentibus sat longis, acute-triangularibus, fere æqualibus, in arcum levem dispositis, emarginaturis profunde arcuatis, centrali externis parum latiore; ventre pedibusque cyanescenti-viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta. — ♀; long. 8½ mm.

Chrys. aurifasciae Brullé similis et affinis; sed angustior, cavitate faciali in medio concinne transverse-striata, genis brevioribus, vertice cyaneo-maculato, mesonoti vittis tribus decorato, thorace supra et abdominis segmentis dorsalibus duobus primis fortius magisque distincte punctato-reticulatis, tertii foveolis maioribus, intermediis parum sulciformibus, dentibus analibus multo longioribus, acute-triangularibus, iam satis distincta.

Patria: Caffraria (Mus. Vindob.).

509. **Chrysis semicincta** Lep.

Chrysis semicincta, Lep. Annal. du Mus. Hist. nat. VII. p. 127, n. 21. ♂. tab. VII. fig. 15. (1806). — Dhlb. Hym. Europ. II. p. 242, n. 134. ♂ ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 45 et 47. ♂ ♀. (1879). — Lampr. Goldwesp. Deutschl. p. 15, n. 38, tab. I. fig. 17. ♂. (segm. anale) (1881). — Mocs. Chrys. faun. Hung. p. 60 et 87, n. 26. ♂ ♀. (1882). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 83, n. 62. ♂ ♀. (1887).

Chrysis imperialis, Dhlb. Dispos. p. 11, n. 7. (1845) (nec Westw.).

Chrysis tricolor, Luc. Explor. de l'Algér. Zoolog. III. p. 309, n. 350. (1849).

Submediocris vel mediocris, elongata, sat robusta, nigro-violacea, parcius cinereo-alboque pilosa; pronoto, scutello postscutelloque viridi-, vel læte- vel subigneo-aureis; vertice circa stemmata et mesopleuris viridi-aureo-maculatis; cavitate faciali profunda, in femina sat lata viridi-cyanea, in mare parum angustata nigro-violacea, dense punctulato-coriacea, medio subtiliter longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne transverse non vel indistincte marginata; antennis brevibus, crassiusculis, fuscis, cano-puberulis, articulis tribus primis viridi-cyaneis, tertio sat brevi, secundo vix duplo longiore; genis brevibus, in femina parum longioribus, articulo antennarum secundo vix longioribus; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter leviter sulcato; metanoto convexo, dentibus postico-lateralibus brevibus, acute-triangularibus, incurvis; vertice densius, sed subtilius, thorace supra parum dispersius, sed fortius minus profunde punctato-reticulatis; abdominis segmentis dorsalibus nigro-violaceis, primo supra aut viridi-, aut cocineo-aurato, secundo fascia apicali ampla coccineo- seu subigneo-aurea, antice leniter bisarcuato-emarginata viridi-aureoque limbata egregie ornato, tertio in femina toto nigro-violaceo supra seriem parum virescenti, in mare supra seriem fascia abbreviata viridi- vel coccineo-aurea; segmentis 2—3 basi late nigro-æneis, secundo carinula mediana minus distincta, angulo postico-laterali subrotundo; tertio convexo, supra seriem vix calloso, foveolis numerosis medio-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

cribus rotundatis plus minusve distinctis, margine apicali in mare brevi, in femina sat longo, dense subtiliter punctato, quadridentato, dentibus externis brevibus triangularibus, intermediis valde brevibus, obtusis, obsoletissimis, in arcum levem dispositis, emarginaturis leniter arcuatis, externis centrali parum latioribus, margine laterali parum remoto; segmentis omnibus fere æqualiter dense, minus crasse, parum rugosiuscule-punctatis; ventre pedibusque viridi-cyaneis vel violascentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis subhyalinis, venis firmis brunneis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. 6½—8 mm.

Patria: Hungaria (Dhlb.); Germania (Wiesbaden, Lampr.) (? Mocs.); Gallia (Lep.); Hispania (Dhlb.); Algeria (Luc. et Coll. Saussurei!).

Animadversio. — Quod species hæc eximia, maxime meridionalis, etiam Germaniæ incola esset — prout hoc Lamprecht voluit — in dubium vocare aussus sum. — Teste Drewsen-Dahlbom etiam Hungariam inhabitat; nos tamen specimen Hungaricum hucusque non habemus.

510. **Chrysis iucunda** n. sp.

Submediocris, elongata, parce albo-pilosa, læte-cyanea; fronte cum vertice, pronoto, mesonoti lobis lateralibus, scutello, postscutello pleurisque supra cupreo-auratis; cavitate faciali sat profunda, punctulato-coriacea, medio canaliculata, superne flexuoso-marginata, ramulum utrinque brevem ocellos versus demittente; antennarum scapo cyaneo, articulis duobus primis flagelli viridi-subauratis, reliquis fuscis, articulo secundo proportionaliter longo, tertio duplo longiore; clypeo punctato læte-viridi-aurato, genis sat longis, articulo tertio flagelli æquilongis; fronte et vertice thoraceque supra punctato-reticulatis; pronoto parte antica in medio impresso, metanoti angulis postico-lateralibus dentibus acutis viridi-auratis; abdomine baseos macula nigro-ænea, dorsalibus primo toto et secundi parte apicali cupreo-coccineoque auratis, fascia antice subreniformi medio parum producta viridi-aureoque limbata, secundo parte basali tertioque læte-cyaneis, hoc in medio linea longitudinali viridi-aurata, segmentis omnibus, anticis parum dispersius, posticis densius, subrugose-punctatis, serie anteapicali foveolis profundis subrotundis circiter 8, margine apicali quadridentato, dentibus intermediis arcuato-obtusis, obsoletis, lateralibus brevibus subacutis, emarginatura centrali lateralibus angustiore; ventre viridi-æneo, segmento secundo utrinque nigro-maculato; pedibus virescenti-cyaneis, tarsis fuscis; alis subhyalinis, venis fuscis, cellula radiali lanceolata completa, tegulis cyaneis medio viridi-maculatis, — ♀; long. 6½ mm.

Jucunda hæc species *Chrys. semicinctae* Lep. feminæ similis et affinis; sed fronte cum vertice mesonotique lobis lateralibus cupreo-auratis, cavitate faciali superne distincte flexuoso-marginata, ramulum utrinque brevem ocellos versus emittente, metanoti angulis postico-lateralibus dentibus acutis viridi-auratis, abdomine baseos macula nigro-ænea, serie ante-apicali foveolis maioribus profundioribusque, præsertim distincta.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Patria: Macedonia Turciæ Europeæ, ibidem die 9 Junii 1869 detecta et a Cl. Dom. Wüstnei mecum benevole communicata (Coll. Wüstnei).

XIII. *Abdomen cyaneum, segmentis dorsalibus: primo margine apicali et secundo in medio violaceo-faciatis, hoc margine apicali sat late aurato, tertio rubro-aurato.*

511. **Chrysis imperialis** Westw.

Chrysis fasciata, Donov. Ins. of India, p. . . pl. LVI. fig. 1. (1800—1803) (nec Oliv., nec Fabr., nec Spin.).

Chrysis imperialis, Westw. Donovan Nat. Hist. of the Insects of India. New Edit. p. 87. tab. LVI. fig. 1. (1842).

Descriptio secundum Donovan:

«Thorace viridi, fascia cyanea; abdomine antice cyaneo violaceoque fasciato, medio aureo, postice rubro, quadridentato. — Long. corp. $^2/_5$ unc.

Chrysis: with the thorax green, with a blue band; anterior part of the abdomen blue fasciated with violet, golden in the middle, posterior end red, with four teeth. Length of the body $^2/_5$ of an inch.»

Patria: India orientalis (Tranquebaria, Donov.).

Animadversio. — Species hæc elegantissima secundum figuram pictam est: capite thoraceque viridis, hoc fascia in mesonoto cyanea; abdominis segmentis dorsalibus: primo margine apicali et secundo in medio violaceo-fasciatis, hoc margine apicali sat late aurato, tertio toto læte rubro-aurato, dentibus quattuor mediocribus acutis.

XIV. *Abdominis dorsum auratum: igneo- vel coccineo-auratum, segmentum primum violaceum vel cyaneum, interdum segmentum quoque secundum macula concolori; caput et thorax cyanea, nonnunquam parcius viridi-irrorata.*

1) *Abdominis segmento dorsali primo postice viridi-aureo purpureo-marginato; dentes apicales parvi, laterales obsoleti.*

512. **Chrysis comparata** Lep.

Chrysis comparata, Lep. Annal. du Mus. Hist. nat. VII. p. 127, n. 17, tab. VII. fig. 12. ♂. (1806). — Dhlb. Hym. Europ. II. p. 284, n. 159. (1854).

Chrysis insoluta, Ab. Diagnos. Chrys. Nouvell. p. 4, n. XXIII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 56 et 70. ♀. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 63, n. 33. ♀. (1887).

Mediocris, elongata, robusta, viridi-cyanea, parcius cinereo-alboque pilosa; thorace supra plus minusve violascenti vel virescenti; cavitate faciali minus profunda, subangusta, viridi, dense punctulato-coriacea argenteo-sericeoque pilosa, superne indistincte marginata; antennis brevibus, crassiusculis, nigris, cano-puberulis, articulis tribus primis viridi-auratis, tertio longitudine mediocri, secundo vix dimidio adhuc longiore; genis brevibus, articulo antennarum tertio brevioribus; pronoto brevi, transverso-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

rectangulo, antice in medio minus profunde longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, acute-triangularibus, apice incurvis; vertice densius, thorace supra parum fortius minus crasse ac profunde punctato-subreticulatis; abdominis segmentis dorsalibus igneo- vel coccineo-auratis, primo basi cyaneo plus minusve violascenti vel virescenti, margine apicali sat late viridi-aureo anguste purpureo-limbato, 2—3 basi late nigro-æneis, carinula mediana sat distincta, tertio convexo, ante seriem vix calloso, foveolis minus regularibus mediocribus, circiter 8 tantum, nonnunquam parum confluentibus, rotundis, margine apicali brevi, dense subtilius punctato, quadridentato, dentibus in arcum dispositis, brevibus, intermediis late-triangularibus, externis obtusis, a margine laterali remotis, emarginaturis leniter arcuatis, centrali externis angustiore; segmentis omnibus fere æqualiter dense minus crasse et profunde punctato-coriaceis rugosiusculis, primi interstitiis subtilissime punctulatis; ventre igneo-aurato, segmentis margine apicali et secundo basi utrinque macula nigris; femoribus cyanescentibus, tibiis viridi-auratis, tarsis rufescenti-testaceis; alis sordide-hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata incompleta, apice aperta. — ♂; long. 7 mm.

Femina: in natura mihi ignota est.

Patria: Gallia (Montpellier et La Seyne, Mus. Hung.); Hispania (Abeille et Gogorza).

Animadversio. — Clariss. Dom. Abeille speciem hanc eximiam *Chrysidis Gribodoi* forsan tantum varietatem esse suspicatur? Ego e contrario eam bene distinguendam censeo.

2) *Abdominis segmento dorsali primo toto cyaneo vel violascenti-cyaneo, imo margine apicali nonnunquam viridi- vel viridi-aureo limbato; dentes apicales omnes distincti.*

*

Conspectus specierum huius subsectionis.

1(6). Abdominis segmento dorsali primo solum cyaneo aut violascenti-cyaneo, segmentis reliquis igneo- aut coccineo-auratis.

2(3). Abdominis segmento dorsali tertio apice distincte angustiore quam basi, a margine laterali non remoto subrecto, serie anteapicali foveolis numerosis distinctis circiter 16, dentibus apicalibus acute-triangularibus ... ... *fulgida* Linn. ♀.

3(2). Abdominis segmento dorsali tertio apice parum angustiore quam basi, a margine laterali remoto ante dentem externum leniter sinuato, serie anteapicali foveolis paucis, lateralibus obsoletis, dentibus apicalibus angustis spinoideis.

4(5). Abdominis segmento dorsali primo toto cyaneo, secundi carinula mediana lata lævi ac polita, tertio disco valde convexo, dentibus apicalibus subæqualibus *exulans* Dhlb.

5(4). Abdominis segmento dorsali primo margine apicali anguste viridi-aureo-limbato, secundi carinula mediana acuta angusta subtilissime punctulata, tertio disco

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

utrinque concaviusculo-immerso, dentibus apicalibus inæqualibus
placida Mocs. ♂.

6(1). Abdominis segmentis dorsalibus: primo toto et secundo basi macula magna semicirculari violascenti-cyanea viridi-aureoque limbata, huius parte apicali et tertio igneo- aut coccineo-auratis --- --- --- --- --- --- --- --- *fulgida* Linn. ♂.

*

513. **Chrysis exulans** Dhlb.

Chrysis exulans, Dhlb. Hym. Europ. II. p. 247, n. 137. ♂. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 45 et 47. (1879) sec. spec. typ. e coll. Abeillei.

Mediocris vel submagna, elongata, robusta, cyanea, virescenti- vel violascenti-cyanea, dense cinereo-alboque villosa; cavitate faciali lata, sat profunda, dense punctulato-coriacea argenteoque pilosa, superne transverse parum flexuoso marginata; antennis longis, haud crassis, nigris, cano-puberulis, articulis tribus primis cyaneis, tertio longo, secundo duplo longiore; genis longis, articulo antennarum tertio fere æquilongis; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus, subacutis, apice incurvis; vertice densius, pro- et mesonoto parum fortius irregulariter sat crasse punctato-subreticulatis, scutello et postscutello regulariter fortiusque punctato-reticulatis; abdominis segmentis dorsalibus: primo toto virescenti- vel violascenti-cyaneo, secundo tertioque igneo- vel purpurascenti-auratis; segmentis omnibus carinula mediana elevata lævi ac polita instructis; 2—3 basi nigro-æneis, tertio convexo, vel in femina parum concaviusculo-immerso, ante seriem in femina sat fortiter, in mare parum calloso, foveolis profundis magnis circiter 8—10 tantum rotundatis, margine apicali humili in mare perbrevi, in femina longiore, quadridentato, dentibus in arcum levem dispositis, longis, fortiter spinoideis, a margine laterali remotis, in femina tamen parum robustioribus, subæqualibus, emarginaturis fortiter arcuatis, centrali externis parum angustiore minusque profunda; segmentis: primo crasse minus dense, secundo parum subtilius densiusque, tertio multo subtilius denseque parum rugosiuscule-punctatis; secundo angulo postico-laterali spinoideo, tertio margine laterali ante dentem externum leniter arcuato; ventre cyaneo, vel in mare nonnunquam viridi-aurato; pedibus concoloribus, tarsis fuscis; alis hyalinis leviter sordidis, venis tenuibus piceis, cellula radiali triangulariter lanceolata completa. — ♂ ♀; long. 8—9½ mm.

Patria: Algeria (Biskra, Ab.; Oran, Coll. Fairmairei! et Mus. Hung.).

Animadversio. — Dahlbomus huius egregiæ speciei patriam ignotam, forte Bengaliam dicit. Sed descriptio eius, exemplaribus quattuor ante me iacentibus ad amussim convenit; ideoque pro eius patria Algeria consideranda est.

514. **Chrysis placida** Mocs.

Chrysis placida, Mocs. Term. Füz. III. p. 122, n. 10. ♂. (1879); Chrys. faun. Hung. p. 87, n. 24. ♂. tab. II. fig. 4. (1882) (excl. Chrys. exulantis Ab. syn.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Mediocris, elongata, robusta, cyanea, parum virescens, densius cinereo-alboque pilosa; cavitate faciali sat profunda, frontem versus parum angustata, dense punctulato-coriacea, superius concinne trasverse-striata et acute-marginata, margine leniter transverso-arcuata; antennis mediocribus, tenuibus, nigris, cano-puberulis, scapo cyaneo, flagelli articulis duobus primis viridibus, huius secundo longo, tertio fere duplo longiore; genis mediocribus, articulo antennarum quarto æquilongis; occipite utrinque angulo parvo spinoideo; pronoto brevi, transverso-rectangulo, antice in medio plus minusve profunde longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus late-triangularibus, acutis, apice fortiter curvatis; vertice densius parumque subtilius, thorace supra dispersius fortiusque inæqualiter punctato-subreticulatis; abdominis segmentis dorsalibus: primo toto cyaneo, margine apicali tenuiter viridi-aureo plus minusve distincte limbato, secundo tertioque plus minusve igneo aurato; 2—3 carinula mediana acuta bene distincta subtilissime punctulata, basi late nigro-æneis, tertio disco utrinque concaviusculo-immerso, supra seriem calloso-convexo, foveolis profundis irregularibus, rotundatis, circiter 10 tantum, margine apicali valde brevi, quadridentato, dentibus in arcum dispositis, mediocribus vel longis, triangularibus (in specimine Hungarico) vel subspinoideis (in specimine e Caucaso), inæqualibus, intermediis externis a margine laterali remotis longioribus, emarginaturis profunde arcuatis, centrali externis parum profundiore; segmentis omnibus sat dense crassius rugosiuscule-punctatis; ventre pedibusque violaceo-cyaneoque variis; alis obscure-hyalinis, venis tenuibus piceis, cellula radiali triangulariter lanceolata incompleta, apice parum aperta. — ♂; long. $7^1/_2$—8 mm.

Chrys. exulanti Dhlb. similis et affinis; sed capitis thoracisque pilositate et genis evidenter longioribus, abdominis segmentorum dorsalium carinula mediana non lævi ac polita, sed subtilissime punctulata, tertio disco utrinque concaviusculo-immerso, dentibus analibus inæqualibus (sicut in *Chrys. inaequali* Dhlb.), est species bene distincta.

Patria: Hungaria centralis (Mocs.); Caucasus (Coll. Rad.!).

515. **Chrysis fulgida** Linn.

Chrysis fulgida, Linn. Faun. Suec. Ed. II. p. 415, n. 1699. ♀. (1761); Syst. Nat. Ed. XII. T. I. P. II. p. 948, n. 7. ♀. (1767).— Muell. Stad. Linnée's Natursyst. der Ins. Bd. II. Theil V. p. 877, n. 7. ♀. (1775). — Fabr. Spec. Ins. I. p. 455, n. 7. ♀. (1781). — Schrk, Enum. Ins. Austr. p. 387, n. 783. ♀. (1781). — Fabr. Mant. Ins. I. p. 283, n. 7. ♀. (1787). — Vill. Linn. Ent. III. p. 257, n. 7. ♀. (1789). — Oliv. Encycl. Méth. Ins. V. p. 673, n. 9. ♀. (1790). — Christ, Naturg. p. 402, tab. 44, fig. 10. ♀. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2746, n. 7. ♀. (1792). — Rossi, Mant. Ins. I. p. 133, n. 292. ♀. (1792). — Fabr. Ent. Syst. II. p. 240, n. 8. ♀. (1793). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 59, tab. XIV. fig. 6. ♀. (1801). — Schrk, Faun. Boica. T. II. P. II. p. 343, n. 2194. ♀. (1801). — Panz. Faun. Ins. Germ. fasc. 79, tab. 15. ♀. (1801). — Fabr. Syst. Piez. p. 172, n. 11. ♀. (1804). — Latr. Hist. nat. XIII. p. 237, n. 2. ♀. (1805). — Lep. Annal. du Mus. Hist. nat. VII, p. 126, n. 13. ♀. (1806). — Spin. Ins. Lig. I. p. 64, n. 4. ♀. (1806). — Panz. Krit. Rev. II. p. 102. ♀. (1806). — Lam. Anim. sans vertébr. IV. p. 126, n. 2. ♀. (1817). — Dhlb. Monogr. Chrys. Suec.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

p. 7, n. 1. ♂ ♀. (1829). — Shuck. Ent. Mag. IV. p. 164, n. 3. ♀. (1837). — Zett. Ins. Lapp. p. 433, n. 1. ♂ ♀. (1840). — Dhlb. Dispos. p. 9, n. 6. ♂ ♀. (1845). — Först. Verh. nat. Ver. Preuss. Rheinl. X. p. 304. ♀. (1853). — Dhlb. Hym. Europ. II. p. 245, n. 136. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 31, n. 8. ♂ ♀. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 557, n. 9. ♂ ♀. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 69. (1858). — Chevr. Chrysid. du Léman, p. 75. ♂ ♀. (1862). — Smith, Entom. Annual, p. 88. (1862). — Taschb. Hym. Deutschl. p. 151. ♂ ♀. (1866). — Schck, Progr. Gymn. zu Weilb. p. 11, n. 12. ♂ ♀. (1870). — Thoms. Opusc. Ent. II. p. 108, n. 14 ♂ ♀. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 45. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. ♂ ♀. (1879). — Lampr. Goldwesp. Deutschl. p. 15, n. 37. (1881). — Heyd. Ber. Senkenb. Naturf. Ges. p. 249, n. 17. ♂ ♀. (1882). — Mocs. Chrys. faun. Hung. p. 59 et 87, n. 25. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 53—54 et 71. ♂ ♀. (1887). — Gog. Annal. Soc. Españ. Hist. Nat. XVI. p. 62, n. 32. ♀. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 28. (genit. maris) (1888).

Chrysis ornatrix, Christ, Naturg. p. 403, tab. 44, fig. 12. ♂. (1791).

Chrysis Stoudera, Jur. Hym. p. 296, tab. XII. fig. 9. ♂. (1809). — Spin. Ins. Lig. II. p. 169, n. 14. ♂. (1809). — Shuck. Ent. Mag. IV. p. 165, n. 4. ♂. (1837). — Wesm. Bullet. Acad. Brux. VI. p. 175, n. 3. ♂. (1839). — Blanch. Hist. nat. III. p. 295. ♂. (1840). — Först. Ver. nat. Ver. preuss. Rheinl. X. p. 304. ♂. (1853).

Chrysis Stondera, Panz. Faun. Ins. Germ. fasc. 107, tab. 12. ♂. (1809).

Chrysis ocellata, Blanch. Hist. nat. III. p. 295, n. 2. ♀. (1840) (excl. Lep. syn.).

Chrysis Stouderi, Labr. und Imh. Insect. der Schweiz. (1842).

Chrysis cruenta, Mocs. Dissert. phys. Acad. Hung. Vol. XIII. Nro 11, p. 15, n. 19. ♀. (1883) var.

Mediocris vel magna, elongata, robusta, cyanea plus minusve viridi vel parum viridi-subaureo picta, longius cinereo-alboque pilosa; cavitate faciali minus profunda, lata, dense punctulato-coriacea argenteo-sericeoque pilosa, plerumque virescenti, supra discum fovea centrali, superne marginata, margine inæquali transverso, utroque apice breviter longitudinaliter deflexo; antennis longiusculis, robustis, fuscis, cano-puberulis, articulis tribus vel quattuor primis viridi-cyaneis, tertio longo, in mare parum breviore, quarto dimidio adhuc longiore; genis brevibus, articulo antennarum secundo æquilongis; margine occipitali angulo utrinque parvo prominulo; pronoto brevi, transverso-rectangulo, antice in medio sat profunde impresso; metanoto convexo, dentibus posticolateralibus magnis latiusculis, triangularibus; vertice dense subtilius, thorace supra dispersius fortiusque irregulariter punctato-subreticulatis; abdominis segmentis dorsalibus: secundo carinula mediana acuta subtili abbreviata bene distincta, reliquorum segmentorum indistincta; primo sparsim crassius minus profunde, secundo densius, sed subtilius punctatis, interstitiis subtilissime punctulatis, tertio dense minus fortiter rugosiuscule-punctato, subcoriaceo, disco in femina sæpius utrinque parum impresso, in mare convexo, foveolis numerosis mediocribus rotundatis, margine apicali longo, sparsim punctulato, quadridentato, dentibus robustis, triangularibus, longis, in mare magis acutis, subæqualibus, a margine laterali non remotis, emarginaturis profunde lateque arcuatis subæqualibus, in femina nonnunquam centrali externis latiore; ventre pedibusque nitidibus, viridi-, cyaneo- et illo nigro pictis, tarsis fuscis; alis sordide-hyalinis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

venis firmis piceis, cellula radiali triangulariter lanceolata completa vel apice parum aperta. — ♂ ♀ ; long. 9—11 mm.

Femina: abdominis segmentis dorsalibus: primo cyaneo vel violascenti-cyaneo, 2—3 igneo- vel coccineo-auratis (nonnunquam infuscatis: *Chrys. cruenta* Mocs.).

Mas: abdominis segmentis dorsalibus: primo toto et secundi basi macula magna, postice viridi-aureo limbata, violascenti-cyaneis, huius parte reliqua et tertio igneo- vel coccineo-auratis.

«*Armure.* Le bord intérieur de la branche du forceps s'allonge graduellement, les poils garnissent ce bord assez fort. Volsella nue. Les crochets assez larges, non rétrécis au milieu. Le courvercle génital est représenté sur la fig. 58k.

Par sa forme, l'armure de cette espèce se rappoche à l'armure de *Chr. ignita.*» (Rad. l. c. tab. V. fig. 58a, 58b, 58c.)

Patria: Europa tota, inde a Kamschadalia et Sibiria Turkestaniaque (Rad!) usque ad Asiam minorem Caucasumque (Mus. Hung.) et Persiam (Coll. Rad!).

XV. *Abdominis segmentis dorsalibus: primo toto et secundi parte basali cyaneis vel cyaneo-viridibus, huius parte apicali et tertio igneo-auratis; dentibus apicalibus acute-triangularibus.*

516. **Chrysis Uljanini** Rad. Mocs.

Chrysis Uljanini, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 22, n. 44. ♂ ♀. (solum ♂, excl. ♀.), tab. II. fig. 8. ♂. (1877) sec. spec. typ. e coll. Rad.; Horæ Soc. Ent. Rossicæ. XXIII. p. 24. (genit. maris) (1888).

Mediocris, elongata, sat robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice, pronoto, mesonoti areis lateralibus scutelloque viridi-subauratis; cavitate faciali minus profunda, lata, inæqualiter dense punctato-coriacea, viridi-cyanea, dense argenteo-sericeo-pilosa, superne transverse, medio flexuoso-marginata; antennis crassiusculis, minus longis, fuscis, cano-puberulis, scapo et articulo primo flagelli supra viridi-subauratis, huius secundo valde brevi, tertio vix longiore; genis mediocribus, articulis antennarum tertio quartoque simul sumptis fere æquilongis; vertice dense minus crasse, thorace supra dispersius fortiusque punctato-subreticulatis interstitiisque hic illic subtilissime punctulatis; pronoto brevi, transverso-rectangulo, antice in medio sat profunde impresso; metanoto convexo, dentibus postico-lateralibus sat longis, acutis, minus validis, apice fortiter incurvis; abdominis segmentis dorsalibus: primo et secundi parte antica cyaneo-viridibus, huius parte apicali et tertio toto igneo-auratis, omnibus fere æqualiter sat sparsim crassius punctatis, primo punctis aliquot minutis inmixtis; 2—3 basi nigro-æneis, primo basi trifoveato, secundo carinula mediana minus distincta, angulo postico-laterali subrecto, tertio convexo, supra seriem sat fortiter calloso, foveolis circiter 10, per carinulam interruptis, profundis, rotundatis, sat magnis, margine apicali brevi, quadridentato, dentibus a margine laterali non remotis mediocribus acute-trian-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

gularibus, fere in lineam transversam dispositis, subæqualibus, emarginaturis sat profunde arcuatis fere æquilatis, margine laterali ante dentem externum leniter flexuoso; ventre aurato, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque viridibus, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, tegulis cyaneo-viridibus. — ♂; long. 8 mm.

«*Armure*. La branche du forceps allongée vers l'extrémité et garnie de poils fins. La forme du crochet (avec son fourreau) est représentée sur la fig. 51i, et le couvercle génital — sur la fig. 51k.» (Rad l. c. tab. IV. fig. 51a, 51b.)

Patria: Turkestania (Kisil-kum, Coll. Rad.).

Animadversio. — Clariss. Auctor sub nomine *Chrys. Uljanini*, secundum specimina typica, duas descripserat species bene distinctas et ego denominationem solum ad marem, etiam depictum, restringo et feminam distinguendam esse censeo.

517. **Chrysis Sarafschana** mihi.

Chrysis Uljanini, Rad. Fedt. Reise in Turkest. Hym. Chrysid. p. 22, n. 44. ♂♀. (solum ♀, excl. ♂.) (1877) sec. spec. typ. e coll. Rad.

Mediocris, elongata, sat robusta, virescenti-cyanea, longius cinereo-alboque pilosa; vertice circa stemmata, collo, mesonoti lobo medio et alarum tegulis violascentibus; cavitate faciali minus profunda, lata, inæqualiter dense subrugose punctato-coriacea, medio longitudinaliter canaliculata, superne transverse subarcuatim acute-marginata; antennis crassiusculis, minus longis, fuscis, cano-puberulis, articulis duobus primis viridibus, tertio longo, quarto dimidio adhuc longiore; genis mediocribus, articulo antennarum quarto æquilongis; vertice dense minus crasse, thorace supra dispersius fortiusque punctato-subreticulatis; pronoto brevi, transverso, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus brevibus, validis, late-triangularibus, postice subtruncatis; abdominis segmentis dorsalibus: primo toto et secundi parte basali cyaneis parumque viridi nitentibus, huius parte apicali et tertio toto igneo-auratis, primo secundoque sat sparsim minus crasse punctatis, tertio basi dense subtiliter coriaceo-rugoso punctatoque, disco supra seriem leniter calloso utrinque transversaliter concaviusculo-depresso, dense fortius irregulariter sed minus crasse punctato; 2—3 basi nigro-æneo, secundo carinula mediana bene distincta acuta lævi ac polita, angulo postico-laterali subrecto, tertio foveolis per carinulam medianam interruptis haud numerosis, circiter 12 tantum, rotundatis, mediocribus, margine apicali sat longo, dense punctulato, quadridentato, dentibus fere in lineam transversam dispositis mediocribus, acute-triangularibus, externis parum longioribus magisque acutis, emarginaturis sat profunde arcuatis fere æquilatis, margine laterali leniter subarcuatim flexuoso; ventre pedibusque cyaneis parumque virescentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa. — ♀; long. 8½ mm.

Præcedenti similis et affinis; sed metanoti dentibus postico-lateralibus aliter for-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

matis, abdominis segmentis dorsalibus: secundo carinula mediana bene distincta lævi ac polita, tertio punctatura penitus alia, disco utrinque transversaliter concaviusculo-depresso (sicut in *Chrys. inaequali* Dhlb.), non vero valde convexo, tarsis saturatius fuscis coloreque thoracis abdominisque magis cyaneo et violascenti, speciem distinguendam esse censeo.

Patria: Turkestania (vallis Sarafschan, Coll. Rad.).

XVI. *Abdominis segmentis dorsalibus: duobus primis parte basali viridi-cyaneis, apicali et tertio igneo-auratis; dentes apicales acute-triangulares.*

518. **Chrysis Hecuba** n. sp.

Mediocris, elongata, sat robusta, cyanea, longius cinereo-alboque pilosa; cavitate faciali, pro- et metanoti lateribus mesopleurisque virescentibus; cavitate faciali minus profunda, dense punctato-coriacea argenteo-sericeoque pilosa, superne transverse, medio flexuoso-marginata, margine utrinque ramulum perpendicularem ad oculos demittente; margine occipitali utrinque inermi; (antennæ desunt); genis brevibus; pronoto valde brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus brevibus, robustis, obtusis; vertice densius, sed subtilius, thorace supra dispersius fortiusque irregulariter punctato-subreticulatis; abdominis segmentis dorsalibus igneo-auratis, primo secundoque parte basali viridi-cyaneis; primo basi trifossulato, secundo carinula mediana bene distincta angusta lævi, lateribus subtilissime punctulatis, tertio convexo, foveolis profunde immersis haud numerosis, circiter 10 tantum, sat magnis, rotundis, secundariis confluentibus, per carinulam depresso-convexam interruptis, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus a margine laterali parum remotis fortibus, acute-triangularibus, intermediis externis parum longioribus magisque acutis, emarginaturis profunde arcuatis subæqualibus; segmentis: primo sat sparsim minus fortiter, secundo adhuc parum subtilius punctatis, illius interstitiis dense, huius tantum sparsim subtilissime punctulatis, tertio dense subtiliter rugosiuscule-punctato; secundo angulo postico-laterali acuto, tertio margine laterali oblique-subrecto; ventre pedibusque viridibus et cyaneis, tarsis fuscis; alis sordide-hyalinis, venis tenuibus fuscis, cellula radiali triangulariter lanceolata completa, tegulis viridi-cyaneis. — ♂; long. 7 1/2 mm.

Species: cum *Chrysidis fulgidae* Linn. mare multum habet similitudinis; sed abdominis segmento dorsali primo non toto et secundi basi macula magna violascenti-cyaneis, sed hoc tantum anguste, differt.

Patria: ignota; verisimiliter regio palæarctica (Coll. Saussurei).

XVII. *Abdominis dorsum auratum, segmentum tertium cyaneum vel violascenti-cyaneum: aut unicolor, aut disco plus minusve viride vel auratum; caput et praesertim thorax maxima ex parte aurata, vel cyanea plus minusve viridi irrorata; dentes apicales iam distincti iam obsoleti.*

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Conspectus specierum huius sectionis:

1 (12). Thoracis dorso maxima ex parte aurato: igneo-cupreoque, rarius viridi-aurato.

2 (3). Abdominis segmento dorsali secundo linea basali transverso-arcuata cyanea *poecila* Mocs.

3 (2). Abdominis segmento dorsali secundo sine linea basali transverso-arcuata cyanea.

4 (9). Statura mediocri vel submagna, sat robusta; antennarum articulo tertio sat longo, quarto fere dimidio longiore.

5 (6). Vertice nigro-cyaneo vel in mare parum tantum viridi-subaureo *viridula* Linn.

6 (5). Vertice macula magna igneo-cupreoque aurata.

7 (8). Abdominis segmento dorsali tertio disco sine macula magna cuneata igneo-cupreoque aurata, sed tantum leniter viridi-aureo *viridula* L. *var. erythromelas* Dhlb.

8 (7). Abdominis segmento dorsali tertio macula magna cuneata igneo-cupreoque aurata ... ... *viridula* L. *var. intermedia* Buyss.

9 (4). Statura tantum mediocri, minus robusta; antennarum articulo tertio brevi, quarto vix longiore.

10 (11). Mesonoti lobo medio igneo-cupreoque aurato *viridula* L. *var. cingulicornis* Först.

11 (10). Mesonoti lobo medio concinne nigro-violaceo *viridula* L. *var. pulcherrima* Lep.

12 (1). Thoracis dorso ex parte tantum igneo-aurato vel toto cyaneo aut violascenti-cyaneo, viridi et viridi-cyaneo, rarius plus minusve viridi-subaureo-nitenti.

13 (14). Pronoto et scutello igneo-auratis ... ... *aurotecta* Ab.

14 (13). Thorace supra toto cyaneo vel violascenti-cyaneo, viridi vel viridi-cyaneo, rarius plus minusve viridi-subaurato.

15 (16). Corpore robusto; abdominis segmento dorsali secundo carinula mediana lata lævi ac polita ... ... *splendidula* Rossi

16 (15). Corpore sat gracili; abdominis segmento dorsali secundo carinula mediana nulla vel indistincta.

17 (18). Abdominis segmentis dorsalibus dense subrugose-punctatis, subcoriaceis, tertio dentibus analibus brevibus undulatis ... ... *viridula* L. *var. integra* Fabr.

18 (17). Abdominis segmentis dorsalibus minus dense subtilius punctatis, tertio dentibus analibus mediocribus aut subbrevibus triangularibus bene distinctis.

19 (22). Corpore 6—6½ mm. longo; abdominis segmento dorsali tertio foveolis intermediis plerumque confluentibus, dentibus analibus minus robustis.

20 (21). Capite thoraceque cyaneis, scutello plerumque viridi (♀), vel capite thoraceque viridibus, vertice tamen cum mesonoto nigro-violaceis (♂) *rutilans* Oliv.

21 (20). Vertice, pronoto, mesonoti lobis lateralibus, scutello pleurisque plus minus viridi-subauratis, lobo medio mesonoti læte-cyaneo *rutilans* Oliv. *var. Asiatica* mihi.

22 (19). Corpore parvo, tantum 5½ mm. longo; abdominis segmento dorsali tertio foveolis separatis, dentibus analibus robustis ... ... *decora* Mocs.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

519. **Chrysis poecila** Mocs.

Chrysis sinuata, Dhlb. Dispos. p. 12, n. 18. ♂ ♀. (1845) (ex parte, solum ♀); Hym. Europ. II. p. 251, n. 139. ♀. (1854) (nec Brullé).

«Mediocris 2 1/2 lin. decimal. long. confertim crasse punctata viridi- et cyaneo-picta, pronoto, striolis dorsuli duabus, scutello, postscutello, abdominis segmentis dorsalibus primo et secundo maculaque centrali segmenti tertii aureis, segmento secundo linea basali transverso-arcuata cyanea.

Observ. Statura fere *Chrysidis bidentatae.* Corpus subrobustum lineare, fusco et griseo-pubescens. Caput rotundato-triangulum confertim modice punctato-subreticulatum viride; vertex amplus transverso-rectangularis parumper convexus macula centrali saturate cyanea; cavitas facialis longiuscula rectangularis, disco profunda subtilissime coriacea subcyanescens, canaliculata mediana distincta, limbo toto viridis et punctulata, superne distincte transverse marginata: margine utrinque longitudinaliter breviter deflexo; antennæ mediocres fuscæ, basi virides; clypeus viridis nitidus punctulatus transversus subtrapezinus, disco subcarinato-convexus, utrinque immersus, margine apicali piceo late lenissime arcuato-emarginatus. Labrum, mandibulæ et reliquæ oris partes normales. Thorax longiusculus subcylindricus crasse punctato-reticulatus; pronotum viridi-aureum, truncatura cyanea foveis medianis 3 parallelis approximatis; tegulæ et dorsulum violaceæ, huius areæ laterales introrsum viridi-auratæ; scutellum rubro- et postscutellum viridi-aurea; metanotum subaurato-viride foveis nonnullis cyaneis, angulis postico-lateralibus robustis triangularibus; pectus viride; pedes viridi-cyanei, calcaribus albo-testaceis, tarsis fuscis; alæ hyalinæ, disco nonnihil sordidæ, venis mediocribus brunneis, cellula radiali elongata subtriangulariter lanceolata, subcompleta propter venulam radialem mox ante apicem alæ ita oblitteratam, ut inter costam et venam radialem apertura perangusta obvenit. Abdomen thorace nonnihil longius at latitudine thoracem æquans, obtuse subrectangulum, dorso subdepresso convexum confertim punctato-subreticulatum aureum: segmentum secundum basi fascia transverso-arcuata cyanea, medio angusta, utrinque ampliata, in hoc segmento carinula quoque mediana subtilis adest; segmentum tertium cyaneum macula centrali viridi-aurea lata triangulari, regio antica huius segmenti convexo-terminata; regio postica (= margo apicalis) igitur paullulum humilior, ceterum modice prominula planiuscula opaca subtiliter punctulato-coriacea; series anteapicalis continua (nec interrupta), foveolis numerosis profundis subsulciformibus; dentes apicales robusti acute triangulares, externi forsitan paullulum breviores; emarginaturæ subprofunde arcuatæ, externæ obliquæ et centrali nonnihil profundiores; margo lateralis proprius obliquus elongatus, ad centrum leniter angulatus, inter basin et angulum convexo- et inter angulum et apicem concavo-arcuatus. Venter modice fornicatus nitidus subtiliter punctulatus pubescens cyaneo-viridis nigro-maculatus.»

Patria: Promontorium Bonæ Spei.

Animadversio. — *Chrysis sinuata,* Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 19, n. 36. ♂ ♀. tab. II. fig. 5. ♀. (1877) e Turkestania, prope Durmankul, certe alia est species, a me tamen non visa.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

520. **Chrysis viridula** Linn.

Chrysis viridula, Linn. Faun. Suec. Ed. II. p. 415, n. 1668. ♂. (1761); Syst. Nat. Ed. XII. T. I. P. II. p. 948, n. 6. ♂. (1767). — Muell. Stad. Linnée's Natursyst. der Ins. Bd. II. Theil V. p. 877, n. 6. ♂. (1775). — Sulz. Abgek. Gesch. der Ins. p. 193, tab. XXVII. fig. 8. ♂. (1776). — Vill. Linn. Ent. III. p. 257, n. 6. ♂. (1789). — Oliv. Encycl. Méth. Ins. V. p. 676, n. 22. (1790). — Christ. Naturg. p. 404, tab. 45, fig. 2. ♂. (1791); Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2746, n. 6. ♂. (1792). — Dhlb. Dispos. p. 11, n. 45. ♂ ♀. (1845). — Thoms. Opusc. Entom. II. p. 107, n. 9. ♂ ♀. (1870). — Mocs. Chrys. faun. Hung. p. 61 et 88, n. 28. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 53 et 68. ♂ ♀. tab. III. fig. 22. (margo apic.) (1887) (excl. var.). — Destef. Natural. Sicil. VII. p. 141 (1888).

Chrysis bidentata, Linn. Syst. Nat. Ed. XII. T. I. P. II. p. 947, n. 2. ♀. (1767). — Fabr. Syst. Ent. p. 358, n. 7. ♀. (1775). — Muell. Stad. Linnée's Natursyst. der Ins. Bd. II. Theil V. p. 876, n. 2. ♀. (1775). — Fabr. Spec. Ins. I. p. 456, n. 9. ♀. (1781); Mant. Ins. I. p. 283, n. 10. ♀. (1787). — Vill. Linn. Ent. III. p. 256, n. 2. ♀. (1789) excl. Degeeri syn. et observ. — Oliv. Encycl. Méth. Ins. V. p. 674, n. 12. ♀. (1790). — Christ, Naturg. p. 398, tab. 44, fig. 2. ♀. (1791). — Donov. Brit. Ins. I. pl. 19. ♀. (1792). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2745. n. 2. ♀. (1792) excl. Degeeri syn. — Rossi, Mant. Ins. I. p. 132, n. 291. ♀. (1792). — Fabr. Ent. Syst. II. p. 241, n. 11. ♀. (1793). — Panz. Faun. Ins. Germ. fasc. 77, tab. 15. ♀. (1801). — Fabr. Syst. Piez. p. 173, n. 16. ♀. (1804). — Lep. Annal. du Mus. Hist. nat. VII. p. 128, n. 23. ♀. (1806). — Panz. Krit. Rev. II. p. 102. ♀. (1806). — Dhlb. Monogr. Chrys. Suec. p. 8, n. 3. ♂ ♀. (1829); Exerc. Hym. p. 29, n. 4. ♂ ♀. (1831). — Shuck. Ent. Mag. IV. p. 165, n. 6. ♀. (1837). — Wesm. Bullet. Acad. Brux. VI. p. 175, n. 4. (1839). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 306. (1853). — Dhlb. Hym. Europ. II. p. 257, n. 142. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 33, n. 11. ♂ ♀. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 561, n. 14. ♂ ♀. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 70. (1858). — Chevr. Chrysid. du Léman, p. 51. ♂ ♀. (1862). — Smith, Entom. Annual, p. 90. (1862). — Taschb. Hym. Deutschl. p. 151. (1866). — Schck, Progr. Gymn. zu Weilb. p. 11, n. 16. ♂ ♀. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 49 et 50. ♂ ♀. tab. II. fig. 12. (margo apic.) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Lamp. Goldwesp. Deutschl. p. 17, n. 49, tab. I. fig. 21. (segm. anale) (1881). — Heyd. Ber. Senkenb. Naturf. Ges. p. 249, n. 18. ♂ ♀. (1882). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 79, n. 47. ♂ ♀. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 20. (genit. maris.) (1888).

Chrysis thalassina, Zschach, Mus. Leskeanum, p. 73, n. 402. (1788). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2747, n. 24. (1792).

Chrysis Aurora, Christ, Naturg. p. 405, tab. 45, fig. 5. ♂. (1791).

Chrysis edentula, Rossi, Mant. Ins. I. p. 134, n. 295. ♂. (1792).

Chrysis dimidiata, Fabr. Ent. Syst. Suppl. p. 258, n. 15. ♂. (1798). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 58. tab. XIV. fig. 2. ♂ et fig. 3. ♀. (1801). — Fabr. Syst. Piez. p. 174, n. 22. ♂. (1804). — Latr. Hist. nat. XIII. p. 238, n. 5. (1805). — Lep. Annal. du Mus. Hist. nat. VII. p. 127, n. 20. ♂ ♀. (1806). — Spin. Ins. Lig. II. p. 170, n. 15. (1808). — Luc. Explor. de l'Algér. Zoolog. III. p. 306, n. 344. (1849).

Elampus bidentatus, Luc. Explor. de l'Algér. Zoolog. III. p. 310, n. 352. (1849).

Chrysis cylindrica, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 544, n. 3. ♀. (1857) (sec. spec. typ. Eversmanni e coll. Rad.! — Rad. Horæ Soc. Ent. Rossicæ. III. p. 302, n. 24; tab. III. fig. 13. ♀. (1866).

Chrysis sinuosa, Rad. Horæ Soc. Ent. Rossicæ. III. p. 304, n. 28, tab. IV. fig. 17. ♂. (1866) sec. spec. typ. e coll. Rad.! (nec Dhlb.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis sicula, Ab. Diagnos. Chrys. nouvell. p. 3, n. XV. ♂. (1878) sec. spec. typ. e coll. Abeillei!
Chrysis bidentata L. *var. ? sicula,* Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 51. ♂. tab. II. fig. 15. (margo apic.) (1879).
Chrysis gemma, Ab. Diagnos. Chrys. nouvell. p. 3, n. XVI. ♂. (1878) sec. spec. typ. e coll. Abeillei!
Chrysis bidentata L. *var. ? gemma,* Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 52. ♂. tab. II. fig. 13. (margo apic.) (1879).

Mediocris aut submagna, rarius magna (specimina e regionibus meridionalibus), elongata, sat robusta, rarius robusta, viridi- vel læte-cyanea, parcius, sed longius cinereo-alboque pilosa; thorace supra et abdominis segmentis dorsalibus duobus primis igneo-cupreoque, rarius viridi- vel virescenti-auratis; cavitate faciali lata, sat profunda, subquadrata aut subtrapezina, dense subtilissime transverse-strigosa, medio longitudinaliter canaliculata, lateribus dense punctato-coriacea, superne aut obsoletius aut distincte transverse-marginata: margine inæquali utrinque breviter longitudinaliter deflexo; facie cum fronte in maribus plus minusque viridibus aut subaurato-viridibus; antennis brevibus crassis vel crassiusculis, articulo tertio sat brevi, secundo vix duplo longiore; genis valde brevibus sublinearibus; margine occipitali utrinque angulo parvo subacuto prominulo; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter canaliculato; metanoto convexo, dentibus postico-lateralibus brevibus triangularibus; pronoti truncatura antica, lobo medio mesonoti antice, metanoti lateribus, pleuris pectoreque cyaneis vel plus minusve virescentibus; vertice dense subtilius, thorace supra crassius dispersiusque punctato-reticulatis; abdomine robusto, segmentis dorsalibus: primo basi plerumque violascenti-cyaneo, medio longitudinaliter sulcato, lateribus plus minusve profunde impressis; secundo tertioque basi nigro-æneis, illo carinula mediana plerumque distincta, hoc violascenti-cyaneo, disco aut macula centrali aut fasciola transverso-arcuata minus bene determinata virescenti vel viridi-subaurata, supra seriem anteapicalem convexo, vix calloso, foveolis numerosis profundis inæqualibus, medio interruptis, margine apicali brevi, in mare longiore, convexo-depresso, dense punctulato, quadridenticulato, dentibus externis brevibus triangularibus, intermediis brevissimis latissimisque lenissime arcuato-obtusis; emarginaturis: centrali lenissime subangulata, externis latis leniter arcuatis; segmentis: secundo angulo postico-laterali subrecto, tertio margine laterali parum remoto obliquo-subrecto, ante dentem plus minusve distincte sinuoso; segmentis omnibus sat dense vel dense minus crasse, nonnunquam rugosiuscule-punctatis; tarsis brunneis vel rufescentibus, calcaribus testaceis; alis sordide-hyalinis, venis firmis piceis, cellula radiali lanceolata plerumque incompleta, tegulis cyaneis, æneis aut nigro-piceis. — ♂ ♀; long. 6½—10 mm.

Femina: antennis fuscis vel nigris, cano puberulis, articulis duobus primis cyaneis vel viridibus; ventre pedibusque cyaneis vel violascenti-cyaneis, rarius plus minusve virescentibus.

Mas: antennis fuscis et subtus testaceis vel testaceis fusco-annulatis, articulis duobus vel tribus primis viridi-auratis; corpore subtus et facie cum pedibus ventreque magis viridibus vel viridi-subauratis, ventris segmento secundo basi utrinque nigro-maculato.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

« *Armure.* Le bord intérieur de la branche du forceps faiblement decoupé vers l'extrémité et garni de poils assez longs. La tenette est densement garnie de poils, transversalement disposés. La forme des crochets et du couvercle génital est représentée sur les fig. 44i et 44k.

Cette espèce peut être confondue, par la structure de son armure, avec le *Chr. Daphnis.* » (Rad. l. c. tab. IV. fig. 44a, 44b, 44c, 44g.)

Patria: Europa tota cum Caucaso Algeriaque.

Animadversio. — De hac specie Clarissimus Dominus Abeille sequentia scripserat: « J'ose avancer que cette espèce est une des plus embarrassantes et des plus protéiformes que l'on puisse rencontrer. L'*Ignita* seule lui fait concurrence sous ce rapport et encore!... Je crois qu'il ne faut ici tenir que très-peu compte de la couleur, de la ponctuation et de la forme de dernier segment. Comme cette opinion paraîtra tout d'abord radicale et empirique, je dois compte à mes lecteurs des motifs qui me guident. Tout d'abord j'ai vainement cherché, pour distinguer la vraie *Bidentata* des formes voisines, une de ces différences absolues qui gisent dans les palpes, la longueur du prothorax, les angles du métasternum, les tarses, etc... Je n'ai pu en decouvrir aucune. — Ensuite, parmi les 67 *Bidentata* que j'ai prises moi-même, ou que mes amis ont prises dans nos régions, j'ai observé de grandes variations sous le rapport de la sculpture, de la forme du dernier segment et notamment du rebord, de la pubescence du front et de la couleur verte ou dorée du vertex; il m'a été impossible de rattacher ces variations à des types distincts, sans qu'aussitôt les passages ne vinssent détruire mon groupement. Puis j'ai été frappé de deux remarques: 1° de la très-petite proportion de ♂ que j'observais: ainsi sur 41 ♀ que j'ai prises moi-même, il ne se trouvait que 2 ♂; 2° de ce que les 20 *Fenestrata* ou *Pyrrhina* que j'ai capturés, ainsi que tous les autres que j'ai vus, appartenaient au sexe masculin. Ajoutez à cela que ces deux dernières formes ne diffèrent de la *Bidentata* absolument que par la couleur et que je les prenais toujours avec elle; parfois même je les obtenais d'éclosion en même temps qu'elle. J'ai donc été amené à admettre qu'il fallait chercher les ♀ des *Fenestrata* et *Pyrrhina* parmi les *Bidentata*. Jusqu' ici mes conclusions sont formelles et je ne crains pas de me tromper: je reunis sans hésiter à la *Bidentata:* 1° l'*Erythromelas* de Dahlbom, ainsi que plusieurs autres espéces du même auteur (Sinuosa? etc.)... basées uniquement sur la force ou la faiblesse de la ponctuation et sur la forme à peine différente du rebord; 2° les *Fenestrata* et *Pyrrhina,* variétés mâles, basées a peu près uniquement sur la coloration.

Je serai beaucoup moins affirmatif pour les *Sicula, Gemma* et *Integra.* Ici, en effet, je trouve des écarts beaucoup plus considérables pour la taille, les proportions du corps, la sculpture et la forme du rebord apical; de plus, je n'ai point vu de passages. Mais je ferai observer: 1° que je ne connais qu'une *Sicula,* trois *Gemma* et deux *Integra;* 2° que les charactères que les séparent de la *Bidentata* rentrent tous dans le catégorie de ceux que nous avons vu varier tout à l'heure, quoique ici ces mêmes différences soient plus accusées; 3° enfin, que les trois formes précitées appartiennent encore toutes à des ♂, ce qui autorise à supposer que leurs ♀ pourraient avoir été confundues avec la *Bidentata.* »

Huic opinioni pauca tantum adiungere possum. *Chrysis Sicula, gemma, integra, erythromelas, intermedia* et *pyrrhina* non sunt Hungariæ cives; ideoque earum mores in natura observandi occasionem non habui. *Chrysis Sicula* et *gemma,* secundum specimina typica, mihi a Clarissimo Auctore libentissime transmissæ, a typo vix differunt. *Chrysidem integram* in natura non nosco, si non eadem sit cum *Chryside pyrrhina,* prout hoc in opere Dom. De-Stefani legimus. Chrysidem *cingulicornem, erythromelana, intermediam* et *pyrrhinam* tamen tamquam varietates distinguendas esse censeo. *Chrysis bidentatae* L. mares feminis multo rariores esse, ego non observavi; quia inter specimina numerosa a me collecta et e variis collectionibus mihi transmissa, fere totidem mares, quam feminas inveni.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

var. cingulicornis Först.

Chrysis cingulicornis, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 313, n. 75. ♂. (1853) sec. spec. typ. Mus. Nat. Hung. — Mocs. Chrys. faun. Hung. p. 61 et 88. ♂ ♀. (1882). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 17. (genit. maris) (1888).
Chrysis viridula L. *var. erythromelas,* Frey, Chrys. Helvet. p. 53 et 69. ♂ ♀. (1887) (nec Dhlb.).

Typo simillima; sed constanter multo minor ac gracilior, antennarum articulo tertio, præsertim in mare, brevi, quarto vix longiore (non vero sat longo, quarto fere dimidio longiore), corpore ubique, præsertim abdominis segmento dorsali tertio, densius et subtilius punctato. — Patria: Hispania (Chiclana, Coll. Hiendlmayri!); Gallia (Montpellier, Mus. Hung.); Italia (Calabria, Mus. Hung.); Helvetia (Frey-Gessn.); Hungaria (Först. Mocs.); Russia meridionalis (Sarepta, Coll. Saussurei!); Caucasus (Coll. Rad.!).

«*Armure.* La forme de la branche du forceps rapelle *Chr. separanda,* mais elle est plus large, les poils, garnissants l'extrémité, sont plus forts et plus longs. Les crochets larges vers la base, pointus à l'extrémité.» (Rad. l. c. tab. III. fig. 33a, 33b, 33c, 33f, 33i.)

var. erythromelas Dhlb.

Chrysis erythromelas, Dhlb. Dispos. p. 11, n. 15. (1845); Hym. Europ. II. p. 155, n. 85. ♀? tab. VII. fig. 91. (segm. anale) (1854).
Chrysis viridula L. *var. erythromelas,* Destef. Natural. Sicil. VII. p. 141. ♀. (1888).

Typo simillima; sed macula magna verticis igneo-cupreoque aurata, abdominis segmento dorsali tertio foveolis linearibus sulciformibus, margine apicali leniter obtuse-angulato. ♀; long. 9 mm. — Patria: Sicilia (Destef. et Coll. Rad.!).

«Questa varietà è più tosto rara; si incontra nella stessa epoca del tipo.» (Destef. l. c.)

var. intermedia Buyss.

Chrysis bidentata L. *var. intermedia,* Buyss. Revue d'Entom. VI. p. 181, n. 17. ♂. (1887).

Typo simillima; sed macula magna verticis et alia cuneata in disco abdominis segmenti dorsalis tertii igneo-cupreoque auratis, mesonoto lobo medio antice cyaneo, segmento anali undulato, indistincte quadridentato. ♂; long. 8—9 mm. — Patria: Gallia (Hyères, Coll. Abeillei) et Algeria (Blidah-Médéah, Mus. Berolinense!).

var. pulcherrima Lep.

Chrysis pulcherrima, Lep. Annal. du Mus. Hist. nat. VII. p. 127, n. 19. ♂. tab. VII. fig. 15. ♂. (1806) (nec Cress.).
Chrysis bidentata L. *var. fenestrata,* Ab. Feuille Jeun. Natural. VII. p. 67. (1877); Annal. Soc. Linn. Lyon. XXVI. p. 46 et 51. ♂. (1879) sec. spec. typ. e coll. Abeillei! — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. ♂. (1879).
Chrysis fenestrata, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 20. (genit. maris) (1888).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Typo simillima; sed corpore parum breviore et minore, mesonoti lobo medio toto concinne nigro-violaceo. ♂; long. 7 mm. — Patria: Gallia.

«*Armure.* La branche du forceps par sa forme générale ressemble à celle de l'espèce précédente (*Chr. pyrrhina* Dhlb.), mais son bord intérieur est en partie médiocrement garni de poils et vers sa base deux fois échancré (cela est caractéristique). Volsella large. Les crochets très larges par la forme générale se rapprochent à ceux de *Chr. pyrrhina,* mais par leurs dimensions sont bien différents. Le courvercle génital est représenté sur la fig. 43k.» (Rad. l. c. tab. IV. fig. 43a, 43b, 43c, 43i.)

var. integra FABR.

Chrysis integra, Fabr. Mant. Ins. I. p. 283, n. 11. (1787). — Vill. Linn. Ent. III. p. 259, n. 12. (1789). — Oliv. Encycl. Méth. Ins. V. p. 674, n. 13. (1790). — Rossi, Mant. Ins. I. p. 134, n. 295. (1792). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2745, n. 14. (1792). — Fabr. Ent. Syst. II. p. 241, n. 12. (1793); Syst. Piez. p. 174, n. 17. (1804). — Dhlb. Hym. Europ. II. p. 157, n. 86. ♂. (1854).

Chrysis coronata, Spin. Ins. Lig. II. p. 30, n. XXVIII. ♂. (1808).

Chrysis pyrrhina, Dhlb. Dispos. p. 9, n. 8. ♂. (1845); Hym. Europ. II. p. 259, n. 143. ♂. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 558, n. 10. ♂. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 305, n. 38, tab. IV, fig. 23. ♂. (1866); XXIII. p. 20. (genit. maris) (1888).

Chrysis bidentata L. *var. pyrrhina,* Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 51. ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. ♂. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 80. ♂. (1887).

Chrysis bidentata L. *var. ? integra,* Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 51. ♂. (1879).

Chrysis bidentata L. *var. integra,* Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. ♂. (1879).

Chrysis viridula L. *var. integra,* Destef. Natural. Sicil. VII. p. 141. ♂ ♀. (1888).

A typo colore valde differt:

Mediocris vel submediocris, viridis vel viridi-cyanea, plus minusve viridi-subaureo nitens, occipite et mesonoti lobo medio abdominisque segmentis: primo basi et tertio toto violascenti-cyaneis, abdominis punctatura plerumque densa subrugulosa, segmenti tertii dentibus analibus obsoletis vel valde brevibus undulatis. ♂; long. 6—8 mm. — Patria: Hispania (Fabr.); Italia (Spin.); Gallia (Oliv.); Dalmatia (Frauenfeld); Russia (Saratow, Orenburg, Ural, Eversm.); Africa septentrionalis (Setif, Coll. Saussurei!; Tunisia [regnum Tunetarum], Dhlb.).

«I caratteri che distinguono questa varietà dal tipo sono ben marcati e specialmente la colorazione assume una non leggiera modificazione. Difatti il corsaletto non ha più quel color rosso-dorato del tipo, esso è più tosto verde soffuso di oro, anche i segmenti dell' addome sono un po' verdastri e la taglia del corpo è più robusta di quella del tipo, è più larga nelle ♀ ♀; i maschi sono simili al tipo meno la colorazione un po' più verde.

Questa varietà è frequente nell' isola come il tipo in compagnia del quali si raccoglie nel mese di maggio e giugno.» (Destef. l. c.)

«*Armure.* — La branche du forceps ressemble à celle de l'espèce précédente

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

(*Chrys. cyanopyga* Dhlb.), mais elle est plus allongée vers l'extrémité et son bord intérieur est densement pourvu de poils longs, parallèlement disposés. Volsella nue, sa tenette large. La forme des crochets est représenté sur la fig. 42i.» (Rad. l. c. tab. IV. fig. 42a, 42b, 42c.)

Animadversio. — *Chrysis bellula* Guér. (sinuosa Dhlb.), *Daphnis* Mocs. et *consanguinea* Mocs., species *Chrys. viridulae* L. similes, apud Gonochrysidas inveniuntur (pag. 296—299).

521. **Chrysis splendidula** Rossi.

Chrysis splendidula, Rossi. Faun. Etr. II. p. 78, n. 850. ♀. (1790). — Illig. Rossi Faun. Etr. Ed. II. Tom. II. p. 125, n. 850. ♀. (1807) (excl. *Chrys. rutilantis* Oliv. syn.).
Chrysis versicolor, Luc. Explor. de l'Algér. Zoolog. III. p. 305, n. 342. (1849) teste Ab. (nec. Spin.).
Chrysis cyanopyga, Dhlb. Hym. Europ. II. p. 253, n. 140. ♂ ♀. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nro IV. p. 557, n. 8. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 70. (1858). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 305, n. 36. tab. IV. fig. 22. (1866). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 18. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 19, n. 37. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 47 et 53. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. (1879). — Lampr. Goldwesp. Deutschl. p. 18, n. 53. (1881). — Mocs. Chrys. faun. Hung. p. 64 et 88, n. 31. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 54 et 70. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 67, n. 39. (1887). — Destef. Natural. Sicil. VII. p. 142. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 19. (genit. maris) (1888).
Chrysis dominula, Ab. Feuille Jeun. Natur. VII. p. 67. (1877). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. (1879).
Chrysis cyanopyga Dhlb. *var. dominula,* Ab. Annal. Soc. Linn. Lyon. XXVI. p. 47 et 54. ♂. (1879).
Chrysis Maroccana, Mocs. Dissert. phys. Acad. Hung. XIII. Nro 11, p. 16, n. 20. ♂. (1888) var.

Mediocris, elongata, robusta, viridi-cyanea vel cyanea parumque virescens aut pronoto et scutello parum viridi-subauratis, densius cinereo-alboque pilosa; cavitate faciali mediocri, subquadrata, lata, dense argenteo-sericeo-pilosa, medio longitudinaliter canaliculata et utrinque dense subtiliter transverse coriaceo-rugosiuscula, superne transverse marginata, margine leniter bisarcuato; antennis mediocribus, in mare longioribus, crassiusculis, fuscis, cano-puberulis, articulis tribus primis in femina cyanescentibus, in mare viridi-subauratis, articulo tertio mediocri, secundo vix duplo longiore; genis sat longis, articulo antennarum tertio æquilongis; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; vertice post stemmata, pronoti truncatura antica et mesonoti lobo medio sæpius nigro-violaceis, præsertim in femina; metanoto convexo, dentibus postico-lateralibus robustis triangularibus acutis; vertice densius et subtilius, thorace supra sparsius parumque crassius punctato-subreticulatis; abdominis segmentis dorsalibus: duobus primis auratis, igneo- vel purpurascenti-auratis, tertio cyaneo vel violascenti-cyaneo, ante seriem nonnunquam viridi- vel viridi-aureo-maculato; secundo basi late nigro-æneo, carinula mediana lata lævi ac polita, angulo postico-laterali dentiformi acuto; tertio convexo, supra seriem leniter calloso, foveolis immersis paucis magnis separatis orbiculatis per carinulam interruptis, margine apicali sat brevi, in femina

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

longiore, dense subtiliter punctulato, quadridentato, dentibus mediocribus aut subbrevibus triangularibus fere in lineam transversam dispositis, emarginaturis modice arcuatis, centrali externis parum angustiore, margine laterali leniter oblique-flexuoso; segmentis omnibus sat sparsim crassius, parum rugosiuscule-punctatis; ventre viridi-cyaneo nigro-maculato; alis plus minusve sordide-hyalinis, venis mediocribus brunneis, cellula radiali elongata lanceolata completa vel subcompleta. — ♂ ♀ ; long. 7—7½ mm.

«*Armure.* La branche du forceps est allongée vers l'extrémité et autour fortement garnie de poils; le bord intérieur est presque nu. Volsella garnie de poils. La forme des crochets représentée sur la fig. 40i.» (Rad l. c. tab. III. fig. 40a, 40b, 40c.)

Patria: Hispania (Gog.); Italia (Rossi; Sicilia, Destef.; Sardinia, Costa); Gallia (Court); Germania (Schck); Hungaria (Mocs.); Dalmatia (Coll. Wüstneii!); Russia (Spassk, Coll. Rad!; Orenburg, Ural. Eversm.); Turkestania (Rad.); Algeria (Lucas; Setif, Coll. Saussurei!) et Marocco [regnum Maroccanum] (Mus. Hung.).

Animadversio. — Penitus consentio cum Clarissimo Domino Frey-Gessner, quod *Chrysis splendidula* Rossi eadem sit species cum *Chryside cyanopyga* Dhlb. Descriptio enim Rossii sequens est: «glabra, nitida, thorace viridi-cœruleo, abdomine rubro-aureo, ano cœruleo quadridentato. Facie simillima *C. ignitae*, sed paulo minor et angustior. Differt a *C. ignita* tantum ultimis duobus segmentis cœruleis uti in *C. calens*. Subtus tota cœrulea etc.» Verba sequentia: «*ignita* paulo minor et angustior et subtus tota cœrulea» tantum ad *Chrys. cyanopygam* Dhlb. applicari possunt.

522. **Chrysis rutilans** Oliv.

Chrysis rutilans, Oliv. Encycl. Méth. Ins. V. p. 676, n. 23. ♂. (1790) (nec Dhlb. et auct. recentiores).
Chrysis splendidula, Dhlb. Dispos. p. 9, n. 7. (1845); Hym. Europ. II. p. 254, n. 141. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 77, n. 18. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 70. (1858). — Schck, Progr. Gymn. zu Weilb. p. 11, n. 13. (1870) — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 47 et 53. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. (1879). — Lampr. Goldwesp. Deutschl. p. 18, n. 52. (1881). — Heyd. Ber. Senkenb. naturf. Ges. p. 254, n. 28. (1882). — Mocs. Chrys. faun. Hung. p. 63 et 88, n. 30. ♂ ♀. (1882). — Frey, Chrys. Helv. p. 54 et 73, tab. III. fig. 26. (margo apic.) (1887). — Gog. Anal. Soc. Espań. Hist. Nat. XVI. p. 63, n. 34. ♀. (1887). — Destef. Natural. Sicil. VII. p. 143. (1888) (nec Rossi).
Chrysis analis, Shuck. Entom. Magaz. IV. p. 165, n. 5. (1837) (excl. Spin. syn.). — Först. Verh. nat. Ver. preuss. Rheinl X. p. 306. ♀. (1853) sec. spec. typ. in Mus. Nat. Hung. (nec Spin.)
Chrysis insperata, Chevr. Mittheil. Schweiz. Ent. Ges. III. p. 265, n. 1. ♂. (1870).

Sexus præcedenti similes sunt; sed species est minor et multo angustior seu magis gracilis, abdominis segmento dorsali secundo carinula mediana nulla vel indistincta, tertio foveolis maioribus coëuntibus seu confluentibus, dentibus apicalibus robustioribus, ventre viridi- et igneo-aurato etc.

Femina: capite et thorace cyaneis, scutello pleumque viridi.

Mas: capite et thorace viridibus, vertice tamen cum mesonoto et segmento dorsali ultimo nigro-violaceis.

Patria: Anglia (Shuck.); Suecia (Dhlb.); Germania (Schck); Helvetia (Chevr.); Tyrolis (Dalla Torre et Kohl); Austria (Rogenhofer et Kohl); Gallia (Oliv.); Hispania

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

(Gog.); Sardinia (Costa); Sicilia (Destef.); Hungaria (Mocs.); Dalmatia (Mus. Hung.); Russia (gubernium Mosquense, Assmus); Algeria (Mus. Hung.).

var Asiatica mihi.

Vertice, pronoto, mesonoti lobis lateralibus, scutello pleurisque plus minusve viridi-subauratis, lobo medio læte-cyaneo, abdominis segmenti dorsalis tertii dentibus apicalibus magis acutis. Femina. — Patria: Ashabad in Persia et Taschkend in Turkestania (Coll. Rad.!).

Animadversio. — Nulli mihi subiacet dubio, quin piæ memoriæ vir: Olivier, sub nomine *Chrysis rutilans,* non speciem illam magnificam, quam Försterus *Chrys. chrysoprasinam* et Dahlbomus *Chrys. rutilantem* nominaverunt, descripserit, sed animal illud, quod usque ad hodiernam diem sub nomine *Chrysis splendidula* Rossi notum erat. Verba enim Olivieri sequentia sunt: «Cyaneo-viridis, abdominis segmentis duobus primoribus rubro-cupreis, ano cyaneo quadridentato. — Il est petit, d'un vert bleuâtre. Les antennes et les yeux sont noires; la tête est vert, bleuâtre au milieu; les pattes sont vertes, avec un peu de bleu à leur bâse, et avec les tarses noirs; l'abdomen est allongé, d'un noir bleuâtre, avec les deux premiers anneaux rouges en dessus, et quatre dents à l'extrémité du dernier. J'ai recu de M. l'abbé Latreille qui l'avoit trouvé en Augoumois.» Hæc verba ad amussim conveniunt mari *Chrys. splendidulae* Dhlb. Mas enim huius speciei: abdominis segmentum tertium dorsale nigro-violaceum (d'un noir bleuâtre) habet et non violaceum, sicut hoc apud *Chrysidem cyanopygam* videre est. Thorax porro viridis, mesonoti lobo medio cyaneo, et animal parvum. — Dahlbomus, in literatura aliarum gentium non satis versatus, fontium studiis non satis dedit operam aliisque cœce credidit; inde ortæ sunt confusiones illæ, quæ in eius operibus tam frequenter obveniunt. Expressio quoque illa, quam apud *Chrysidem rutilantem* Dhlb. legimus: «*Chrysis rutilans* Olivier, teste Latreille, olim in litteris ad Spinola» penitus falsa est. — Mihi, fontium antiquorum scriptorum indagatori, secundum legem prioritatis, nomen ab Oliviero datum restituendum erat.

523. **Chrysis decora** Mocs.

Chrysis superba, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 20, n. 38. ♂. (1877) (nec Cress. 1865, nec Tourn. 1879.).
Chrysis decora, Mocs. Term. Füz. XI. p. 16. (1887).

«Parva, capite thoraceque cyaneo-violascentibus crebre punctata; cavitas facialis rugosa, disco profunde-immerso, marginulo superne transverso recto; clypei margo apicalis haud emarginatus; metanoti anguli postico-laterales parvi; abdomen punctatissimum, segmenta primum secundumque igneo-aurea, segmentum tertium cyaneo-violascens, margine haud incrassato, foveolis profundis separatis, dentes robusti acuti triangulares recti per rectam lineam currentes, cellula radialis aperta.

Chrysidi splendidulae assimilis.

Long. 5,5 mm.»

Patria: Turkestania ad flumen Jaxartem.

524. **Chrysis aurotecta** Ab.

Chrysis aurotecta, Ab. Diagnos. Chrys. nouvell. p. 3, n. XVII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 103. ♂ ♀. (1879).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

«Long. 6½—7½ mill.

Entierèment d'un doré feu, avec la tête, le mésothorax, le postécusson, le métathorax, le troisième segment de l'abdomen et le dessous du corps bleus, parfois avec une légère teinte verdâtre. Antennes noires, sauf leurs trois premiers articles qui ont une teinte bleue. Tête à gros points ocellés. Joues paralleles et assez longues. Pronotum sculpté comme la tête, à fossette antérieure médiane large. Mésonotum de même; les compartiments latéraux portant chacun sur leur milieu une ligne lisse longitudinale d'un bleu verdâtre tranchant sur le bleu foncé du reste de ce segment. Ecusson et postécusson à points plus gros, celui-ci bordé de vert postérieurement sur ses côtés. Angles du métasternum larges et à pointe obtuse décombante. Abdomen à ponctuation assez grosse et serrée, plus lâche sur le premier segment, ruguleuse et plus fine sur le troisième. Celui-ci assez long, concave sur son disque, en bourrelet au-dessus de la ligne ponctuée à peu près de 14 grosses fossettes allongées. Rebord court, peu convexe, portant 4 dents assez aiguës, surtout les latérales qui commencent les côtés mêmes du segment. Pattes bleues; nervure radiale atteignant le bord.

Le ♂ diffère de la ♀ par le front plus villeux de blanc, le troisième segment de l'abdomen avec une teinte peu verdâtre, le rebord plus court avec les dents plus obtuses, le ventre avec des teintes verdâtres à la base des segments.

La couleur de ce gracieux insecte l'isole au premier aspect. Parmi les espèces à abdomen quadridenté, il est le seul à avoir le pronotum, l'écusson et l'abdomen feu; mais sa forme et la sculpture le rapprochent infiniment de *Splendidula* Rossi. Comparé aux grands individus de cette espèce, il n'en diffère guère que par le rebord plus court et par sa couleur. Or, nous voyons le premier de ces caractères varier assez chez *Splendidula* et encore plus chez *Cyanopyga,* sa très-proche voisine, si non sa parente. D'autre part, certains exemplaires de ces deux espèces ont, sur le pronotum et sur l'écusson, une teinte vert gai qui tranche sur la couleur foncière bleue du thorax. On peut facilement supposer que cette teinte peut tourner, par exagération, au vert métallique et au doré. Mon avis est donc que l'*Aurotecta* n'est qu'une race de la *Splendidula;* elle est pourtant si remarquable, que j'ai cru devoir la signaler à l'attention par un nom particulier.»

Patria: Corsica (Porto Vecchio) et Sardinia (Alghero).

XVIII. *Abdominis dorsum auratum, segmentum tertium violascenti-cyaneum parte basali utrinque macula ovata magna obliqua aurea viridi-aureoque limbata concinne ornatum.*

525. **Chrysis Ramburi** Dhlb. Mocs.

Chrysis Ramburi, Dhlb. Hym. Europ. II. p. 249, n. 138. ♂. (excl. ♀) (1854). — Mocs. Chrys. faun. Hung. p. 62, n. 29. ♂. (excl. ♀) (1882). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 66, n. 37. ♂. (excl. ♀) (1887).

Mediocris, elongata, sat robusta, viridis et cyanea, parcius cinereo-alboque pilosa; vertice post stemmata, collo, mesonoti lobo medio et metanoto nigro-violascentibus;

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cavitate faciali minus profunda, subangusta, medio longitudinaliter canaliculata, lateribus dense punctato-coriacea argenteo-sericeoque pilosa, superne convexa, non marginata; antennis sat longis, crassiusculis, fuscis, cano-puberulis, articulis duobus primis viridibus, tertio longitudine mediocri, quarto vix dimidio adhuc longiore; genis brevibus, articulo antennarum secundo vix longioribus; pronoto sat longo, transverso-rectangulo, capite parum tantum breviore, antice in medio longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus brevibus, validis, late-triangularibus, subobtusis; vertice thoracisque dorso dense minus crasse et profunde punctato-subreticulatis; abdominis segmentis dorsalibus: duobus primis igneo-auratis, tertio violascenti-cyaneo parte basali macula utrinque magna ovata obliqua aurea viridi-aureoque limbata concinne ornato; 2—3 basi late nigro-æneo, secundo carinula mediana subtili, angulo postico-laterali recto, tertio convexo, ante seriem nec minime calloso, foveolis mediocribus, 8—10 tantum, lateralibus minoribus, rotundatis, separatis, margine apicali brevi, dense punctulato, quadridentato, dentibus valde brevibus, triangularibus, latiusculis, emarginaturis lenissime arcuatis, centrali parum latiore, margine laterali centro angulato; segmentis duobus primis dense minus crasse, tertio adhuc densius subtiliusque rugosiuscule-punctatis, subcoriaceis, punctis minutis inmixtis; ventre violascenti-cyaneo, nitido, segmento secundo basi utrinque nigro-maculato, tertio disco viridi-cyaneo; pedibus viridi-cyaneis, tarsis fuscis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali lanceolata subcompleta, tegulis fusco-rufis. — ♂; long. 7 1/2 mm.

Patria: Hispania (Dhlb.) et Algeria (Setif, Coll. Saussurei!).

Animadversio. — Secundum me, piæ memoriæ vir: Dahlbomus sub nomine *Chrysis Ramburi* duas descripserat species bene distinctas, si etiam in hac specie, sicut apud *Chrys. viridulam* L. dimorphismus non obvenerit? Ego denominationem ad Dahlbomi marem solum, ab ipso Ramburo detectum restringo et eius feminam tamquam speciem distinctam considero.

526. **Chrysis chrysostigma** mihi.

Chrysis Ramburi, Dhlb. Hym. Europ. II. p. 249, n. 138. ♀. (excl. ♂) (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 48. ♀. (excl. ♂) (1879). — Mocs. Chrys. faun. Hung. p. 62, n. 29. ♀. (excl. ♂) (1882). — Frey, Chrys. Helvet. p. 53 et 68. ♀. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 66, n. 37. ♀. (excl. ♂) (1887).

Mediocris, elongata, robusta, violascenti-cyanea, longius cinereo-alboque pilosa; pro- et mesonoto scutelloque igneo-cupreoque auratis; pronoti sulco longitudinali et mesonoti suturis anticis virescenti-æneis; cavitate faciali minus profunda, dense punctato-coriacea, superne indistincte levissime transverse marginulata: marginulo obsoleto bis-arcuato; antennis longis, crassis, fuscis cano-puberulis, articulis duobus primis in femina nigro-violaceis, in mare viridi-auratis, tertio sat longo, quarto quintoque simul sumptis tamen breviore; genis valde brevibus, sublinearibus, articulo antennarum secundo evidenter brevioribus; pronoto sat longo, transverso-rectangulo, antice in medio longitudinaliter profunde sulcato; vertice thoracisque dorso dense sat crasse, sed minus profunde punctato-reticulatis; metanoto convexo, dentibus postico-lateralibus brevibus,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

validis, late-triangularibus, subobtusis; abdominis segmentis dorsalibus: duobus primis igneo-auratis, tertio violascenti-cyaneo parte basali macula utrinque magna ovata obliqua aurea viridi-aureoque limbata concinne ornato; primo parte truncata violascenti-cyanea superne viridi-aureo-limbata; 2—3 basi nigro-æneis, secundo carinula mediana subtili, in femina magis distincta, tertio convexo, supra seriem lenissime calloso, foveolis, in femina magis immersis, mediocribus, 8—10 tantum, lateralibus minoribus, rotundatis, separatis, margine apicali in mare brevi, in femina longiore, quadridentato, dentibus in femina brevibus triangularibus æquilongis, in mare valde brevibus, triangularibus, latiusculis, externis duobus longioribus, emarginaturis in femina leniter arcuatis, centrali externis angustiore, in mare lenissime arcuatis, centrali externis parum latiore; segmentis duobus primis dense minus crasse, tertio adhuc parum densius subtiliusque rugosiuscule-punctatis, haud subcoriaceis punctis minutis quoque inmixtis; tarsis fuscis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta.

Femina: cavitate faciali sat lata violascenti-cyanea, femoribus tibiisque concoloribus; ventre nigro-æneo, segmento secundo apice violascenti-cyaneo. — Long. 8—8½ mm.

Mas: cavitate faciali subangusta viridi-subaurata, dense fulvo-tomentosa (non pilosa); femoribus tibiisque et ventre viridibus et cyaneis, hoc segmento secundo basi utrinque late nigro-æneo. — Long. 7½ mm.

Mas eximiæ huius speciei a mare *Chrys. Ramburi* Dhlb. Mocs, differt: corpore magis robusto, colore thoracis, facie dense fulvo-tomentosa, genis evidenter brevioribus, punctatura thoracis abdominisque parum fortiore, haud subcoriaceo.

Sexus: *Chrys. viridulae* Linn. similes sunt; sed postscutello violascenti-cyaneo et abdominis segmento dorsali tertio violascenti-cyaneo utrinque macula concinne aurea ornato.

Patria: Italia (Lombardia, Dhlb.; Suse in Pedemontano, Gir.); Helvetia (Tourn.); Hungaria meridionalis et septentrionalis in planitie, mense Julio valde rara (Mocs.); Græcia (Mus. Atheniense!).

XIX. *Abdominis dorsum auratum, segmentis: primo et secundo margine apicali concinne anguste violascenti-cyaneo-limbatis, tertio margine apicali violascenti-cyaneo; caput et thorax quoque cyanea viridi-aureoque maculata.*

527. **Chrysis marginata** n. sp.

Mediocris, elongata, sat robusta, viridi-cyanea, parce albo-pilosa; vertice ante stemmata, pronoti parte antica, mesonoti lobis lateralibus et dentibus postico-lateralibus metanoti viridi-auratis; vertice post stemmata, pronoti parte postica, scutello et postscutelli disco violascenti-cyaneis; cavitate faciali minus profunda, viridi-cyanea, dense punctulato-coriacea, argenteo-sericeoque pilosa, medio longitudinaliter canaliculata,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

superne transverse biarcuatim minus distincte aureo-marginata; antennis nigris, articulo primo cyaneo-viridi, tertio sat longo, quarto dimidio longiore; genis longis, articulo antennarum tertio adhuc longioribus; vertice densius et subtilius, thorace supra sparsius crassiusque punctato-reticulatis; pronoto sat longo, capite parum tantum longiore, transverso, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus mediocribus, validis, subobtuse-triangularibus; abdominis segmentis dorsalibus auratis, secundo disco et tertio igneo-auratis, primo basi viridi-aurato, margine apicali et secundi anguste concinne violascenti-cyaneo-limbatis, tertio margine apicali quoque violascenti-cyaneo, omnibus sat sparsim cribrato-punctatis interstitiis lævibus, primo tamen punctis etiam minutissimis inmixtis, tertio convexo, foveolis haud numerosis minus profundis, rotundatis, apice quadridentato, dentibus, sat longis, acute triangularibus subæqualibus, fere in lineam transversam dispositis, emarginaturis profunde arcuatis subæqualibus, centrali parum profundiore; ventre viridi-cyaneo parumque aurato, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis tarsis fusco-rufescentibus; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis viridi-cyaneis. — ♀ ; long. 8½ mm.

Species hæc eximia: colore corporis et abdominis, a congeneribus iam facile cognoscitur.

Patria: Turkestania (Coll. Rad.).

XX. *Abdominis dorsum auratum, igneo-auratum vel viridi-auratum, segmenti tertii margo apicalis cyaneus vel violascenti-cyaneus.*

*

Conspectus specierum huius sectionis synopticus.

1 (10). Thorace cyaneo parumque violascenti vel virescenti, rarius tantum leniter viridi-subaureo picto.

2 (7). Corpore mediocri vel submagno, sat robusto.

3 (6). Fronte indistincte transverse flexuoso-marginata; antennarum articulo tertio quarto duplo longiore; abdominis segmentis dorsalibus fere æqualiter cribrato-punctatis, punctatura simplici, tantum in primo punctis aliquot minutis nonnunquam inmixtis.

4 (5). «La branche du forceps est plissée vers l'extrémité et se termine par une partie courte allongée. Son bord supérieur est presque droit et se termine par une partie saillante.» (Rad.) ... ... *analis* Spin.

5 (4). «Le bord intérieur de la branche du forceps est continué, vers l'extrémité du côté externe échancré.» (Rad.) ... ... *excisa* Mocs.

6 (3). Fronte distincte arcuatim marginata; antennarum articulo tertio quarto subæquali; abdominis segmentis dorsalibus punctatura duplici ... *Sybarita* Först.

7 (2). Corpore parvo, elongato, minus robusto; thorace ex parte viridi-subaurato.

8 (9). Abdominis segmentis dorsalibus igneo-auratis, dentibus apicalibus in arcum dispositis ... ... *Thalhammeri* n. sp.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

9 (8). Abdominis segmentis dorsalibus auratis, dentibus apicalibus in lineam rectam transversam dispositis ... ... *exigua* n. sp.

10 (1). Thorace cyaneo vel violascenti-cyaneo, ex parte semper aureo picto.

11 (12). Corpore magno, robusto; cavitate faciali dense punctulato-coriacea; abdominis segmentis dorsalibus: secundo carinula mediana indistincta, tertio foveolis sat magnis oblongis. ... ... *Sybarita* Först. *var. Valesiana* Frey.

12 (11). Corpore mediocri, sat robusto; cavitate faciali subtiliter dense transverse-striata; abdominis segmentis dorsalibus: secundo carinula mediana minus distincta, tertio foveolis mediocribus rotundatis... ... ... *Pérezi* n. sp.

13 (16). Antennarum flagello fusco-rufo vel fusco-rufescenti.

14 (15). Corpore mediocri; abdominis segmentis dorsalibus dense sat crasse parum rugosiuscule-punctatis, tertio dentibus apicalibus brevibus triangularibus æquilongis ... ... *poecilochroa* Mocs.

15 (14). Corpore submagno; abdominis segmentis dorsalibus minus dense profunde cribrato-punctatis, tertio dentibus apicalibus acute-triangularibus, lateralibus mediocribus, intermediis fere duplo longioribus ... ... *Asiatica* Rad.

16 (13). Antennarum flagello fusco vel nigro.

17 (18). Corpore parvo, tantum 5½ mm. longo; cavitate faciali subtilissime transverse-striata, superne distincte marginata ... ... *Helvetica* Mocs.

18 (17). Corpore maiore, 6—8 mm. longo; cavitate faciali dense punctulato-coriacea, superne indistincte vel obsoletissime marginata.

19 (20). Vertice et thorace supra sat crasse minus profunde punctato-reticulatis; abdominis segmentis dorsalibus fere æqualiter dense minus profunde, tertio parum rugosiuscule-punctatis, dentibus apicalibus in mare brevissimis obtusis undulato-flexuosis, in femina intermediis simillibus, externis brevibus distincte triangularibus ... ... *scutellaris* Fabr.

20 (19). Vertice et thorace supra crassius profundeque punctato-reticulatis; abdominis segmentis dorsalibus minus dense cribrato-punctatis, dentibus apicalibus in mare sat longis distincte triangularibus, in femina externis triangularibus brevibus, intermediis brevioribus obtusis ... ... *consobrina* n. sp.

*

528. **Chrysis analis** Spin.

Chrysis analis, Spin. Ins. Lig. II. p. 26, n. XXVI. tab. IV. fig. 17. (1808) sec. spec. typ. teste Abeille. — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 55 et 67. (1879). — Mocs. Chrys. faun. Hung. p. 65 et 89. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 55 et 76. ♂ ♀. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 58, n. 27. (1887). — Rad. Horæ. Soc. Ent. Rossicæ. XXIII. p. 24. (genit. maris) (1888).

Chrysis Graelsii, Guér. Revue. Zoolog. p. 148, n. 14. ♀. (1842).

Chrysis flavitarsis, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 310, n. 73. ♀. (1853).

?*Chrysis analis*, Dhlb. Hym. Europ. II. p. 263, n. 146. ♂ ♀. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 560, n. 13. (1857). — Court. Annal. Soc. Linn. Maine- et Loire. III.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

p. 70. (1858). — Rad. Horæ. Soc. Ent. Rossicæ. III. p. 306, n. 40. tab. V. fig. 25. (1866). — Schck, Progr. Gymn. zu Weilb. p. 11, n. 14. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 21, n. 40. ♂ ♀. (1877). — Lampr. Goldwesp. Deutschl. p. 18, n. 51. tab. I. fig. 22. (segm. anale) (1881).*

Chrysis marginalis, Schck, Nass. Jahrb. XI. p. 31, n. 9. (1856) sec. spec. ab ipso auctore acceptum (nec Brullé). — Lampr. Goldwesp. Deutschl. p. 18. ♀. (1881).

Chrysis Dahlbomi, Chevr. Chrysid. du Léman, p. 64. ♂ ♀. (1862). — Ab. Feuille Jeun. Natural. VII. p. 67. (1877). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 161. (1879).

Chrysis cribrata, Gerst. Stett. Ent. Zeit. XXX. p. 186. ♀. (1869). — Schck, Progr Gymn. zu Weilb. p. 15, n. 16. ♀. (1870). — Lampr. Goldwesp. Deutschl. p. 18, n. 50. ♀. tab. I. fig. 22 (segm. anale) (1881).

Chrysis analis Spin. *var. Perrisi* (e mando typographico secundum auctorem pro Perrini) et *var. rubescens,* Rad. Horæ Soc. Ent. Rossicæ. XV. p. 144. (1879) sec. spec. typ. e collect. Rad.

Chrysis Perrini, Rad. Horæ. Soc. Ent. Rossicæ. XXIII. p. 25. ♂. (1888).

Chrysidi Sybaritae Först. penitus similis; sed paulo maior et latior, fronte indistincte transverse flexuoso-marginata, antennis crassioribus, articulo tertio, præsertim in feminis, quarto duplo longiore, abdominis segmentis dorsalibus fere æqualiter dense et crasse, fere cribrato punctatis, punctatura simplici, secundo margine apicali haud purpurascenti, tarsis fusco-rufis, vena radiali subangulatim curvata.

«*Armure.* La branche du forceps est plissée vers l'extrémité et se termine par une partie courte allongée. Son bord supérieur est presque droit et se termine par une partie saillante α; cette partie est plus visible en dessous. Volsella large. La forme des crochets et du couvercle génital est représentée sur les fig. 52i et 52k.» (Rad. l. c. tab. V. fig. 52a, 52b, 52c.)

Clarissimus Auctor de armatura genitali *Chrysidis Perrini* vero sequentia scripserat:

«*Armure.* Le bord supérieur de la branche du forceps, vu en face, est évidé; il est, vu de côté, comme échancré et garni de poils. La forme des crochets est représentée sur la fig. 55i.» (Rad. l. c. tab. V. fig. 55a, 55b, 55c.)

Patria: Hispania (Guér.); Italia (Spin.); Gallia (Ab. et Mus. Hung.); Germania (Schck et Mus. Hung.); Helvetia (Chevr.); Carniolia sup. (Gerst.); Moravia (Coll. Handlirschi!); Austria (Mus. Hung.); Caucasus (Coll. Rad.! et Mus. Hung.).

529. **Chrysis excisa** Mocs.

Chrysis excisa (Mocs.), Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 25. ♂. (1888).

Chrysidi anali Spin. simillima neque aliter distinguenda, nisi armaturam genitalem respicias, quæ secundum Dom. Radoszkovszky hoc modo descripta est:

«*Armure.* Le bord intérieur de la branche du forceps est continué, vers l'extrémité du côté externe échancré; cette échancrure se trouve à l'endroit, où se partagent les parties supérieure et inférieure de la branche du forceps, et y est garnie de poils

* Hæc synonyma incerta sunt, quoniam sub nomine *Chrysis analis* Spin. confusæ species, tantum tempore reçenti in duas divisæ sunt.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

longs. Volsella est densement garnie de poils. Les crochets brusquement allongés vers l'extrémité.» (Rad. l. c. tab. V. fig, 53a, 53b, 53c.)

Patria: Gallia (Coll. Rad.!).

530. **Chrysis Sybarita** Först.

Chrysis Sybarita, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 309, n. 72. ♀. (1853) sec. spec. typ. Mus. Nat. Hung. — Mocs. Chrys. faun. Hung. 64 et 88, n. 32. ♂ ♀. (1882). excl. *Chrys. analis var. incerta* Rad. syn. — Frey, Chrys. Helvet. p. 55 et 74. ♂ ♀. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 25. (genit. maris) (1888).

Chrysis analis, Chevr. Chrysid. du Léman, p. 62. ♂ ♀. (1862). — Ab. Feuille Jeun. Natural. VII. p. 67. (1877). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 57, n. 26. ♂ ♀. (1887). — Buyss. Revue d'Entom. VII. p. 9. (1888). — Destef. Natural. Sicil. VII. p. 144. (1888) (nec Spin.).

Chrysis Chevrieri, Ab. Feuille Jeun. Natural. VII. p. 67. (1877); Annal. Soc. Linn. Lyon. XXVI. p. 55 et 66. (1879). — Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 161. (1879) (nec Mocs).

Mediocris vel submagna, sat robusta, cyanea parumque violascens; facie, sæpius etiam pronoto et mesonoti lobis lateralibus mesopleurisque virescentibus; cavitate faciali sat profunda, lata, argenteo-sericeo-pilosa, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne distincte arcuatim acute-marginata; antennis brevibus, haud crassis, fuscis, cano-puberulis, articulis duobus primis viridibus vel viridi-cyaneis, tertio longitudine mediocri, quarto subæquali; genis valde brevibus, sublinearibus; pronoto brevi, transverso-rectangulo, antice in medio leviter sulcato; thorace dense sat crasse punctato-subreticulato, subcoriaceo; abdominis segmentis dorsalibus viridi- vel igneo-auratis, tertio margine apicali cyaneo vel violascenti-cyaneo, primo basi trifossulato subdisperse, sed sat crasse, 2—3 densius et subtilius subrugoso-punctatis et punctulatis, punctatura nempe duplici, in maribus parum crassiore, secundo margine apicali sæpius tenuiter purpurascenti, secundo carinula mediana sat distincta, 2—3 basi nigro-æneis, tertio dentibus analibus brevibus, triangularibus, emarginaturis leniter arcuatis, centrali paulo, in maribus sæpissime evidenter, latiore quam externis; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis vel virescentibus, tarsis fuscis; alis hyalinis, medio sordidis, cellula radiali subcompleta, vena radiali leniter curvata. — ♂ ♀; long. 7—9 mm.

«*Armure.* Cette espèce par la forme de l'armure ressemble beaucoup à l'espèce précédente (Chrys. analis Spin.); on peut même confondre ces deux espèces sans l'examen détaillé. Le *Sybarita* diffère de l'*analis* par la forme du bord supérieur de la branche du forceps, qui ne se termine pas par une partie saillante, ni en dessus, ni en dessous. La forme des crochets est représentée sur la fig. 54i.» (Rad. l. c. tab. V. fig. 54a, 54b, 54c.)

Patria: Hispania (Gog.); Sicilia (Destef.); Gallia (Ab. et Mus. Hung.); Helvetia (Chevr.); Bohemia et Austria infer. (Coll. Handlirschi!); Hungaria sat rara (Först. Mocs.); Russia orientalis (Orenburg, Coll. Rad.! et Mus. Hung.); Caucasus (Tiflis Coll. Saussurei!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

var.' Valesiana Frey.

Chrysis sybarita, Först. *var. valesiana,* Frey, Chrys. Helvet. p. 55 et 74. ♂ ♀. (1887) sec. spec. ab ipso Clariss. Auctore accepta.

Typo simillima, sed corpore magis robusto ac plerumque maiore, vertice, pronoto, mesonoti lobis lateralibus, disco scutelli et mesopleuris viridi-auratis, abdominis segmento dorsali secundo punctatura densiore magisque subtili subcoriacea, ventris segmentis quoque uberius viridi-pictis. ♂ ♀ ; long. 9—10 mm. — Patria: Helvetia (Frey et Mus. Hung.).

531. **Chrysis Thalhammeri** n. sp.

Parva, elongata, minus robusta, læte-cyanea parumque violascens, parcius cinereo-alboque pilosa; macula minuta ad stemmata postica, pronoti lateribus, vitta lata loborum lateralium mesonoti scutelloque viridi-subauratis; cavitate faciali profunda, dense punctulato-coriacea, medio canaliculata, lateribus argenteo-sericeo-pilosa, superne flexuoso distincte transverse-marginata; clypeo viridi-æneo; antennis tenuibus, nigris, scapo cyaneo, flagelli articulo secundo brevi, tertio parum longiore; genis brevibus sublinearibus; vertice thoracisque dorso sat dense crasseque minus regulariter punctato-reticulatis; pronoto brevi, transverso, antice in medio vix impresso, metanoto convexo, dentibus postico-lateralibus late-triangularibus, acutis; abdominis segmentis dorsalibus igneo-auratis, basi cyaneo, minus dense sat profunde æqualiter punctatis, primi interstitiis punctis minutis inmixtis, secundo carinula mediana distincta, tertio disco utrinque leniter concaviusculo-immerso, ante marginem apicalem sat fortiter calloso, foveolis circiter decem oblongis maiusculis, ipso margine apicali nigro-cyaneo, distincte quadridentato, dentibus in arcum dispositis, mediocribus, acute-triangularibus, æquilongis, emarginaturis minus profunde arcuatis subæqualibus; ventre pedibusque cyaneis, tarsis fusco-testaceis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis nigro-cyaneis. — ♀; long. 5 1/2 mm.

Chrys. anali Spin. et *Sybaritae* Först. similis; sed corpore dimidio minore, abdominis segmento dorsali tertio disco utrinque leniter concaviusculo-immerso, ante marginem apicalem sat fortiter calloso et alis magis hyalinis; a *Chrys. anali* insuper: fronte acute-marginata, antennarum articulo tertio brevi, quarto solum parum longiore, abdominis segmenti primi dorsalis punctatura duplici; a *Chrys. Sybarita* vero: abdominis segmentis dorsalibus punctatura proportionaliter multo fortiore magisque sparsa, distincta.

Speciem hanc iucundam in honorem Clarissimi Domini J. Thalhammer, Professoris Colocensis Hungariæ, Entomologiæ cultoris assidui, summæ meæ venerationis causa denominare optavi.

Patria: Hungaria meridionalis (Mus. Hung.).

532. **Chrysis exigua** n. sp.

Parva, elongata, minus robusta, cyanea parumque violascens, parce albo-pilosa; vertice maxima ex parte, pronoto, vitta lata loborum lateralium mesonoti, scutello et

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

mesopleuris ex parte leniter viridi-subauratis; genis brevibus, sublinearibus; cavitate faciali profunda, violascenti-cyanea, punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse marginata, margine utrinque leniter sinuato, vertice punctato-reticulato; thorace supra crasse profundeque irregulariter punctato-reticulato; abdomine aurato, basi violascenti-cyaneo, segmentis dorsalibus dense crasse et profunde cribrato-punctatis primique interstitiis punctulatis, secundo tertiique parte basali carinula mediana instructis, hoc ante marginem leniter callosum parum convexiusculo-immerso, disco spatio ovali subtilissime dense punctulato, serie anteapicali foveolis circiter 13 oblongis maiusculis profundis, testaceo-pellucidis, margine apicali violascenti-cyaneo, quadridentato, dentibus mediocribus triangularibus fere æqualibus, emarginaturis sat profunde-arcuatis æquilatis; ventre cyaneo; antennarum scapo tibiisque externe viridi-cyaneis, flagelli articulo primo supra viridi, reliquis fuscis, cano-puberulis, secundo brevi, tertio parum tantum longiore; femoribus cyaneis, tarsis testaceis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice parum aperta, tegulis violascenti-cyaneis. — ♀; long. 6 mm.

Chrys. Thalhammeri similis et affinis; sed vertice thoraceque supra crassius magisque distincte punctato-reticulatis, abdominis segmentis dorsalibus crassius profundiusque punctatis, his non igneo-auratis, tertio disco spatio ovali subtilissime denseque punctulato, dentibus apicalibus in lineam rectam transversam (non vero in arcum) dispositis, foveolis testaceo-pellucidis, margine apicali violascenti-cyaneo, dentibus analibus parum longioribus, mihi distinguenda esse videtur.

Patria: Turkestania (Taschkend, Coll. Rad.).

533. **Chrysis scutellaris** Fabr.

Chrysis scutellaris, Fabr. Ent. Syst. Tom. IV. p. 458. ♀. (1794); Ent. Syst. Suppl. p. 257, n. 4. ♀. (1798); Syst. Piez. p. 171, n. 5. ♀. (1804). — Dhlb. Dispos. p. 10, n. 12. (1845); Hym. Europ. II. p. 265, n. 147. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 77, n. 21. (1856). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 70. (1858). — Chevr. Chrysid. du Léman, p. 49. ♂ ♀. (1862). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 306, n. 41. tab. V. fig. 26. (1866). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 15. (1870). — Thoms. Opusc. Ent. II. p. 106, n. 6. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 76 et 90. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 162. (1879). — Lampr. Goldwesp. Deutschl. p. 17, n. 47. (1881). — Mocs. Chrys. faun. Hung. p. 65 et 89, n. 33. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 52 et 66. ♂ ♀. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 74, n. 49. (1887). — Destef. Natural. Sicil. VII. p. 178. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 21. (genit. maris) (1888).

Chrysis segmentata, Dhlb. Monogr. Chrys. Suec. p. 9, n. 4. (1829).

Chrysis Rosenhaueri, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 322, n. 82. ♀. (1853).

Chrysis scutellaris Fabr. *var. modesta,* Tourn. Mittheil. Schweiz. Ent. Ges. V. p. 306, n. 8. (1878).

Mediocris, elongata, sat robusta, viridi-cyanea parumque violascens, densius cinereo-alboque pilosa; vertice circa stemmata, pronoto antice et mesonoti lobis lateralibus sæpius viridi-subauratis, mesopleuris postscutelloque vel concoloribus vel cum scutello igneo-auratis; cavitate faciali subangusta, sat profunda, in femina cyanea vel nigro-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

violacea, in mare virescens aut viridi-subaurata, dense punctulato-coriacea, in mare argenteo-sericeo-pilosa, medio longitudinaliter canaliculata, superne obsoletissime marginulata; antennis brevibus, fuscis, cano-puberulis, articulis duobus vel tribus primis in femina plerumque cyaneis, in mare viridibus, tertio longitudine mediocri, secundo duplo tantum longiore; genis brevibus, articulo antennarum quarto æquilongis; pronoto sat longo, capite parum tantum breviore, transverso-rectangulo, antice in medio sat profunde longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus brevibus, late-triangularibus, acutis; vertice densius, sed subtilius, thorace supra crassius minus profunde punctato-reticulatis, reticulatione in mesonoto parum subtiliore non tam regulari; abdominis segmentis dorsalibus: igneo- vel rubro-auratis, segmento primo in mare nonnunquam plus minusve virescenti, basi nigro-violaceo, superne viridi-aureo-limbato, leniter trifoveato; 2—3 basi nigro-æneis, secundo carinula mediana minus distincta, tertio valde convexo, foveolis sat profunde immersis mediocribus numerosis ovatis aut subtriangularibus, margine apicali cyaneo vel violascenti-cyaneo, in mare brevi, dentibus brevissimis obtusis undulato-flexuosis, in femina externis brevibus, distincte triangularibus, emarginaturis lenissime arcuatis; segmentis omnibus fere æqualiter dense minus profunde, tertio parum rugosiuscule, punctatis; ventre pedibusque in femina cyaneis, in mare viridi-cyaneis, tarsis brunneis, in mare plerumque dilutioribus; alis subhyalinis, disco parum sordidis, venis firmis piceis, cellula radiali lanceolata incompleta. — ♂ ♀; long. 6—8 mm.

Variat: mas in speciminibus Hungaricis et e Dalmatia ortis: scutello viridi-aurato, postscutello cyaneo.

«*Armure.* La branche du forceps rétrécie vers l'extrémité et vers l'extrémité garnie fortement de poils. Les crochets sont caractéristiques par leur forme.» (Rad. l. c. tab. IV. fig. 46a, 46b, 46c, 46i.)

Patria: Hispania (Gog.); Italia (Fabr.); Gallia (Court.); Helvetia (Chevr.); Tyrolis (Dalla Torre et Kohl); Germania (Schck); Austria (Dhlb.); Hungaria (Mocs.); Dalmatia (Mus. Hung.); Græcia (Mus. Atheniense!); Dania et Suecia (Dhlb.); gubernium Mosquense (Assmus); Caucasus (Coll. Rad.!); Algeria (Setif, Coll. Saussurei!).

534. **Chrysis consobrina** n. sp.

Mediocris, elongata sat robusta, viridi-cyanea, parce cinereo-alboque pilosa; vertice (apud feminam post ocellos nigro-violaceo maculato), pronoto, vitta mesonoti loborum lateralium plus minusve distincta, scutello et sæpe etiam mesopleuris viridi-subauratis vel scutello aurato; genis brevibus, antennarum articulo secundo æquilongis; cavitate faciali cyanea, vel virescenti-cyanea, minus profunda, medio canaliculata, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte transverse-marginata; collo et mesonoti lobo medio nigro-violascentibus; vertice et thorace supra sat crasse profundeque punctato-reticulatis; abdominis segmentis dorsalibus viridi- parumque igneo-auratis, minus dense cribrato-punctatis, a latere visis subreticulatis, segmento

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

secundo carinula mediana haud distincta, tertio margine apicali cyaneo, serie anteapicali minus profunde immersa foveolis oblongis minus profundis, dentibus quattuor apicalibus apud feminam brevibus, intermediis adhuc brevioribus obtusis, externis distincte triangularibus, emarginaturis mediocribus leniter arcuatis, apud marem paulo longioribus, fere æquilongis, distincte triangularibus, emarginaturis fortius arcuatis; ventre viridi et cyaneo nigroque maculato; pedibus viridi--cyaneis, tarsis rufo-testaceis; antennarum scapo viridi-cyaneo, flagelli articulis duobus primis supra viridibus, reliquis fuscis, tertio mediocri, quarto parum longiore; alis hyalinis, disco modice sordidis, venis firmis piceis, cellula radiali lanceolata apice parum aperta. — ♂ ♀; long. 8 mm.

Sexus uterque *Chrysidis scutellaris* Fabr. proximus; sed toto corpore et etiam abdomine multo fortius dispersiusque punctatis, pronoto et lobis lateralibus mesonoti viridi-subauratis, serie anteapicali foveolis fere oblongis (non ovatis), dentibus apicalibus parum, in mare multo longioribus, optime distinquenda.

Patria: territorium Transcaspicum (Coll. Rad.!) et Persia (Demalen et Ashabad, Coll. Rad.! et Mus. Hung.).

535. **Chrysis pœcilochroa** Mocs.

Chrysis poecilochroa, Mocs. Horæ Soc. Ent. Rossicæ. XXIII. p. 27. ♂. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 27. (genit. maris) (1888).

Mediocris, elongata, robusta, viridi-cyanea, longius cinereo-alboque pilosa; macula utrinque ad stemmata postica, temporibus supra, pronoto, mesonoti lobis lateralibus et lobo medio parte postica, scutello, postscutelli medio mesopleurisque supra auratis; genis brevibus; cavitate faciali sat profunda, viridi-cyanea, punctulato-coriacea, lateribus albo-sericeo-pilosa, superne transverse minus acute marginata, margine flexuoso; vertice dense, thorace supra inæqualiter crassius dispersiusque punctato-reticulatis; abdomine segmentis dorsalibus: primo et secundi basi viridi-, parte apicali et tertio usque ad marginem læte-cyaneum igneo-auratis, omnibus dense sat crasse parum rugosiuscule-punctatis, primo in medio leniter longitudinaliter canaliculato, canalicula purpureo-nitente, secundo carinula mediana minus distincta, tertio convexo, ante marginem non calloso, serie anteapicali foveolis circiter 10 sat magnis et profundis rotundis, margine apicali dentibus brevibus triangularibus æquilongis, emarginaturis sat profunde-arcuatis, centrali externis paulo angustiore; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; antennarum scapo, femoribus tibiisque viridibus, flagelli articulo primo supra viridi, reliquis et tarsis fusco-rufis, flagelli articulo secundo valde brevi, tertio solum fere dimidio tantum longiore, quarto subæquali; alis hyalinis, venis fuscis, cellula radiali lanceolata fere completa, tegulis cyaneis. — ♂; long. 7 mm.

Chrysidis consobrinae mihi (*proximae* mihi i. l. nec Cam.) affinis; sed cavitate faciali superne marginata, abdominis segmentis dorsalibus non tam crasse profundeque punctatis, serie anteapicali foveolis non oblongis, sed rotundis et profundis, antennarum flagello fere toto fusco-rufo, articulo secundo non mediocri et quarto quintoque æquali, iam satis distincta.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

« *Armure.* La branche du forceps plus allongée vers l'extrémité que dans les espèces précédentes; elle est sans échancrure vue de côté. Volsella plus petite et allongée vers l'extrémité. Les crochets larges.» (Rad. l. c. tab. V. fig. 57a, 57b, 57c, 57f, 57i.)

Patria: Algeria (Coll. Rad.).

536. **Chrysis Asiatica** Rad.

Chrysis analis, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 21, n. 40. ♂ ♀. (solum ♂, excl. ♀.) (1877) (nec Spin.).

Chrysis asiatica, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 26, ♂. (1888) sec. spec. typ. e coll. Rad.

Submagna, robusta, viridi-cyanea, parcius cinereo-alboque pilosa; pronoto, mesonoti loborum lateralium vitta angusta, scutello et postscutello pleurisque viridi-auratis vel subauratis; mesonoti lobo medio cyaneo medio viridi-subaureo maculato; cavitate faciali planata, lata, viridi, dense punctato-coriacea argenteo-sericeoque pilosa, medio longitudinaliter canaliculata, superne haud distincte transverse-marginata; antennis crassiusculis, fusco-rufescentibus, cano-puberulis, scapo viridi-aureo, articulo tertio proportionaliter brevi, quarto parum tantum longiore; genis sat longis, articulo antennarum tertio æquilongis; vertice densius et subtilius, thorace supra crasse profundeque punctato-reticulatis, mesonoti lobo medio fere scrobiculato; pronoto longo, longitudine capitis, transverso-rectangulo, antice in medio profunde longitudinaliter sulcato, metanoto convexo, dentibus postico-lateralibus longis, acute-triangularibus; abdominis segmentis dorsalibus: duobus primis auratis, margine apicali et tertio igneo-auratis, omnibus minus dense profunde cribrato-punctatis, secundo carinula mediana minus distincta, tertio supra seriem anteapicalem leniter incrassato, foveolis circiter 10 magnis et profundis violaceis subrotundis nonnullis confluentibus, margine apicali cyaneo, quadridentato, dentibus in arcum dispositis, acute triangularibus, lateralibus mediocribus, centralibus fere duplo longioribus, emarginaturis profundis æquilatis, centrali externis parum adhuc profundiore; ventre pedibusque aurato-viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis rufescenti-testaceis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice sat late aperta, tegulis viridi-cyaneis. — ♂; long. 8 mm.

Chrys. consobrinae mihi similis et affinis; sed multo maior ac robustior, flagelli articulis fusco-rufescentibus, thorace abdomineque supra fortius punctatis, foveolis maioribus profundioribusque, lateralibus confluentibus, dentibus intermediis multo longioribus, acute-triangularibus (non vero subobtuse-triangularibus), ventre pedibusque aurato-viridibus (non cyaneis) et tarsis multo dilutioribus, mihi distinguenda esse videtur.

Etiam *Chrys. poecilochroae* mihi similis; sed multo maior, thorace abdomineque multo fortius punctatis, dentibus intermediis longioribus etc. iam satis distincta. — A *Chryside anali* Spin. demum: antennis, tarsis, capite thoraceque et abdomine ex parte aliter coloratis, punctatura multo fortiore et dentibus intermediis multo longioribus, optime distinguenda.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«*Armure.* Par la forme de l'armure, cette espèce se rapproche aux espèces précédentes. Le bord supérieur de la branche du forceps est presque échancré; la partie allongée est beaucoup plus large, non rétrécie vers sa base, garnie (avec l'échancrure) de poils assez forts et longs. La forme des crochets diffère aussi.» (Rad. l. c. tab. V. fig. 56a, 56b, 56i.)

Patria: Turkestania (Taschkend et vallis Sarafschan, Coll. Rad.!).

537. **Chrysis Pérezi** n. sp.

Chrysis Chevrieri Ab. *var.* (ex Algeria), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 67. (1879).

Mediocris, elongata, sat robusta, parce cinereo-alboque pilosa, læte-violascenti-cyanea; thorace supra viridi-aureoque variegato, abdominis segmentis dorsalibus coccineo-auratis, tertii margine apicali violascenti-cyaneo; capite concolore, cavitate faciali profunda, medio viridi-subaurata, subtiliter dense transverse-striata, lateribus violascenti-cyanea, punctulato-coriacea argenteo-sericeoque pilosa, superne acute transverse flexuoso-marginata; antennis sat longis, fuscis, scapo viridi-cyaneo, flagelli articulo secundo brevi, primo dimidio tantum longiore, tertio subæquali; genis linearibus, fere nullis; vertice ante stemmata et lateribus viridi-subaurato, medio et occipite nigro-æneis; pronoto brevi, transverso, antice in medio profunde impresso, aurato, lateribus et margine apicali anguste colloque cyaneis, meso- ac metanoto violascenti-cyaneis, illius loborum lateralium vitta lata et mesopleurarum macula perpendiculari lata scutelloque auratis, hoc lateribus virescentibus; capite supra thoraceque sat crasse minus profunde punctato-reticulatis; metanoto convexo, dentibus postico-lateralibus brevibus, acute-triangularibus, postice truncatis; abdominis segmentis dorsalibus dense sat crasse subrugoso-punctatis, subcoriaceis, secundo tertioque basi nigro-æneis, secundo carinula mediana minus distincta, tertio convexo, ante seriem anteapicalem leniter calloso, foveolis cyaneis, sat profundis distinctisque circiter 12, mediocribus, rotundatis, margine apicali quadridentato, dentibus omnibus brevibus, arcuato-obtusis, emarginaturis minus profundis ad invicem æquilatis; ventre pedibusque violascenti-cyaneis parum viridi-variegatis, tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata fere completa, tegulis nigro-æneis subcyanescentibus. — ♂; long. 8—9 mm.

Patria: Algeria (Bône); a Clariss. Domino J. Pérez, Professore Burdigalensi, mecum benevole communicata et in eius honorem denominata.

538. **Chrysis Helvetica** Mocs.

Chrysis superba, Tourn. Annal. Soc. Ent. Belg. XXII. p. 95. ♂ ♀. (1879). — Frey, Chrys. Helvet. p. 54 et 74. (1887) (nec Cress. 1865, nec Rad. 1877).
Chrysis Helvetica, Mocs. Term. Füz. XI. p. 16. (1887).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Descriptio secundum Tournier:

«Long. 5 1/2 mill.

♂ ♀. Corps brièvement, très-finement et très-éparsément pubescent; pubescence d'un blanc grisâtre. Tête d'un beau vert clair brillant, avec une petite tache bleue entre les ocelles; elle est grosse; vue de devant, elle offre une forme très-arrondie; impression faciale profonde, occupant tout l'espace compris entre les yeux, limitée en haut par une carène transversale presque droite, assez saillante; le fond de l'impression est très-finement ridé, chagriné et partagé longitudinalement par un fort sillon qui s'étend antérieurement jusqu'à la racine des antennes; de chaque côté de ce sillon, elle est densement couverte d'une pubescence médiocrement longue, d'un beau blanc d'argent; le front, l'occiput et les joues sont très-densément couverts de points moyens, ronds, assez profonds, ne laissant entre eux que des intervalles étroits, brillants; les joues sont limitées postérieurement par une fine carène abrégée environ à la hauteur des angles antérieurs du pronotum; ce dernier est rouge doré brillant, il est aussi large que le mésonotum, parallèle sur les côtés, coupé droit devant, couvert d'une ponctuation moyenne, très-serrée, assez profonde, semblable à celle de la tête; compartiments latéraux du mésonotum et du scutellum colorés et ponctués comme le pronotum; compartiment médian du mésonotum d'un beau bleu violet; postscutellum et flancs du mésothorax vert doré, intervalles de la ponctuation par-ci par-là d'un rouge doré brillant; métathorax vert clair, un peu doré sur les angles latéraux; abdomen d'un rouge pourpre un peu doré, base du premier segment verte, dorée, marge apicale du troisième d'un beau bleu clair, quadridentée, les dents peu saillantes, égales; la ligne transversale au devant de la marge, formée de seize points, grands, profonds, en forme de carré long; surface des 3 segments couverte d'une ponctuation forte, égale, médiocrement serrée, les points profonds, ronds, laissant entre eux des intervalles lisses, brillants, d'une largeur environ égale à la moitié d'un des points; sur le seconde segment se montre une trace de carène longitudinale, lisse, brillante; poitrine, cuisses, tibias et ventre d'un beau vert clair, brillant; tarses brun-jaunâtre. Cette magnifique espèce a quelques rapports de taille et d'aspect avec *C. aeruginosa* Klug, mais elle s'en distingue nettement par son coloris, sa ponctuation, sa pubescence plus courte et la structure du troisième segment; chez *C. aeruginosa* Klug, le bourrelet transversal qui précède la marge apicale, est fort, saillant; au-dessus de lui, l'on voit une forte dépression transversale et les dents de la marge sont assez saillantes, aiguës; chez *C. superba,* le bourrelet transversal qui précède la marge apicale, est peu saillant, peu accentué; au-dessus de lui le segment est régulièrement convexe, sans dépression transversale et les dents apicales sont peu saillantes, les échancrures sont très-largement ouvertes.

Peney, juillet 1877, sur des Sedum.»

«Ein sehr zierliches Thierchen, mit *aeruginosa* Dhlb. verwandt, aber durch die in angeführter Notiz angegebenen Merkmale (Thoraxrücken ganz oder grösstentheils grünlich kupferfarbig oder feuriggoldig.... Gesicht und Unterseite blau (*aeruginosa*

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Dhlb.).... Gesicht und Unterseite hellgrün, höchstens am Bauch mit violettem Glanz, Tarsen gelb (*superba* Tourn.) davon unterschieden.... Unterseite und Kopf goldgrün, am Bauch ins violetblaue übergehend. Von oben hat das Insekt, ein ♀ grosse Aehnlichkeit mit *pulchella* Spin. ♂, unterscheidet sich aber sofort durch den schön blauen und deutlich kurz vierzähnigen Hinterrand des 3. Hinterleibssegments und die glänzend smaragdgrüne Grübchenreihe, Pronotum, die Seitenfelder des Metanotum, Scutellum und die Basismitte des Postscutellum sind feuriggoldig, das Mittelfeld des Mesonotum schön blau; auf dem grünen Kopf ist das Feld innerhalb der Ocellen dunkelblau. Ganz brillant nehmen sich auf dem Schildchen und Hinterschildchen die vertieften grünen Punkte in der rothgoldenen Umgebung aus.» (Frey-Gessner l. c.).

Patria: Helvetia.

XXI. *Abdominis dorsum auratum vel viridi-auratum (vel in Chrys. Taczanovszkyi Rad. varietate e Persia in segmentis primo et tertio plus minusve viridi-cyanescens), vel viridi- vel rubro-cupratum, segmenti tertii margo apicalis aenescens, virescens, viridi-cyaneus vel viridi- vel aeneo-cupratus.*

1) *Caput et thorax plerumque maxima ex parte viridi-aurata, cuprata, viridi- vel igneo- aut rubro-cuprata.*

*

Conspectus specierum huius subsectionis.

1 (4). Abdominis segmento dorsali tertio margine apicali viridi-cyaneo.

2 (3). Thorace maxima ex parte viridi-aurato vel viridi-subaurato; abdomine supra igneo-aurato ... ... *distincta* Mocs.

3 (2). Thorace subtus nigro-cyaneo, supra et segmentis dorsalibus viridi-cupratis *aeruginosa* Dhlb.

4 (1). Abdominis segmento dorsali tertio margine apicali læte-viridi vel viridissimo aut nigro- vel viridi-æneo vel cupreo-ænescenti.

5 (8). Abdominis segmento dorsali tertio margine apicali læte-viridi parumque viridi-subaurato vel viridissimo.

6 (7). Corpore minuto, obscure-cupreo ... ... *undulata* Rad.

7 (6). Corpore magno, robusto, subtus viridi-cyaneo, supra aurato. *Drewseni* Dhlb.

8 (5). Abdominis segmento dorsali tertio margine apicali nigro- aut viridi-æneo, aut cupreo-ænescenti.

9 (10). Capite, thorace abdomineque ex parte rubro-cupreo-auratis, margine apicali cupreo-ænescenti ... ... *apicalis* Rad.

10 (9). Capite, thorace abdomineque ex parte viridi-auratis, margine apicali nigro- aut viridi-æneo.

11 (12). Corpore mediocri; cavitate faciali in medio spatio lato lævi ac polito; abdominis segmento dorsali tertio margine apicali dentibus mediocribus acute-triangularibus, intermediis postpositis ... ... *Kolazyi* n. sp.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

12(11). Corpore minuto vel parvo; cavitate faciali tota dense punctulato-coriacea; abdominis segmento dorsali tertio margine apicali dentibus brevibus, intermediis late-triangularibus, externis longioribus magis acutis, in arcum dispositis *varidens* Ab.

*

539. **Chrysis distincta** Mocs.

Chrysis analis, Spin. *var. incerta*, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 145. (1879) sec. spec. typ. e coll. Rad.

Chrysis distincta, Mocs. Term. Füz. XI. p. 13. (1887).

Parva, elongata, robusta, viridi-subaurata, parce albo-pilosa; cavitate faciali subtus, clypeo, vertice, mesonoti lobis lateralibus fere totis, scutello et postscutelli basi auratis; collo, mesonoti lobo medio et lateribus loborum lateralium cyaneis, alarum tegulis violaceis; genis brevibus, linearibus; cavitate faciali profunda, dense punctulato-coriacea, medio canaliculata, superne transverse marginata, margine medio flexuoso; vertice punctato-subreticulato, thorace supra crasse parum subreticulatim punctato; abdomine igneo-aurato, fere ubique æqualiter minus profunde cribrato-punctato, segmento secundo carinula mediana abbreviata lævi nigro-ænea, tertio ante marginem leniter callosum concaviusculo-immerso, serie anteapicali foveolis numerosis distinctis sulciformibus, margine apicali viridi-cyaneo, dentibus quattuor triangularibus brevibus fere æqualibus, in arcum levem dispositis, emarginaturis arcuatis, externis fortius, quam centrali; ventre viridi-cyaneo nigroque maculato; antennarum scapo, femoribus tibiisque viridi-subauratis, flagello fusco-, tarsis rufo-testaceis; alis sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata fere incompleta. — ♀; long. 6 mm.

Species: corpore minore, viridi-subaurato, cavitate faciali subtus, labro, clypeo, vertice mesonoti lobis lateralibus, scutello et postscutello basi auratis, abdominis segmentis dorsalibus fere ubique æqualiter cribrato-punctatis, segmento secundo carinula mediana lævi nigro-ænea, tertio ante marginem leniter callosum concaviusculo-immerso, serie anteapicali foveolis sulciformibus, margine apicali viridi-cyaneo, tarsis dilutioribus, ab omnibus *Chrysidis analis* Spin. varietatibus, est certe distincta.

Chrys. exiguae et *Thalhammeri* socia; sed magis robusta, thorace et margine apicali abdominis segmentorum dorsalium tertio aliter coloratis foveolisque sulciformibus, bene distincta.

Patria: Caucasus (Erivan, Coll. Rad.).

540. **Chrysis Kolazyi** n. sp.

Mediocris, elongata, sat robusta, nigro-violacea, parcius cinereo-alboque pilosa; vertice et occipite, thorace supra cum scutello et postscutello mesopleurisque viridi-auratis, mesonoto parum cupreo-nitenti; cavitate faciali lata, sat profunda, læte-viridi parumque violascenti, medio spatio sat lato lævi ac polito, lateribus dense punctato-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

subcoriaceis, superne indistincte transverse marginata; antennis tenuibus, brevibus, nigris, cano-puberulis, articulis tribus primis viridi-ænescentibus, tertio sat longo, quarto dimidio adhuc longiore; genis sat longis, articulo antennarum quarto æquilongis; vertice dense minus crasse, pronoto, mesonoti lobis lateralibus, scutelli parte postica et postscutello fortius, sed parum dispersius punctato-reticulatis; mesonoti lobo medio et scutelli basi crassius sat sparsim punctatis, punctis aliquot minoribus inmixtis; pronoto brevi, antice in medio longitudinaliter impresso, metanoto convexo, dentibus postico-lateralibus mediocribus subacute-triangularibus; abdominis segmentis dorsalibus viridi-auratis disco et præsertim tertio igneo-cupreoque lavatis, primo basi trifoveato, secundo carinula mediana minus distincta, tertio depresso convexo, supra seriem tumido, foveolis viridibus irregularibus haud numerosis parum sulciformibus, margine apicali nigro-æneo, sat longo, minus dense subtilius punctato, quadridentato, dentibus in arcum dispositis, intermediis postpositis (sicut in *Chrys. Grohmanni* Spin.), dentibus mediocribus, acute-triangularibus, intermediis approximatis parum longioribus quam externis, emarginaturis: centrali externis valde multo angustiore magisque arcuata, margine laterali ante dentem externum leniter sinuato; segmentis: primo dense minus fortiter punctato et subtilissime punctulato, secundo parum fortius punctato interstitiis angustis lævibus, tertio dense sat fortiter punctato-aciculato; ventre viridi, igneo-cupreoque vario; pedibus viridi-subauratis, femorum apice, tibiarum basi apiceque ænescentibus, tarsis fusco-rufescentibus; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, tegulis nigro-æneis. — ♀; long. 7 mm.

Patria: Austria; a Clariss. Dom. J. Kolazy inventa mihique donata (Mus. Hung.)

541. **Chrysis varidens** Ab.

Chrysis varidens, Ab. Diagnos. Chrysid. nouvell. p. 6, n. XXXIV. (1878); Annal Soc. Linn. Lyon. XXVI. p. 91. ♂♀. (1879).

Chrysis Schousboei, Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 163. (1879) (nec Dhlb.).

Minuta vel parva, elongata, sat robusta, violascenti-cyanea, densius cinereo-alboque pilosa; fronte cum vertice, thorace supra cum scutello, postscutelllo et angulis postico-lateralibus mesopleurisque viridi-auratis, plus minusve cupreo lavatis; cavitate faciali minus profunda, dense punctulato-coriacea, in femina virescenti-cyanea, in mare magis viridi, argenteo-sericeoque pilosa, superne indistincte marginata; antennis mediocribus, tenuibus, fuscis, cano-puberulis, articulis tribus primis violascenti-cyaneis, tertio longo, quarto duplo longiore; genis longis, articulo antennarum tertio æquilongis; vertice thoraceque supra minus crasse densius punctato-reticulatis; pronoto sat brevi, in mare breviore, transverso, antice in medio parum impresso, metanoto convexo, dentibus postico-lateralibus brevibus, acute-triangularibus; abdominis segmentis dorsalibus viridi-auratis parumque cupreo-lavatis, tertio margine apicali viridi-æneo vel virescenti; primo sat dense minus fortiter et profunde punctato subtiliterque punctulato, secundo subtilius parum rugosiuscule-punctato, carinula mediana nulla, tertio basi fere similiter

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

00079040

punctato, ante seriem dense multo subtilius punctulato, foveolis circa 6—7 mediocribus elongatis, per carinulam medianam brevem interruptis, margine apicali quadridentato, dentibus brevibus, intermediis late-triangularibus, externis longioribus magis acutis, emarginaturis minus profundis, intermedia externis multo angustiore; ventre violascenti-cyaneo nigroque vario; femoribus tibiisque violascenti-cyaneis, tibiis externe in maribus nonnunquam virescentibus, tarsis fuscis; alis hyalinis, vix sordidis, cellula radiali triangulariter lanceolata completa, tegulis violascenti-cyaneis. — ♂ ♀; long. 4—7 mm.

Patria: Gallia (Montpellier, Ab. et Mus. Hung.: Lorgues, Ab.; Vernet, Mus. Hung.) et Hungaria (a Clariss. Dom. Rogenhofer inventa, Mus. Cæs. Vindob.!).

542. **Chrysis æruginosa** Dhlb.

Chrysis aeruginosa, Dhlb. Hym. Europ. II. p. 267, n. 148. ♀. (1854). — Schck, Nass. Jahrb. XI. p. 77, n. 23. (1856); Progr. Gymn. zu Weilb. p. 15, n. 17. (1870). — Lampr. Goldwesp. Deutschl. p. 17, n. 48. (1881). — Frey, Chrys. Helvet. p. 54 et 74. (1887).

Descriptio secundum Dahlbom:

«Mediocris 2 lin. decimal. long. confertim punctulato-subcoriacea subtus nigro-cyanea supra viridi-cuprea, abdominis segmenti tertii margine apicali cyaneo, dentibus brevibus distinctis, externis triangularibus, intermediis obtusis.

Observ. Habitus omnino *Chrysidis succinctae*. Caput viride fronte cyanea, vertex confertim subtiliter punctato-rugulosus aut subreticulatus. Clypeus mediocris aut subparvus inæqualis transversus viridis, margine apicali nigro-fusco transverso vix emarginulato. Mandibulæ basi nigro-, apice rufo-piceæ. Thoracis dorsum convexiusculum modice punctato-subreticulatum viridi-cupratum, metanoto pectore pedibusque cyaneis, illo (metanoto) suturis et angulis virescentibus. Abdominis dorsum modice convexum, confertim modice punctatum viridi-cupratum; segmentorum primi et secundi margo basalis nigro-æneus; segmentum tertium medio leniter et transverse concaviusculo-immersum, at iterum — ante seriem — modice convexiusculum; series ante-apicalis foveolis parvis rotundis circ. 12 distinctis, per carinulam medianam intercedentem brevissimam interrupta; margo apicalis prominulus sparse punctulatus viridi-cyaneus. Venter niger, cyaneo- et viridi-maculatus.»

«Eine der kleineren Chrysisarten, 6—7 mm. lang, von den mit kupfergoldglänzendem Rücken bekleideten Arten durch den deutlich vierzähnigen und nur von der Grübchenreihe an mit grünblauem Rand versehenem dritten Hinterleibssegment, von *superba* Tourn. durch die dunkle, blau bis schwarze Unterseite und die blaue Stirn unterscheidbar.» (Frey-Gessner l. c.).

Patria: Germania (ad Berolinum, Dhlb.); Helvetia (Tourn.); Tyrolis (Dalla Torre et Kohl).

543. **Chrysis apicalis** Rad.

Chrysis apicalis, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 146, n. 54. ♀. (1879) sec. spec. typ. e coll. Rad.

00079040

Minuta vel parva, sat robusta, æneo-viridis, parcius cinereo-alboque pilosa; vertice vel toto vel tantum circa stemmata, pronoto et postscutello similiter, sed mesonoto et scutello, nonnunquam etiam mesopleuris rubro-cupreo-auratis; cavitate faciali minus profunda, viridi, dense punctato-coriacea, medio spatio sat lato longitudinali lævi ac polito viridi-aureoque nitenti, superne indistincte transverse marginata; antennis mediocribus, tenuibus, fuscis, cano-puberulis, scapo ænescenti, tertio sat longo, quarto dimidio adhuc longiore; genis mediocribus, articulo antennarum quarto æquilongis; pronoto brevi, antice in medio impresso, metanoto convexo, dentibus postico-lateralibus brevibus acute-triangularibus; vertice thoracisque dorso sat crasse minus dense punctato-subreticulatis; abdominis segmentis dorsalibus rubro-cupreo-auratis, primo et lateribus nonnunquam parum virescentibus, vel secundo carinula mediana indistincta nigro-ænescenti, tertio margine apicali cupreo-ænescenti, foveolis elongatis haud numerosis concoloribus, apice quadridentato, dentibus in arcum dispositis mediocribus triangularibus, centralibus approximatis postpositis, emarginaturis minus profunde arcuatis, centrali externis parum profundiore, margine apicali apicem versus angustato subrecto; segmentis: primo dense minus profunde ac crasse punctato et punctulato, secundo dense parum rugosiuscule-, minus crasse punctato, tertio parum depresso-convexo subaciculatim punctato, supra seriem leniter incrassato; ventre nigro-æneo, viridi cupreoque vario; femoribus tibiisque viridi cupreoque nitentibus, tarsis sordide-testaceis; alis hyalinis parum sordidis, venis pallide-fuscis, cellula radiali triangulariter lanceolata incompleta, tegulis viridi-æneis cupreoque lavatis. — ♀; long. 5—5½ mm.

Patria: Russia meridionalis (Sarepta, Mus. Vindob.!) et Caucasus (Rad.!).

544. **Chrysis undulata** Rad.

Chrysis obscura, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 106, n. 30. ♂. tab. II. fig. B. (segm. anale) (1876) sec. spec. typ. e coll. Rad. (nec Smith).
Chrysis undulata, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 145, n. 53. (1879) sec. spec. typ. e coll. Rad.
Chrysis chalcochrysa, Mocs. Term. Füz. XI. p. 15. (1887).

Minuta, robusta, obscure-cuprea, dense cinereo-alboque pilosa; vertice ex parte, suturis posticis lobi medii mesothoracis, metathoracis parte truncata metapleurisque viridi-æneis; mesonoti lobo medio basi nigro-æneo; fronte angusta, cavitate faciali minus profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte marginata; genis sat longis; vertice et pronoto densius, mesonoto et scutello postscutelloque sparsim crassius haud profunde punctato-reticulatis; abdomine cupreo-aurato, segmentis, præsertim primo lateribus, viridi nitentibus, tertii margine apicali læte-viridi parumque viridi-subaurato, omnibus minus dense crassius subrugoso-punctatis, secundo carinula mediana indistincta, tertio margine laterali concavo-arcuato supra seriem leniter calloso, serie anteapicali foveolis 6 profundis sat magnis rotundisque, margine apicali quadridentato, dentibus in mare subbrevibus, triangularibus, in arcum dispositis, intermediis approximatis postpositis externis paulo longioribus, emarginaturis

minus fortiter arcuatis, externis latioribus quam centrali, in femina late-triangularibus, brevibus, undulatis, emarginaturis non profundis æquilatis; ventre viridi-cupreoque aurato, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque cupreo-auratis; antennarum articulo primo cupreo-, reliquis et tarsis fusco-rufis, flagelli articulo secundo mediocri, tertio parum tantum longiore; alis sordide-hyalinis, venis fusco-testaceis, cellula radiali lanceolata incompleta, tegulis viridi-cupreis. — ♂ ♀; long. 6 mm.

Species: colore corporis, antennarum et tarsorum, a congeneribus facile cognoscitur.

Patria: Caucasus (Coll. Rad.!).

545. **Chrysis Drewseni** Dhlb.

Chrysis Drevseni, Dhlb. Hym. Europ. II. p. 273, n. 152, ♂? (1854).

»Magna robusta 3 lin. decimal. long. confertim crasse punctata subtus viridi-cyanea supra aurea, segmenti tertii margine apicali viridissimo distincte quadridentato dentibus brevibus, externis acute triangularibus, intermediis latis obtusissime arcuatis.

Observ. Habitus fere *Chrysidis bidentatae.* Corpus robustum elongatum sublineare obtusum pubescens. Caput latiusculum orbiculatum confertim modice punctatum subreticulatum viridi-aureum partibus faciali ovali et occipitali viridi-cyaneis; cavitas facialis quadrata subtiliter punctulata planiuscula lateribus albo-sericea; antennæ breves fuscæ, basi viridi-cyaneæ; clypeus mediocris transversus trapezinus punctulatus nitidus, disco parum convexus, margine apicali piceo transverso. Mandibulæ (præter maculam baseos viridem), maxillæ palpique fusco-piceæ. Thorax rectangulariter subcylindricus, confertim crasse punctato-reticulatus, subtus viridi-cyaneus, dorso parum convexo aureus; pronoti truncatura antica declivis coriaceo-rugulosa, cyanea, viridis, et aureo irrorata foveis centralibus 2 parallelis ovalibus planis politis viridibus; metanoti anguli posticolaterales robusti acute triangulares; pedes viridi-cyanei, tarsis basi fuscis, apice totoque latere infero brunneo-testaceis; alæ sordidæ, venis firmis piceis, cellula radiali triangulariter lanceolata incompleta, apice modice aperta; tegulæ alarum viridi-cyaneæ. Abdomen ovale aut potius obtuse subrectangulum, longitudine capitis thoracisque simul sumtorum, dorso modice convexum et confertim punctatum nitidum rubro-aureum, limbo nonnihil viridi-micans; segmentum tertium totum depresso-convexum, series ante-apicalis irregularis et obsoleta scil. foveolis tantum ad latera detegendis, medio autem cum reliqua punctura conmixtis; margo apicalis viridissimus, non nisi obsoletissime humilior quam regio antica et huius puncturam præbens, dentes externi breves acute triangulares valde remoti, intermedii breves lati obtusissime arcuati; emarginatura centralis lata lenissima, emarginaturæ externæ breves obliquæ modice arcuatæ; margo lateralis leniter curvus.«

Patria: Promontorium Bonæ Spei Africæ meridionalis.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

2) *Thoracis dorso toto aurato, capite cyaneo viridi-maculato.*

546. **Chrysis Schousboei** Dhlb.

Chrysis Schousboei, Dhlb. Hym. Europ. II. p. 272, n. 151. (1854).

«Mediocris circ. 2 lin. decimal. long. confertim modice punctata viridi-cyanea thoraceque abdomine dorso aureis, segmenti tertii margine apicali æneo quadriangulato.

Observ. Magnitudo et habitus omnino *Chrysidis succinctae* formæ *optimae;* ab hac vero dignoscitur: dorso thoracis toto aureo, abdominis segmenti tertii margine apicali per truncaturas laterales obliquas et media recta trapezii instar quadriangulato; series ante-apicalis foveolis irregularibus, aliis distinctis, aliis confusis, medio per interstitium brevissimum interrupta. Ceterum *Chrysidi succinctae* simillima. Caput cyaneum viridi-maculatum. Venter nigro-æneus, viridi- et cyaneo-maculatus.»

Patria: regnum Maroccanum [Tanger] Africæ septentrionalis.

3) *Thoracis dorso ex parte tantum aurato vel viridi-aurato: pronoto nempe antice et lobis solum lateralibus mesonoti; capite cyaneo vel violascenti-cyaneo.*

547. **Chrysis Grohmanni** Dhlb.

Chrysis gloriosa, Dhlb. Dispos. p. 10, n. 11. ♀. (1845).

Chrysis Grohmanni, Dhlb. Hym. Europ. II. p. 271, n. 150. ♀. (1854). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 22, n. 42. ♂ ♀. tab. II. fig. 7. ♀. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 77 et 91. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 163. (1879). — Lampr. Goldwesp. Deutschl. p. 16, n. 40. (1881).

Chrysidi succinctae Linn. et præsertim *varietati bicolor* Lep. similis; sed magis robusta, mesonoti lobo medio parte postica nigro-violaceo, corpore ubique et præsertim abdominis dorso multo fortius punctato, huius segmento tertio dentibus quattuor apicalibus robustis acute-triangularibus, emarginaturis latitudine mediocribus, sed profunde arcuatis, externis obliquis et centrali parum latioribus, dentibus intermediis postpositis, margine laterali obliquo leniter arcuato, cellula radiali lanceolata fere completa. — ♂ ♀; long. 5—7 mm.

Margo apicalis in mare plerumque cyanescenti-viridis et lobi laterales magis viridi-aurei.

Patria: Sicilia (Dhlb. et Coll. Fairmairei!); Gallia (Ab.); Tyrolis meridionalis (Kohl); Hungaria ad Fanum Sancti Viti Flamoniensis [Fiume] a Dom. Korlević inventa (Mus. Hung.); Dalmatia (Gasperini! et Mus. Hung.); Caucasus (Coll. Rad.!); Persia (Demavanda, Coll. Rad.!); Turkestania (desertum Kisil-kum. Rad.).

4) *Caput et thorax cyanea, mesonoto viridi.*

548. **Chrysis Kessleri** Rad.

Chrysis Kessleri, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 21, n. 41. ♀. tab. II. fig. 6. (1877).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«Subparva, caput cyaneum rugoso-punctulatum; cavitas facialis quadrata profunde subtiliter strigosa, albido-pilosella, margine superno abrupto, biarcuato; antennæ nigræ; thorax crasse punctatus cyaneo-violascens, dorsulo viridi, scutello metanoto rugosis, anguli postico-laterales magni triangulares subcurvi; abdominis segmenta confertim profunde scrobiculato-punctata, segmentum primum viride cum basi cyanea, secundum viridi-aureum, tertio igneo-aureum, margo apicalis sordide virescens foveolis magnis rotundatis profundioribus; dentes apicales externi breves triangulares, intermedii brevissimi arcuato obtusi, emarginatura centralis obsoletissima; pedes cyanei tarsis pallidis; alæ hyalinæ.

Long. 6 mm.»

Patria: Turkestania (Vallis Sarafschan).

5) *Caput et thorax viridi-cyanea, lobus medius mesonoti cyaneus.*

549. **Chrysis Taczanovszkyi** Rad.

Chrysis Taczanovszkyi, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 146, n. 102. ♀. (1876) sec. spec. typ. e coll. Rad.

Chrysis viridimargo, Buyss. Revue d'Entom. VI. p. 191, n. 29. ♀. (1887) sec. spec. typ. e coll. Abeillei.

Chrysis Mariae, Buyss. Revue. d'Entom. VI. p. 193, n. 31. ♂. (1887) sec. spec. typ. e coll. Abeillei.

Mediocris vel submagna, sat robusta, viridi-cyanea vel cyaneo-viridis parumque in mare viridi-subaureo nitens, parcius cinereo-alboque pilosa; collo et mesonoti lobo medio vel toto vel tantum antice violascenti-cyaneis; cavitate faciali sat profunda et lata, viridi vel viridi-subaurata, dense punctulato-coriacea argenteo-sericeoque pilosa, in medio transverse substrigosa, superne transverse marginata, margine utrinque post stemma anticum distincte vel minus distincte arcuato areamque subreniformem plus minusve distinctam includente; genis mediocribus, articulo antennarum secundo parum longioribus; vertice densius, sed subtilius, pro- et mesonoto postscutelloque dispersius, sed parum crassius punctato-reticulatis, scutello sparsim crassius punctato, interstitiis angustis lævibus ac politis; pronoto sat brevi, transverso-rectangulo, antice in medio longitudinaliter sulcato, metanoto convexo, dentibus postico-lateralibus mediocribus, crassis, acute-triangularibus divarricatis; abdominis segmentis dorsalibus viridi-, parumque subigneo-auratis, præsertim segmento secundo (in una varietate e Persia: segmento primo, secundi basi et tertio plus minusve viridi-cyaneis), primo basi viridi-cyaneo superne trifossulato, 2—3 basi nigro-violaceis, tertio margine apicali viridi-cyaneo vel præsertim in mare cyaneo-viridi; segmentis duobus primis crasse sat sparsim, tertio densius subtiliusque punctatis, primi interstitiis subtilissime punctulatis, secundo carinula mediana minus distincta subtilissime punctulata, angulo postico-laterali acuto, tertio apice quadridentato, margine laterali remoto ante dentem externum lenissime sinuato; ventre viridi-cyaneo viridi aureoque variegato, segmento secundo basi utrinque

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

nigro-maculato; pedibus læte-viridibus, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta, tegulis viridi-cyaneis.

Femina: antennis tenuibus, fuscis, cano-puberulis, articulis tribus primis læte-viridibus vel parum cyanescentibus, tertio longo, secundo duplo longiore; abdominis segmento dorsali tertio disco utrinque concaviusculo-immerso, ante seriem incrassato-convexo, foveolis circiter 10—12 sat magnis vel mediocribus distinctis violascentibus rotundatis, margine apicali longo, sparsim crassius haud profunde punctato, dentibus sat longis acute-triangularibus fere in lineam transversam dispositis, intermediis duobus parum longioribus, emarginaturis profunde arcuatis subæqualibus vel centrali externis parum angustiore et tunc etiam profundiore. — Long. 8—9 mm.

Mas: antennis sat crassis, fuscis, cano-puberulis, articulis duobus primis viridi-subauratis, tertio valde brevi, secundo vix longiore; abdominis segmento dorsali tertio disco convexo, foveolis sat profunde immersis circiter 12 mediocribus distinctis rotundatis, margine apicali brevi, dense subtiliter punctato, dentibus mediocribus acute-triangularibus fere in lineam transversam dispositis, subæqualibus, emarginaturis minus profunde arcuatis, subæquilatis. — Long. 7—8 mm.

Species hæc eximia a speciebus subsectionis sequentis: abdominis segmentis dorsalibus 2—3 imo basi nigro-violaceis, iam facile cognoscitur.

Patria: insula Candia (Mus. Atheniense!); Asia minor (Aidin, Mus. Hung.); Caucasus (vallis Akstafa, Coll. Rad.!); Transcaucasia (Lenkoran, Mus. Hung.); Syria (Buyss., Mus. Hung. et Coll. Wüstneii!); Persia (Coll. Rad.!); Aegyptus (Coll. Rad.!).

6) *Caput et thorax cum abdominis dorso viridi-subaurata vel viridi-aurata, segmentum tertium aut totum viride aut viridi-subauratum, margo apicalis vel concolor vel viridi-cyaneus.*

*

Conspectus specierum huius subsectionis synopticus.

1 (4). Antennarum flagello nigro vel fusco.

2 (3). Antennarum articulo tertio mediocri, quarto parum tantum longiore; metanoti dentibus postico-lateralibus latis oblique-truncatis; abdominis segmentis dorsalibus: secundo carinula mediana minus distincta microscopice punctulata, tertio disco utrinque concaviusculo-immerso, foveolis distinctis; tarsis rufo-testaceis *aurulenta* n. sp.

3 (2). Antennarum articulo tertio sat longo, quarto dimidio adhuc longiore; metanoti dentibus postico-lateralibus late-triangularibus, apice incurvis; abdominis segmentis dorsalibus: secundo carinula mediana distincta lævi ac polita, tertio convexo, foveolis confluentibus; tarsis fuscis vel rufescentibus *chrysoprasina* Först.

4 (1). Antennarum flagello tarsisque rufo-testaceis.

5 (6). Capite magno ac lato, pronoto antice non angustato; corpore ubique fortiter punctato; abdominis segmenti dorsalis tertii foveolis profunde immersis confluenibus... ... ...*chrysoprasina* Först. *var. imperatrix* Buyss.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

6(5). Capite parvo, latitudine solum partis anticæ pronoti anterius valde angustati; corpore subtilius punctato; abdominis segmenti dorsalis tertii foveolis irregularibus orbiculatis non numerosis ... ... *xanthocera* KLUG.

*

550. **Chrysis aurulenta** n. sp.

Mediocris, robusta, cyaneo-viridis parumque viridi-subaureo nitens, densius cinereo-alboque pilosa; mesonoto lobo medio antice alarumque tegulis viridi-cyaneis; cavitate faciali minus profunda, densissime argenteo-sericeo-pilosa, punctulato-coriacea, lata, superne indistincte transverse-marginata; antennis mediocribus, tenuibus, nigris, articulis anticis argenteo-puberulis, duobus primis et tertii basi læte-viridibus, hoc mediocri, quarto parum tantum longiore; genis sat longis, articulo antennarum tertio æquilongis; vertice dense sed subtilius, thorace supra parum dispersius fortiusque minus profunde punctato-reticulatis; pronoto sat longo, transverso-rectangulo, antice in medio leniter impresso, metanoto convexo, dentibus postico-lateralibus validis, latis, oblique-truncatis; abdominis segmentis dorsalibus viridi-auratis, secundi parte maxima apicali et tertio subigneo-auratis, margine apicali viridi-cyaneo; primo basi subtus nigro-violaceo, medio longitudinaliter sulcato, sulco lato lævi ac polito, 2—3 basi nigro-æneis, secundo carinula mediana minus distincta microscopice punctulata, tertio disco utrinque transverse concaviusculo-immerso, carinula mediana indistincta subtilissime punctulata, ante seriem convexo, foveolis profundis irregularibus magnis et minutis parum oblongis, margine apicali quadridentato, dentibus mediocribus, acutis, intermediis longioribus quam externis, emarginaturis profunde arcuatis, centrali externis multo longiore; segmentis: primo dense minus crasse ac profunde punctato interstitiisque subtilissime punctulatis, secundo parum subtilius rugosiuscule-punctato, in lateribus punctis etiam minutis inmixtis, tertio similliter punctato; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato, tertii basi aureo-limbato; pedibus cyaneo-viridibus, tarsis rufo-testaceis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta. — ♂; long. 8 mm.

Patria: Malatia in Mesopotamia Asiæ minoris (Mus. Hung.).

551. **Chrysis chrysoprasina** FÖRST.

Chrysis chrysoprasina, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 321, n. 81. ♀. (1853). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 21. (genit. maris) (1888).

Chrysis rutilans, Dhlb. Hym. Europ. II. p. 260, n. 144. ♂ ♀. (1854) (excl. Oliv. syn.). — Schck, Nass. Jahrb. XI. p. 77, n. 19. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 559, n. 11. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 306, n. 39, tab. IV. fig. 24. ♂. (1866). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 13. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Lampr. Goldwesp. Deutschl. p. 18, n. 54. (1881). — Frey, Chrys. Helvet. p. 54 et 72. ♂ ♀. tab. III. fig. 24. ♂ ♀. (margo apic.) (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 64, n. 35. (1887) (nec Oliv.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Mediocris aut magna, robusta, cyaneo-viridis, parcius cinereo-alboque pilosa; vertice, thorace supra et pleuris plus minusve læte viridi-subauratis, occipite, collo, lobo medio mesonoti antice alarumque tegulis cyaneis; cavitate faciali profunda, lata, medio longitudinaliter canaliculata, lateribus punctato-coriacea et, præsertim in mare, argenteo-sericeo-pilosa, superne indistincte transverse-marginata; antennis mediocribus, crassiusculis, fuscis, argenteo-puberulis, articulo scium primo viridi-aurato vel læte-viridi, tertio sat longo, secundo duplo longiore; genis sat longis, articulo antennarum tertio fere æquilongis; vertice thoracisque dorso dense minus crasse punctato-subreticulatis; pronoto longo, longitudine capitis, transverso-rectangulo, antice in medio longitudinaliter profunde sulcato, metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus, apice incurvis; abdominis segmentis dorsalibus auratis, viridi- vel præsertim duobus primis formose coccineo-, rarius subigneo-auratis, tertio sæpissime viridi-aurato, foveolis nigro-violaceis, margine apicali viridi-cyaneo; 2—3 basi nigro-æneis, secundo carinula mediana distincta, lævi ac polita, tertio convexo, foveolis profundis politis confluentibus fere sulcum transverso-linearem efformantibus, medio per carinulam brevem interruptis, margine apicali quadridentato, dentibus a margine laterali remotis mediocribus aut brevibus, robustis, intermediis plerumque longioribus spinoideis, externis triangularibus, emarginaturis profunde arcuatis, centrali externis angustiore; segmentis: primo sat dense minus crasse ac profunde punctatis interstitiisque subtilissime punctulatis, secundo tertioque fere similiter, parum rugosiuscule-punctatis; ventre violascenti-cyaneo viridi-nigroque vario; pedibus viridi-cyaneis, tarsis fuscis; alis sordide-hyalinis, apice dilutioribus, venis tenuibus fuscis, cellula radiali lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. 9—12 mm.

«*Armure.* La branche du forceps bombée, son bord supérieur brusquement échancré, garni de poils. La tenette est de la longueur de sa volsella. Le contour des crochets est représenté sur la fig. 45i.» (Rad. l. c. tab. IV. fig. 45a, 45b, 45c.)

Patria: Macedonia (Mus. Halense Saxonum!); Lusitania, Italia, Gallia, Turcia (Dhlb.); Tyrolis merid. (Dhlb. et Mus. Hung.); Helvetia (Frey et Mus. Hung.); promontorium Uralense (Eversm. in Coll. Rad.!); Armenia (Coll. Rad.!).

var. imperatrix Buyss.

Chrysis rutilans, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 20, n. 39. ♂ ♀. (1877) (nec Oliv.).
Chrysis imperatrix, Buyss. Revue d'Entom. VI. p. 190, n. 28. ♂. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 21. (genit. maris) (1888).

Typo simillima; sed antennarum flagello tarsisque rufo-testaceis, vertice, pronoto, mesonoti lobis lateralibus scutelloque lætius viridi-auratis et multo fortius dispersiusque punctato-subreticulatis, mesonoti lobo medio læte-cyaneo, abdominis segmentis dorsalibus duobus primis quoque multo fortius dispersiusque cribrato-punctatis, interstitiis latis lævibus, dentibus lateralibus longioribus. — Patria: Persia (Askhabad, Rad.) et Turkestania (Taschkend, Coll. Rad.!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«L'armure de *Chr. imperatrix* Buyss. dans ses détails est identique avec celle de l'espèce précédente (Chr. chrysoprasina Först.), et comme sa forme n'est pas très commune, mais caractèristique, je prends cette espèce comme une variété très jolie de *Chr. chrysoprasina* Först.» (Rad. l. c.).

552. **Chrysis xanthocera** Klug.

Chrysis (Spintharis) xanthocera, Klug. Symb. phys. Dec. V. tab. XLV. fig. 5. (1845).

Mediocris, elongata, minus robusta, cyaneo-viridis, longius cinereo-alboque pilosa; vertice et thorace supra mesopleurisque viridi-auratis, mesonoto vel solum eius lobo medio cyanescenti; capite parvo, latitudine solum partis anticæ pronoti anterius valde angustati; cavitate faciali minus profunda ac lata, dense argenteo-sericeo-pilosa, medio longitudinaliter canaliculata et utrinque punctulato-coriacea, superne depresso-convexa, non marginata; antennis brevibus, crassiusculis, rufo-testaceis, articulis duobus primis viridi-auratis, tertio brevi, quarto vix longiore; clypeo longo, dense punctato, apice truncato nigroque æneo; genis mediocribus, antennarum articulo quarto æquilongis; vertice dense, pronoto et mesonoti lobis lateralibus parum dispersius fortiusque irregulariter punctato-subreticulatis, mesonoti lobo medio et scutello punctatura magis regulari; pronoto sat longo, convexo, antice in medio longitudinaliter profunde sulcato, metanoto convexo, dentibus postico-lateralibus validis acute-triangularibus; abdominis segmentis dorsalibus concinne auratis, vel totis, vel tertio cyaneo-viridi parumque subaureo-nitenti; 2—3 basi nigro-cyaneis, secundo carinula mediana abbreviata minus distincta, tertio convexo, supra seriem nec minime calloso, foveolis paucis irregularibus minutis orbiculatis medio late interruptis nonnullis confluentibus, margine apicali quadridentato, dentibus fere in lineam transversam dispositis mediocribus acute-triangularibus subæqualibus vel lateralibus parum brevioribus, a margine laterali bisinuato remotis, emarginaturis profunde-arcuatis subæqualibus vel centrali parum latiore; segmentis duobus primis fere æqualiter sat dense crasseque cribrato-punctatis, interstitiis angustis, hic illic subtilissime punctulatis, tertio densius et subtilius punctato; ventre pedibusque viridi-auratis, illo segmento secundo basi utrinque nigro-maculato, his tarsis rufo-testaceis; alis hyalinis vix sordidis, venis tenuibus fuscis, cellula radiali lanceolata incompleta, apice sat late aperta. — ♂; long. 7—8 mm.

Patria: Aegyptus (prope Alexandriam, mense Martio, Klug); territorium Transcaspicum [Krasnowodsk], mihi a Clariss. Domino Ferd. Morawitz donata (Mus. Hung.).

XXII. *Abdominis dorsum viridi-auratum, segmento tertio basi et lateribus cyaneis; scutello punctis profundis aureis ornato.*

553. **Chrysis auropunctata** n. sp.

Submagna, elongata, cyaneo-viridis, parce albo-pilosa; vertice inter stemmata et mesonoti lobo medio parte postica violaceis; foveolis minutis ad stemmata, fossula

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

transversa mesopleurarum et scutelli punctis sat sparsis profundisque auratis; genis brevibus, cavitate faciali profunda, punctato-coriacea, lateribus albo-sericeo-pilosa, superne flexuoso-marginata areaque insigni semicirculari stemma anticum excipiente et utrinque ramulum oblique demittente determinata; vertice et thoracis dorso sparsim sat crasse, postscutello fortius punctatis; mesopleuris ante apicem fossula transversa aurata lævi, apice postice arcuatim exciso-bidentatis; abdominis segmentis dorsalibus sat sparsim minus profunde cribrato-punctatis, viridi-auratis, tertio basi et lateribus cyaneis, secundo carinula mediana non satis distincta, tertio convexo, ante seriem leniter calloso, serie anteapicali foveolis circiter 14 magnitudine inæqualibus, centralibus sex magnis et profundis, reliquis lateralibus parvis, margine apicali sparsim punctulato, dentibus quattuor fere in lineam transversam dispositis brevibus, triangularibus, lateralibus paulo maioribus acutis, intermediis subacutis, emarginaturis minus profunde arcuatis, centrali externis paulo angustiore; ventre viridi, cyaneo et aureo variegato, segmento secundo basi utrinque nigro-maculato; femoribus et tibiis subaurato-viridibus, tarsis fuscis, articulis externe virescentibus; antennarum scapo et flagelli articulo primo viridibus, secundo cyanescenti, reliquis fuscis, flagelli articulo secundo haud longo, tertio parum longiore; alis fumato-hyalinis, violascentibus, venis firmis piceis, cellula radiali triangulariter lanceolata apice fere completa, tegulis viridi-cyaneis. — ♀; long. 11 mm.

Species: foveolis minutis ad stemmata, fossula transversa mesopleurarum et scutelli punctis auratis, vertice, foveolis et alis, facile cognoscitur.

Patria: Annam in Cochinchina (Coll. Rad.).

XXIII. *Abdominis dorsum unicolor: viridi-, igneo- vel coccineo-auratum, aut his coloribus variegatum.*

1) *Caput et thorax nigra, fronte violacea.*

554. **Chrysis seminigra** Walk.

Chrysis seminigra, Walk. List of Hym. collect. by Lord in Egypt. etc. p. 7, n. 31. ♀. (1871).

«Female. — Black, thickly punctured, with cinereous tomentum. Head purple in front. Antennæ black; first point purple. Scutum with two slight parallel furrows. Metathorax with a stout spine on each side of the hind border. Pectus purple. Abdomen golden green, with a very slight keel and with three large segments; third segment deep black at the base; tip quadridentate; under side black. Legs purple; tarsi black. Wings cinereous; veins black. Fore wings smoky brown, except along the exterior border. Length of the body 5 lines.»

Patria: Arabia (Wâdy Ferran).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

2) *Caput et thorax cyanea, viridia vel viridi-cyanea, nonnihil viridi-aureo irrorata vel solum pronoto et scutello viridi-subauratis.*

A. *Abdominis segmenti tertii dentes breves, intermedii triangulares, externi obtusiusculi, ipsum angulum lateralem efficientes.*

555. **Chrysis aestiva** Dhlb.

Chrysis aestiva, Dhlb. Hym. Europ. II. p. 286, n. 161. ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 56 et 68. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 160. (1879). — Frey, Chrys. Helvet. p. 53 et 68. ♂ ♀. tab. III. fig. 21. (margo apical.) (1887). — Destef. Natural. Sicil. VII. p. 157. (1888).

Submediocris vel mediocris, elongata, subparallela, viridi-cyanea vel parum violascenti-cyanea, longius cinereo-alboque pilosa; vertice, pronoto et scutello in femina plus minusve viridi pictis; cavitate faciali minus profunda, sat lata, in femina cyanea, in mare virescenti-cyanea dense argenteo-sericeoque pilosa, dense punctulato-coriacea, medio longitudinaliter canaliculata, superne convexa, non marginata; antennis brevibus, minus crassis, fuscis, cano-puberulis, articulis tribus primis viridi-auratis, tertio sat brevi, quarto parum tantum longiore; genis sat longis, articulo antennarum tertio adhuc parum longioribus; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter sulcato, metanoto convexo, dentibus postico-lateralibus sat validis acute-triangularibus; vertice thoracisque dorso dense minus crasse punctato-subreticulatis; abdominis segmentis dorsalibus igneo-auratis, 2—3 basi nigro-æneis, secundo carinula mediana indistincta, tertio medio in femina lenissime transversaliter immerso, in mare convexo, foveolis in femina mediocribus distinctis numerosis rotundatis, in mare tantum centralibus aliquot distinctis, lateralibus subobsoletis, margine apicali in femina mediocribus, in mare brevibus, dense subtiliter punctatis, quadridentatis, dentibus duobus tantum intermediis distinctis brevibus triangularibus, externis obtusiusculis ipsum angulum lateralem efficientibus, emarginatura centrali leniter transverse arcuata, externis obliquis lenissime arcuatis; segmentis: primo sat crasse minus profunde punctato interstitiisque angustis subtilissime punctulatis, 2—3 densius subtiliusque rugosiuscule-punctatis; ventre nigro-æneo, segmentis apice igneo-auratis in femina, igneo-auratis in mare, segmento secundo basi utrinque macula et tertio apice nigris; femoribus violascenti-cyaneis, tibiis externe virescentibus, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata subcompleta. — ♂ ♀; long. 6—7 mm.

Species: de segmento anali facile cognoscitur.

Patria: Helvetia (Frey); Dalmatia et Herzogovina (Mus. Vindob.!); Gallia (Ab. et Mus. Hung.); Hispania (Albarracin, Coll. Hiendlmayri!); Sicilia (Destef.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

B. *Abdominis segmenti tertii dentes breves, intermedii obtusi vel obtuse-arcuati, externi acuti vel triangulares.*

556. **Chrysis impar** Dhlb.

Chrysis impar, Dhlb. Hym. Europ. II. p. 287, n. 162. ♂. (1854)

«Subparva 1²/₃ lin. decimal. long. cyaneo-viridis, abdomine viridissime aureo, segmenti tertii serie ante-apicalis foveolis parvis rotundis circ. 10, dentibus apicalibus parvis triangularibus, intermediis apice obtusis, alis hyalinis, cellula radiali completa.

Observ. Valde similis et affinis *Chrysidi comparatae,* quam mutilatam et mucore obductam rite examinare non potui. Structura et sculptura omnino *Chrysidis comparatae.* Caput et thorax læte viridia. Antennæ robustæ nigro-fuscæ, basi virides. Clypeus apice leniter arcuato-emarginatus. Pronotum utrinque supra coxas fovea distinctissima ovata. Cavitas facialis subquadrata planiuscula superne distincte transverse arcuato-marginata. Pronoti truncatura antica et dorsuli area media cyaneæ. Sternum et metanoti discus quoque cyanescunt. Pedes virides tarsis fuscis. Alarum venæ brunneæ, tantum costa et vena radialis firmæ, reliquæ tenues. Abdominis segmentum primum aureo-viride, venter concolor, illius basis cyanescens; segmenta secundum et tertium viridi-aurea; segmentum tertium totum modice depresso-convexum; series ante-apicalis interrupta, foveolæ parvæ profundæ rotundatæ circ. 10 distinctæ; margo apicalis brevis punctulatus; dentes apicales parvi, omnes triangulares et intermedii summo apice obtusi, externi acuti; emarginaturæ leniter arcuatæ, centralis mediocris recte transversa, externæ nonnihil obliquæ et paullulum latiores; margo lateralis obliquus.»

Patria: insula Rhodus.

Animadversio. — *Chrysis impar,* Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 23, n. 45. ♂♀. tab. II. fig. 9. ♂. (1877) mihi alia esse videtur species.

557. **Chrysis Handlirschi** n. sp.

Mediocris, elongata, parallela, sat robusta, violascenti-cyanea, parcius cinereo-alboque pilosa; pronoto toto viridi-subaurato; cavitate faciali profunda, subangusta, medio leviter longitudinaliter canaliculata, utrinque dense punctulato-coriacea, supra spatio sublævi, fronte convexa, non marginata; antennis sat longis, fuscis, cano-pubescentibus, scapo ænescenti, articulo tertio sat longo, secundo duplo longiore; genis mediocribus, antennarum articulo quarto æquilongis; pronoto longo, transverso-rectangulo, antice in medio profunde sulcato, metanoto convexo, dentibus postico-lateralibus mediocribus, triangularibus, apice incurvis; vertice thoracisque dorso dense minus crasse ac profunde punctato-subreticulatis; abdominis segmentis dorsalibus subigneo-auratis, primo basi nigro-violaceo superne viridi-cyaneo limbato, 2—3 basi nigro-æneis, secundo carinula mediana indistincta, tertio depresso-convexo, foveolis profunde immersis mediocribus rotundatis nigro-æneis per carinulam medianam interruptis confluentibus,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

margine apicali crasso, sat longo, densius subtiliter punctato, quadridentato, dentibus valde brevibus, intermediis late obtuse-arcuatis, externis parum longioribus late-triangularibus, emarginaturis vix arcuatis, centrali externis parum latiore, margine apicali ante dentem externum leniter sinuato; segmentis omnibus fere æqualiter sat crasse ac profunde, parum rugosiuscule-punctatis; ventre viridi et cyaneo nigroque vario; pedibus violascenti-cyaneis, tibiis externe magis virescentibus, tarsis fusco-rufescentibus; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice aperta. — ♀; long. 7 mm.

Species, in honorem Hymenopterologiæ cultoris eximii A. Handlirsch, amicitiæ ac venerationis meæ sinceræ causa denominata: corpore parallelo, pronoto viridi-subaurato longo, punctatura abdominis segmentis dorsalibus dentibusque apicalibus, facile cognoscitur.

Patria: Asia minor (Brussa, Mus. Cæs. Vindobonense).

558. **Chrysis verna** Dhlb.

Chrysis verna, Dhlb. Hym. Europ. II. p. 285, n 160. ♀. (1854). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 29. (genit. maris) (1888).

Mediocris, sat lata ac robusta, cyaneo-viridis, parcius cinereo-alboque pilosa; capite thoraceque supra plus minusve viridi-subaureo et nigro-violaceo pictis; cavitate faciali minus profunda, lata, medio longitudinaliter canaliculata, utrinque anguste subtilissime transverse-striata, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne non marginata, sed cum convexitate frontali confusa; antennis mediocribus, crassiusculis, fuscis, argenteo-puberulis, articulis duobus primis ænescentibus, tertio sat longo, quarto dimidio adhuc longiore; genis brevibus, articulo antennarum secundo æquilongis; pronoto sat longo, transverso, antice in medio sat profunde longitudinaliter sulcato, metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus; vertice thoracisque dorso irregulariter minus crasse ac profunde punctato-subreticulatis; abdominis segmentis dorsalibus subigneo-auratis; primo basi cyaneo-viridi, 2—3 basi nigro-æneis, secundo carinula mediana indistincta, tertio convexo-depresso, supra seriem nec minime calloso, foveolis in femina, secundum Dahlbom, profundis, transversis, confluentibus, in mare foveolis minutis subrotundatis haud numerosis, lateralibus minus distinctis, margine apicali regione antica vix humiliore dense punctulato, quadridentato, dentibus a margine laterali parum remotis, externis latiusculis triangularibus brevibus, intermediis latis arcuato-obtusis brevissimis, emarginaturis ad latitudinem subæqualibus obliquis modice arcuatis; segmentis omnibus dense subtiliter, parum rugosiuscule-punctatis et punctulatis, subcoriaceis (adminimum in mare mihi solum cognito), margine laterali bisinuato; ventre igneo-aurato nigroque maculato; pedibus cyaneo-viridibus, tibiis externe viridi-subauratis, tarsis rufescentibus; alis sordide-hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata incompleta. — ♂; long. 8 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species cum *Chrys. Chevrieri* Mocs. multum habet similitudinis, sed punctatura abdominis et segmento anali longe discrepat.

«*Armure.* La branche du forceps forte, arrondie à son extrémité et presque nue. Volsella large, nue. Les crochets effilés à l'extrémité. Le couvercle génital représenté sur la fig. 62k.» (Rad. l. c. tab. V. fig. 62a, 62b, 62c, 62i).

Patria: insula Rhodus (Dhlb.); Caucasus (Coll. Rad.!).

Animadversio. — *Chrysis verna,* Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 159. (1879): «Tous les angles ou toutes les dens apicales bien nettement desinés, même les internes. . . . Corps de taille moyenne (quam *Chr. rutilantis* Dhlb.), tête poilue au-devant; troisième segment complètement vert» — alia est species.

C. *Abdominis segmenti tertii dentes omnes triangulares vel spinoidei.*

a) *Dentes externi ab angulo laterali remoti, angulo hoc arcuato-obtuso.*

559. **Chrysis Chevrieri** Mocs.

?*Chrysis cyanochrysa,* Forst. Novæ Spec. Ins. I. p 88, n. 88. (1781).

?*Vespa ignita,* Fourcr. Entom. Paris. II. p. 440, n. 25. (1785).

Chrysis distinguenda, Dhlb. Hym. Europ. II. p. 282, n. 158. ♂♀. (1854) (nec Spin.). — Schck, Nass. Jahrb. XI. p. 78, n. 28. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 559, n. 12. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 71. (1858). — Chevr. Chrysid. du Léman, p. 65. ♂♀. (1862). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 306, n. 46, tab. V. fig. 30. ♂. (1866). — Lampr. Goldwesp. Deutschl. p. 16, n. 42. tab. I. fig. 20. (segm. anale) (1881).

Chrysis manicata, Rad. Horæ Soc. Ent. Rossicæ. III. p. 306, n. 45, tab. V. fig. 29. ♂. (1866) sec. spec. typ. e coll. Rad. (nec Dhlb.).

Chrysis comparata, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 56 et 68, tab. II. fig. 45. ♂. (segm. anale), fig. 47. (pronotum) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 161. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 60, n. 30. (1887). — Destef. Natural. Sicil. VII. p. 157 et 220. (1888) (nec Lep.).

Chrysis Chevrieri, Mocs. Topogr. med. et phys. reg. Budap. p. 10. (1879); Chrys. faun. Hung. p. 68 et 90, n. 36. ♂♀. (1882). — Frey, Chrys. Helvet. p. 55 et 76. ♂♀. tab. III. fig. 25. (margo apical.) (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 28. (genit. maris) (1888).

Mediocris aut submagna, robusta ac sat lata, viridi- vel violascenti-cyanea, longius cinereo-alboque pilosa; cavitate faciali quadrata, minus profunda, lata, dense punctato-coriacea, argenteo-sericeoque pilosa, medio longitudinaliter canaliculata, superne distincte marginata, margine transverso vel recto, vel antice crenulato, sæpissime tamen antice concavo-arcuato; antennis mediocribus, crassis, fuscis, cano-puberulis, articulis tribus primis in femina cyaneis, in maribus duobus tantum primis et tertii basi viridibus, tertio longo, quarto fere duplo longiore; clypeo mediocri, transverso subtrapezino, depresso-planiusculo, punctulato nitido, ad centrum marginis apicalis modice arcuato-emarginato; genis sat longis, articulo antennarum tertio fere æquilongis; mandibulis bidentatis; margine occipitali utrinque angulo prominulo spinoideo; pronoto longo, longitudine capitis et ultra, transverso-rectangulo, antice in medio profunde longitudi-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

naliter sulcato, metanoto convexo, dentibus postico-lateralibus robustis latiusculis acute-triangularibus apice incurvis; vertice thoracisque dorso dense minus crasse punctato-subreticulatis, reticulatione in mare plerumque magis regulari; abdominis segmentis dorsalibus subigneo-auratis, primo et reliquorum lateribus parum virescentibus, primo parte truncata viridi-cyaneo leniterque trifossulato, 2—3 basi nigro-æneis, carinula angusta elevata plus minusve distincta, tertio supra seriem modice incrassato-convexo, foveolis numerosis profundis rotundatis mediocribus per carinulam medianam interruptis, margine apicali sat longo, in mare multo breviore, sparsim subtiliter punctato, quadridentato, dentibus a margine laterali longe remotis brevibus triangularibus æquilongis, fere in lineam transversam dispositis, emarginaturis modice arcuatis æquilatis, margine laterali bisarcuato, arcu superiore brevi et subperpendiculari, inferiore maximo valde convexo-obliquo; segmentis: primo parum fortiore, reliquis subtilius sat crasse ac dense punctatis; ventre viridi-cyaneo vel viridi et tunc nonnihil aureo-nitenti, segmentorum marginibus nigricantibus; pedibus viridi-cyaneis aut cyaneo-viridibus, tarsis fuscis; alis sordide-hyalinis, venis firmis piceis, cellula radiali lanceolata incompleta, apice anguste aperta. — ♂ ♀; long. 8—10 mm.

Species *Chrys. ignitae* Linn. similis; sed pronoto longo et dentibus apicalibus a margine laterali longe remotis, facile cognoscitur. Eam in honorem Fr. Chevrier denominavi, qui speciem post Dahlbomum primus optime descripserat.

«*Armure.* La branche du forceps forte; son bord intérieur échancré vers l'extrémité. Volsella grande, son bord parsemé de poils minces. Les crochets larges, leurs côtés parallèles, leur extrémité pointue.» (Rad. l. c. tab. V. fig. 60a, 60b, 60f).

Speciem hanc eximiam verisimiliter iam Forsterus primus noverat verbisque sequentibus descripserat: «Glabra nitens, capite thoraceque cyaneis, reliquis viridi-aureis, ano quadridentato. Habitat in Hispania ad Calpen freti Gaditani. Magnitudo parum inferior *Chrysid. ignita.* Caput cyaneum. Labium superius et regio inter oculos vestita pilis raris griseis. Antennæ fuscæ, articulis duobus ultimis, ad basin cyaneis. Thorax scabriusculus punctatus cyaneus, sub alis versus abdomen utrimque dentes singuli. Alæ fuscæ, costa venisque nigris. Abdomen viridi-aureum, ano quadridentato. Venter concavus nitens, coloris beryllini. Pedes femoribus cyaneis, tibiis beryllinis, tarsis fuscis.»

Patria: Hispania (Gog.); Gallia (Dhlb.); Italia (Dhlb.); Helvetia (Chevr.); Austria (Dhlb.); Tyrolis merid. (Dalla Torre et Kohl); Hungaria, non rara (Mocs.); Volga inferior (Eversm.); insula Rhodus (Dhlb.).

var. orientalis mihi

Typo simillima; sed abdominis segmentis dorsalibus viridi-auratis thoraceque plus minusve nonnunquam viridi-subaureo aut segmentis 2—3 tantum lateribus aureo pictis. — Patria: Græcia (Parnassus, Coll. Schmiedeknechti!; Ephesus, Mus. Turicense!) et Caucasus (Coll. Rad.!. Mus. Hung. et Vindob.! et Coll. Fairmairei!).

560. **Chrysis Chloris** n. sp.

Præcedenti et præsertim eius varietati valde similis; sed cavitate faciali dense subtiliter punctulato-coriacea, antennis fusco-rufis, tantum duobus primis articulis viridi-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

bus, tertio brevi, quarto vix longiore, clypeo producto, multo longiore, abdominis segmentis dorsalibus viridi-auratis, tertii dentibus apicalibus parum longioribus, foveolis minoribus haud numerosis minus distinctis, ventre concinne pure-aurato, segmento secundo basi utrinque nigro-maculato, geniculis, tibiarum apice tarsisque rufescenti-testaceis, optime distinguenda. — ♂; long. 8 mm.

Patria: Algeria (Setif, Coll. Saussurei).

561. **Chrysis comta** Först.

Chrysis comta, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 314, n. 76. ♂. (1853) sec. spec. typ. Mus. Nat. Hung.

Chrysis comparata, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 557. n. 7. ♂. (1857) sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. III. p. 307, n. 47. tab. V. fig. 31. ♂. (1866) (nec. Lep.).

Chrysis adulterina, Ab. Diagnos. Chrys. Nouvell. p. 4, n. XXII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 56 et 69. ♀. tab. II. fig. 46 (segm. anale), fig. 48 (pronotum) (1879).

Chrysis compta, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 29. (genit. maris) (1888).

Chrys. Chevrieri Mocs. similis et affinis; sed parum minor, magis elongata, subparallela, thorace supra plus minusve nonnunquam viridi-subaureo picto, genis brevioribus, pronoto brevi, fere tantum dimidii capitis, transverso, antice in medio vix impresso, abdominis segmentis dorsalibus auratis, rarius viridi-auratis, sed segmento dorsali primo plerumque viridi-aurato, secundi carinula mediana continua lata lævi ac polita, tertio disco basali dense subtiliter subaciculatim punctato, dentibus analibus multo longioribus acute-triangularibus subspinoideis, centralibus externis parum longioribus, facillime distinguenda.

A *Chrys. Chevrieri* Mocs.: pronoto brevi (sicut in Chrys. ignita Linn.), carinula segmenti secundi et tertii dentibus sat longis subspinoideis; a *Chrys. ignita* Linn. vero: dentibus apicalibus a margine laterali longe remotis, iam primo intuitu cognoscitur.

«*Armure.* Le bord intérieur de la branche du forceps deux fois échancré et garni de poils raids. Volsella large. Crochets allongés,» (Rad. l. c. tab. V. fig. 61a, 61b, 61c, 61i).

Patria: Gallia (Gavernie, Ab.); Helvetia (Ab.); Austria (ad Vindobonam a Dom. Kolazy inventa mihique donata, Mus. Hung.); Hungaria centralis, sat rara (Mocs.); Græcia (Mus. Atheniense!); Russia (Orenburg, Eversm.); Tauria (Coll. Rad.!); Caucasus (Coll. Rad.!); Asia minor (Först. et Mus. Hung.).

b) *Dentes externi ab angulo laterali non remoti.*

*

Conspectus specierum synopticus huius secundariæ sectionis.

1 (2). Fronte thoraceque longe fulvescenti-cinereo-, temporibus et parte reliqua corporis albo-villosis; abdominis segmentis dorsalibus 2—3 carinula mediana lata lævi ac polita, tertio convexo; corpore magno, 11½ mm. longo *Fairmairei* n. sp.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

2 (1). Corpore plerumque mediocri cinereo-alboque piloso; abdominis segmento dorsali tertio sine, vel cum carinula mediana, sed non lata lævi ac polita.

3 (4). Abdominis segmento dorsali tertio disco utrinque ad carinulam acutam concaviusculo-depresso, supra seriem fortiter incrassato-subconvexo, dentibus subspinoideis, intermediis externis longioribus ... *inaequalis* DHLB.

4 (3). Abdominis segmento dorsali tertio disco convexo vel leniter tantum concaviusculo-depresso, supra seriem haud vel tantum leniter incrassato.

5 (6). Thorace viridi, dorsuli area media suturisque omnibus cyaneis *manicata* DHLB.

6 (5). Thorace nigro-violaceo vel cyaneo plerumque tantum antice plus minusve viridi vel viridi-subaureo picto.

7 (20). Antennarum articulo tertio longo, quarto plerumque dimidio adhuc longiore.

8 (11). Capite thoraceque nigro-violaceis vel violascenti-cyaneis unicoloribus.

9 (10). Abdominis segmentis dorsalibus igneo-purpureoque auratis, 1—2 dense sat crasse parum rugosiuscule-punctatis, secundi carinula mediana indistincta *semiviolacea* n. sp.

10 (9). Abdominis segmentis dorsalibus auratis parumque ignitis vel purpuratis, 1—2 crasse profundeque cribrato-punctatis, secundo carinula mediana continua acuta ... *Kirschii* n. sp.

11 (8). Capite thoraceque viridi-, vel violascenti- aut nigro-ænescenti cyaneis plus minusve viridi vel viridi-subaureo pictis.

12 (13). Abdominis segmento dorsali tertio apicem versus fortiter angustato, dentibus intermediis a lateralibus longe remotis, postpositis ... *Schlettereri* n. sp.

13 (12). Abdominis segmento dorsali tertio apicem versus haud fortiter angustato, dentibus intermediis non postpositis.

14 (15). Pronoto antice, alarum tegulis, coxis, trochanteribus, femoribus tibiisque concinne auratis ... *Ruddii* SHUCK.

15 (14). Coxis, trochanteribus, femoribus tibiisque cyaneis, viridibus vel viridi-cyaneis.

16 (17). Calcari interiore tibiarum posticarum valido, curvato; tarsis posticis tibiis brevioribus ... *brevitarsis* THOMS.

17 (16). Calcari interiore tibiarum posticarum tenui, recto; tarsis posticis tibiis longioribus.

18 (19). Abdominis segmenti secundi angulis postico-lateralibus rectis, obtusis *ignita Linn. et var.*

19 (18). Abdominis segmenti secundi angulis postico-lateralibus unciformibus, spinoideis *uncifera* AB.

20 (7). Antennarum articulo tertio valde brevi, secundo vel quarto æquilongo; metanoti dentibus postico-lateralibus anguste-triangularibus, acutis, incurvis *cerastes* AB.

*

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

562. **Chrysis inæqualis** Dhlb.

? *Chrysis Miegii*, Guér. Revue Zoolog. p. 148, n. 13. (1842).

Chrysis inaequalis, Dhlb. Dispos. p. 8, n. 4. ♀. (1845); Hym. Europ. II. p. 278, n. 156. ♂ ♀. (1854). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 71. (1858). — Chevr. Chrysid. du Léman, p. 68. ♂ ♀. (1862). — Lampr. Goldwesp. Deutschl. p. 16, n. 45. (1881). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 56. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 161. (1879). — Mocs. Chrys. faun. Hung. p. 66 et 89, n. 35. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 55 et 76. ♂ ♀. (1887). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 59, n. 29. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 158. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 28 (genit maris) (1888).

Chrysis taeniophrys, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 325, n. 84. ♀. (1853).

Mediocris, sat lata ac robusta, cyanea vel violascenti-cyanea, longius cinereo-alboque pilosa; cavitate faciali planiuscula lata, medio longitudinaliter canaliculata, utrinque irregulariter fortius transverse-substriata, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne fortiter marginata, margine acuto leniter transverse-arcuato; antennis mediocribus minus crassis, fuscis, cano-puberulis, articulis tribus primis cyaneis, tertio longo, quarto quintoque simul sumptis æquilongo; genis sat longis, articulo antennarum quarto æquilongis; margine occipitali utrinque angulo spinoideo munito; pronoto brevi, transverso-rectangulo, antice in medio impresso; metanoto convexo, dentibus postico-lateralibus magnis ac latis acuminatis; mesopleuris apice utroque emarginato-bidentatis; vertice thoracisque dorso dense minus profunde sat crasse punctato-reticulatis; abdominis segmentis dorsalibus viridi-, sed plerumque igneo- seu rubro-auratis, nonnihil parum purpurascentibus, primo plerumque magis viridi, 2—3 basi nigro-æneis, carinula mediana continua acuta subtilissime punctulata, tertio utrinque ad carinulam disco concaviusculo-depresso, supra seriem fortiter incrassato-subconvexo, foveolis profunde immersis rotundatis mediocribus, per carinulam medianam interruptis, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus subapproximatis robustis acute-triangularibus subspinoideis, intermediis duobus externis longioribus, emarginaturis: externis nonnihil latioribus et minus profundis, intermedia nonnunquam triangulari, margine laterali obliquo leniter arcuato; segmentis duobus primis dense crassius, tertio modice subtilius subrugoso-punctatis; ventre læte-cyaneo parumque viridi-picto; pedibus concoloribus, tarsis fuscis; alis sordide-hyalinis, venis firmis piceis, cellula radiali triangulariter lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. 6—8 mm.

«*Armure.* La partie supérieure de la branche du forceps, vue en face et de côté, est mince, fortement allongée. Volsella grande, au milieu densement parsemée de poils très minces. Le bord de la tenette comme denté. Les crochets allongés vers l'extrémité.» (Rad. l. c. tab. V. fig. 59a, 59b, 59i).

Patria: Hispania (Madrid, Gog.; Granada et Malaga, Mus. Hung.); Italia (Dhlb.; Sardinia, Costa; Sicilia, Destef.); Gallia (Dhlb.); Helvetia (Chevr.); Tyrolis (Kohl); Germania (Lampr.); Austria (Rogenh. et Kohl); Hungaria, non rara (Mocs.); Carniolia

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

(Coll. Handlirschi!); Græcia (Mus. Atheniense!); Krimia et Astrahan (Rad.); Turcia ad Bosphorum (Dhlb.); Algeria (Setif, Coll. Saussurei!); Sibiria (Rad.).

Animadversio. — Species verisimiliter eadem est ac *Chrysis Miegii* Guér., quam piæ memoriæ vir verbis sequentibus descripserat: «Corps très-ponctué d'un beau bleu vif; un tache noire sur le vertex et au milieu du bord antérieur du mésothorax. Antennes noires avec les deux premiers articles bleus. Abdomen large et court, ressemblant un peu à celui des *Hedychrum*, d'un beau rouge doré vif avec la dernier segment terminé par une série transverse de gros points ou fossettes enfoncées et par quatre dents aiguës. Pattes et dessous du thorax et de l'abdomen d'un beau bleu mêlé de vert. Tarses noirâtres. Ailes transparentes, un peu teintées de brun jaunâtre près de la côté. — Long. 7½ à 8, env. 14 à 16 mm., hab. Barcelone. Dédiée à M. Mieg, entomologiste zélé, professeur de physique à Madrid.»

var. Caucasica mihi.

Typo simillima; sed capite thoraceque cyaneo-viridibus parumque viridi-subauratis, antennarum articulis tribus primis et abdominis segmentis dorsalibus: primo toto et secundi parte basali quoque viridi-subauratis, huius parte apicali et tertio toto igneo-auratis, ventre, femoribus item et tibiis viridi-auratis. — ♂; long. 7 mm. — Patria: Transcaucasia (Helenendorf, Mus. Cæs. Vindob.).

563. **Chrysis semiviolacea** n. sp.

Mediocris vel submagna, elongata, minus robusta, nigro-violacea, longius cinereo-alboque pilosa; cavitate faciali, pronoto et mesonoti lobis lateralibus in maribus nonnunquam parum virescentibus; cavitate faciali sat profunda ac lata, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne fortiter marginata, margine acuto leniter transverse-arcuato; antennis mediocribus, sat tenuibus, nigris, cano-puberulis, articulis tribus primis cyaneis vel violascenti-cyaneis, tertio longo, quarto dimidio adhuc longiore; genis longis, articulo antennarum tertio fere æquilongis; occipite utrinque angulo spinoideo munito; vertice, pro- et mesonoto dense minus crasse ac profunde punctato-subreticulatis, scutello et postscutello fortius punctato-reticulatis; mesopleuris inermibus; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus sat longis, minus latis, acute-triangularibus, apice incurvis; abdominis segmentis dorsalibus igneo-purpureoque auratis, primo basi nigro-æneo viridi-aureoque limbato, trifossulato, 2—3 nigro-æneis, secundo carinula mediana minus distincta, tertio disco lenissime concaviusculo-immerso, ante seriem modice calloso, foveolis haud profunde immersis, 8—10 tantum mediocribus rotundatis, nonnunquam non satis distinctis, margine apicali brevi, quadridentato, dentibus in arcum levem dispositis brevibus triangularibus, subobtusis, lateralibus nonnunquam magis acutis, æquilongis, emarginaturis leniter arcuatis, latis, centrali externis parum angustiore, margine laterali oblique-subrecto; segmentis: primo parum fortius, 2—3 densius subtiliusque parum rugosiuscule-punctatis; ventre igneo-purpureoque aurato, segmento secundo basi utrinque et tertio apice nigro-maculatis; illius macula viridi-aureo-limbata; femo-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ribus tibiisque nigro-violaceis, tarsis fuscis; alis hyalinis, parum sordidis, venis fuscis, cellula radiali lanceolata incompleta, apice aperta. — ♂♀; long. 6—9 mm.

Patria: Algeria (Setif, Coll. Saussurei!; Sebdou, Mus. Hung.).

564. **Chrysis Fairmairei** n. sp.

Magna, elongata, sat lata ac robusta, parallela, nigro-violacea, fronte verticeque longe fulvescenti-cinereo-, temporibus subtus et parte reliqua corporis albo-villosis; cavitate faciali minus profunda, lata, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse-marginata; antennis mediocribus, minus crassis, fuscis, cano-puberulis, articulis tribus primis violascenti-cyaneis, tertio longo, quarto fere dimidio adhuc longiore; genis sat longis, articulo tamen antennarum tertio parum brevioribus; occipite utrinque angulo prominulo; pronoto valde brevi, transverso-rectangulo, antice in medio parum impresso, metanoto convexo, dentibus postico-lateralibus brevibus, late-triangularibus, mesopleuris inermibus; vertice densius et subtilius, thorace supra crassius punctato-subreticulatis; abdominis segmentis dorsalibus igneo-purpureoque auratis, primo basi nigro-violaceo superne pure-aureo lavato, leniter trifossulato, 2—3 basi nigro-æneis, carinula mediana in utroque segmento continua lata lævi ac polita, tertio convexo, ante seriem vix calloso, foveolis minus immersis sat profundis mediocribus circiter 10 rotundatis, per carinulam medianam brevem interruptis, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus mediocribus, acute-triangularibus, subæqualibus, fere in lineam transversam dispositis, emarginaturis arcuatis, centrali externis angustiore, margine laterali obliquo, ante dentem externum lenissime sinuato; segmentis duobus primis minus dense, sed crasse, fere cribrato-punctatis interstitiisque hinc illic subtilius punctatis, tertio dense multo subtilius punctato; ventre nigro-æneo, viridi et cyaneo vario; pedibus nigro-violaceis, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata incompleta, apice parum aperta, tegulis nigro-violaceis. — ♂; long. 11 1/2 mm.

Species: capite thoraceque dense villosis (non pilosis), colore corporis, abdominis segmentorum dorsalium 2—3 carinula mediana lata lævi ac polita, dentibus item apicalibus ventreque facile cognoscitur.

Eam in honorem Clariss. viri: Léon Fairmaire, entomologi illustrissimi, qui eximiam suam Chrysididarum collectionem mihi libenter tradidit lustrandam, summæ meæ venerationis causa denominare optavi.

Patria: Algeria (Oran, Coll. Fairmairei).

565. **Chrysis Kirschii** n. sp.

Magna, lata ac robusta, violascenti-cyanea, longius cinereo-alboque pilosa; cavitate faciali minus profunda, lata, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne leniter arcuatim marginata; antennis longis, crassiusculis, nigris, cano-puberulis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

articulis tribus primis cyaneis, tertio longo, quarto fere duplo longiore; genis sat longis, articulo antennarum tertio tamen brevioribus; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus, obtusis; mesopleuris inermibus; vertice densius, sed subtilius, thorace supra parum dispersius fortiusque punctato-reticulatis; abdominis segmentis dorsalibus auratis parumque ignitis vel purpuratis, primo basi nigro-violaceo, superne trifossulato, 2—3 basi nigro-æneis, secundo carinula mediana continua acuta subangusta, tertio disco utrinque parum concaviusculo-immerso, supra seriem leniter incrassato-convexo, foveolis minus profunde immersis mediocribus, haud numerosis, circiter 10 tantum distinctis rotundatis, per carinulam medianam interruptis, margine apicali sat longo, dense subtiliter punctato, quadridentato, dentibus mediocribus, triangularibus, acutis, subæqualibus, emarginaturis arcuatis fere æquilatis, centrali basi subtriangulari, margine laterali oblique-subrecto; segmentis: primo secundique disco crasse profundeque cribrato-, huius parte apicali et lateribus multo subtilius punctatis, interstitiis: partis apicalis hinc illic punctulatis, lateralibus dense subtiliter punctulatis, tertio dense subtiliter punctulato, subcoriaceo; ventre nigro-violaceo, segmento secundo ante apicem macula utrinque viridi-cyanea aureo-igneoque limbata, margine sub ventrem inflexo igneo-aurato; femoribus tibiisque nigro-violaceis, tarsis fuscis; alis hyalinis modice sordidis, venis firmis piceis, cellula radiali triangulariter lanceolata completa, tegulis cyaneis. — ♀; long. 10 1/2 mm.

Præcedenti similis et affinis; sed magis robusta, violascenti-cyanea, fronte verticeque aliter pilosis, abdominis segmentis dorsalibus non igneo-purpureoque auratis, carinula mediana secundi angusta non lævi ac polita, tertii vix distincta, hoc disco utrinque concaviusculo-immerso, 2—3 aliter punctatis etc. satis superque distincta.

Eximiam hanc speciem in honorem Clariss. Dom. Th. Kirsch, Musæi regii Dresdensis Custodis denominavi, qui specimina Chrysidiformia Musæi mihi libenter tradidit lustranda.

Patria: regnum Maroccanum [Marocco] Africæ septentrionalis (Mus. Dresdense).

566. **Chrysis manicata** Dhlb.

Chrysis manicata, Dhlb. Hym. Europ. II. p. 276, n. 154. ♂ ♀. (1854).

«Submagna 3 1/3—3 1/2 lin. decimal. long. robusta ovato-oblonga crasse punctata cyaneo-viridis, abdomine longiusculo viridi-aureo, ventre nigro-, viridi- et igneo-picto, pedibus viridibus, tarsis (♂) albo-testaceis (♀ brunneis), segmenti tertii serie-anteapicali distincta, margine laterali mutico (non acutangulo).

Observ. Valde similis *Chrysidi armenae* Spin.; sed corpore longiore, thoracis dorso cyaneo-viridi nec aureo-maculato, serie ante-apicali distincta, segm. tertii margine laterali non angulato sed lenissime arcuato, ventre variegato, pedibus viridibus etc. ut propria species certe distinguitur. Clypeus margine apicali nigro-æneo polito prominulo non arcuatus sed transversus. Thorax viridis, dorsuli area media omnibus suturis et dorsalibus et pectoralibus cyaneis. Antennæ fuscæ. basi virescentes, ♂ longiusculæ,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

♀ breves. Alæ hyalinæ, disco et in cellula radiali nonnihil sordidæ, venis firmis fuscis, cellula radiali triangulariter lanceolata incompleta, apice modice aperta. Abdominis segmenti tertii series ante-apicalis distincta, foveolis irregularibus, maioribus et minoribus simul sumtis circ. 12; dentes apicales robusti triangulares acuti, externi non a latere remoti sed angulum laterali-apicalem simul efficientes.»

Patria: insula Rhodus.

Animadversio. — Descriptione non satis clara, species cognitu difficilis est.

567. **Chrysis ignita** Linn.

Chrysis ignita, Linn. Faun. Suec. Ed. II. p. 414, n. 1665. (1761). — Sulz. Kennzeich. der Insect. pag. 50. II. 121. tab. XIX. (1761). — Linn. Syst. Nat. Ed. XII. T. I. P. II. p. 947, n. 1. (1767). — De Geer, Mém. Tom. II. P. II. p. 832, n. 1. tab. XXVIII. fig. 17—21. (1771). — Fabr. Syst. Ent. p. 358, n. 6. (1775). — Müell. Stad. Linnée's Natursyst. Bd. II. Theil. V. p. 875, n. 1. tab. XXVI. fig. 17. (1775). — Fabr. Spec. Ins. I. p. 455, n. 8. (1781). — Schrk. Enum. Ins. Austr. p. 387, n. 782. (1781). — Fabr. Mant. Ins. I. p. 283, n. 9. (1787). — Vill. Linn. Ent. III. p. 255, n. 1. (1789). — Rossi, Faun. Etr. II. p. 74, n. 842. (1790). — Oliv. Encycl. Méth. Ins. V. p. 673, n. 11. (1790). — Christ, Naturg. p. 404, tab. 45, fig. 1. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. Tom. I. P. V. p. 2745, n. 1. (1792). — Donov. Brit. Ins. I. pl. 7. (1792). — Panz. Faun. Ins. Germ. fasc. 5. fig. 22. (1793). — Fabr. Ent. Syst. II. p. 241, n. 10. (1793). — Cederh. Faunæ Ingricæ prodrom. p. 167. (1798). — Schrk, Faun. Boica. Tom. II. P. II. p. 344, n. 2195. (1802). — Walcken, Faun. Parisien. II. p. 84, n. 1. (1802). — Fabr. Syst. Piez. p. 173, n. 14. (1804). — Panz. Schæfferi Icon. Ins. Ratisbon. p. 59. (1804). — Latr. Hist. nat. XIII. p. 238, n. 4. (1805). — Spin. Ins. Lig. p. 64, n. 6. (1806). — Illig. Rossi Faun. Etr. Ed. II. Tom. II. p. 119, n. 842. (1807). — Cuvier, Regn. anim. p. 479. (1817). — Lam. Anim. sans vertébr. IV. p. 126, n. 1. (1817). — Dhlb. Monogr. Chrys. Suec. p. 7, n. 2. ♂ ♀. (1829); Exercit. Hym. p. 28, n. 2. var. a et b. (1831). — Shuck. Ent. Mag. IV. p. 161, n. 1. (1837). — Zett. Ins. Lapp. p. 433, n. 2. (1838). — Wesm. Bullet. Acad. Brux. VI. p. 174, n. 1. (1839). — Brullé, Hist. nat. d. Iles Canar. Tom. II. P. II. p. 93. (1839). — Blanch. Hist. nat. Ins. III. p. 295, n. 1. tab. III. fig. 2. (1840). — Zett. Ins. Lapp. p. 433, n. 2. (1840). — Dhlb. Dispos. p. 8, n. 2. (1845). — Lep. Hym. tab. 37, fig. 6. (1845). — Luc. Explor. de l'Algér. Zoolog. III. p. 304, n. 338. (1849). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 305. (1853). — Dhlb. Hym. Europ. II. p. 292, n. 165. (1854). — Schck, Nass. Jahrb. XI. p. 28, n. 1. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 556, n. 6. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 71. (1858). — Chevr. Chrysid. du Léman. p. 70. ♂ ♀. (1862). — Smith, Ent. Annual, p. 86. (1862). — Taschb. Hym. Deutschl. p. 151. (1866). — Schck, Progr. Gymn. zu Weilb. p. 10, n. 10. (1870). — Thoms. Opusc. Ent. II. p. 108, n. 12. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 23, n. 46. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 56 et 72. ♂ ♀. tab. I. fig. 21. (antennæ), fig. 22. (metathorax) fig. 26. (angulus lateralis posticus segm. secundi), tab. II. fig. 48. (pronotum). (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 161. (1879). — Lampr. Goldwesp. Deutschl. p. 17, n. 46. (1881). Heyd. Ber. Senkenb. naturf. Ges. p. 350, n. 21. (1882). — Mocs. Chrys. faun. Hung. p. 68 et 90, n. 38. ♂ ♀. (1882) (excl. Försteri Chrys. comtæ et chrysoprasinæ syn.). — Frey, Chrys. Helvet. p. 56 et 78. tab. III. fig. 28. (margo apic.) (1887) (excl. Försteri Chrys. comtæ et chrysoprasinæ syn.). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 61, n. 31. (1887). — Destef. Natural. Sicil. VII. p. 159. (1888). Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 29. (genit. maris) (1888).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Sphex ignita, Poda, Ins. Mus. Græc. p. 108, n. 8. (1761). — Scop. Ent. Carn. p. 297, n. 791, tab. 42, fig. 791. ♀. (1763).

Chrysis (prima), Schæff. Icon. Ins. Ratisbon. Vol. I. P. I. tab. 42, fig. 5—6. (1766).

? *Chrysis cyanochrysa,* Forst. Novæ Spec. Ins. p. 88, n. 88. (1771). — Gmel. Linn. Syst. Nat. Ed. XIII. Tom. I. P. V. p. 2747, n. 21. (1792).

Chrysis ignita, Linn. *var. Alcione, var. Asterope, var. Celeno, var. Electra, var. Maia, var. Taygeta,* Shuck. Ent. Mag. IV. p. 161 et 162. (1837).

Chrysis obsoleta, Dhlb. Dispos. p. 8, n. 1. ♂. (1845).

Chrysis vitripennis, impressa, angustula, Schck, Nass. Jahrb. XI. p. 28—29. (1856). — Lampr. Goldwesp. Deutschl. p. 17. (1881).

Chrysis igniventris (Abeille), Marq. Bullet. Soc. Nat. Hist. Toulouse, p. 161. (1879).

«La guêpe dorée a corcelet vert, et derniers anneaux du ventre épineux» Geoffr. Ins. II. p. 382, n. 20. (1762).

Parva, mediocris aut submagna, viridi-, vel violascenti- aut nigro-ænescenti-cyanea, plus minusve viridi subaureo-picta, longius cinereo-alboque pilosa; cavitate faciali lata, minus profunda, dense punctato-coriacea, superne plerumque leniter arcuato-marginata; antennis longiusculis, sat crassis, fuscis, cano-puberulis, articulis duobus, rarius tribus primis viridibus vel cyaneis aut viridi-auratis, tertio longo, in feminis quarto duplo longiore, in maribus breviore, quarto plerumque dimidio tantum longiore; genis mediocribus, articulo antennarum quarto subæqualibus; pronoto brevi, transverso-rectangulo, antice in medio plerumque impresso; metanoto convexo, dentibus postico-lateralibus mediocribus, late-triangularibus, subobtusis; vertice thoracisque dorso dense minus crasse ac profunde irregulariter punctato-subreticulatis; abdominis segmentis dorsalibus viridi- vel igneo-auratis, punctatura variabili, secundo tertioque carinula mediana aut distincta, aut evanescenti, tertio disco in mare convexo, in femina plerumque parum concaviusculo-immerso, dentibus analibus et emarginaturis variabilibus, illis a margine laterali non remotis; secundi angulis postico-lateralibus rectis obtusis; ventre pedibusque viridibus vel viridi-cyaneis, non auratis vel igneo-auratis, tarsis fuscis vel parum rufescentibus; alis modice vel suturatius sordide-hyalinis, venis firmis piceis, cellula radiali lanceolata incompleta vel subcompleta. — ♂ ♀; long. 4—8 mm.

Species: de antennis, pronoto, colore ventris et pedibus, a simillimis optime distinguenda.

«*Armure.* L'armure par sa forme se rapproche à celle de *Chr. fulgida;* mais le bord intérieur de la branche du forceps fortement échancré et les poils, qui garnissent le bord supérieur, ne sont ni si forts, ni si denses. Les crochets moins larges et fortement rétrécis au milieu.» (Rad. l. c. tab. I. fig. 1a, 1b, 1f, 1k, 1i.)

Patria: Europa tota, inde a summa boreali a Lapponia et Camschadalia usque ad Asiam minorem, Caucasum, Persiam, Turkestaniam, Sibiriam, Chinam borealem (Mus. Hung.) Africamque septentrionalem cum insulis Madeira et Teneriffa — ubique sui generis vulgatissima. — In collectionibus Dom. Radoszkovszky et Musæi Dresdensis adsunt exemplaria e Brasilia, patria vel falsa, vel animal forsan navibus invectum.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Animadversio. — De hac specie: magnitudine, colore sculpturaque quam maxime variabili auctores recentiores sequentia scripserunt:

1. *Abeille* (Annal. Soc. Linn. Lyon. XXVI. 1879. p. 72—74.):

»La plus commune de toutes les *Chrysis* et la plus variable peut-être; elle n'est pourtant pas la plus abondante à Marseille, où je n'en ai pris que 48 sujets. Il est difficile d'en rencontrer plusieurs exemplaires identiques. Sans parler des variétés nommées, dont on trouvera la liste ci-dessous, j'ai essayé de diviser l'*Ignita* en plusieurs races, sans pouvoir parvenir, parce que jamais les mêmes caractères ne se trouvaient à la fois sur plusieurs individus. Les variations portent un peu sur tout:

1° La taille qui, de 5½ millimètres, s'élève jusqu' à 10.

2° La forme générale qui, tantôt très-longue et parallèle, comme cela se voit un peu sur certains de nos sujets et surtout sur 2 individus du Caucase donnés par M. Waga, devient parfois lourde et massive.

3° La coloration: le corselet ordinairement vert ou bleu prend parfois des teintes dorées, comme chez l'*Auripes;* ces teintes sont surtout bien visibles sur le prothorax, l'écusson et les compartiments externes du mésothorax. L'abdomen passe du doré le plus ardent au verdâtre à peine doré.

4° La ponctuation plus ou moins forte et plus ou moins serrée. Ordinairement le dernier segment a des points beaucoup plus petits et plus serrés que le 2e; mais on voit parfois des exemplaires chez lesquels le 3e segment a une ponctuation se rapprochant de celle du précédent.

5° Les antennes ne sont pas non plus très-stables. Ordinairement le 3e article est très-long et le suivant deux fois plus court. C'est surtout chez le ♂, que l'on observe cette proportion. Mais il arrive aussi parfois que la longueur de ce 3e article diminue au point de se réduire presque à la dimension du suivant. Pourtant jamais les proportions ne sont interverties comme chez la *Cerastes*.

6° Les dents apicales affectent les formes les plus disparates: plus ou moins aiguës, elles sont souvent recourbées en-dessous, et dans ce cas elles arrivent à une grande longueur; tantôt elles sont également espacées, tantôt les intermédaires sont très-rapprochées, tantôt au contraire elles sont très-éloignées. Je possède certains sujets chez lesquels les intermédaires sont fortement arquées extérieurement. Aussi je ne doute pas que la forme décrite par Dahlbom sous le nom de *curvidens* ne se rattache encore à l'*Ignita*. Chez cette forme les dents intermédiaires sont tournées l'une vers l'autre.

L'*Ignita* vit aux dépens de plusieurs vespides, entre autres de l'*Eumenes infundibuliformis*, ainsi que l'a constate M. Pérez. Son cocon est en ovale irrégulier, fort peu translucide et entremêlé de poils très fins et peu nombreux englués dans son tissu.

Plusieurs de ses variétés sont plus tranchées que celles mentionnées ci-dessus. Aussi valent-elles la peine qu'on les décrive rapidement.«

2. *Frey-Gessner* (Chrys. Helvet. 1887, p. 78—84.) inter cetera:

»Jeder Sammler wird beinahe so viel Stück *Ch. ignita* haben, als er an allen übrigen Chrysiden zusammen besitzt. Nun rathe ich in ester Linie die ♂ und ♀ sorgfältig zu sondern. Man wird dabei bald einsehen, dass bei den ♂ das 3. Hinderleibssegment kürzer und gewölbter is als beim ♀, mit spitzigern, oft dornartig aussehenden Zähnen versehen, gegenüber den mehr schneidig dreieckigen Zähnen beim Weibchen an einem quer über die Mitte schwach sattelförmig eingedrückten Segment. Zugleich ist die Punktirung bei den Männchen gröber und gedrängter, bei den ♀ auf dem 2. Segment auf glattem Grunde zerstreuter, auf dem 3. oft sehr fein und mehr oder weniger dicht. Die Unterseite des Hinterleibs findet man von schwarz mit oder ohne blaue, grüne oder feuriggoldene Flecke von sehr verschiedener Ausdehnung bis überwiegend feuriggolden, grün etc. Der umgeschlagene Rand des 1. und 2. Hinterleibssegment ebenfalls blau, grün bis feuriggolden; ebenso die Beine von tiefblau bis grün mit goldschimmer.

Die Punktirung auf dem 2. Hinterleibssegment zerstreut in glatter Oberfläche bis dicht punktirt, einfach bis doppelt, d. h. grobe Punkte mit feineren in den Zwischenräumen, in allen möglichen Abstufungen der Dichtigkeit mit Ausnahme von dicht und gleichmässig wie es bei oben genannten

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

drei Arten (Chevrieri Mocs., inæqualis Dhlb. und Ruddii Shuck.) constant vorkommt. Die Stirnkante über die Mitte aufwärts oder abwärts schwach bogig, oder horizontal, an den Seiten mit scharfer oder abgerundeter Ecke schräg seitwärts und abwärts dem innern Augenrand zulaufend etc.

Die Extreme dieser Sculpturverhältnisse innerhalb dieser *ignita* Linn. und mit Zuziehung sogar der veränderlichen Farben haben mehrere Autoren veranlasst einzelne Formen als Varietäten oder gar als selbständige Arten abzutrennen und es ist nicht gerade schwer, vermittels Förster, Schenck, Abeille, Tournier etc. diese Formen heraus zu finden; was mir persönlich aber noch nicht möglich ist, das ist die Grenze zu finden, wo eine solche Art aufhört und die andere anfängt. Es gibt Varietäten deren Zähne vom dornartig spitzen bis zum verschwindend stumfen abändern, von der Farbe will ich kaum reden, die geht am Vorderkörper vom goldgefleckten grün bis zum tiefen blau, einfarbig oder die verschiedenen Nuancen auf die gewöhnliche Art vertheilt, vom 4 mm. kaum überragenden Liliputaner bis zur 12 mm. langen Riesentochter Glumdalclitsch; am Hinterleib oben vom blass messinggelb durch grüngelb zum feuriggoldenen und bis ins purpurrothgoldene oder violettkupferglänzende. Alles geth durcheinander, kein Merkmal bleibt constant um irgend eine bestimmte Reihe zusammenstellen zu können, man wird stets auf Stücke kommen, welche man mit Uebergang zu a. b. c. etc. bezeichnen muss.»

var. Japonica mihi.

Typo simillima; sed facie, pronoto antice tegulisque viridi-auratis. ♂ ♀; long. 8 mm. — Patria: Japonia (Coll. Saussurei).

var. infuscata mihi.

Typo simillima; sed abdominis segmentis dorsalibus igneo-purpureoque auratis plus minusve cyaneo nitentibus, alis infuscatis. ♂ ♀; long. 7—8 mm. — Patria: Aegyptus (Cairo, Coll. Saussurei! et Mus. Turicense!).

var. curvidens Dhlb.

Chrysis curvidens, Dhlb. Hym. Europ. II. p. 288, n. 163. ♂. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. tab. II. fig. 44. (segm. anale) (1879).

«Angusta subparva $1^3/_4$ lin. decimal. long. confertim modice punctata et punctulata viridi-cyanea, pedibus ventreque concoloribus, abdominis dorso cupreo, segmenti tertii dentibus apicalibus: externis triangularibus, intermediis spinoideis arcuatis.» (Dhlb. l. c.).

Patria: Europa meridionalis.

Animadversio. — Speciem hanc Dahlbomi, in unico solum specimine cognitam et tempore recenti non reinventam, *Chrysidis ignitae* varietatem vel potius monstrositatem esse puto.

var. obtusidens Duf. et Perr.

Chrysis obtusidens, Duf. et Perr. Annal. Soc. Ent. France. IX. p. 37, n. 17. (1840). — Gir. Annal. Soc. Ent. France. Sér. 4. tom. VI. p. 494. (1866).

Chrysis igniventer, Guér. Revue Zoolog. p. 148, n. 15. ♂ ♀. (1842) (teste Ab.).

? *Chrysis brevidentata*, Schck, Nass. Jahrb. XI. p. 30. (1856). — Lampr. Goldwesp. Deutschl. p. 17. (1881).

Chrysis ignita Linn. *var. obtusidens*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 74. (1879). — Heyd. Ber. Senkenb. Naturf. Ges. p. 251. (1882).

? *Chrysis comparata*, Lampr. Goldwesp. Deutschl. p. 16. n. 44. (1881) (nec Lep.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«J'ai vu les types de cette espèce décrite par ces auteurs dans leur histoire des insectes de la ronce. Depuis lors M. Pérez m'en a donné plusieurs exemplaires; j'en ai vu un chez M. Pandellé, qui ne dépasse pas 3 millimètres ½; enfin j'ai pu examiner dans la collection Gribodo le type de l'*ignigaster* Guérin, qui n'est autre que l'*obtusidens*.

Il est impossible de séparer cette forme de l'*Ignita*, dont elle ne diffère que par sa taille très petite, les dents apicales obtuses et le ventre souvent couleur feu. Mais ni les antennes, ni les angles du métasternum, ni aucun détail anatomique important ne vient appuyer ces différences.» (Abeille l. c.). — Patria: Algeria (Guérin); Gallia (Duf. et Perr.); Germania (Schck, Heyd.); Hungaria (Mocs.).

var. brevidens Tourn.

Chrysis brevidens, Tourn. Annal. Soc. Ent. Belg. XXII. p. 96. ♂ ♀. (1879), sec. specimina ab ipso Auctore mihi donata. — Frey, Chrys. Helv. p. 80. ♂ ♀. (1887).

Typo simillima; sed minuta, angustula, gracilis, facie et temporibus, antennarum articulis duobus primis, pronoto antice, vitta mesopleurarum, coxis ac trochanteribus, femoribus tibiisque viridi-auratis, abdominis segmento dorsali tertio margine apicali dentibus valde brevibus, intermediis late-triangularibus, externis triangularibus, emarginaturis latis lenissime arcuatis, centrali externis multo latiore, ventre nigro-æneo, segmentis duobus primis aureo-maculatis. ♂ ♀; long. 5½—6½ mm. — Patria: Helvetia (Tourn., Mus. Hung. et Mus. Lugdun. Batavorum!).

var. rutiliventris Ab.

Chrysis ignita, Linn. *var. rutiliventris*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 74. (1879).

«Variété d'assez petite taille, différant des précédentes par son ventre feu et surtout la finesse de la ponctuation du seconde segment abdominal. M. Pérez la prend à Bordeaux.» (Abeille l. c.). — Patria: Gallia (Ab. et Mus. Hung.); Hungaria (Mocs.); insula Lesina (Mus. Turicense!); Asia minor (Amasia, Mus. Dresdense!); Syria (Coll. Handlirschi!).

var. longula Ab.

? *Chrysis gracilis*, Schck, Nass. Jahrb. XI. p. 30. (1856). — Lampr. Goldwesp. Deutsch. p. 17. (1881). — Frey, Chrys. Helv. p. 80. (1887).

Chrysis ignita Linn. *var. longula*, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 74. tab. II. fig. 40. (segm. anale) (1879). — Heyd. Ber. Senkenb. naturf. Ges. p. 251. (1882).

«C'est la plus tranchée de toutes. Sa taille est des plus fortes; tous mes exemplaires égalent 11 millimètres au moins. Sa forme est extrémement allongée. Les dents apicales sont toujours obtuses et le ventre d'un doré splendide. La ponctuation est grosse et peu serrée.

Au premier abord il est impossible de ne pas considérer cette race comme une espèce et j'aurais vivement desiré trouver quelque chose de plus concluant que les

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

différences susénoncées. Mais je n'ai pu y parvenir. Ce qui frappe le plus, c'est que ces différences se rencontrent toutes ensemble sur chacun de nos sujets.» (Abeille l. c.).

«9—12 mm. lang; schlanker als die *Chr. ignita* mittlerer Grösse, Vorderkörper vorherrschend grün, Flügel ziemlich angeraucht, bei einem Exemplar fast wasserklar. Bauch des ♂ brillant golden mit sehr wenig schwarz an der Basis der Segmente; beim ♀ ist das Grüngold auf das erste und das Feuriggold auf das zweite Segment beschränkt, und zwar auf letzterem auf die Mitte und den breiten Endrand, das dritte Bauchsegment ist entweder ganz schwarz oder hat nur einen mehr oder weniger ausgedehnten schwächer oder stärker glänzenden grünen oder feuriggoldenen Fleck ungefähr zwischen der Mitte und der Basis. Segment 2 ist auf dem Rücken grob nicht dicht punktirt, entweder mit flachen Zwischenräumen und wenigen feinen Pünktchen oder die Zwischenräume sind unregelmässig längsrunzlig und mehr feine Punckte aufweisend, gegen den Hinterrand zu werden alle Punkte feiner. Das dritte Segment ist bei dem Weibchen auffallend viel feiner und dichtrunzlig zusammenhängend punktirt. Das ♂ ist auf dem 2. Segment weniger grob punktirt als das ♀, dagegen auf dem 3. stärker und auf beiden zusammen etwas dichter, kommt in den Alpengegenden häufiger vor als im Thal, ich fand Exemplare noch bei 2000 m. ü. M. an der obern Baumgränze in der Region der *Osmia corticalis* G., *Anthidium montanum* Mor. etc.» (Frey-Gessner l. c.).

In speciminibus e Sibiria occidentali et pæninsula Korea: abdominis segmenti secundi tertiique pars basalis disco infuscata, facies et pronoti latera plerumque aureo lavata sunt. — Patria: Gallia (Ab.); Germania (Heyden); Helvetia (Frey); Austria (Coll. Handlirschi! et Mus. Hung.); Moravia (Coll. Handlirschi!); Hungaria (Mocs.); Transcaucasia (Lenkoran, Mus. Hung.); Sibiria (Mus. Hung.); pæninsula Korea (Coll. Rad.!); Cayenne (Coll. Saussurei!).

568. **Chrysis brevitarsis** Thoms.

Chrysis brevitarsis, Thoms Opusc. Ent. II. p. 107, n. 11. (1870).

»Cœrulea, abdomine igneo, calcari interiore tibiarum posticarum valido curvato. Abdomine oblongo, segmento ultimo acutius quadridentato. Tarsis posticis tibiis brevioribus. Mandibulis apice bifidis.

C. ignitae magnitudine statura et colore simillima, mesonoto parcius adhuc grossius punctato, antennis validioribus, abdomine segmento ultimo minus acute quadridentato, mandibularum et tibiarum structura bene distincta.

Sällsynt; funnen i Nerike af Stud. Warenius.»

Patria: Suecia.

Animadversio. — Secundum Auctorem in litt. ad me species in unico tantum exemplari inventa est.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

569. **Chrysis uncifera** Ab.

Chrysis uncifer (!), Ab. Diagnos. Chrys. Nouvell. p. 4. n. XXIII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 56 et 72, tab. I. fig. 25 (angul. later. segm. apic. secundi) (1879).

«Espéce très voisine de l'*Ignita*, si elle en est réellement distincte. Sa taille atteint celle des plus grands exemplaires de cette dernière. Sa forme est lourde et massive, très-convexe; son troisième segment a les côtés bien plus arrondis. Enfin, et c'est là son principal signe distinctif, les angles latéraux postérieurs du seconde segment sont aigus et unciformes au lieu d'être droits et obtus.

J'en ai rapporté 12 sujets de Corse et j'en ai pris 3 autres à Lorgues.»

Patria: Corsica (Ab., Coll. Buyssoni! et Mus. Hung.); Gallia (Lorgues, Ab.); Hungaria centralis et septentrionalis, rara (Mocs.).

570. **Chrysis Ruddii** Shuck.

Chrysis ignita, Dhlb. Exercit. Hym. p. 28, n. 2. var. c. (1831).

Chrysis Ruddii, Shuck. Ent. Mag. IV. p. 163, n. 2. (1837). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 305. (1853). — Smith, Ent. Annual. p. 88. (1862). — Mocs. Chrys. faun. Hung. p. 68 et 90, n. 37. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 56 et 77, tab. III. fig. 27. (margo apical.) (1887). — Destef. Natural. Sicil. VII. p. 158. (1888).

Chrysis auripes, Wesm. Bullet. Acad. Brux. VI. p. 175, n. 2. (1839). — Dhlb. Hym. Europ. II. p. 289, n. 164. ♂ ♀. (1854). — Schck, Nass. Jahrb. XI. p. 29, n. 3. (1856). — Chevr. Chrysid. du Léman, p. 73. ♂ ♀. (1862). — Taschb. Hym. Deutschl. p. 151. (1866). — Schck, Progr. Gymn. zu Weilb. p. 10, n. 11. (1870). — Thoms. Opusc. Ent. II. p. 108, n. 13. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 56 et 71. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 161. (1879). — Lampr. Goldwesp. Deutschl. p. 16, n. 43. (1881). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 21. (genit. maris) (1888).

Chrysidi ignitae Linn. valde similis et affinis; sed facile cognoscitur: abdominis segmento dorsali secundo multo subtilius densiusque punctato et punctulato subcoriaceo, pronoto antice, alarum tegulis, coxis, trochanteribus, femoribus tibiisque concinne auratis, ventre igneo-aurato nigroque maculato. — ♂ ♀; long. 7—9 mm.

«*Armure*. La branche du forceps vers l'extrémité fortement allongée et intérieurement decoupée; son bord garni de poils longs, minces. Les crochets caractéristiques par leur forme. Le couvercle génital représenté sur la fig. 47k» (Rad. l. c. tab. IV. fig. 47a, 47b, 47i).

«In der ebnern Schweiz schon von Ende April an; in den Alpen bis zu 2000 m. ü. M. vorkommend, von Ende Juni bis Mitte Juli.» (Frey-Gessner l. c.).

Patria: Anglia (Schuck.); Suecia (Dhlb.); Germania (Först.); Gallia (Dhlb.; Vallouise, Gir.; Barèges, Ab.); Belgium (Wesm.); Helvetia (Chevr.); Tyrolis (Dalla Torre et Kohl); Moravia (Coll. Handlirschi!); Austria (Coll. Handlirschi! et Mus. Hung.); Hungaria septentrionalis, rara (Mocs.): Istria et Italia sup. (Bormio, Coll. Handlirschi!); Sicilia (Destef.); Russia (gubernium Mosquense, Assmus) cum Caucaso (Erivan, Mus. Hung.) — præsertim in regionibus montanis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

571. **Chrysis cerastes** Ab.

Chrysis cerastes, Ab. Feuille Jeun. Natural. VII. p. 68, n. XIV. ♂. (1877) ; Annal. Soc. Linn. Lyon. XXVI. p. 56 et 71. ♂ ♀. tab. I. fig. 23. (antennæ), tab. II. fig. 49. (pronotum) (1879). — Desef. Natural. Sicil. VII. p. 157. (1888).
Chrysis igniventris, Ab. Feuille Jeun. Natural. VII. n. XIII. p. 68. ♀. (1877).

Exemplaribus minutis vel minoribus *Chrys. ignitae* Linn. similima; sed corpore magis robusto, antennis brevioribus magis crassis, articulo tertio valde brevi, secundo vel quarto æquilongo, pronoto proportionaliter longiore, metanoti dentibus postico-lateralibus anguste-triangularibus, acutis, incurvis, abdominis segmentis dorsalibus magis æqualiter regulariterque sat dense minus crasse punctatis, dentibus apicalibus brevibus, triangularibus magis obtusis, segmentis ventralibus semper igneo-auratis nigroque maculatis, est certe distincta.

Patria: Sicilia (Destef.); Sardinia (Costa); Gallia (Ab.): Helvetia (Tourn.); Tyrolis (Kohl in Mus. Hung.); Hungaria centralis, rara (Mocs.); Dalmatia (Gasperini, Coll. Wüstneii! et Mus. Hung.); Herzogovina (Mus. Vindob.!); Græcia (Mus. Atheniense!).

572. **Chrysis Schlettereri** n. sp.

Submediocris, angusta, elongata, viridi-cyanea, parcius cinereo-alboque pilosa; cavitate faciali lata, minus profunda, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse marginata, margine medio sinuoso; antennis tenuibus, nigris, articulis tribus primis viridibus, tertio sat longo, secundo duplo longiore; genis longis, articulo antennarum tertio adhuc longioribus; pronoto brevi transverso, antice in medio leniter impresso, metanoto convexo, dentibus postico-lateralibus sat longis, angustis, subspinoideis, rectis; vertice thoracisque dorso dense minus crasse punctato-subreticulatis; abdominis segmentis dorsalibus igneo-cupreoque auratis, primo disco parum virescenti, dense minus crasse ac profunde parum rugosiuscule-punctatis, secundo carinula mediana indistincta, tertio apicem versus fortiter angustato, disco convexo, supra seriem vix calloso, foveolis minus distinctis sulciformibus per carinulam medianam interruptis, margine apicali longo, dense punctulato, quadridentato, dentibus in arcum dispositis acute-triangularibus, intermediis duobus a lateralibus longe remotis postpositis, emarginaturis arcuatis, centrali profundiore; ventre viridi, cyaneo et nigro vario; pedibus viridi-cyaneis, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa. — ♀ ; long. 6 mm.

Species in honorem Clar. Dom. A. Schletterer sincerae amicitiae ac venerationis causa denominata: de forma gracilenta, dentibus metanoti postico-lateralibus et analibus, facile cognoscitur.

Patria: Mexico (Tacubaya, Mus. Cæs. Vindob.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

D. *Abdominis segmenti dorsalis tertii margo apicalis transverse modice arcuatim-truncatus, lateribus sub initio serie anteapicalis bisinuatus et sic ante medium angulatus, dentibus lateralibus duobus tantum distinctis brevibus triangularibus.*

573. **Chrysis Amasina** n. sp.

Mediocris, elongata, subparallela, sat robusta, viridis parumque viridi-subaureo-nitens, parcius cinereo-alboque pilosa; vertice post stemmata, collo, pronoti sulco longitudinali profundo, mesonoti lobo medio, postscutelli disco et sulco longitudinali mesopleurarum violascenti-cyaneis; cavitate faciali subangusta, sat profunda, medio longitudinaliter canaliculata, utrinque dense subtilissime transverse-striata, lateribus punctato-coriacea argenteo-sericeoque pilosa, superne convexa, non marginata; antennis mediocribus crassiusculis, fuscis, cano-puberulis, articulis: primo viridi, 2—3 supra cupreo-auratis, tertio longitudine mediocri, secundo vix duplo longiore; genis brevibus, articulo antennarum secundo æquilongis; pronoto sat longo, capite tamen breviore, transverso-rectangulo, metanoto convexo, dentibus postico-lateralibus brevibus acute-triangularibus; vertice thoracisque dorso dense minus crasse punctato-subreticulatis; abdominis segmentis dorsalibus igneo-purpureoque auratis, primo parte truncata viridi, secundo carinula mediana nulla, tertio convexo, supra seriem nec minime calloso, foveolis minutis rotundatis paucis, margine apicali modice arcuatim-truncato crasso, dentibus tantum duobus lateralibus distinctis parvis triangularibus, lateribus lenissime bisinuatis et sic in medio angulatis; segmentis omnibus dense minus crasse ac profunde punctatis, primi interstitiis angustis subtilissime punctulatis, 2—3 disco punctatura multo densiore magisque subtili, quam in lateribus; ventre igneo-purpureoque aurato, segmento secundo basi utrinque nigro-maculato; femoribus viridi-, postice cum tibiis cupreo-auratis, tarsis testaceis; alis hyalinis, vix sordidis, venis fuscis, cellula radiali lanceolata incompleta, apice late aperta, tegulis viridi-subauratis. — ♂; long. 8½ mm.

Species: de cavitate faciali, antennis, metanoti dentibus, margine anali singulari coloreque pedum facile cognoscitur.

Patria: Asia minor (Amasia, Mus. Dresdense).

574. **Chrysis Charon** n. sp.

Submagna, elongata, subparallela, sat robusta, viridis parumque viridi-subaureo-nitens, parcius cinereo-alboque pilosa; vertice post stemmata, collo, lateribus scutelli postscutelloque viridi-, mesonoti lobo medio violascenti-cyaneis; cavitate faciali subangusta, sat profunda, medio longitudinaliter canaliculata, utrinque dense subtilissime transverse-striata, lateribus punctato-coriacea, superne convexa, non marginata; antennis mediocribus crassiusculis, nigris, cano-puberulis, articulis tribus primis viridibus, tertio sat longo, quarto fere duplo longiore; genis brevibus, articulo antennarum secundo æquilongis; pronoto sat longo, capite tamen breviore, transverso-rectangulo,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

antice in medio sat profunde longitudinaliter sulcato, metanoto convexo, dentibus postico-lateralibus brevibus, obtuse-triangularibus; vertice thoracisque dorso dense minus crasse irregulariter punctato-subreticulatis; abdominis segmentis dorsalibus igneo-coccineoque auratis, primo basi nigro-æneo superne viridi-subaureo limbato, 2—3 basi nigro-æneis, secundo carinula mediana indistincta, tertio convexo, supra seriem leniter calloso, foveolis fere nullis, tantum duabus centralibus indistinctis sulco loco foveolarum in utrinque transverso sat profundo, margine apicali sat lato dense subtilius punctato, imo apice transverse leniter sulcato modice arcuatim truncato, dentibus lateralibus duobus tantum distinctis brevibus subacutis, lateribus bisinuatis et sic ante medium angulatis, sinu superiore iuxta initium seriei anteapicalis lenissimo, inferiore profundo arcuato; segmentis duobus primis valde dense subtilissime punctatis et punctulatis subcoriaceis, tertio parum fortius rugosiuscule-punctato; ventre viridi- et igneo-aurato nigroque vario; pedibus viridi-cyaneis, tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice late aperta. — ♀; long. 9½ mm.

Præcedenti similis et affinis; sed metanoto dentibus postico-lateralibus obtuse-triangularibus, abdominis segmentis dorsalibus multo densius subtiliusque punctulatis, tertio aliter formato, est species certe distincta.

Patria: Algeria (Blidah-Médéah, Mus. Berolinense).

Animadversio. — Species cum *Chryside strangulata* Gog. multum habere videtur similitudinis.

XXIV. *Abdominis segmento dorsali primo in maribus virescente vel plus minusve aurato aut coerulescente, in feminis igneo-aurato ad basin leniter viridi, secundo tertioque igneo-auratis, illo in maribus leniter virescente aut coerulescente; dentes apicales in maribus breves, in feminis acutiusculi.*

575. **Chrysis mutabilis** Buyss.

Chrysis mutabilis, Buyss. Revue d'Entom. VI. p. 194, n. 32. ♂♀. (1887).
Chrysis cerastes, Ab. *var. Caucasica* Mocs. i. l.

♂. Corpore submediocri, cinereo- et albo-pilosello; capite thoraceque læte-viridibus aut cyaneo-viridibus, aut viridibus leniter auratis. Capite subrotundato, paululo latiore quam pronotum; cavitate faciali læte viridi, subquadrata, profundiuscula, sat confertim punctulata, in medio substrigosa, albo-pubescente, margine ad frontem irregulariter elevato, horizontali, utrinque deflexo superne terminata; fronte ante stemma anticum confertissime ruguloso-punctata; vertice minus confertim punctato, punctis paululo maioribus; occipite cyanescente. Pronoto brevi, viridi, sæpius leniter aurato, confertim punctato, antice obsolete sulcato, truncatura antica cœrulea; mesonoti area media cœrulea, areis lateralibus scutelloque viridibus, sæpius leniter auratis; scutello minus confertim punctato; postscutello subrotundato, reticulato; metanoti angulis postico-lateralibus acutis, curvis, elongatis, haud crassis. Tegulis viridibus aut cyanescentibus; alis subhyalinis, cellula radiali elongata, subcompleta. Antennarum scapo secundoque articulo viridibus, aliis articulis obscure nigris, articulis 3—4

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

perbrevibus, æqualibus, sequentis longitudinem conjunctis æquantibus. Pedibus viridibus plus vel minus auratis, tarsis rufo-brunneis. Abdomine modice punctato, punctis mediocribus: primo segmento virescente plus vel minus aurato aut cœrulescente; secundo igneo-aurato, basi lèniter virescente aut cærulescente, in medio carinula subelevata, angulis laterali-apicalibus acutis; tertio segmento quadridentato, igneo-aurato, non depresso; serie anteapicali subimpressa, foveolis circa 12 rotundatis, mediocribus apertisque; margine apicali concolore, obsolete punctulato. Dentibus brevibus; medianis leniter approximatis, sæpies obtusis, semper brevioribus quam exteriores; exterioribus irregulariter triangularibus, maioribus acutioribusque; emarginatura mediana regulariter arcuata vel leniter angulata, exterioribus emarginaturis latioribus, irregulariter arcuatis, minus profundis. Ventre læte-viridi plus vel minus aurato, segmentis 1—2 basi cum duabus nigris maculis. — Long. 6—6½ mill.

♀. Sculptura et structura mari simillima, sed his notis dignoscitur: capite thoraceque cœruleis; pronoto, mesonoti area mediana et scutello leniter virescentibus; abdomine igneo-aurato leniter viridi, præsertim ad basin primi segmenti; tertio segmento abdominis depressulo, elongato, ante seriem anteapicalem leniter incrassato; dentibus apicalibus acutiusculis; ventre igneo-aurato aut viridi nigro-maculato. — Long. 7 mill.

La ♀ du *Chr. mutabilis* peut facilement être confundue avec le *Chr. igniventris* Ab. ♀ ; on pourra cependant la distinguer par la taille généralement moins forte dans ce sexe, par les reflets verts du thorax, par la ponctuation thoracique moins profonde et moins serrée, non ruguleuse, avec les intervalles des points lisses, par la ponctuation abdominale bien plus forte et moins serrée, par la teinte légèrement verte du premier segment abdominal, par la forme plus allongée du troisième segment abdominal qui est plus déprimé sur le disque et plus renflé avant la série antéapicale, enfin par la couleur du ventre qui est feu ou vert avec des taches noires sur les premier et seconde segments.

Il faut encore indiquer que chez le *Chr. mutabilis* les angles postico-latéraux du metanotum sont très recourbés, aigus et étroits, et aussi que les troisième et quatrième articles des antennes sont très courts et de longueur égale. Ces deux caractères, que l'on trouve chez le *Chr. igniventris* Ab., peuvent servir également à distinguer le *mutabilis* du *Mariae.*»

Patria: Asia minor (Brussa, Mus. Hung.); Syria (Tiberias [Tabarieh] et Caiffa, Ab. Buyss.); Caucasus (Coll. Rad.! et Mus. Hung.).

Animadversio. — *Chrys. cerasti* Ab. valde affinis forsanque solum eius varietas Asiatica: capite thoraceque ex parte aureo- vel viridi-aureo pictis. Femina mihi ignota est ideoque descriptionem eximiam de verbo ad verbum assumsi.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

XXV. *Abdominis segmenta dorsalia viridi-aurata, disco subcuprea, margine apicali cyaneo-viridi, spinis minutis subtilibus subulatis, spatio inter spinulas ita ter secto, ut latera trapezii tria exstent; corpus supra cyaneo-viride, subtus cyaneum.*

576. **Chrysis dubitata** mihi.

Chrysis prasina, Dhlb. Hym. Europ. II. p. 184, n. 100. ♂. tab. IX. fig. 104. ♂. (1854) (nec Klug).

«Mediocris robusta $2^2/_3$ lin. decimal. long. modice at confertim punctata, vertice thoracisque dorso coriaceis subrugulosis, subtus cyanea supra cyaneo-viridis, abdominis dorso viridi-aureo, disco subcupreo, margine apicali cyaneo-viridi spinulis minutis subtilibus, spatio inter spinas subrectangulari l. subtrapezino.

Observ. Præcedenti *(Chrysidi bihamatae)* maxime affinis et similis, atque forsitan eiusdem sola varietas mascula. Quum vero sculptura thoracica dorsalis nec non structura analis abdominis longe aliæ sunt in *Chryside prasina* quam in *Chryside bihamata,* atque tantummodo unicum *Chrysidis prasinae* specimen adhuc examinare mihi contigit, hanc ut propriam speciem pro tempore potius habui, usque dum experientia pluribus individuis utriusque comparatis aliter doceat.

Corpus quoad magnitudinem et habitum omnino ut in *Chryside bihamata;* caput huius. Antennæ robustiores et longiores, sed scapus brevior quam in *Chrys. bihamata.* Mandibulæ nigro-piceæ basi viridi-maculatæ, ante apicem late rufo-testaceæ; secundum *Klugi* descriptionem sint mandibulæ «*basi testaceae*», qua pictura mandibulæ nostri exemplaris carent. Thoracis dorsum confertim punctatum coriaceum l. subrugulosum læte cyanescenti-viride. Sternum viridi-cyaneum. Pedes et alæ ut in *Chryside bihamata,* sed tegulæ viridi-cyaneæ. Abdominis segmentum dorsale primum (in *Westermanni* exemplare, quod ante oculos habui) totum viride, parumper aureo-nitens; segmentum secundum et tertium cuprea, lateribus viridi-aureo-splendentia, segmenti tertii margo apicalis cyaneo-viridis nitidissimus depressus, spinis minutis subtilibus subulatis; spatium inter spinulas ita ter sectum ut latera trapezii tria exstent. In ceteris a *Chryside bihamata* non differt.»

Patria: Aegyptus.

Animadversio. — Vide meam adnotationem in pagina 318.

XXVI. *Abdominis dorsum violaceum, segmentis: primo margine apicali viridi-aurato, lateribus et secundo tertioque margine apicali viridi-cupreoque lavatis; dentes apicales acuti regulariter siti; caput et thorax viridia.*

577. **Chrysis Daphne** Smith.

Chrysis Daphne, Smith. Transact. Ent. Soc. Lond. p. 399, n. 1. ♀. (1874).

«Female. — Length $3^1/_4$ lines. Head and thorax green, abdomen purple, with shades of gold and coppery brilliancy. Head and thorax, as well as the extreme base of the abdomen, very coarsely punctured, the second segment of the abdomen much

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

more finely and closely punctured, and the third more finely punctured than the second, the apical segment armed with four angular acute teeth; the lateral angles of the apical margine acute, not toothed. A dark blue spot encloses the ocelli; the antenæ black; the head posteriorly dark blue. Thorax: the prothorax with three dark blue spots, and the central division of the mesothorax also obscurely blue; wings hyaline, the nervures testaceous; the legs green, the tarsi fuscous. Abdomen: the apical margin of the first segment golden-green, the lateral margins bright green, with a coppery brilliancy in certain lights; the apical margins of the second and third segments have a similar green and coppery brilliancy; beneath of a steel-blue, with the base of the segments black.»

Patria: Japonia (Hiogo).

XXVII. *Abdominis dorsum vel cupreum nitore rubro vel cupreo-auratum nitore viridi; caput et thorax cyanea et viridia; dentes duo laterales et duo intermedii postpositi triangulares.*

578. **Chrysis aurichalcea** Prov.*

Chrysis aurichalcea, Prov. Natur. Canad. XII. p. 300. ♀. (1881); Petit. Faun. Canad. II. Hym. p. 579. n. 2. ♀. (1883). — Aar. Transact. Amer. Ent. Soc. XII. p. 232. ♀. (1887).

«Before me are three specimens, one of which is Provancher's type from Canada, the others from Maine and Canada; the head and thorax in the two Canadian specimens blue with much green and purple, the Maine specimen with the predominating color green, with some blue and purple reflections. In all densely punctured, finest on the head; basin of face broadly smooth; abdomen in the Canadian specimens cupreous and golden, with brilliant emerald-green reflections in certain lights; in the Maine specimen cupreous with deep scarlet or ruby reflections, almost entirely ruby on the dorsum, with green reflections only at the base of first segment and on the apical margin beyond the pits; abdominal punctures on first and second segments equal, close, very little separated, becoming irregular laterally, and confluent and irregular on the third segment; pits medium, rounded, subequidistant, contained in a shallow groove ending midway on the lateral margin; lateral angles and apical teeth as in *scitula*; 7—7.5. mm. long. All females.» (Aaron l. c.)

Patria: America septentrionalis.

XXVIII. *Abdominis segmenta dorsalia viridi-aurata cupreoque micantia; dentes apicales parvi, triangulares, acuti vel subacuti, a margine laterali longe remoti; caput et thorax viridia, cyanea, vel vertice thoraceque ex parte vel totis aureo-, vel cupreo-micantibus.*

* Speciem hanc in opere Clarissimi Domini Aaron Dichrysidibus insertam invenimus; sed illa, secundum meam opinionem cum *Chrysida scitula* Cress. ad Tetrachrysidas pertinet; dentibus nempe quattuor distinctis: duobus lateralibus et duobus intermediis postpositis ab illis remotis.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

579. **Chrysis humeralis** KLUG.

Chrysis (Spintharis) humeralis, Klug. Symb. phys. Dec. V. tab. XLV. fig. 7. (1845).

«C. viridis, abdomine viridi-aurato, alarum tegulis cyaneis, tarsis testaceis. Long. lin. 3 1/2.

Statura præcedentium. Confertim punctata, læte viridis. Caput inter oculos impressum, pube densa albo-argentea tectum. Antennæ, articulo primo viridi excepto, fuscæ. Thorax immaculatus. Alæ hyalinæ, nervis stigmateque fuscis, tegulis læte cyaneis. Pedes pubescentes, virides, tarsis testaceis. Abdomen viridi-auratum, cupreo-micans, subtus auratum, articulo ultimo apice truncato, quadridentato.»

Patria: Nubia (ad Ambukohl mense Septembre semel capta).

580. **Chrysis Pharaonum** MOCS.

Chrysis (Spintharis) refulgens, Klug, Symb. phys. Dec. V. tab. XLV. fig. 8. (1845) (nec Spin.).
Chrysis Pharaonum, Mocs. Chrys. faun. Hung. p. 46. (1882).

«C. viridis, abdomine aurato, tarsis testaceis. Long. lin. 3 1/2.

Præcedenti simillima. Sat confertim punctata, viridis, nitida. Caput inter oculos vix impressum. Antennæ fuscæ, articulo primo viridi-aurato, secundo cupreo. Thorax prothorace antice, metathorace apice auratis. Alæ hyalinæ, nervis stigmateque fusco-testaceis, tegulis viridibus, apice cupreis. Pedes viridi-aurati, cupreo-micantes, tarsis testaceis. Abdomen viridi-auratum, dorso cupreum, subtus auratum, segmento secundo nigro-bimaculato, ultimo rotundato, quadridentato.» (Klug.).

Patria: Nubia (prope Ambukohl capta).

581. **Chrysis frontalis** KLUG.

Chrysis (Spintharis) frontalis, Klug, Symb. phys. Dec. V. tab. XLV. fig. 9. (1845).

«C. viridi-cuprea, capite antice cyaneo. Long. lin. 3.

Reliquis brevior, punctata, viridi-cuprea. Caput inter oculos impressum, læte cyaneum, albido-pubescens. Antennæ, articulo primo viridi-cyaneo excepto, fuscæ. Thorax dorso cupreo-micans Alæ hyalinæ, nervis stigmateque fuscis. Pedes virides, tarsis fuscis. Abdomen supra cupreo-micans, subtus viride, articulo ultimo apice rotundato, medio acute emarginato, utrinque unidentato.»

Patria: Aegyptus (ad Saccahram Pyramidem).

582. **Chrysis opulenta** n. sp.

Mediocris, elongata, sat lata ac robusta, parallela, viridi-cyanea, breviter cinereo-alboque pilosa; collo nigro-violaceo; vertice thoraceque supra cum mesopleuris viridi-aureo-cupreoque lavatis; mesonoti lobo medio et eius suturis et metathoracis sulcis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

oblique-striatis viridi-cyaneis; cavitate faciali subangusta, profunda, viridi-cyanea parumque violascens, supra et clypeo viridi-auratis, illa medio longitudinaliter anguste canaliculata, utrinque subtilissime transverse-striata, lateribus dense punctulato-coriacea argenteo-sericeoque pilosa, superne parum arcuatim transverse-marginata, margine utrinque ramulum indistinctum ad stemma anticum emittente areamque obsoletam obcordatam includente; antennis mediocribus, nigris, articulis duobus primis viridi-cyaneis, tertio brevi, secundo parum tantum longiore; pronoto brevi, transverso-rectangulo, antice in medio impresso; metanoto convexo, dentibus postico-lateralibus validis, late-triangularibus, postice subtruncatis, apice acutis; vertice densius, sed subtilius, thorace supra dispersius, sed crassius punctato-reticulatis; abdominis segmentis dorsalibus concinne auratis igneo-cupreoque lavatis, basi nigro-violaceis, primo sat dense crassius minus profunde punctato interstitiisque subtilissime punctulatis, 2—3 valde dense subtiliter parum rugosiuscule-punctatis subcoriaceis, secundo carinula mediana nulla, tertio disco utrinque lenissime concaviusculo-immerso, supra seriem parum calloso, foveolis profundis mediocribus numerosis rotundatis, margine apicali purpurascenti dense subtiliter punctato, quadridentato, dentibus a margine laterali longe remotis in arcum dispositis brevibus acute-triangularibus, emarginaturis sat profunde-arcuatis subæqualibus; ventre pedibusque cyaneis et viridibus, femoribus postice lævibus nigro-violaceis, tarsis rufo-testaceis; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata, incompleta, apice late aperta, tegulis nigro-violaceis, externe viridi-auratis. — ♂; long. 8 mm.

Species cum *Chrys. frontali* Klug multum habere videtur similitudinis.

Patria: Algeria (Setif, Coll. Saussurei).

XXIX. *Abdominis thoracisque dorsum cupratum; dentibus apicalibus solum externis acutis; vertice aurato, facie viridi.*

583. **Chrysis mutata** Mocs.

Chrysis cuprea, Brullé, Hym. IV. p. 40, n. 26. ♀. (1846) (nec Rossi).
Chrysis mutata, Mocs. Chrys. faun. Hung. p. 50. ♀. (1882).

Descriptio secundum Brullé:

«Viridis, thoracis et abdominis dorso cupreis, alis obscuris, basi pallida, punctata, ano vix quadridentato. Fem.

C'est un bel insecte qui a le dessus du thorax et de l'abdomen d'un rouge cuivreux et brillant; le vertex doré, la face verte, ainsi que la base des antennes, le dessus du corps et les pattes; ces dernières sont quelquefois d'un bleu violet. Les ailes sont obscures, avec la base et l'extrémité plus pâles.

Le corps est criblé de points qui ne se touchent pas et qui sont un peu moins gros sur l'abdomen que sur le thorax et la tête. Le bord postérieur de la fossette susantennaire est peu ou point marqué; la fossette du prothorax est peu distincte; les sillons interlobulaires du mesothorax sont étroits et crénelés. La base de l'abdomen

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

offre une échancrure large, peu profonde et à peine trilobée; la ligne moyenne n'est pas marquée; le troisième segment est surmonté d'un bourrelet peu saillant et qui n'est pas suivi d'une rangée de gros points; le bord postérieur est sinueux plutôt que découpé en quatre dents, dont les deux extérieures seules sont aiguës.

Longueur: 0,010.»

Patria: Promontorium Bonæ Spei.

XXX. *Abdominis dorsum auratum et viride nitore cupreo, segmento tertio margine apicali nigro, dentes apicales mediocres subacuti.*

584. **Chrysis Meta** Aar.

Chrysis Meta, Aar. Transact. Amer. Ent. Soc. XII. p. 234. ♂ ♀. tab. IX. fig. 50. (segm. anale) (1885).

»Varies from emerald-green with brassy reflections, and slight golden reflections on the abdomen to golden and green with strong cupreous reflections, deepest on the abdomen; head and thorax closely and equally punctured, finest on the head; basin of face broadly smooth; abdomen with the punctures of the first and second segments somewhat separated but evenly distributed, with finer punctures scattered among the others; specimens with the abdomen deep cupreous have the sutures, when exposed, black, and a patch on basal half of dorsum of second segment black, shading to green, the punctures within it green; third segment with the punctures larger, a little confluent; apical margin beyond the pits in all the specimens black; pits rather large or medium, distinct or confluent, rounded or oval, contained in a shallow groove, which ends midway on the lateral margin; wings hyaline, very slightly infumated at the base of the radial cell; 6—7 mm. long. ♂ ♀.

Montana; twelve specimens. A very beautiful and distinct species.»

Patria: America septentrionalis.

XXXI. *Abdominis segmenta dorsalia cum pronoto et lobis lateralibus mesonoti cupreo-aurata; cavitate faciali aurata, vertice et mesonoti lobo medio alarumque tegulis violascenti-cyaneis; genis valde longis; dentes apicales breves, acuti, subaequales.*

585. **Chrysis facialis** Buyss.

Chrysis facialis, Buyss. Revue d'Entom. VI. p. 196, n. 33. ♀. (1887) sec. spec. typ. e coll. Abeillei.

Subparva, elongata, sat robusta, cyaneo-viridis, parcius cinereo-alboque pilosa; facie, pronoto, mesonoti lobis lateralibus auratis parumque cupratis, vertice circa stemmata et mesonoti lobo medio alarumque tegulis violascenti-cyaneis, scutello viridi, verticis parte reliqua postscutelloque cyanescentibus; cavitate faciali minus profunda ac lata, medio anguste longitudinaliter canaliculata, utrinque minus distincte subtilissime transverse-striata, lateribus punctulato-coriacea, argenteo-sericeoque pilosa, superne convexa, non marginata; antennis brevibus, sat tenuibus, nigris, cano-puberulis, scapo

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

viridi-aurato, basi æneo, articulis 2—3 obscure-æneis lenissime viridibus, tertio sat longo, secundo duplo longiore; genis valde longis, articulo antennarum tertio adhuc longioribus; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; metanoto convexo, dentibus postico-lateralibus mediocribus, acute-triangularibus, rectis; vertice densius minus crasse, pronoto fortius, sed parum dispersius modice punctato-subreticulatis, punctis minoribus quoque in pronoto inmixtis, mesonoto irregulariter subtilius punctato subcoriaceo, scutello punctato, postscutello punctato-reticulato; abdominis segmentis dorsalibus: primo disco viridi-aurato, lateribus et segmentis reliquis cupreo-auratis, primo minus crasse ac profunde punctato interstitiisque subtilissime punctulatis cum margine apicali parum cyanescenti; 2—3 basi nigro-æneis, carinula mediana indistincta, minus dense irregulariter modice fortius punctatis; tertio disco utrinque leniter concaviusculo-immerso, ante seriem in medio subtilissime punctulato, foveolis irregularibus tantum 6 distinctis rotundatis, tantum lateralibus immersis, per spatium latum convexum interruptis, margine apicali sat longo, dense punctulato, quadridentato, dentibus brevibus triangularibus, externis parum longioribus magisque acutis, in arcum levem dispositis, emarginaturis æqualibus, modice profundis, arcuatis, margine laterali ante dentem externum leniter sinuato; ventre pedibusque viridi-subauratis, illo segmentis secundo tertioque basi utrinque nigro-maculatis, apice parum cyanescentibus, his tarsis rufo-brunneis; alis subhyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa. — ♀; long. 6 mm.

Patria: Syria (Tiberias [Tabarieh], Coll. Abeillei).

XXXII. *Abdominis segmenta dorsalia verticeque capitis viridi-cupreoque aurata; caput et thorax viridi-aurata violascentique cyanea; dentes intermedii per emarginaturam centralem triangularem profundam obtuse-triangulares, breves, externi solum angulati.*

386. **Chrysis mirabilis** Rad.

Chrysis mirabilis, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 106, n. 29. tab. II. fig. A. ♂. (1876) sec. spec. typ. e coll. Rad.; XXIII. p. 23. (genit. maris) (1888).

Mediocris, elongata, parallela, sat robusta, violascenti-cyanea, longius cinereo-alboque pilosa; vertice post ocellos temporibusque, collo, pronoti sulco longitudinali, lobo medio mesonoti suturisque metathoracis violascenti-cyaneis; vertice, pronoto, mesonoti lobis lateralibus, scutello, metanoti dentibus et abdominis segmentis dorsalibus viridi-cupreoque auratis; mesopleuris et postscutelli viridi-maculatis; cavitate faciali minus profunda, sat lata, medio longitudinaliter anguste canaliculata, utrinque minus dense transverse-striata viridi-aurata, lateribus viridi-cyaneis, dense punctulato-coriaceis argenteo-sericeoque pilosis, superne transverse minus distincte marginata; (antennæ desunt); genis mediocribus, longitudine unius millimetri; pronoto brevi, transverso-rectangulo; metanoto convexo, dentibus postico-lateralibus sat longis ac latis triangularibus subacutis; vertice dense subtilius, thorace supra crassius dispersiusque punctato-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

subreticulatis; abdominis segmentis dorsalibus: 2—3 basi nigro-æneis, carinula mediana subdepressa sat lata subtilissime punctulata, tertio convexo, supra seriem leniter calloso, foveolis circit. 10 tantum mediocribus rotundatis per carinulam medianam interruptis, margine apicali sat longo, dense punctulato, dentibus intermediis per emarginaturam centralem triangularem profundam obtuse-triangularibus, brevibus, externis solum angulatis; segmentis primo sat sparsim subtilius minus profunde punctato interstitiisque sat latis subtilissime punctulatis; secundo tertioque sat dense minus crasse parum rugosiuscule-punctatis; ventre pedibusque viridibus et cyaneis nigroque maculatis, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata completa, tegulis cyaneo-viridibus, interne nigro-violaceis. — ♂; long. 9½ mm.

Armure. Le bord supérieur de la branche du forceps, avant tout vu de côté, est caractéristique, échancré et garnie de poils longs, disposés symétriquement. La tenette est plus courte que sa volsella. La forme des crochets est réprésentée sur la fig. 491. (Rad. l. c. tab. IV. fig. 49a, 49b, 49c, 49f).

Patria: Caucasus.

XXXIII. *Abdominis segmenta dorsalia: primum et secundi pars basalis aurato-viridia, huius pars apicalis tertiumque cupreo-aurata; dentes apicales valde insolite dispositi: duo tantum apicales, mediocres, acuti et duo laterales, parvi, obtuse-triangulares; vertex auratus, thorax aurato-viridis, splendidus.*

587. **Chrysis Przewalskii** Rad.

Chrysis Przewalskii, Rad. Horæ Soc. Ent Rossicæ. XXI. p. 6. ♂. tab. III. fig. 8. (segm. anale) (1887). sec. spec. typ. e coll. Rad.

Mediocris, elongata, aurato-viridis, splendida, densius longiusque cinereo-alboque pilosa; vertice circa stemmata aurato, postscutello metathoraceque viridi-cyaneis; cavitate faciali planiuscula, sat lata, dense subtilissime punctulato-coriacea denseque argenteo-sericeo-pilosa, superne indistincte marginata; antennis tenuibus, testaceis, subtus parum infuscatis, articulis tribus primis aurato-viridibus, tertio longo, quarto quintoque simul sumptis longitudine æquali; mandibulis unidentatis, nigris, medio rufis; genis sat longis, articulo tertio flagelli æquilongis; vertice dense inæqualiter subtilius punctato-reticulato, spatio utrinque ad stemmata postica lævi; pronoto brevi, transverso, medio longitudinaliter impresso; pro- et mesonoto scutelloque sparsim sat profunde punctatis interstitiis lævibus; mesopleuris in areas duas distinctas divisis, subtus triangulariter productis acuteque marginatis; abdominis segmentis dorsalibus: primo et secundi parte basali aurato-viridibus, huius parte apicali tertioque cupreo-auratis, omnibus minus fortiter densius punctatis, punctatura secundi parum rugosiuscula, 2—3 carinula mediana minus distincta, tertio convexo, ante seriem anteapicalem non incrassato, foveolis paucis circiter 6 distinctis, haud profundis subrotundis, margine apicali sat longo, quadridentato, dentibus valde insolite dispositis: duobus tantum apicalibus, mediocribus spinoideis et duobus lateralibus, iuxta initium seriei anteapicalis sitis, par-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

vis, obtuse-triangularibus, emarginaturis: centrali minus fortiter arcuata inter dentes duos apicales valde, ultra 1 mm. lata, oculis inarmatis visa; lateralibus minus fortiter arcuatis; ventre aurato-viridi; pedibus aurato-viridibus, splendidis, geniculis et tibiarum apice tarsisque testaceis; alis niveo-hyalinis, venis pallide-fuscis, cellula radiali triangulariter lanceolata apice late aperta, tegulis cyaneo-viridibus. — ♂; long. 7 mm.

Species: colore, dispositione insolita dentium analium et alis niveo-hyalinis eximia, a congeneribus facile cognoscenda.

Patria: Mongolia (Zaïdam, in altitudine 9000 pedum montium Keria, Coll. Rad.!).

XXXI. *Abdominis segmenta dorsalia, vertex, pro- et mesonotum scutellumque igneo-cupreoque vel viridi aurata; dentes apicales valde insolite dispositi: duo tantum apicales breves, triangulares et duo laterales parvi, obtuse- triangulares.*

588. **Chrysis angulata** Dhlb.

Chrysis angulata, Dhlb. Hym. Europ. II. p. 277, n. 155. ♀. (1854).

Mediocris, elongata, sat robusta, violascenti-cyanea, cinereo-alboque pilosa; vertice, pro- et mesonoto, scutello abdominisque segmentis dorsalibus igneo-cupreoque auratis; facie cum temporibus, pronoti sulco longitudinali lato ac profundo, suturis mesonoti viridi-cyanescentibus; pleuris ex parte et postscutello viridi-auratis; cavitate faciali subquadrata sat profunda ac lata, dense punctato-coriacea parciusque argenteo-sericeo-pilosa, medio canalicula longitudinali subtili, superne convexa, non marginata; antennis mediocribus crassiusculis brunneis, cano-puberulis, articulis duobus primis viridi-æneis, tertio sat brevi, quarto vix duplo longiore; genis sat longis, articulo antennarum tertio æquilongis; pronoto longo, transverso-rectangulo, metanoto convexo, dentibus postico-lateralibus brevibus, triangularibus, postice truncatis; vertice densius et parum subtilius, thorace supra crassius dispersiusque fortiter punctato-reticulatis; abdominis segmentis dorsalibus: primo parte truncata nigro-violaceo viridi-aureo-limbato, 2—3 basi nigro-æneis, secundo carinula mediana nulla, tertio convexo, supra seriem vix incrassato, foveolis obliteratis minutis minus distinctis, margine apicali sat longo, dense punctulato, transverso, leniter arcuato-obtuso, utrinque dente laterali robusto triangulari, margine laterali superne lenissime arcuato, inferne sub initio seriei anteapicalis late arcuato-emarginato, unde ad centrum angulus exstat mediocris dentiformis; segmentis: primo et secundi parte basali crasse profundeque, huius parte apicali et tertio multo subtilius subrugoso-punctatis, interstitiis subtilissime punctulatis; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fusco-rufis; alis subhyalinis, venis fuscis, cellula radiali sublanceolata incompleta, apice late aperta, tegulis brunneo-æneis viridi-maculatis. — ♀; long. 8 mm.

Species: cum *Chryside pulchella* Spin. multum habet similitudinis.

Patria: Sardinia (Costa); Croatia (Pregrada, circa finem Junii a Dom. Korlević inventa, Coll. Korlevići et Mus. Hung.); Asia minor (Dhlb.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

589. **Chrysis incisa** Buyss.

Chrysis angulata, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 76 et 89. ♂. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 72, n. 45. (1887) (nec Dhlb.).

Chrysis incisa, Buyss. Revue d'Entom. VI. p. 184, n. 20. ♂♀. (1887) sec. spec. typ. ♀. e coll. Abeillei.

Præcedenti simillima; sed minor, cavitate faciali frontem versus angustata, oculis multo minoribus magisque ovatis, genis brevioribus, pronoto quoque breviore, thorace supra abdominisque segmentis dorsalibus multo subtilius punctatis, alarum tegulis viridi-cyaneis, segmento tertio lateribus multo profundius arcuatim-excisis, dentibus maioribus magisque robustis, cellula lanceolata subcompleta, apice parum tantum aperta, speciem optime distinguendam esse censeo.— ♀ ; long. 7 mm.

«Je rapporte à cette espèce comme ♂ deux individus de la collection Abeillei, figurant avec doute sous le nom de *Chr. angulata* Dhlb.; l'un vient d'Espagne, l'autre de Caiffa, ce dernier exemplaire capturé par M. Abeille de Perrin avec les précédents. Ces deux insectes s'éloignent de la description de Dahlbom par leur ponctuation thoracique et abdominale et par leur troisième segment abdominal qui ne correspond nullement au dessin de l'entomologiste suédois. En effet, au lieu d'avoir cinq angles à l'apex, dont trois sur la même ligne, les insectes de la collection Abeille ont la ligne transversale de l'apex rectiligne sans angles ou imperceptiblement arrondie, les angles latéraux sont obtus et l'incision qui les forme de chaque côté est peu profonde. La ligne de points existe mais est incompléte, les points du milieu sont plus larges, ouverts et arrondis.

Ce qui me fait croire que ces deux ♂ doivent appartenir à la *Chr. incisa*, c'est qu'ils ont même forme, même coloration, même ponctuation que celle ci. Ils ont comme caractères sexuels les tarses pâles presque blanchâtres, la cavité faciale à longue pubescence blanche, les antennes à fine villosité blanchâtre, les incisions laterales du troisième segment abdominal moins profondes et dès lors les angles moins accusés; enfin, ainsi qu'il est dit plus haut, la ligne antéapicale est distincte.» (Buyss. l. c.).

«Muy abundante en la región montañosa de la provincia, en los terrenos donte cercle la *Thapsia*. En la región baja por el contrario, desaperece completamente.» (Gog. l. c.).

Patria: Hispania (Ab.; Navacerrada, Quadarrama, Escorial, Villalba, Gog.); Syria (Kaiffa, Coll. Abeillei!).

590. **Chrysis strangulata** Gog.

Chrysis strangulata, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 72, n. 46. (1887) excl. Dahlb. syn., nec Dhlb.

«Cuerpo alargado. Cabeza convexa, verde-dorado. Vértice prominente. Megillas azules. Fosita antenaria medianamente profunda, no bien limitada por la frente. Antenas con los tres primeros artejos verdes, los restantes negros. Tórax subcilíndrico con

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

punctuación fina, rugosa y disigual. Protórax verde-dorado; el borde anterior de este y el surco medio longitudinal que alcanza hasta la mitad del anillo, verdes. Mesotórax también verde-dorado, con la mitad anterior del área, casi azul. Metanoto en parte azul ó verde. Ángulos metasternales pequeños, divergentes. Abdomen dorado con un fuerta reflejo verde. Puntuación fina. Último segmento truncado posteriormente con dos pequeños dientes laterales en los extremos de la truncadura. Vientre verde.

Long. 8 mm.

Muy afin à la especie anterior de la cual est possible que sea una variedad únicamente.»

Patria: Hispania (Madrid, Escorial, Gog.).

Animadversio. - - Dahlbomus sub nomine *Chrys. strangulata* ne unam quidem descripserat Chrysidem.

XXXII. *Abdominis segmenta dorsalia cum facie, pro- et mesonoto igneo-aurata; dentes intermedii postpositi prominuli, robusti, valde approximati, obtusiusculi, externi laterales breves, triangulares.*

591. **Chrysis pyrophana** DHLB.

Chrysis pyrophana, Dhlb. Hym. Europ. II. p. 280, n. 157. ♀. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 77. ♀. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. p. 77, n. 52. (1887).

Mediocris vel submagna, ovato-oblonga, robusta, violascenti-cyanea, densius longiusque cinereo-alboque pilosa; cavitate faciali, pro- et mesonoto abdominisque segmentis dorsalibus et ventralibus maxima ex parte igneo-auratis, scutelli disco et mesopleuris viridi-auratis, vertice ante stemmata aureo-maculato; cavitate faciali profunda, lata, dense punctata, disco lævissima polita punctis perpaucis adspersa, superne non marginata; antennis breviusculis, fuscis, sat crassis, articulis tribus primis ænescentibus, tertio minus longo, secundo vix duplo longiore; oculis ovalibus, valde exsertis; genis mediocribus, antennarum articulo tertio brevioribus; vertice nigro-violaceo, circa stemmata ænescenti; pronoto sat longo, transverso-rectangulo, antice in medio sat profunde longitudinaliter sulcato, sulco viridi-aureo, truncatura antica nigro-violacea; metanoto convexo, dentibus postico-lateralibus mediocribus, angustis, acute-triangularibus; vertice dense subtilius, thorace supra parum dispersius crasse profundeque punctato-reticulatis; abdominis segmentis dorsalibus: primo parte truncata cyanea superne viridi-aureo-limbata, 2—3 basi nigro-æneis, secundi carinula mediana indistincta, sed tertii abbreviata subplaniuscula nigro-ænescenti lævi, segmento hoc convexo-depresso, supra seriem utrinque parum incrassato, foveolis mediocribus rotundatis distinctis circiter 12, per carinulam medianam latam planamque interruptis, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus intermediis prominulis robustis obtusiusculis approximatis, magnitudine mediocribus, dentibus externis pone illos sitis brevioribus latioribus triangularibus, emarginaturis: centrali anguste arcuata, externis obliquis late-arcuatis, summo margine nigro-æneo; segmentis: primo sat sparsim subti-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

lius, secundo densius sed parum fortius, tertio adhuc magis crassius punctato-subreticulatis, interstitiis primi subtilissime punctulatis, tertii lævibus ac politis; ventre igneo-aurato nigroque maculato; pedibus viridi- et nigro-æneis, tarsis brunneis; alis sordide-hyalinis, apice dilutioribus, venis fuscis, cellula radiali lanceolata incompleta, apice parum aperta, tegulis brunneis. — ♀; long. 8—9 mm.

Mas adhuc ignotus esse videtur. — Femina, secundum Dahlbom, in pro- et mesonoto segmentisque abdominis dorsalibus duobus primis viridi-aurata est.

Patria: Gallia (Dhlb.; Marseille, Ab.; Montpellier, Mus. Hung.) et Hispania (Ab. et Gog.).

XXXIII. *Abdominis segmenta dorsalia igneo-aurata nitore viridi; pro- et mesonotum aurata; dentes: duo laterales et duo apicales.*

592. **Chrysis euchlamys** mihi.

Chrysis varidens, Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 76, n. 51. ♀. (1887) excl. Abeillei syn., nec Abeille.

«Cuerpo grande, robusto. Cabeza negra. Frente con una mancha verde en la parte anterior. Fosita antenaria verde, más estrecha que el espacio interocular, con el borde frontal redondeado. Antenas negras, con los dos primeros artejos metálicos. Ojos grandes, pero deprimidos. Punctuación de la cabeza formada de puntos gruesos, aislados, pero próximos. Protórax y mesotórax dorados, el surco medio longitudinal del primero casi tan largo como ancho es el anillo; el área media del segundo, verde. Posescudete mesotóracico y metatórax azules. Piezas escapulares azules, patas también azules, pero muy oscuras. Abdomen puncteado, rugoso, rojo de fuego, con reflejos verdes que dominan en el primer segmento. Puntos de la línea marginal, grandes y profundos, completamente cerrados. Borde libre del tercer segmento, con cuatro dientes, dos laterales y dos apicales; estos últimos muy salientes. Vientre dorado. Oviscapo tan largo como el abdomen. Cuerpo con pubescencia larga y poco abundante.

Long. 11 mm.

Solo poseo un ejemlar ♀. recogido por el Sr. D. Maximino Sanz di Diego. En un principio creí podía formasse una variedad local, al observar la diferencia grande de tamaño que exsiste entre este y otros ejemplares que poseo di distintos puntos de Europa. Pero mejor estudiado he visto que esta diferencia en el tamaño, no hace variar en nada los demás caracteres relativos á la coloración, punctuación, proporciones de las diferentes partes, etc. y que por tanto la variación indica carece de importantia.»

Patria: Hispania (Escorial).

Animadversio. - - A *Chryside varidente* Ab., secundum meam opinionem, toto cœlo differt.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

XXXIV. *Caput et thorax supra cum abdomine viridi-aurata vel aurato-viridia, in locis certis nonnunquam cyanescentibus vel cyaneo-viridibus.*

1) *Caput magnum, cubicum, pronoto latius; abdominis segmenti tertii dentes externi ab angulo laterali non remoti.*

593. **Chrysis Ehrenbergi** Dhlb.

Platycelia Ehrenbergi, Dhlb. Dispos. p. 8, n. 1. ♀. (1845).
Chrysis Ehrenbergi, Dhlb. Hym. Europ. II. p. 220, n. 120. ♀. (1854). — ? Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 16, n. 29. tab. I. fig. 10. ♀. (1877).

Descriptio secundum Dahlbom:

«Mediocris ovalis robusta 2½ lin. decimal. long. sparse modice punctata subtus cyanea supra virescens parumper aurato-nitida, tarsis testaceis, capite magno cubico, cavitate faciali superne non marginata, occipite inermi, abdomine ovato, segmenti tertii margine laterali paullulum flexuoso, alarum cellulis discoidali completa, radiali incompleta, venis tenuibus testaceis.

Observ. Species eximia per structuram capitis præcipue singularis. Corpus ovale nitidum cano-pubescens et pilosellum punctis sat mediocribus aut subparvis adspersum. Caput magnum rotundato-cubicum viride; vertex latus pronoto latior transverso-rectangularis, depresso-convexiusculus pone stemmata nonnihil aureo-nitens, margine occipitali leniter arcuato-emarginatus; tempora recta concaviuscula polita non punctata margine postico emarginata; oculi subparvi ovato-rotundati; cavitas facialis quadrata mediocris confertim punctulata medio leniter et abrupte canaliculata. Antennæ breves non crassæ, fuscæ scapo viridi; genæ brevissimæ, ad apicem temporum angulato-subprotuberantes; clypeus brevis transversus depressus parce punctulatus, ad centrum marginis apicalis lenissime arcuato-emarginatus. Mandibulæ elongatæ acuminatæ sublineares parumper arcuatæ, margine infero-externo a basi usque ad ¾ totius longitudinis leniter arcuato-emarginatæ, supra l. extus longitudinaliter sulcatæ, totæ piceæ, ante apicem dilutiores, macula basali viridi; labrum parvum semilunatum. Thorax rectangularis capite angustior, dorso parum convexus; pronotum breve transverso-rectangulum sulculo mediano brevi, margine antico humili cyanescens, reliqua parte viridis parum aureo-nitens, lateribus concavo-emarginatis; dorsulum breve transverso-ovale et scutellum mediocre viridia parumper aureo-micantia; metanoti anguli postico-laterales subparvi triangulares. Pedes virides calcaribus tarsisque testaceis. Alæ albo-hyalinæ venis præter costalem robustam tenuibus brunneo-testaceis, cellula radiali lanceolata apice aperta. Abdomen subbreve, thoracis longitudine, ovatum, basi transversum normaliter at leniter impressum, dorso modice convexum crebre punctulatum læte viride nonnihil aureo-splendens; segmentum dorsale tertium subsemilunatum, totum modice convexum nec in regione seriei quidem immersum, series anteapicalis continua: foveolis numerosis perparvis rotundis cum reliqua segmenti punctura facile confundendis, margo apicalis brevis subdepressus viridi-cœrulescens: dentibus apicalibus mediocribus aut subparvis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

spinoideis, emarginaturis arcuatis, lateralibus levibus (nec profundis) subangustis (nec latis), centrali profunda et duplo nisi triplo latiore quam singula quaque lateralium; hinc utrinque dentes duo approximati, nec ulli mere centrales, existunt; venter cyaneus nigro- et viridi-maculatus, totus depresso-planus nec ullo modo fornicatus.»

Patria: Aegyptus (Dhlb.); ? Turkestania (desertum Kisil-kum, Rad.).

Animadversio. — Radoszkovszkyi specimen typicum non vidi.

594. **Chrysis megacephala** DHLB.

Chrysis megacephala, Dhlb. Hym. Europ. II. p. 222, n. 121. ♀. (1854).

«Mediocris ovalis robusta 2½ lin. decimal. long. sparse modice punctata, subtus cyanea, supra virescens æneo-aurato-nitida tarsis testaceis, capite maximo cubico, cavitate faciali superne non marginata, occipite inermi, abdomine ovato, segmenti tertii margine laterali flexuoso, alarum cellulis discoidali completa, radiali incompleta, venis firmis piceis.

Observ. Nimis affinis et similis *Chrysidi Ehrenbergi* atque ut huius varietas primo intuitu facile existimanda. Attamen *Chrysis megacephala* sequentibus notis præcipue characteristicis certe dignoscitur, scil. vertice, pronoto, mesonoto, abdominisque dorso conspicue æneo-aurato-nitidis; capite majore multoque crassiore; fronte latiore et oculis igitur magis distantibus; clypeo majore; thorace crassiore; femoribus et tibiis viridi-cyaneis; alis sordide hyalinis venis firmis piceis; abdominis dorso crebrius punctato, segmenti secundi margine basali nigro-æneo; segmenti tertii margo-apicalis prominulus et reliqua parte segmenti distinctius humilior, serie anteapicali fere obliterata l. a reliquis segmenti punctis vix discernenda, dentibus apicalibus majoribus. Ceterum inter has species non ulterior adest differentia.

Not. Chrysides Ehrenbergi et *megacephala* forsitan proprium Genus efficere possint, cui jam anno 1845 nomen «*Platycelia*» proposuimus. Quum vero notæ Generis ejusmodi characteristicæ e structura trophorum ut opinamur præcipue sumi debent, nos has partes post mortem, ut constat, retractas et perfragiles (in exemplaribus tantum descriptionis causa et bona fide traditis) dissecare non ausi sumus, præsertim quod hoc vix nisi detrimento animalculi fieri posset. Propter hanc rationem itaque necesse fuit, ut species memoratas in Genere Chrysidum saltem pro tempore collocaverimus.»

Patria: Aegyptus.

2) *Caput mediocre, pronoto non latius.*

a) *Clypeus magnus longiusculus, apice truncatus.*

595. **Chrysis pallidicornis** SPIN.

Chrysis pallidicornis, Spin. Annal. Soc. Ent. France. VII. p. 451, n. 4. ♂. (1838).

Chrysis armena, Dhlb. Hym. Europ. II. p. 274, n. 153. ♂. (1854). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 306. n. 44, tab. V. fig. 28. ♂.; Fedts. Reise in Turkest. Hym. Chrysid. p. 22, n. 43. ♂ ♀. (1877).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Mediocris, robusta, viridi-subaurata, parcius cinereo-alboque pilosa; vertice mesonoto et scutello abdominisque dorso magis auratis; cavitate faciali planiuscula, dense punctulato-coriacea densissimeque argenteo-sericeo-pilosa, superne transverse acute-marginata, margine inæquali; antennis robustis, fusco-rufis, scapo viridi-aurato, articulo tertio brevi, secundo vix duplo longiore, quarto fere dimidio breviore; clypeo longiusculo, magno, depresso-convexo, læte-viridi, sparsim punctato, margine apicali arcuato, fusco; genis longis, articulo quarto antennarum æquilongis; vertice et pronoto dense minus regulariter, mesonoto cum scutello et postscutello vero sparsim crasse profundeque punctato-reticulatis; pronoto longo, longitudine capitis, metanoto convexo, dentibus postico-lateralibus longis acutis, triangularibus, divarricatis; abdominis segmentis dorsalibus sat sparsim crasse profundeque punctatis, interstitiis lævibus; secundo carinula mediana distincta; tertio convexo, supra seriem non calloso, ipsa serie foveolis obliteratis, margine apicali quadridentato, dentibus robustis, mediocribus, intermediis triangularibus, externis spinoideis parum brevioribus, fere in lineam rectam transversam dispositis, a margine laterali parum remotis, emarginaturis profunde-arcuatis, centrali externis parum angustiore; ventre pure-aurato, segmento secundo basi utrinque nigro-maculato; pedibus viridi-auratis, tibiarum calcaribus tarsisque testaceis; alis parum sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice late aperta, tegulis viridi-cyaneis. — ♂; long. 8 mm.

Patria: Aegyptus (Spin.); Armenia (Dhlb.); Caucasus (Coll. Rad.!); Turkestania (desertum Kisil-kum, Rad.).

b) *Clypeus non magnus, nec longiusculus.*

*

Conspectus specierum huius secundariæ sectionis mihi cognitarum.

1 (6). Dentibus apicalibus brevibus, triangularibus.

2 (5). Scutello concinne aurato; antennarum articulo tertio longitudine mediocri; pronoto longo.

3 (4). Antennarum flagello nigro; tarsis fuscis; corpore ubique crasse punctato; abdominis segmento dorsali primo truncatura in medio sulco longitudinali lato ac polito ... ...

8 (7). Dentibus apicalibus a margine laterali parum tantum remotis; antennis inde ab articulo secundo vel tertio fuscis; alis hyalinis vel albo-hyalinis.

9(10). Corpore parvo, toto cum abdomine aurato-viridi, splendido; cavitate faciali superne non marginata; abdominis segmentis dorsalibus punctatura subtili; tibiarum calcaribus tarsisque testaceis . . . . . *spinidens* Mocs.

10 (9). Corpore mediocri, cum abdomine non toto aurato-viridi; cavitate faciali superne transverse marginata; abdominis segmentis dorsalibus punctatura fortiore; tarsis fuscis.

11(12). Antennarum articulis tribus primis viridibus; abdominis segmento dorsali tertio disco utrinque parum concaviusculo-immerso, supra seriem lateribus leniter calloso, margine apicali longo, emarginaturis latioribus. . . . *chrysochlora* n. sp.

12(11). Antennarum articulis duobus primis tantum viridibus; abdominis segmento dorsali tertio convexo, supra seriem vix calloso, margine apicali brevi, emarginaturis angustioribus.

13(14). Antennis crassiusculis, articulo tertio quarto parum breviore, abdominis segmentis dorsalibus duobus primis fortius minus profunde parum rugosiuscule-punctatis; cellula radiali apice parum aperta. . . . . *Keriensis* Rad.

14(13). Antennis tenuibus, articulo tertio quarto parum longiore; abdominis segmentis dorsalibus duobus primis sat sparsim minus crasse ac profunde punctatis punctis minoribus quoque inmixtis; cellula radiali subcompleta. . . . *carnifex* n. sp.

*

596. **Chrysis Somalina** n. sp.

Mediocris, elongata, parallela, sat robusta, aurato-viridis, parcius cinereo-alboque pilosa; suturis lobi medii longitudinalibus mesonoti abdominisque segmentis dorsalibus basi nigro-violaceis; alarum tegulis et abdominis segmento dorsali tertio in mare viridi-cyaneis; cavitate faciali planiuscula, minus lata, sursum versus angustata, dense punctulato-coriacea, argenteo-sericeo-pilosa, superne indistincte flexuoso-marginata; antennis brevibus, sat tenuibus, nigris, cano-puberulis, articulis in mare duobus, in femina tribus primis viridi-auratis, tertio sat longo, secundo duplo longiore; genis longis, articulo antennarum tertio æquilongis; vertice thoracisque dorso in femina sat sparsim crassius punctatis interstitiis sat latis lævibus, in mare punctatura densiore subreticulata; pronoto longo, longitudine capitis, transverso-rectangulo, antice in medio leniter longitudinaliter sulcato; metanoto convexo, dentibus postico-lateralibus mediocribus, triangularibus, apice incurvis; abdominis segmentis dorsalibus sat sparsim, in mare densius, cribrato-punctatis interstitiis lævibus ac politis, primo parte truncata in medio longitudinaliter sulcato, sulco lato lævi ac polito, secundo carinula mediana indistincta, tertio disco parum concaviusculo-immerso, ante seriem in femina modice incrassato-convexo, foveolis mediocribus haud numerosis, in mare adhuc magis indistinctis, margine apicali sat longo, dense subtilius punctato, quadridentato, dentibus brevibus triangularibus, externis brevioribus, in arcum levem dispositis, a margine laterali oblique-flexuoso

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

parum remotis, emarginaturis minus profunde-arcuatis, centrali externis parum angustiore; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus viridi-auratis, tarsis fuscis; alis sordide-hyalinis, apice dilutioribus, venis firmis piceis, cellula radiali lanceolata incompleta, apice parum aperta. — ♂ ♀; long. 8—9 mm.

Patria: Africa orientalis (provinciæ Somali, Coll. Ed. André).

597. **Chrysis chlorochrysa** Mocs.

Chrysis chlorochrysa, Mocs. Horæ. Soc. Ent. Rossicæ. XXIII. p. 23, ♂ ♀. (1888). — Rad. l. c. p. 24. (genit. maris) (1888).

Mediocris, elongata, parallela, sat robusta, aurato-viridis, parcius cinereo-alboque pilosa; vertice, vitta angusta loborum lateralium mesonoti et scutello concinne auratis; occipite, collo, lobo medio mesonoti antice et metanoto cyanescentibus; cavitate faciali minus profunda, angusta, dense punctulato-coriacea argenteo-sericeoque pilosa, superne transverse-marginata, margine aream semicircularem stemma anticum excipientem plus minusve distincte emittente; antennis mediocribus, crassiusculis, fusco-rufis, canopuberulis, articulis: primo viridi-aurato, secundo supra virescenti, tertio haud longo, quarto parum tantum longiore; genis mediocribus, antennarum articulo tertio æquilongis; pronoto longo, longitudine capitis, transverso-rectangulo, antice in medio longitudinaliter impresso, metanoto convexo, dentibus postico-lateralibus acute-triangularibus, apice parum curvatis; vertice, pro- et mesonoto sat crasse, scutello et postscutello adhuc parum fortius punctato-subreticulatis; abdominis segmentis dorsalibus auratoviridibus, basi et ultimo margine apicali cyanescentibus, dense sat crasse, ultimo adhuc densius subtiliusque subrugoso-punctatis, secundo carinula mediana nulla, tertio convexo, ante seriem calloso, foveolis circiter 9 distinctis submediocribus, margine apicali quadridentato, dentibus triangularibus, brevibus, externis subacutis, intermediis late-obtusis, in arcum levem dispositis, emarginaturis minus profunde arcuatis, centrali fere triangulari, externis parum angustiore; margine laterali parum remoto ante dentem externum leniter arcuato; ventre pedibusque aurato-viridibus, tarsis pallide-testaceis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta, tegulis viridi-cyaneis. — ♂.; long. 7 mm.

«*Armure*. L'armure de cette espèce est conforme avec celle de l'espèce précédente (Chrys. Maracandensis Rad.).» (Rad. l. c.).

Patria: Persia (Askhabad, Coll. Rad.).

598. **Chrysis regina** Buyss.

Chrysis regina, Buyss. Revue d'Entom. VI. p. 186, n. 21. ♂. (1887).

Mediocris, elongata, parallela, sat robusta, aurato-viridis vel leniter cyanescens, longius cinereo-alboque pilosa; cavitate faciali sat lata, subquadrata, minus profunda, dense punctato-coriacea, argenteo-sericeo-pilosa, medio longitudinaliter canaliculata,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

superne transverse marginata, margine undulato; antennis longis, crassis, nigris, cano puberulis, articulis duobus primis et tertii basi viridi-auratis, 3—4 valde brevibus subæqualibus, simul sumptis quinto æquilongis; genis sat longis, articulo antennarum quinto longitudine æqualibus; pronoto brevi, capite breviore, transverso-rectangulo, antice in medio sat profunde impresso, metanoto convexo, dentibus postico-lateralibus sat longis acute-triangularibus, metathoracis area media utrinque sulco lato ac profundo transverseque costato, apice profunde fossulato, circumcincta; thorace supra crasse minus dense irregulariter punctato-subreticulato; abdomine aurato-viridi, segmentis dorsalibus fere æqualiter, ultimo parum densius, crasse profundeque punctatis, primo basi trifossulato, 2—3 nigro-æneis, secundo carinula mediana sat distincta subtilissime punctulata, angulis laterali-apicalibus acutis; tertio basi utrinque parum concaviusculo-immerso, supra seriem leniter calloso, serie anteapicali medio per carinulam medianam brevem interrupta foveolis sat profundis, rotundis, mediocribus, margine apicali quadridentato, dentibus submediocribus, triangularibus, subacutis, fere æquilongis, in lineam subarcuatam dispositis, externis parum longioribus quam intermedii magisque acutis, emarginaturis minus profunde, centrali paulo profundius arcuatis, externis distincte latioribus quam centrali, margine laterali oblique-subrecto; ventre pedibusque aurato-viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis sordide-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis aurato-viridibus. — ♂; long. 8 mm.

Variat: colore capitis thoracisque plus minusve cyanescenti.

Species: colore, genis sat longis, metathoracis area media utrinque sulco insigni lato et profundo transverseque costato (quæ in aliis speciminibus plerumque indistincta est) circumcincta et antennarum flagelli articulis 2—3 valde brevibus, tertio secundo breviore, his simul sumptis quarto æquali, a congeneribus facile cognoscitur.

Patria: Persia (Buyss.; Demabend, Coll. Rad.! et Mus. Hung.).

599. **Chrysis remota** Mocs.

Chrysis remota, Mocs. Horæ. Soc. Ent. Rossicæ. XXIII. p. 21. ♂. (1888). — Rad. l. c. p. 22. (genit. maris) (1888).

Mediocris, elongata, parallela, minus robusta, cyaneo-viridis, parce cinereo-alboque-pilosa; vertice, pronoti lateribus, mesonoti loborum lateralium vitta basali mesopleurisque aurato-viridibus; occipite, collo, mesonoti lobo medio et tegulis cyanescentibus; genis brevibus, linearibus; cavitate faciali sat profunda, subangusta, dense punctulato-coriacea, lateribus albo-sericeo-pilosa, superne acute marginata, margine deorsum versus profunde arcuato; pronoto brevi, transverso-rectangulo, antice in medio sat profunde impresso, metanoto convexo, dentibus postico-lateralibus validis subobtusis; vertice thoraceque supra crasse profundeque punctato-subreticulato; abdomine cyaneo-viridi, segmentis dorsalibus primo disco, secundo tertioque fere totis aurato-viridibus, duobus primis sat sparsim cribrato-, tertio densius subtiliusque punctatis, se-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cundo carinula mediana obsoleta, tertio convexo, supra seriem leniter calloso, serie anteapicali foveolis paucis, circiter 5 tantum distinctis, profundis et rotundis, margine apicali quadridentato, dentibus ab angulo laterali longe remotis sat longis, acutis, subspinoideis, externis centralibus brevioribus, emarginaturis profundis, centrali externis latiore; ventre cyaneo-viridi, segmento secundo basi utrinque nigro-maculato; antennarum articulis duobus primis, femoribus tibiisque viridi-cyaneis, articulis reliquis et tarsis fusco-rufis, flagelli articulo secundo haud longo, tertio æquali; alis sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice parum aperta, tegulis cyaneis. — ♂; long. 7 mm.

Species: cum *Chrys. Chevrieri* Mocs. *var. orientali* Mocs. multum habet similitudinis.

«*Armure.* — La branche du forceps allongée vers l'extrémité, son bord intérieur decoupé, garni de poils minces. Volsella assez large, garnie de poils. Crochets larges, pointus à l'extrémité.» (Rad. l. c. tab. IV. fig. 48a, 48b, 48i.).

Patria: Persia (Demabend, Coll. Rad!) et Caucasus (Rad.).

600. **Chrysis chrysochlora** n. sp.

Mediocris, elongata, parallela, minus robusta, aurato-viridis, parce cinereo-alboque pilosa; collo, mesonoti lobo medio antice et postice nigro-cyaneis; capite cyaneo-viridi vel aurato-viridi; genis sat longis, cavitate faciali minus profunda, medio canaliculata, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse marginata, margine medio flexuoso, vertice punctato-subreticulato; thorace supra sparsim sat crasse profundeque punctato; pronoto brevi, transverso-rectangulo, antice in medio vix impresso, metanoto convexo, dentibus postico-lateralibus brevibus, robustis, late-triangularibus, postice subtruncatis; abdomine segmentis dorsalibus aurato-viridibus, duobus primis dense sat crasse, tertio densius subtiliusque subrugoso-punctatis, 2—3 basi late nigro-cyaneis, secundo carinula mediana distincta segmentum totum occupante, angulo laterali-apicali acuto, tertio convexo, supra seriem lateribus leniter calloso, serie anteapicali foveolis circiter 13 minutis rotundis, margine apicali dentibus quattuor in lineam rectam transversam dispositis, acutis, sat longis, externis paulo longioribus, quam centralibus, a margine laterali subarcuatim inflexo parum remotis, emarginaturis profundis, æquilatis; ventre cyaneo-viridi parum aureo-lavato, segmento secundo basi utrinque nigro-maculato; antennarum scapo, femoribus tibiisque viridibus, flagelli articulis duobus primis supra viridibus, reliquis et tarsis subtus fuscis, flagelli articulo secundo sat longo, tertio longiore, quarto quintoque simul sumptis breviore; alis hyalinis, cellula radiali triangulariter lanceolata parum sordida, apice anguste aperta, venis fuscis, tegulis aurato-viridibus. — ♀; long. 8 mm.

Patria: Turkestania (Taschkend, Coll. Rad.! et Mus. Hung.).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

601. **Chrysis Keriensis** Rad.

Chrysis keriensis, Rad. Horæ Soc. Ent. Rossicæ. XXI. p. 47. ♂ (non ♀), tab. III. fig. 9. (margo apic.) (1887) sec. spec. typ. e coll. Rad.

Mediocris, elongata, subparallela, minus robusta, densius longiusque albo-pilosa, cyaneo-viridis, facie, pro- et mesonoto, scutello alarumque tegulis aurato-viridibus, splendidis, occipite, collo et mesonoti lobo medio antice cyanescentibus; cavitate faciali non profunda, dense punctulato-coriacea argenteo-sericeoque pilosa, superne in medio sinuatim acute-marginata; antennis crassiusculis, longis, fuscis, articulis duobus primis aurato-viridibus, tertio proportionaliter brevi, quarto parum breviore, quinto æquali; genis brevibus, articulo primo flagelli æquilongis; vertice dense minus crasse, metanoto fortius punctato-reticulatis; parte reliqua thoracis supra minus dense irregulariter fortius punctato, metathorace subtus trifossulato; pronoto brevi transverso, antice in medio parum impresso, metanoto convexo, dentibus postico-lateralibus brevibus obtuse-triangularibus; abdomine aurato-viridi, segmentis dorsalibus basi cyaneis, primo basi trifossulato, primis duobus fortius minus profunde parum rugosiuscule-punctatis, secundo carinula mediana distincta, tertio coriaceo rugoso-punctato, convexo, ante seriem anteapicalem non incrassato, foveolis circa 8 sat distinctis, rotundis, mediocribus, sed minus profundis, margine apicali quadridentato, dentibus longis, acutis, æqualibus, spinoideis, in lineam transversam dispositis, a margine laterali parum remotis, emarginaturis profundis, æquilatis; ventre aurato-viridi, segmento secundo basi utrinque nigro-maculato; pedibus aurato-viridibus, tarsis fuscis; alis albo-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta. — ♂; long. 7 mm.

Patria: Mongolia (Keria-Daria, Coll. Rad.).

602. **Chrysis spinidens** Mocs.

Chrysis spinidens, Mocs. Horæ Soc. Ent. Rossicæ. XXI. p. 48. ♂. (1887). — Rad. ibid. tab. III. fig. 9. (margo apic.).

Parva, elongata, parallela, sat robusta, parce albo-pilosa; corpore toto cum abdomine unicolore aurato-viridi, splendido; genis mediocribus, cavitate faciali minus profunda ac lata, dense punctulato-coriacea, argenteo-sericeo-pilosa, superne non marginata, vertice dense punctato-subreticulato; thorace supra sat sparsim minus profunde punctato; pronoto brevi transverso, antice in medio non impresso, metanoto convexo, dentibus postico-lateralibus brevibus, acute-triangularibus; abdominis segmentis dorsalibus: primo sat sparsim leviter punctato interstitiisque subtilissime punctulatis, reliquis dense, tertio rugosiuscule-punctulatis, secundo carinula mediana haud distincta, tertio convexo, ante marginem non calloso, serie anteapicali foveolis mediocribus, circiter 10 sat distinctis et profundis, margine apicali quadridentato, dentibus longis acutis, spiniformibus, fere in lineam transversam dispositis et a margine laterali parum remotis, externis modice brevioribus, emarginaturis profunde arcuatis, centrali externis paulo latiore; ventre

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

viridi-cyaneo aurato-viridi lavato, segmento secundo basi utrinque nigro-maculato; antennarum scapo, femoribus tibiisque aurato-viridibus, flagelli articulo primo supra viridi, reliquis fuscis, cano-puberulis, secundo brevi, tertio paulo breviore, quarto subæquali; tarsis calcaribusque testaceis; alis albo-hyalinis, venis pallide-fuscis, cellula radiali triangulariter lanceolata, apice parum aperta. — ♂; long. 5 mm.

Patria: Mongolia (Zaïdam, in monte Keria, in altitudine 9000′ a Dom. Przewalski detecta, Coll. Rad.).

603. **Chrysis carnifex** n. sp.

Mediocris, elongata, subparallela, cyaneo-viridis, parcius cinereo-alboque pilosa; mesonoto scutelloque et abdominis segmentis dorsalibus viridi-auratis; cavitate faciali subangusta, minus profunda, dense punctulato-coriacea argenteo-sericeoque pilosa, medio longitudinaliter canaliculata, superne transverse acute, medio sinuoso-marginata; antennis tenuibus, sat longis, nigris, cano-puberulis, articulis duobus primis læte-viridibus, tertio sat longo, secundo fere duplo, quarto parum tantum longiore; genis mediocribus, articulo antennarum secundo parum longioribus; pronoto brevi, transverso, antice in medio longitudinaliter impresso, metanoto convexo, dentibus postico-lateralibus validis sat longis late-triangularibus, apice subacutis; vertice dense subtilius punctato-subreticulato; thorace supra sat crasse profundeque irregulariter punctato; abdominis segmentis dorsalibus: primo basi leviter trifossulato, 2—3 basi nigro-æneis, secundo carinula mediana angusta, acuta, angulo laterali-apicali acuto, tertio convexo, supra seriem vix calloso, foveolis profundis circiter 10 tantum, intermediis quattuor sat magnis, reliquis minutis, margine apicali sat longo, dense punctulato, quadridentato, dentibus longis, acute-triangularibus, æquilongis, a margine laterali parum remotis, emarginaturis profundis, centrali externis parum angustiore; segmentis duobus primis sat sparsim minus crasse ac profunde punctatis punctis minoribus quoque inmixtis, tertio dense rugosiuscule-punctulato subcoriaceo; ventre cyanescenti-viridi et aurato, segmento secundo basi utrinque nigro-maculato; pedibus cyaneo-viridibus, tarsis apice et subtus fuscis; alis hyalinis, venis fuscis, cellula radiali triangulariter lanceolata subcompleta. — ♂; long. 7 mm.

Patria: China borealis (Ta-tschian-sy, Mus. Hung.).*

604. **Chrysis scitula** Cress.**

Chrysis scitula, Cress. Proceed. Ent. Soc. Philad. IV. p. 308, n. 4. ♀. (1865). — Nort. Transact. Amer. Ent. Soc. VII. p. 242. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 232. ♀. tab. VIII. fig. 48. (segm. anale) (1885).

* Non me latet, quin species nonnullæ Tetrachrysidarum mihi in natura ignotæ et primæ meæ Sectionis insertæ, huius secundariæ Sectionis cives sint.

** *Chrysis scitula* Cress. et *aurichalcea* Prov., quas in operibus Cressoni et Aaroni Dichrysidibus insertas invenimus, secundum meam opinionem et secundum figuram segmenti analis ad Tetrachrysidas pertinent.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

«One specimen (the type) from Colorado. It is emerald-green with some brassy reflections; punctures about equal all over, dense on the head and prothorax, less dense on the metathorax; a little separated on the first and second segments of the abdomen, very densely ac indistinct on the third segment. The apex of the third segment contains two distinct teeth, separated by a rounded emargination, and on each side of these teeth is a broader sinuation separating the distinct lateral angles from the apical teeth. This is, though less fully developed, the exact pattern of the normal 4-dentate species; pits small, rounded, rather close, contained in a shallow groove; deeper laterally; 6 mm. long. The specimen is a ♀.» (Aaron l. c.).

Patria: America septentrionalis.

XXXV. *Abdominis segmenta dorsalia duo prima aeneo-purpurascentia, lateribus viridi-aurata, tertium aeruginoso-viride, dentibus apicalibus longiusculis acutis; caput et thorax obscure-aenea.*

605. **Chrysis terminata** Dhlb.

Chrysis terminata, Dhlb. Hym. Europ. II. p. 261, n. 145. ♂. (1854) sec. spec. typ. e Mus. Cæs. Vindob. — Schck, Nass. Jahrb. XI. p. 77, n. 20. (1856); Progr. Gymn. zu Weilb. p. 15, n. 14. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46. (1879). — Lampr. Goldwesp. Deutschl. p. 18, n. 55. (1881).

Mediocris, elongata, parallela, sat gracilis, obscure viridi-ænea parumque purpurascens, densius cinereo-pilosa; cavitate faciali sat lata, quadrata, planiuscula, cyanea, dense punctato-coriacea, medio foveola centrali, superne transverse marginata, margine crenulato et sic quadridenticulato; antennis longiusculis, sat crassis, nigris, articulis duobus primis viridi-cyaneis, tertio mediocri, secundo duplo tantum longiore; genis mediocribus, antennarum articulo tertio parum brevioribus, argenteo-sericeo-pilosis; vertice depresso-planiusculo cum pronoto brevi transverso-rectangulo medioque leniter impresso viridi-æneis; mesonoto, scutello et postscutello fusco-æneo-purpurascentibus; margine occipitali utrinque angulo parvo prominulo; vertice densius, thorace supra parum dispersius subcrasse punctato-subreticulatis; metanoto gibbo-convexo, dentibus postico-lateribus brevibus acute-triangularibus; abdominis segmentis dorsalibus duobus primis æneo-purpurascentibus, lateribus viridi-auratis, tertio æruginoso-viridi, basi anguste aurato; secundo carinula mediana indistincta, angulo postico-laterali acuto; tertio convexo, foveolis per carinulam medianam interruptis utrinque 5 profundis, duabus anticis subquadrangularibus majoribus et 3 lateralibus rotundatis, margine apicali brevi convexo-depresso, dense punctulato, quadridentato, dentibus fere in lineam transversam dispositis longiusculis acutis, intermediis externis longioribus subspinoides, externis subtriangularibus, emarginaturis profunde arcuatis, centrali externis parum latiore, margine laterali ante dentem externum obliquo concavo-arcuato; segmentis: duobus primis sat sparsim minus fortiter punctatis interstitiisque hic illic punctulatis, tertio valde dense subtilius rugosiuscule-punctato; ventre pedibusque violascenti-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cyaneis, illo segmento secundo basi viridi, his tarsis fuscis, calcaribus tibiarum sordide-testaceis; alis hyalinis, venis brunneis, cellula radiali lanceolata subcompleta, tegulis violascentibus. — ♂; long. 7 mm.

Patria: Austria.

Subgenus 7. PENTACHRYSIS Licht.

Abdominis segmenti dorsalis tertii margo apicalis denticulis quinque plerumque distinctis armatus.

In hoc subgenere species aliquot magnificæ inveniuntur.

*

I. *Corpus totum cyaneum et viride, supra saepius plus minusve violascens vel rarius parum viridi-subauratum.*

1) *Postscutellum inerme seu non mucronatum.*

606. **Chrysis inops** Grib.

Chrysis inops, Grib. Annali Mus. Civ. Stor. Nat. Genova. Ser. 2. tom. I. p. 318, n. 60. ♀. (1884).

Submediocris, elongata, subparallela, sat robusta, cyaneo-viridis, parcius cinereo-alboque pilosa; vertice circa stemmata et mesonoti lobo medio nigro-cyaneis; cavitate faciali sat profunda, viridi, dense punctulato-coriacea, medio longitudinaliter canaliculata ac lævigata, lateribus argenteo-sericeo-pilosa, superne minus distincte marginata; antennis sat longis, tenuibus, nigris, cano-puberulis, articulis duobus primis et tertii basi viridibus, hoc longitudine mediocri, secundo vix duplo longiore; genis subbrevibus, articulo antennarum secundo æquilongis, mandibulis apice rufis; vertice dense subtilius, thorace supra crassius punctato-reticulatis; pronoto longo, transverso-rectangulo, antice in medio non impresso; metanoti dentibus postico-lateralibus brevibus, robustis ac latis, subacutis, parum incurvis; abdominis segmentis dorsalibus viridi-cyaneis, primo anguste subtransverse, secundo disco maxima parte et tertio basi et margine apicali nigro-cyaneis; primo basi trifossulato, secundo carinula mediana indistincta; primo sat crasse profundeque, reliquis densius parumque subtilius rugosiuscule-punctatis; tertio convexo, foveolis minutis numerosis, orbiculatis, irregularibus minusve distinctis, margine apicali quinquedentato, dentibus sat longis, intermediis tribus æqualibus subacutis, lateralibus duobus parum brevioribus acute-triangularibus, emarginaturis duabus centralibus æquilatis, lateralibus parum angustioribus, omnibus profunde arcuatis; ventre cyaneo, parum virescenti, segmento secundo basi utrinque nigro-maculato, ultimo fusco-nigro-marginato; pedibus viridibus, tarsis pallide-fuscis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali lanceolata subcompleta, tegulis viridi-cyaneis. — ♂ ♀; long. 6—6½ mm.

Patria: Africa æquatorialis (regnum Scioa, Grib.); Promontorium Bonæ Spei (Mus. Vindob.!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

607. **Chrysis quinquedentata** Mocs.

Chrysis quinquedentata, Mocs. Magy. Akad. Értek. (Dissertat. phys. Acad. scient. Hung.). Vol. XIII. Nr. 11, p. 17, n. 22. ♂. (1883).

Mediocris, elongata, parallela, sat robusta, viridi-cyanea, parce cinereo-alboque pilosa; cavitate faciali profunda, viridi, dense subtiliter transverse coriaceo-rugulosa, medio obsoletius longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne marginata, margine transverso leniter biarcuato, ramulum utrinque brevem ad stemma anticum, parum convergentem, emittente; antennis sat longis, crassiusculis, fusco-nigris, cano-puberulis, articulis tribus primis viridibus, reliquis fuscis, tertio sat longo, sequentibus duobus simul sumptis æquilongo; genis brevibus, articulo secundo antennarum æquilongis; vertice thoraceque supra dense minus crasse, scutello fortius punctato-subreticulatis, postscutello convexo crassius punctato-reticulato; pronoto longo, transverso-rectangulo, antice in medio leniter impresso, lateribus acute-marginatis medioque profunde subarcuatim excisis; mesopleuris viridi-subauratis irregulariter crassius punctatis; metanoti dentibus postico-lateralibus brevibus, validis ac latis, subacutis, parum incurvis; abdomine viridi-cyaneo, segmento secundo dorsali obsolete carinato, margine apicali et tertio parte basali virescentibus; primo basi trifossulato supra dispersius et fortius minus profunde, reliquis dense subtiliter rugoso-punctatis; tertio disco utrinque parum concaviusculo-immerso, supra seriem vix calloso, foveolis per carinulam medianam in spinam brevem subacutam productam interruptis paucis, circiter 8 tantum, mediocribus, subrotundis, sat profundis, margine apicali hoc modo quinquedentato, dentibus parvis, lateralibus et intermedio maioribus, triangularibus, subacutis, reliquis minutis late-obtusis, emarginaturis fere æqualibus, lenissime arcuatis; ventre cyanescenti-viridi, segmento secundo basi macula parva nigra notato, apice anguste fusco-marginato; pedibus viridibus, femoribus anticis basi antice, posticis postice politis ac lævibus, nigro-violaceo splendentibus, tarsorum articulis duobus primis supra virescentibus, subtus cum reliquis fuscis; alis pure-hyalinis, venis firmis piceis, cellula radiali lanceolata fere completa, tegulis cyaneis medio violascentibus. — ♂; long. 7 mm.

Species: colore, punctatura, dentibus analibus brevibus, pedibus et alis pure-hyalinis, facile cognoscitur.

Patria: Java (Mus. Hung.).

608. **Chrysis Australasiae** Grib.

Chrysis Australasiae, Grib. Annali Mus. Civ. Stor. Nat. Genova. VI. p. 360, n. 6. (1874).

Mediocris, elongata, robusta, convexiuscula, cyaneo-viridis, parcius cinereo-alboque pilosa; vertice circa stemmata et mesonoti lobo medio violaceis; cavitate faciali profunda, dense punctulato-coriacea, tota dense cano-pilosa, superne minus acute-marginata, margine ramulum utrinque stigma anticum includentem areamque viridi-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

subauratam formantem emittente; antennis brevibus, crassis, nigris, cinereo-puberulis, articulis tribus primis viridi-subauratis, tertio brevi, quarto æquali; genis mediocribus, articulo antennarum tertio æquilongis; vertice densius, thorace supra dispersius crasse punctato-reticulatis, punctis sparsis aliquot minoribus inmixtis; pronoto longo, transverso, antice in medio subarcuatim emarginato, angulis lateralibus rectis; metanoti dentibus postico-lateralibus brevibus, latis, acutis; abdominis segmentis dorsalibus viridi-cyaneis, primo disco et lateribus, secundo tertioque margine apicali viridibus, 2—3 imo basi nigro-violaceis sparsim punctatis, secundo carinula mediana nulla; primo basi non sulcato neque lateribus fossulatis fortius, secundo tertioque parum subtilius punctatis, punctis lateralibus modice rugosiusculis; tertio convexo, supra seriem nec minime calloso, foveolis aliquot tantum minutis rotundatis valde irregularibus subobliteratis, margine apicali tenui sat subtiliter punctato, imo margine arcuato quinquedentato, dentibus intermediis tribus mediocribus acutis, centrali parum breviore, lateralibus duobus parvis acute-triangularibus, emarginaturis duabus centralibus æquilatis arcuatis, lateralibus multo latioribus subarcuatis, ante dentes laterales leniter sinuatis; ventre pedibusque viridi-subauratis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis subfumato-hyalinis, violascentibus, venis firmis piceis, cellula radiali lanceolata subcompleta, tegulis viridi-cyaneis. — ♂; long. 8—9 mm.

Patria: Nova-Hollandia (Grib. et Coll. Saussurei!).

2) *Postsculellum mucronatum.*

609. **Chrysis spina** Brullé.

Chrysis spina, Brullé, Hym. IV. p. 29, n. 10. ♂. (1846).

Chrysis Abyssinica, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 148, n. 105. tab. III. fig. 3. ♀. (1876) sec. spec. typ. e coll. Rad.

Submagna, minus elongata, sat robusta, cyaneo-viridis, longius cinereo-alboque pilosa; vertice post stemmata, mesonoti lobo medio, scutelli basi tegulisque alarum violaceis; cavitate faciali planata, punctato-coriacea, medio longitudinaliter canaliculata, lateribus cano-pilosa, superne minus distincte subacute-marginata, margine transverso abbreviato ad latera non descendente; antennis longiusculis, crassis, nigris, cinereo-puberulis, articulis: primo toto, secundo tertioque supra cyaneo-viridibus, hoc longo, quarto quintoque simul sumptis adhuc parum longiore; genis brevibus, antennarum articulo secundo æquilongis; vertice dense crasseque, pronoti lateribus, mesonoti lobo medio cum scutello postscutelloque adhuc fortius punctato-reticulatis; pronoti disco et mesonoti lobis lateralibus antice sparsim crasse punctatis, his etiam punctis aliquot minutis inmixtis; margine occipitali utrinque angulo parvo spinoideo; pronoto proportionaliter brevi, antice in medio subarcuatim emarginato, centro lenissime sulcato; postscutello conico apice parum prominulo acuto; metanoti dentibus postico-lateralibus brevibus, latis, subobtusis; abdominis segmentis dorsalibus duobus primis læte-viridibus, tertio cyaneo; primo basi leniter sulcato lateribusque vix fossulatis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

secundo carinula mediana indistincta; primo secundoque sat sparsim minus profunde, tertio adhuc magis leviter punctatis, interstitiis lævibus, disco subtiliter punctulatis; tertio convexo, supra seriem vix calloso, foveolis obliteratis minus distinctis, vix 2—3 visibilibus, margine apicali brevi sat crasse punctato, arcuato dentibusque quinque sat magnis bene distinctis spinoideis armato, centrali reliquis parum breviore, emarginaturis duabus centralibus angustis arcuatis, lateralibus duplo latioribus subarcuatis; ventre pedibusque cyaneis et viridibus, illo segmento secundo basi utrinque nigro-maculato, his metatarsis supra violascentibus, subtus et articulis reliquis fuscis, tibiis postice nigro-violaceis lævibus ac politis; alis fumatis violaceo-nitentibus, apice subhyalinis, venis firmis, cellula radiali lanceolata incompleta, apice sat late aperta. — ♂ ♀ ; long. 9—10 mm.

Patria: Senegambia (Senegal, Brullé) et Abyssinia (Rad.).

610. **Chrysis Shanghaiensis** Smith.

Chrysis Shanghaiensis, Smith, Transact. Ent. Soc. Lond. p. 460, n. 12. ♀. (1874).

«Female. — Length 5—6 lines. Bright green, with golden tints, adorned in parts with blue. The face and three basal joints of the antennæ golden-green; the vertex behind the ocelli blue. Thorax: the disk of the mesothorax more or less blue, the central division usually so; wings fuscous, palest towards their apical margins, and having a purple iridescence; legs green, with their tarsi black. Abdomen: the basal half of the second and third segment bright blue. The head and thorax strongly and closely punctured, the scutellum and postscutellum very closely so; the latter produced into a conical tubercle, which is flattaned above. Abdomen strongly and evently punctured, but much more finely so than the thorax; beneath, the insect is bright golden-green, with black spots at the basal margins of the segments of the abdomen.»

Patria: China borealis (Shanghai.).

Animadversio. — Species quam maxime incomplete descripta, rite cognosci nequit, nescioque an nostra sit *Chrysis Himalayensis* vel *mandarina*? — verisimiliter hæc posterior.

611. **Chrysis mandarina** n. sp.

Magna, robusta, viridi-cyanea, densius cinereo-alboque pilosa; vertice post ocellos, occipite, mesonoti lobo medio toto et loborum lateralium lateribus nigro-violaceis; cavitate faciali sat profunda, viridi-subaurata, dense punctato-coriacea, medio canaliculata, superne indistincte abbreviatim flexuoso-marginata; antennarum articulis intermediis incrassatis, scapo et flagelli articulis duobus primis supra viridibus, reliquis fuscis, articulo secundo flagelli longo, tribus sequentibus simul sumptis longitudine æquali; genis longis, articulo secundo flagelli æquilongis crasse punctatis, clypeo mediocri, apice emarginato nigroque æneo; vertice dense minus crasse, thoracis dorso crasse profundeque punctato-reticulatis, seu potius scrobiculatis; prothorace lateribus antice

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

valde productis (forsan ex fortuitu?); postscutelli mucrone valido, porrecto, subtriangulari, scrobiculato, postice oblique-truncato apice subrotundo; mesopleuris subtus transverse quadrisulcatis; abdominis segmentis dorsalibus nigro-violaceis, primo lateribus et secundo parte apicali viridi-subauratis, primis duobus sparsim crassius, tertio subtilius cribrato-punctatis interstitiis lævibus hic illic punctulatis, secundo carinula mediana nulla, tertio convexo, serie anteapicali obsoleta, fere nulla, margine apicali quinquedentato, dentibus tribus intermediis sat longis, æqualibus, acutis, externis duobus multo brevioribus, triangularibus, emarginaturis profunde arcuatis, fere æquilatis; ventre viridi, parum viridi-aureo nitente, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, tarsis subtus fuscis, supra, præsertim articulis tribus primis, virescentibus; alis subfumato-hyalinis, parum iridescentibus, venis fuscis, cellula radiali lanceolata apice sat late aperta, tegulis piceis. — ♀; long. 12. mm.

Sequenti simillima; sed multo maior ac robustior, magis nigro-violacea, cavitate faciali superne flexuoso-marginata, prothorace lateribus antice insolute productis, mesopleuris subtus transverse quadrisulcatis, thoracis punctatura multo fortiore magisque profunda, abdominis segmentis dorsalibus dispersius cribrato-punctatis, interstitiis lævibus latioribus, primi lateribus et secundo parte apicali viridi-subauratis, tegulis piceis, mihi distinguenda esse videtur.

Patria: China borealis (Ta-tschian-sy, Mus. Hung.).

612. **Chrysis Himalayensis** Mocs.

Chrysis Himalayensis, Mocs. Horæ. Soc. Ent. Rossicæ. XXIII. p. 31. ♂. (1888). — Rad. l. c. (genit. maris).

Submagna, elongata, viridis, densius cinereo-alboque pilosa; vertice post ocellos, occipite in medio, collo, mesonoti lobo medio toto et loborum lateralium lateribus anguste nigro-violaceis; cavitate faciali profunda, viridi-subaurata, dense punctulato-coriacea, medio canaliculata, lateribus albo-pilosa, fronte impressa, superne abbreviatim arcuato-marginata; antennarum articulis intermediis incrassatis, scapo et flagelli articulis duobus primis supra viridibus parumque cyanescentibus, reliquis fuscis, articulo secundo flagelli longo, tribus sequentibus simul sumptis æquilongo; genis longis, articulo secundo flagelli longitudine æquali, mandibulis unidentatis, apice obtusis, clypeo mediocri, apice emarginato; vertice dense minus crasse, thoracis dorso crassius punctato-reticulatis; postcutelli mucrone valido, subtriangulari, scrobiculato, apice-subrotundo; abdomine viridi, segmentis dorsalibus dense cribrato-punctatis, 2—3 violascentibus, secundo carinula mediana nulla, tertio serie anteapicali obsoleta, fere nulla, margine apicali quinquedentato, dentibus tribus intermediis sat longis, æqualibus, acutis, externis duobus multo brevioribus, triangularibus, emarginaturis profunde arcuatis, fere æquilatis; ventre viridi, parum viridi-aureo nitente, segmento secundo basi utrinque nigro-maculato; pedibus viridibus, tarsis fuscis, externe, præsertim articulis tribus primis, virescentibus; alis subfumato-hyalinis, parum iridescentibus, venis fuscis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cellula radiali lanceolata apice sat late aperta, tegulis viridi-cyaneis. — ♂; long. 9 mm.

«*Armure*. Le bord supérieur de la branche du forceps, vue en face et de côté, est fortement échancré, garni de poils minces et longs, parmi lesquels on voit aussi des poils forts. Volsella large, pourvue de poils vers l'extrémité.» (Rad. l. c. tab. V. fig. 63a, 63b, 63c, 63f.).

Patria: Himalaya (Coll. Rad.).

613. **Chrysis crassiscuta** n. sp.

Magna, robusta, obscure-viridis vel viridi-cyanea, parcius cinereo-alboque pilosa; vertice post stemmata, collo et mesonoti lobo medio nigro-violaceis; cavitate faciali minus profunda, dense punctato-coriacea, cano-pilosa; fronte area insigni mediana reniformi excavata per marginem crenatam formata, margine hoc superiore insuper ramulum utrinque indistinctum ad stemma anticum emittente; antennis brevibus, crassis, nigris, cano-puberulis, articulis intermediis valde incrassatis, tribus primis viridibus, tertio longo, sequentibus tribus simul sumptis æquilongo; genis longis, articulo tertio antennarum æquilongis; vertice sat sparsim crasse, thorace supra adhuc fortius punctato-reticulatis seu potius scrobiculatis; pronoto sat longo, antice in medio subarcuatim emarginato, centro leniter sulcato; scutello magno, elavato-convexo, inter lobum medium mesonoti et scutellum transverse profunde fossulato; postscutelli mucrone valde magno, crasso, porrecto, late-subtriangulari, apice rotundato, basi profunde excavato; mesopleuris subtus per emarginationem profundam arcuatam obtuse-bidentatis; metanoti dentibus postico-lateralibus brevibus latis robustis valde obtusis; abdominis segmentis dorsalibus viridibus disco parum cyanescentibus vel viridi-cyaneis parumque violascentibus, primo basi in medio sat profunde longitudinaliter fossulato, secundo carinula mediana indistincta, omnibus sparsim crassius cribrato-punctatis interstitiis latis lævibus, tertio convexo, serie anteapicali obsoleta, fere nulla, margine apicali quinquedentato, dentibus tribus intermediis sat longis, centrali parum breviore, externis duobus multo brevioribus acute-triangularibus, emarginaturis duabus centralibus mediocribus arcuatis, externis fere duplo latioribus subarcuatis; ventre pedibusque læte-viridibus, illo parum cyanescenti, his tarsis subtus fuscis; alis subfumato-hyalinis parum violascentibus, venis firmis piceis, cellula radiali lanceolata incompleta, apice late aperta, tegulis cyaneis externe virescentibus. — ♀; long. 11 mm.

Species: area insigni reniformi frontis, mesopleuris et scutello postscutelloque, facile cognoscitur.

Patria: India orientalis (Coll. Saussurei!) et Sumatra (Mus. Vindob.!).

614. **Chrysis Ribbei** n. sp.

Mediocris, sat robusta, viridi-cyanea, vertice thoraceque supra cinereo-, parte reliqua corporis albo-pilosis; vertice circa et post ocellos, collo et mesonoti lobo medio

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

nigro-violaceis; cavitate faciali minus profunda, nonnunquam viridi-subaurata, dense punctato-coriacea, medio longitudinaliter canaliculata, superne transverse marginata, margine ramulum utrinque in verticem supra stemma anticum concurrentes areamque subreniformem efformantes emittente (sicut in *Chrys. splendenti* Dhlb.); antennis crassiusculis, fuscis, cano-puberulis, articulis intermediis incrassatis, scapo et flagelli articulis duobus primis supra viridibus, huius articulo secundo longo, sequentibus tamen tribus simul sumptis paulo breviore; genis sat longis, articulo secundo flagelli longitudine breviore; clypeo mediocri, apice arcuatim emarginato; vertice densius crassiusque punctato-reticulato, thorace supra cum scutello crasse profundeque sparsim cribrato-punctatis, fere scrobiculatis; mesopleuris apice triangulariter productis, basi lævibus ac politis; postscutelli mucrone sat valido, subtriangulari, scrobiculato, apice subrotundo, basi foveato; metanoti dentibus postico-lateralibus brevibus, latis subacutis; abdominis segmentis dorsalibus nigro-violascentibus, primis duobus dense crassius, tertio subtilius cribrato-punctatis, secundo carinula mediana nulla, tertio convexo, ante seriem anteapicalem non incrassato, serie anteapicali obsoleta, fere nulla, margine apicali quinquedentato, dentibus tribus intermediis mediocribus, acute triangularibus, duobus externis valde parvis, late-triangularibus, ab angulo laterali remotis, emarginaturis arcuatis fere æquilatis; ventre viridi, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et tarsorum articulis basalibus externe viridibus, his parte reliqua fuscis; alis fumato-hyalinis violascentibus, cellula radiali lanceolata incompleta, apice late aperta, tegulis cyaneis. — ♂ ♀; long. 8—9 mm.

Præcedentibus similis et affinis; sed area insigni verticis, et dentibus analibus longe diversis, certe alia est species.

Patria: Celebes (Bonthain; ibidem a C. Ribbe collecta, Mus. Hung.).

II. *Corpus totum nigro-violaceum, abdominis segmento dorsali tertio lateribus anguste viridi aureoque egregie limbatis; postscutello in mucronem longum, latum, fere quadratum producto; dentibus apicalibus mediocribus, duobus externis reliquis paulo brevioribus.*

615. **Chrysis spectabilis** n. sp.

Magna, robusta, nigro-violacea, pleuris pedibusque virescentibus; capite thoraceque supra fusco-, subtus et abdomine pedibusque albo-pilosis; cavitate faciali minus profunda, dense punctato-coriacea, medio longitudinaliter canaliculata, superne abbreviatim arcuato-marginata aream subreniformem haud includente; antennis crassis, brevibus, articulis tribus primis cyaneis, reliquis fuscis, cinereo-puberulis, articulo tertio longo, sequentibus tribus simul sumptis æquali; genis longis, articulo antennarum tertio æquilongis; capite thoraceque cum postscutello crasse scrobiculatis; postscutello in mucronem longum, latum, fere quadratum, basi excavatum, mesopleuris subtriangulariter, productis; metanoti dentibus postico-lateralibus validis, latis, valde obtusis; abdominis segmentis dorsalibus nigro-violaceis, a latere visis parum virescentibus, crasse sparsim cribrato-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

punctatis, interstitiis latis lævibus ac politis; secundo carinula mediana nulla, tertio lateribus anguste dentibusque viridi aureoque egregie limbatis, ornatura ad basin utrinque latiore, margine apicali ante seriem obsoletam sat fortiter calloso, dentibus quinque triangularibus mediocribus, acutis, tribus intermediis æquilongis, externis parum brevioribus, emarginaturis externis centralibus multo latioribus; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et tarsorum articulis supra cyaneo-viridibus, his subtus fuscis; alis violascentibus, cellula radiali incompleta, apice late aperta, tegulis nigro-violaceis. — ♀; long. 14 mm.

Species: statura et magnitudine fere Stilbiformi et ex descriptione, a congeneribus haud numerosis, facile cognoscitur.

Patria: Celebes (Bantimurang, Mus. Hung.).

III. *Corpus viridi-subauratum, capite thoraceque cum mesopleuris supra et abdominis segmentis dorsalibus lateraliter cupreo-aeneis, illis plus minusve purpurascentibus, hoc in medio violascenti-cyaneo, dentibus mediocribus aequalibus.*

616. **Chrysis imperiosa** Smith.

Chrysis imperiosus (!), Smith, Transact. Ent. Soc. Lond. p. 460, n. 11. ♀. (1874).

Submagna, robusta, viridi-subaurata, parce cinereo-alboque pilosa; vertice, pro- et mesonoto cum eius pleuris, scutello, postscutello tegulisque et abdominis segmentis dorsalibus duobus primis lateribus late, tertio fere toto (solum disco excepto) cupreo-æneis parumque purpurascentibus; cavitate faciali subplana, viridi-subaurata, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa; antennis haud crassis, fuscis, articulis duobus primis tertiique basi supra viridibus, tertio longo, sequentibus duobus simul sumptis æquali; genis sat longis, articulo antennarum secundo longiore; vertice thoraceque supra dense sat crasse punctato-reticulatis; pronoto brevi medio ad basin impresso lateribus acute-marginatis medioque sinuatis; metanoto gibbo-convexo, postice violascenti, angulis postico-lateralibus validis obtuse triangularibus; abdominis segmentis dorsalibus densius crasse punctatis, interstitiis angustis lævibus ac politis, tertio supra seriem anteapicalem leniter calloso, ipsa serie foveolis circiter 14 distinctis minutis rotundisque, sed haud profundis, margine apicali dentibus quinque in arcum dispositis mediocribus, triangularibus, fere æqualibus armato, emarginaturis quoque fere æquilatis, minus profunde arcuatis; ventre viridi-subaurato, splendido, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et metatarso supra concoloribus, subtus et articulis reliquis fuscis; alis subfumato-hyalinis, a latere visis parum violascentibus, cellula radiali lanceolata fere completa. — ♀; long. 9 mm.

Patria: Australia (Moreton Bay, Smith; Port Denison, Mus. Vindob!).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

IV. *Corpus viridi-cyaneum, supra violascens; abdominis segmentis dorsalibus duobus primis lateribus posticis macula viridi-subaurata, tertio violascenti-cyaneo; dentibus apicalibus externis acutis, intermediis obtuse-triangularibus.*

617. **Chrysis Bengalensis** n. sp.

Mediocris, elongata, viridi-cyanea, parce cinereo-alboque pilosa; vertice, pro- et mesonoto, scutello postscutelloque et abdominis segmentis dorsalibus in medio tertioque fere toto violascenti-cyaneis, segmentis primo secundoque lateribus posticis macula viridi-subaurata; cavitate faciali sat profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne acute-marginata, margine ramulum utrinque arcuatum ad stemma anticum emittente; antennis haud crassis, fuscis, articulis duobus primis et tertio supra cyaneis, hoc sat longo, sequentibus duobus simul sumptis æquali; genis haud longis, articulo antennarum secundo æquali; vertice et postscutello convexo sat dense subreticulatim, thorace dispersius punctatis, punctis in mesonoti lobis lateralibus minoribus inmixtis; pronoto brevi medio ad basin impresso, lateribus acute-marginatis medioque sinuatis (sicut in specie præcedenti); abdominis segmentis dorsalibus densius sat crasse rugosiuscule-punctatis, secundo carinula mediana indistincta, tertio supra seriem anteapicalem leniter incrassato, ipsa serie foveolis magnis et profundis, parum confluentibus, fere sulciformibus nigro-violaceis, circiter decem, per carinulam interruptis, margine apicali dentibus quinque in arcum dispositis armato, externis sat longis acute-, intermediis parum brevioribus obtuse-triangularibus, emarginaturis externis sat profundis latioribusque, quam intermediis fere æqualibus; femoribus tibiisque et metatarsis externe cyaneo-viridibus, tarsis fuscis; alis subfumato-hyalinis, parum violascentibus, cellula radiali lanceolata fere completa, tegulis viridi-cyaneis. — ♀; long. 8 mm.

Species: colore, punctatura, pronoto, foveolis dentibusque, facile cognoscitur.

Patria: India orientalis (Bombay, Mus. Hung.).

V. *Corpus cyaneum et viride (in Chr. lusca Fabr. var. concinna Grib.: laete viridi-aureum), segmento dorsali secundo utrinque macula viridi-aurea (in var. concinna: cupreo-aeruginosa subobsoleta) vel coccineo-aurea viridique aureo limbata ornato; dentibus apicalibus vel triangularibus et subobtusis fere aequalibus, vel spinoideis, centrali minuto.*

618. **Chrysis lusca** Fabr.

Chrysis lusca, Fabr. Syst. Piez. p. 171, n. 7. (1804). — Lep. Annal. du Mus. Hist. nat. VII. p. 126, n. 7. (1806). — Dhlb. Hym. Europ. II. p. 296, n. 166. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 41 et 43. ♂ ♀. (1879).

Pyria lusca, Lep. et Serv. Encycl. Méth. X. p. 495. (1825).

Mediocris aut submagna, elongata, minus robusta, cœruleo-viridis, parcius cinereo-alboque pilosa; vertice circa et post stemmata, collo et mesonoti lobo medio cyaneis; cavitate faciali minus profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

pilosa, superne marginata, margine transverso in medio emarginato ramulum utrinque stemma anticum includentem areamque cordiformem formantem emittente; antennis brevibus, minus crassis, nigris, articulis duobus primis et tertii basi læte-viridibus, huius parte reliqua cyanescenti, tertio longo, quarto quintoque simul sumptis parum adhuc longiore; clypeo brevi, apice in medio emarginato nigroque æneo; genis mediocribus, antennarum articulo quarto æquilongis; vertice et postscutello dense minus crasse punctato-subreticulatis; pro- et mesonoto scutelloque convexo sparsim crassius punctatis interstitiisque, præsertim in mesonoti lobis lateralibus, subtiliter punctulatis; pronoto sat longo, antice in medio subarcuatim emarginato medioque longitudinaliter levius sulcato, lateribus acute-marginato medioque emarginato; abdominis segmentis dorsalibus disco et tertio sæpius violascentibus, secundo utrinque iuxta marginem apicalem macula sat magna viridi-aurea vel aurea ornato; primo basi in medio longitudinaliter sulcato lateribusque minus profunde fossulatis, 2—3 carinula mediana minus distincta; duobus primis sat sparsim crassius, tertio subtilius punctatis; tertio basi convexiusculo, medio transverse-concaviusculo, supra seriem leniter incrassato foveolis rotundatis distinctis, 10—12, rarius confluentibus, per carinulam medianam continuam interruptis, ipso margine apicali quinquedentato, dentibus mediocribus triangularibus subobtusis, emarginaturis arcuatis externis centralibus parum latioribus; ventre cyaneo viridi-subaureo-picto, segmento secundo basi utrinque nigro-maculato; pedibus viridi-auratis, tarsis fuscis; alis subfumato-hyalinis violascentibus, venis firmis piceis, cellula radiali lanceolata completa, tegulis viridibus disco violascentibus. — ♂ ♀; long. 8—9 mm.

Patria: India orientalis (Rajarampore, Neelgherries, Grib.; Tranquebar, Mus. Vindob.!; Pondichéry, Coll. Andréi!) et Java (Coll. Andréi!).

Animadversio. — Species e fauna Chrysididarum Europæ expellenda; patria enim apud divum Fabricium «Italia» falsa est. — In uno specimine e collectione Ed. André sequentem inveni inscriptionem «parasite de *Pelopoeus fabricator* Smith.»

var. concinna Grib.

Chrysis lusca Fabr. *var. concinna*, Grib. Annali Mus. Civ. Stor. Nat. Genova. Ser. 2. tom. I. p. 368, n. 34. ♀. (1884).

«Typo simillima tantum differt corpore toto læte-viridi-aureo, maculis segmenti abdominis secundi cupreo-æruginosis subobsoletis. ♀.»

619. **Chrysis admiranda** n. sp.

Magna, sat robusta, densius longiusque albo-pilosa, viridi-cyanea; occipite, collo, mesonoti lobo medio metanotoque nigro-violaceis; abdominis segmento dorsali secundo macula laterali pulcherrima coccineo-aurea, superne et postice viridi-aureoque limbata concinne ornato, macula magna segmentum totum occupante; facie tota cum cavitate faciali viridi-subaurata, hæc sat profunda, dense punctulato-coriacea argenteo-sericeo-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

que pilosa, superne in medio minus distincte transverse marginata; antennis tenuibus, fuscis, scapo et articulis duobus sequentibus flagelli supra viridibus, huius articulo secundo longo, 3—4 simul sumptis longiore; genis sat longis, articulo quarto flagelli subæquali; vertice thoracisque dorso cum scutello crasse punctato-reticulatis; pronoto antice in medio longitudinaliter profunde sulcato lateribus metanotoque convexis; abdomine lato, segmentis dorsalibus: primo cribrato-, secundo tertioque crasse profundeque rugoso-punctatis, secundo tertioque carinula mediana acuta, tertio supra seriem anteapicalem leniter calloso, foveolis circiter 12 profundis, magnitudine inæqualibus, ipso margine apicali quinquedentato, dentibus spinoideis, intermediis longissimis, externis parum brevioribus, centrali minuto; emarginaturis externis arcuatis, tam latis quam duabus centralibus simul sumptis; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis, venis piceis, cellula radiali triangulariter lanceolata fere completa, tegulis cyaneis. — ♂; long. 11 mm.

Magnifica hæc species *Chrys. ocellatae* Fabr. colore parum similis est.

Patria: Java (Batavia, Mus. Hung.).

VI. *Corpus viridi-cyaneum; abdominis segmentis dorsalibus duobus primis aureis, tertio cyaneo; dentibus apicalibus robustis, spinoideis, aequalibus.*

620. **Chrysis Megerlei** Dhlb.

Chrysis Megerlei, Dhlb. Hym. Europ. II. p. 297, n. 167. (1854). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 46 et 52. (1879).

Descriptio secundum Dahlbom:

«Mediocris 2½ lin. decimal. long. viridi-cyanea, abdominis segmentis dorsalibus primo secundoque aureis, tertio cyaneo dentibus apicalibus robustis spinoideis.

Observ. Statura et magnitudo fere *Chrysidis analis* Spin., ab hac vero mox dignoscitur segmenti abdominis tertii margine apicali distincte quinquedentato.

Corpus robustum obtusum pubescens confertim punctatum. Caput rotundato-triangulum cyaneum antice virescens. Cavitas facialis mediocris subrectangularis non profunda, superne transverse distincte marginata: margine utrinque decurvo (antennæ in specimine nobis communicato mutillatæ); clypeus brevissimus transversus, ad centrum marginis apicalis breviter et modice arcuato-emarginatus, disco nonnihil gibbus: reliquæ partes oris nigro-piceæ. Thorax subbrevis crassus subquadratus confertim crasse punctatus cyaneus; pronoti pars postica, dorsuli areæ laterales, scutellum, metanoti margines et latera atque mesopleuræ viridi-irrorata; dorsuli area media purpurascenti-violacea; metanoti anguli postico-laterales robusti lati triangulares; sternum et pedes viridi-cyanei tarsis fuscis; alæ sordide-hyalinæ, venis firmis brunneis, cellula radiali lanceolata apice anguste aperta. Abdomen robustum subovatum, basi transversum, capite thoraceque simul sumptis brevius, dorso sat convexum crebre modice punctatum nitidum; segmenta primum et secundum aurea, huius margo basalis nigro-æneus; segmentum tertium valde convexo-declive totum cyaneum et confertissime punctatum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

punctis mediocribus; series ante-apicalis profunda sub margine convexiusculo regionis anticæ partim abscondita, foveolis profundis paucis nigro-æneis, hinc inde confluentibus et tunc transversis linearibus; margo apicalis brevissimus punctulatus, dentibus 5 spinoideis æqualibus in lineam lenissime curvam sitis, emarginaturis mediocribus modice arcuatis, invicem latitudine et profunditate subæqualibus. Venter nitidissimus subtilissime punctulatus, pubescens, planus (nec fornicatus), viridi-cyaneus, segmentorum marginibus et basalibus et lateralibus et apicalibus aut nigricantibus aut nigro-brunneis.»

Patria: Italia (Verona, Dhlb.; Rivoli, Ab.).

VII. *Capite thoraceque viridibus plus minusve viridi-aureo lavatis vel cyaneis, mesonoti lobo medio nigro-violaceo; dente intermedio reliquis multo breviore. — Femina: abdominis segmentis dorsalibus pulcherrime coccineo-auratis vel auratis, omnibus vel solum ultimo vitta areaque terminali nigro-violacea ornatis. — Mas: abdominis segmentis duobus primis dorsalibus laete-viridibus utrinque aureo-maculatis, tertio maxima parte violascenti.*

621. **Chrysis amoena** Eversm.

Chrysis amoena, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 562, n. 16. ♀. (1857) sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. III. p. 307, n. 49. tab. V. fig. 32. ♀. (1866).

Sexus ab invicem colore abdominis valde differunt.

Magna, robusta, densius albo-pilosa, cyanea vel viridi-aurata, splendida; collo, pronoti parte truncata et mesonoti lobo medio nigro-violaceis; cavitate faciali sat profunda, dense argenteo-sericeo-pilosa, punctato-coriacea, medio canaliculata, superne acute flexuoso-marginata, ramulum utrinque supra stemma anticum concurrentes emittente areamque subreniformem formantes; antennis longis, tenuibus, fuscis, articulis tribus primis viridibus parumque cyanescentibus, tertio longo, sequentibus duobus simul sumptis longiore; genis longis, articulo antennarum quarto æquilongis; vertice thoracisque dorso dense crasseque punctato-reticulatis; pronoti disco antice longitudinaliter profunde sulcato lateribus metanotoque convexis; mesopleuris apice acute marginatis, medio excavatis et imo apice per emarginaturam bidentatis, dente antico acuto, postico plus minusve obtuso; metanoto basi fovea centrali, dentibus postico-lateralibus robustis latis acutis; abdominis segmentis dorsalibus basi nigro-violaceis, 2—3 medio acute carinatis, tertio supra seriem anteapicalem leniter calloso, ipsa serie foveolis circiter 14 sat profundis, magnitudine inæqualibus; ventre pedibusque viridi-cyaneis, illo segmento secundo utrinque nigro-maculato, his tarsis fuscis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice anguste aperta, tegulis viridi-cyaneis. — Long. 11—13 mm.

Femina: abdominis segmentis dorsalibus pulcherrime coccineo-auratis vel auratis, omnibus vel solum ultimo vitta mediana nigro-violacea viridi-aureoque limbata egregie

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ornatis, segmentis duobus primis crasse, tertio subtilius densiusque cribrato-punctatis, a latere visis parum rugosiusculis, tertio margine apicali viridi-cyaneo dentibus quinque acutis spinoideis in arcum dispositis armato, quattuor externis longis fere æqualibus, intermedio minuto, emarginaturis externis latis profunde arcuatis, centralibus duobus simul sumptis latioribus.

Mas: abdominis segmentis dorsalibus: duobus primis læte-viridibus, subauratis, utrinque concinne aurato-maculatis, tertio parte basali violascenti, margine apicali viridi-cyaneo dentibus quinque acutis spinoideis in arcum dispositis armato, quattuor externis mediocribus, fere æquilongis, intermedio minuto, emarginaturis externis latis minus profunde arcuatis, centralibus duabus simul sumptis non latioribus; segmentis duobus primis sat crasse, tertio subtilius densiusque cribrato-punctatis, a latere visis parum rugosiusculis.

Specimina nostra a typo colore magis insigni differunt.

Magnificam hanc speciem benignitati Ferdinandi Morawitz debeo.

Patria: campi Transuralenses (Eversm.); Sibiria meridionali-occidentalis (Omsk, Rad.!); Territorium Transcaspicum (Krasnowodsk, Mus. Hung.); Persia (Schahrud, Mus. Lugdunense Batavorum!).

VIII. *Capite thoraceque cyaneis et viridibus plus minusve viridi-aureo lavatis, mesonoto lobo medio nigro-violaceo; abdominis segmentis dorsalibus auratis, dente intermedio reliquis breviore.*

622. **Chrysis Goliath** Ab.

Chrysis Goliath, Ab. Diagnos. Chrysid. nouvell. p. 6, n. 32. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 89. ♂. (1879). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 70, n. 43. ♂. (1887).

♀ Long. 12 mill.

Très-grand et très-robuste. Tête verte, bleue sur le vertex, à gros points ocellés, très-petits et ruguleux sur la cavité faciale, qui est assez profonde et nettement limitée en haut par une crête transversale; médiocre et éparse sur le devant. Joues à côtés longs, droits et non ou à peine convergeants. Mandibules obscures. Antennes noires, vertes sur leurs deux premiers articles. Thorax couvert de gros points ocellés peu serrés, séparés par de petits points sur le mésosternum, plus gros et très-serrés sur l'écusson et le postécusson. Pronotum court, vert brillant avec la base et le sommet blues, ainsi que le sillon médian qui est large, profond et prolongé presque jusqu'à la base. Mésonotum avec chaque compartiment vert bordé de bleu. Postécusson gibbeux. Angles du métasternum longs et larges coupés droit par côté, à pointe décombante et aiguë. Abdomen doré, large, massif, à côtés subparalléles carèné fortement sur ses deux derniers segments; à très-gros points serrés, allant en diminuant à peine de grosseur et en augmentant à peine de densité du premier au dernier segment. Celui-ci à côtés assez arrondis, peu déprimé de chaque côté de sa carène et en avant de sa ligne ponctuée, qui est assez immergée, formée de 8 ou 9 points de chaque côté. Rebord peu long,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ponctué, à 4 dents aiguës, également distantes, fortes et dont les deux dents médianes sont séparées par une 5e dent plus petite, assez pointue, le tout placé sur une ligne à peine courbe; les dents latérales reliées au côté par une ligne très-sinuée et allant en s'arrondissant fortement. Ventre entièrement bleu. Pattes bleues, vertes sur les tibias; tarses presque noirs. Ailes sales et enfumées, radiale s'arrêtant assez loin du bord. Ecailles d'un bleu noir. Pubescence blanche, très-dense longue et dressée sur l'avant-corps et surtout sur la tête tout entière, soyeuse, couchée et très-dense dans la cavité faciale.

Je ne connais de cette magnifique espèce qu'un seul ♂ faisant partie de la collection Dufour et venant d'Espagne. La forme tout à fait unique de son armature ne permet pas de la confondre avec nulle autre.»

Patria: Hispania.

623. **Chrysis arrogans** n. sp.

Submagna, sat robusta, parcius albo-pilosa, cyanea parum virescens; vertice post ocellos, occipite, collo, mesonoti lobo medio, postscutelli lateribus metanotique area superiore nigro-violaceis; facie cum verticis parte antica, maculis lateralibus parvis utrinque ad stemmata postica, pronoto, mesonoti lobis lateralibus, scutello et metanoti angulis postico-lateralibus viridi-auratis; cavitate faciali sat profunda, dense punctulato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne transverse flexuoso-marginata, margine ramulum utrinque stemma anticum includentem emittente; antennis tenuibus, fuscis, articulis tribus primis supra viridi-auratis, tertio apice cyanescenti, hoc longo, sequentibus duobus simul sumptis longiore; genis longis, articulo antennarum quarto longioribus; vertice dense minus crasse, thorace dispersius crassiusque punctato-reticulatis; pronoto brevi, transverso-rectangulo, antice in medio profunde fossulato, lateribus subrotundis; metanoto convexo, subtus profunde fossulato, dentibus postico-lateralibus robustis, triangularibus, acutis; abdominis segmentis dorsalibus igneo-auratis, basi nigro-violaceis, crasse, tertio densius subtiliusque parum subrugoso-punctatis, 2—3 carinula mediana distincta acuta, tertio disco utrinque concaviusculo-immerso, supra seriem anteapicalem fortius calloso, foveolis sat profundis, magnitudine inæqualibus, circiter 14, rotundatis, margine apicali quinquedentato, dentibus triangularibus acutis, sat magnis, fere æqualibus, in arcum dispositis, centrali minuto, spinoideo, emarginaturis externis latis, minus profunde arcuatis, centralibus duabus simul sumptis latioribus; ventre violascenti-cyaneo, segmente secundo disco parum, tertio basi lætius viridi-auratis; pedibus viridi-cyaneis, tarsis fuscis; alis hyalinis, disco parum sordidis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis viridi-cyaneis, basi nigro-violaceis. — ♀; long. mm.

Eximia hæc species præcedenti similis esse videtur; sed minor et uberius viridi-aureo picta.

Patria: Asia minor (Malatia in Mesopotamia, Mus. Hung.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Subgenus 8. HEXACHRYSIS Licht.

Abdominis segmenti dorsalis tertii margo apicalis denticulis sex plus minusve distinctis armatus.

*

I. *Abdominis dorsum auratum vel viridi-auratum vel cupreo-auratum.*

1) *Abdominis segmenti tertii dentes: 4 apicales plerumque obsoleti, obtusi, tantummodo ex ipsius marginis undulatione orti, 2 laterales distincti, scilicet: margo proprius lateralis ad centrum suum (infra initium seriei) angulo robusto munitus.*

*

Conspectus specierum huius subsectionis.

1 (8). Abdominis segmenti dorsalis tertii margine apicali immaculato et ipsi segmento concolori.

2 (7). Abdominis segmenti tertii dorsalis serie anteapicali concolori.

3 (6). Vertice maxima ex parte, pleuris, pectore metathoraceque cyaneis; cavitate faciali medio dense subtilissime transverse-striata.

4 (5). Postscutello vel in mare etiam scutello verticeque cyaneis vel leviter viridi-pictis *pulchella* Spin.

5 (4). Postscutello viridi-aurato ... ... *var. spinifera* Ab.

6 (3). Vertice thoraceque totis viridi-cupreoque auratis; cavitate faciali medio lævi ac polita ... ... *plusia* n. sp.

7 (2). Abdominis segmenti tertii dorsalis serie anteapicali nigro-ænea; postscutello et vertice inter stemma anticum et oculum viridi- vel cupreo-auratis in utroque sexu *calimorpha* Mocs.

8 (1). Abdominis segmenti dorsalis tertii margine apicali violaceo-cupreo; capite, pectore et metanoto cœruleo-aureis, pronoto et postscutello viridi-aureis, mesonoto cupreo-aureo ... ... *Vahli* Dhlb.

*

624. **Chrysis pulchella** Spin.

Chrysis pulchella, Spin. Ins. Lig. II. p. 28, n. XXVII. ♂. (1808). — Dhlb. Hym. Europ. II. p. 299, n. 168. ♂ ♀. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 562, n. 17. ♂ ♀. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 307, n. 50, tab. VI. fig. 33. ♀. (1866); Fedts. Reise in Turkest. Hym. Chrysid. p. 23, n. 47. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 76 et 88. ♂. (nec ♀.) (1879). — Mocs. Chrys. faun. Hung. p. 70 et 90, n. 39. ♂ ♀. tab. I. fig. 15. (segm. anale) (1882). — Frey, Chrys. Helvet. p. 52 et 66, solum ♂. (nec ♀) (1887) (excl. *Chrys. calimorphae* Mocs. syn.) — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 75, n. 50. ♂. (1887) (excl. *Chrys. dives* Dhlb. syn.). — Destef. Natural. Sicil. VII. p. 179. ♂ ♀. (1888).

Chrysis dives, Chevr. Chrysid. du Léman, p. 46. ♂. (nec ♀) (1862).

Sexus ab invicem colore scutelli differunt:

Submediocris vel mediocris, sat robusta, cyanea parumque virescens, parcius cinereo-alboque pilosa; femina: pro- et mesonoto scutelloque viridi- et cupreo-auratis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

postscutello cyaneo (var. b. Dhlb.); mas: pro- et mesonoto viridi- et cupreo-auratis, scutello et postscutello cyaneis (var. a. Dhlb.); capite cyaneo, vertice ante stemmata sæpius virescenti, cavitate faciali rectangulari, minus profunda, subtiliter coriacea, medio longitudinaliter canaliculata et utrinque subtilissime subtransverse-striata, lateribus argenteo-sericeo-pilosa, surperne transverse marginata, margine sursum biangulato, e singulo quoque angulo ramulum rectum stemmata superiora versus currentem emittente; antennis mediocribus, tenuibus, fuscis, argenteo-puberulis, articulis duobus primis cyaneis, tertio longo, sequentibus duobus simul sumptis æquilongo; genis mediocribus, antennarum articulo secundo parum longioribus; occipite utrinque angulo spinoideo obsoleto; pronoto sat longo, transverso-rectangulo, antice in medio profunde impresso cum mesonoto, scutello et postscutello dense minus fortiter punctato-reticulatis; metanoti dentibus postico-lateralibus mediocribus, triangularibus, subacutis, apice incurvis; abdominis segmentis dorsalibus viridi- vel cupreo-auratis, duobus primis fere æqualiter sat crasse, tertio densius subtiliusque subrugoso-punctatis, 2—3 basi late nigro-æneis, secundo carinula mediana distincta sublævi, tertio supra seriem incrassato foveolis profunde immersis 8—10 subovalibus, reliquis lateralibus minutis margine apicali undulato-quadridenticulato, denticulis brevibus vel brevissimis, obtusis, externis subtriangularibus, intermediis latis arcuato-obtusis, summo margine scarioso-testaceo et subpellucido, dente utroque laterali triangulari subacuto, per emarginaturam obliquam modice arcuatam a denticulo apicali proximo remoto, margine laterali a basi usque ad dentem suum leniter oblique-flexuoso; ventre pedibusque cyaneis et viridibus, tarsis fusco-rufescentibus; alis hyalinis, disco et ad marginem cellulæ radialis sordidis, venis fuscis, cellula radiali triangulariter lanceolata incompleta: apice modice aperta. — ♂ ♀; long. 6—8 mm.

Patria: Hispania (Gog.); Italia (Spin.; Sicilia, Dhlb. et Destef.); Gallia (Ab.); Helvetia (Chevr.); Hungaria centralis et meridionalis, mensibus Junio et Julio non rara (Mocs.); Peninsula Balcanica (Mus. Vindob.!); Russia (provincæ Orenburgenses, Eversm.; Sarepta, Coll. Saussurei!); Turkestania (Rad.).

var. spinifera Ab.

Chrysis spinifer (!), Ab. Diagnos. Chrys. Nouvell. p. 5, n. XXXII. (1878); Annal. Soc. Linn. Lyon. XXVI. p. 76 et 88. ♀. tab. I. fig. 29. (abdomen.) (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 163. (1879).

A stirpe differt: postscutello quoque plus minusve viridi-aurato.

De hac specie Clarissimus Auctor sequentia scripserat:

«Tellement voisine non de *Pulchella*, quoique je l'aie plusieurs fois reçue sous ce nom, mais de *Dives*, qu'une description détaillée serait superflue. Même coloration et même taille. Ponctuation générale sensiblement plus forte. Forme plus trapue. Joues un peu plus longues, à côtés moins convergeants et terminés par une dent plus accusée. Cavité faciale plus ponctuée et non lisse en partie. Angles médians du rebord moins accusés; angles situés sur le côté en forme d'épines et non obtus.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Avons-nous affaire ici à une race méridionale dans la *Dives* ou à une espèce distincte? Il me faudrait voir un plus grand nombre de *Dives* pour opiner sur ce dilemme. Quoi qu'il en soit, j'ai cru devoir mentionner cette forme litigieuse. Je l'ai reçue de Montpellier (Lichtenstein par Gribodo) et l'ai prise au nombre de 6 sujets ♀ à Marseille et à Lorgues. »

Ego, secundum exemplar e Gallia a piæ memoriæ viro Lichtenstein mihi donatum, præter colorem postscutelli viridi-aurati nullam aliam differentiam a *Chrys. pulchella* Spin. invenio. In notis characteristicis omnibus eidem penitus convenit et segmenti secundi anguli laterales etiam in *Chrys. pulchella* Spin. non semper sunt obtusi. — *Chrysis calimorpha* Mocs. (dives Dhlb.) tamen: macula verticis, punctatura abdominis segmentorum dorsalium subtiliori, serie foveolarum nigro-ænea et dentibus analibus maioribus, etiam ab hac varietate est bene distincta. — Patria: Gallia (Montpellier, Ab. et Mus. Hung.; Marseille et Lorgues, Ab.; Toulouse, Marquet).

625. **Chrysis calimorpha** Mocs.

Chrysis dives, Dhlb. Hym. Europ. II. p. 301, n. 169. ♀. (1854). — Chevr. Chrysid. du Léman, p. 48. ♀ (nec ♂) (1862). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 76. ♀. tab. II. fig. 30. (segm. anale) (1879). — Marq. Bullet Soc. Hist. Nat. Toulouse, p. 163. (1879). — ? Destef. Natural. Sicil. VII. p 180. (1888) (exclus. Lucasi syn.) (nec Lucas).
Chrysis calimorpha, Mocs. Chrys. faun. Hung. p. 71 et 90, n. 40. ♂ ♀. (1882).
Chrysis pulchella, Frey, Chrys. Helvet. p. 52 et 66. ♀. (nec ♂) (1887).

Chrys. pulchellae Spin. simillima; sed in sexu utroque postscutello viridi- vel igneo-aurato, vertice et etiam sæpius mesopleuris viridi- vel cupreo-aureo-maculatis, abdominis segmentis dorsalibus: primo sat sparsim minus profunde punctato interstitiisque latioribus subtilissime punctulatis, secundo tertioque dense subtilius punctatis, tertio margine apicali sæpius æneo vel cupreo-æneo, foveolis profundis nigro-æneis, dentibus analibus magis distinctis et alarum cellula radiali latius aperta, certe alia est species. — ♂ ♀; long. 6—7 mm.

Patria: Sicilia (Dhlb.); Gallia (Marq.); Helvetia (Chevr. et Coll. Saussurei!); Hungaria centralis, mensibus Julio et initio Augusti sat rara (Mocs.).

626. **Chrysis plusia** n. sp.

Submediocris, elongata, sat robusta, viridi-aurata cupreoque lavata, parcius cinereo-alboque pilosa; cavitate faciali angusta, læte-cyanea lævi ac polita, lateribus viridi-aurata sparsimque punctata, superne convexa, non marginata, sed a fronte exeunt ramuli duo paralleli ad stemma anticum aream tamen distinctam non formantes; antennis brevibus, tenuibus, nigris, cano-puberulis, scapo ænescenti, articulo secundo flagelli valde brevi, primo vix longiore; genis valde bevibus linearibus; pronoto longo, longitudine capitis, transverso-rectangulo, antice in medio sat profunde longitudinaliter sulcato; metanoto convexo; vertice densius, sed subtilius, thorace supra sat crasse profundeque minus regulariter punctato-reticulatis; abdominis segmentis dorsalibus viridi-auratis cupreoque lavatis, 2—3 basi late nigro-æneis, secundo carinula mediana nulla, angulo laterali-apicali subrotundo, tertio convexo, ante seriem nec minime calloso, foveolis circa 8 tantum sat magnis rotundis per carinulam medianam convexo-planam interru-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

ptis, margine apicali sat longo, sparsim punctulato, sexdentato, dentibus quattuor apicalibus valde brevibus triangularibus, duobus lateralibus mox iuxta initium seriei anteapicalis sitis per emarginationem ante dentem externum formatis angulatis, emarginatura centrali-apicali angusta, externis multo minore; ventre pedibusque viridibus et cyaneis, illo segmento secundo basi utrinque nigro-maculato, his femoribus anticis antice, posticis postice nigro-violaceis, lævibus ac politis, tarsis rufo-testaceis; alis parum sordide-hyalinis, venis pallide-fuscis, cellula radiali triangulariter lanceolata incompleta, apice late aperta, tegulis violascenti-cyaneis viridi-maculatis. — ♀ ; long. 7 mm.

Patria: Algeria (Setif, Coll. Saussurei).

627. **Chrysis Vahli** Dhlb.

Chrysis Vahli, Dhlb. Hym. Europ. II. p. 301, n. 170. (1854).

«Mediocris 2 lin. decimal. et ultra long. crasse punctata, capite, pectore et metanoto cœruleo-aureis; pronoto, postcutello abdominisque segmento dorsali primo viridi-aureis, mesonoto abdominisque segmentis dorsalibus secundo et tertio cupreo-aureis.

Observ. Valde assimilis *Chrysidi candenti* Germar et nob. — Corpus crassum et crasse punctatum. Abdominis segmenta secundum et tertium margine basali nigro-ænea, segmenti tertii margo apicalis mediocris violaceo-cupreus, fere ut in *Chryside pulchella* constructus. Antennæ tarsique nigro-fuscencentes, scapus illorum et pedes viridi-cœrulei. Alæ hyalinæ venis fuscis. Venter purpureo-, l. æneo-violascens, marginibus segmentorum viridi-cœrulescentibus.»

Patria: regnum Tunetarum (Tunis) Africæ septentrionalis.

2) *Abdominis segmenti tertii dentes: 4 apicales robusti, spinoidei, 2 laterales subparvi, triangulares.*

628. **Chrysis sabulosa** Rad.

Chrysis sabulosa, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 24, n. 49, tab. II. fig. 11. ♀. (non ♂) (1877) sec. spec. typ. e coll. Rad.

Submediocris, ovalis, cyaneo-viridis, parce albo-pilosa; capite magno, cubico, thorace latiore, genis sat longis; fronte, thoracis dorso pleurisque viridi-auratis; cavitate faciali profunda, subtiliter punctato-coriacea, lateribus dense albo-pilosa, superne non marginata; pronoti disco late sulcato inæqualiterque punctato, punctis nempe maioribus minoribusque, haud profundis, lateribus antice sat fortiter oblique-striatis; mesonoto et scutello fortius dispersiusque punctatis; mesopleuris longitudinaliter et transverse sulcatis; abdomine viridi cupreoque nitenti, inæqualiter minus profunde parum rugosiuscule-punctato, serie anteapicali haud immersa foveolis numerosis, minus distinctis, rotundis, dentibus apicalibus fere æqualibus, mediocribus, acutis, lateralibus (iuxta initium seriei anteapicalis sitis) subparvis, triangularibus; ventre viridi-cyaneo et aureo variegato nigro-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

que maculato; antennarum scapo et flagelli articulo primo supra, femoribus tibiisque viridibus, articulis reliquis flagelli fuscis; genibus, tibiarum apice tarsisque rufo-testaceis; alis hyalinis, cellula radiali triangulariter lanceolata apice anguste aperta. — ♀; long. 6 mm.

Species: capite magno, cubico, thorace latiore, pronoti lateribus oblique-striatis, cavitate faciali superne non marginata, abdomine viridi cupreoque nitenti et dentibus apicalibus, rite cognoscenda.

Patria: Turkestania (Mons Karak, Coll. Rad!).

3) *Abdominis segmenti tertii dentes omnes 6 apicales plerumque robusti, spinoidei.*

629. **Chrysis sexdentata** CHRIST.

Chrysis sexdentata, Christ, Naturg. p. 404. (1791). – Mocs. Chrys. faun. Hung. p. 71 et 90, n. 41. ♂ ♀ (1882). — Frey, Chrys. Helvet. p. 53 et 84. ♀. (1887). — Destef. Natural. Sicil. VII. p. 144 (1888) (nec Fabr., nec Panz.)

Chrysis micans, Rossi, Mant. Ins. I. p. 133, n. 293. (1792). — Dhlb. Hym. Europ. II. p. 302, n. 171. ♂ ♀. (1854). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 71. (1858). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 19. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 24, n. 48. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 56 et 68. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Lampr. Goldwesp. Deutschl. p. 18, n. 56. tab. I. fig. 23. (segm. anale) (1881). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 59, n. 28. (1887).

Chrysis similis, Lep. Annal. du Mus. Hist. Nat. VII. p. 126, n. 6. tab. VII. fig. 11. ♂. (1806). — Germ. Reise nach Dalmat. p. 260, n. 342. (1817).

Chrysis caucasica, Rad. Horæ Soc. Ent. Rossicæ. XII. p. 108, n. 32. tab. II. fig. 8. ♀. (1876) sec. spec. typ. e coll. Rad.

Mediocris aut submagna, robusta, viridi-cyanea, punctis plus minusve violaceo-purpurascentibus, densius cinereo-alboque pilosa; cavitate faciali quadrata, minus profunda, punctulato-coriacea, dense argenteo-sericeo-pilosa, superne transverse-marginata: margine subacuto inæquali plerumque flexuoso; antennis brevibus, tenuibus, fuscis, cano-puberulis, articulis duobus primis viridibus vel viridi-cyaneis, tertio longitudine mediocri, quarto subæquali in mare, in femina longo, quarto longiore; genis mediocribus, antennarum articulo quarto fere æquilongis; occipite utrinque angulo spinoideo munito; vertice densius parumque subtilius, pro- et mesonoto fortius, scutello et postscutello crasse punctato-reticulatis, pronoto brevi, transverso-rectangulo, antice in medio parum impresso, scutelli disco punctis aliquot minutis; metanoti dentibus postico-lateralibus latis robustis acute-triangularibus, apice incurvis; abdomine sublineari, dorso valde convexo, viridi-cupreo-aureo, segmento primo impressione basali violascenti, supra in medio longitudinaliter canaliculato, sparsim crassius punctato interstitiisque punctulatis, 2—3 basi nigro-æneis, carinula mediana minus distincta, secundo sat dense crasseque, tertio adhuc densius subtiliusque punctatis, hoc convexo, foveolis profunde immersis mediocribus, numerosis, rotundatis, margine apicali punctulato, dentibus sex in unam lineam parum arcuatam dispositis, robustis, acute-triangularibus, subspinoideis,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

subæqualibus, emarginaturis sat profunde arcuatis, fere æquilatis, dentibus in femina tamen longioribus, quam in mare; ventre nigro, violaceo-micanti, segmentis viridi-cyaneo-maculatis; pedibus viridi-cyaneis, femoribus sæpius violascentibus, tarsis fuscis; alis hyalinis plus minusve sordidis, venis firmis piceis, cellula radiali elongata lanceolata subcompleta: apice parum aperta. — ♂ ♀; long. 7—10 mm.

Species: capitis thoracisque punctis violaceo-purpurascentibus, iam facile cognoscitur.

Patria: Hispania (Gog.; Barcelona, Coll. Schmiedeknechti!); Insulæ Baleares (Friese! et Mus. Hung.); Italia (Rossi; Sardinia, Costa; Sicilia, Dhlb. et Coll. Saussurei!); Corsica (Dhlb.); Gallia (Lep.); Helvetia (Frey); Germania merid. (Schenk); Hungaria centralis et meridionalis, mense Junio non rara (Mocs.); Dalmatia (Germar); Insula Rhodus (Dhlb.); Caucasus (Coll. Rad.!); Turkestania (Rad.).

630. **Chrysis Demavendæ** Rad.

Chrysis Demavendae (r. Demavendica), Rad. Horæ Soc. Ent. Rossicæ. XVI. Bullet. p. V. n. 2. ♂ ♀. (1881).

Chrysis Demabendae, Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 33. ♂ ♀. (1888).

Mediocris, sat robusta, viridi-cyanea (♀) vel viridi-aurata (♂), parce albo-pilosa; vertice, pronoto, mesonoti lobo medio lateribus supra, lobis item lateralibus totis viridi-auratis, parte reliqua lobi medii mesonoti occipiteque cyaneis; genis brevibus, antennarum articulo secundo æquilongis; cavitate faciali sat profunda, medio canaliculata, viridi-subaurata, dense punctato-coriacea argenteo-sericeoque pilosa, superne marginata, margine utrinque parum sinuato; vertice dense minus crasse, thorace crassius profundeque punctato-reticulatis; abdomine viridi-cupreo-aurato vel viridi-aurato, segmento secundo basi ample nigro-æneo, carinula mediana sublævi, in mare minus distincta, primo disco subtiliter punctato, punctis sparsis crassis submagnis inmixtis, secundo sat dense fortiter, tertio paulo subtilius rugoso-punctatis, hoc convexo, serie anteapicali haud profunde immersa foveolis circiter 14 minoribus maioribusque rotundis et sat profundis, margine apicali dentibus in arcum levem dispositis inæqualibus, externis multo brevioribus triangularibus, intermediis quattuor acutis, centralibus omnium longissimis, in femina longioribus quam in mare, emarginaturis inæqualibus, secundariis latissimis; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; antennarum scapo, femoribus tibiisque viridibus, flagelli articulo primo supra viridi, reliquis fuscis, huius secundo apud feminam sat longo, tertio æquali, apud marem valde brevi, tertio dimidio breviore; tarsis rufo-testaceis; alis hyalinis, cellula radiali apud feminam sordida triangulariterque lanceolata completa, tegulis cyaneis. — ♂ ♀; long. 7 mm.

«*L'armure* par la forme de la branche du forceps et de la volsella se rapproche à celle de *Chr. poecilochroa* et par la forme des crochets à celle de *Chr. lunigera,* mais les crochets sont moins larges et plus longs.» (Rad. l. c. tab. VI. fig. 68 a, 68 b, 68 i.)

Chrys. sexdentatae Christ proxima; sed minor, capite thoraceque aliter coloratis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

abdomine segmento secundo dorsali minus fortiter dense rugoso-punctato, dentibus externis brevioribus etc. distincta.

Patria: Persia (Mons Demavend, Coll. Rad!).

631. **Chrysis variicolor** mihi.

Chrysis varicolor, Smith, Transact. Ent. Soc. Lond. p. 462, n. 17. (1874).

«Length 4 lines. Head and thorax varied with blue and green; abdomen green, with bright golden and coppery lustre. Head blue; prothorax green, with a transverse interrupted blue line in the middle; the mesothorax with the middle of the disk and the scutellum blue, the rest purple above, margined laterally with blue; the metathorax green; wings fuscous, not very dark, and with their base hyaline; the nervures black; the legs and body green beneath. Abdomen: the first segment green, with more or less of a golden lustre, the two following segments with a bright-coppery effulgence, the sides more or less golden; the teeth on the apical margin acute, nearly equidistant, and in a slight curve. The head and thorax strongly and closely punctured. Abdomen rather finely punctured, most stongly so at the base; on the second and third segments the punctures more or less confluent.»

Patria: China borealis (Foo-chow).

Animadversio. — Denominationem Smithii mutandam esse censebam, quoniam «varus» longe aliam habet significationem, quæ vox ad colorem applicari non potest.

632. **Chrysis bipartita** Smith.

Chrysis bipartitus, (!), Smith, Transact. Ent. Soc. Lond. p. 462, n. 16. ♀. (1874).

«Female. — Length 4—4½ lines. Head and thorax purple, abdomen golden-green. The face green, the body purple beneath, the femora purple, the tibiæ green; the face with silvery-white pubescence. The head and thorax coarsely punctured; wings subhyaline, the nervoures fuscous. The abdomen strongly punctured, its extreme base most strongly so.

Var. The thorax tinged in parts with green.»

Patria: Australia.

II. *Abdominis dorsum (et corpus totum) viridi-auratum, segmenti tertii dentes omnes acuti, triangulares.*

a) *Postscutellum convexum.*

633. **Chrysis Cristovallensis** Montr.

Chrysis Cristovallensis, Montr. Annal. Soc. Linn. Lyon. Sér. 2. tom. XI. p. 249. (1864).

«Long. 0,010.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Vert-doré. Dessus du corps entièrement couvert de gros points enfoncés. Dernier segment de l'abdomen muni de 6 dents égales.»

Patria: Nova Caledonia (San-Cristoval).

b) *Postscutellum productum, subexcavatum, stilbiforme.*

634. **Chrysis Audouinii** BLANCH.

Chrysis Audouinii, Blanch. Hist. nat. III. p. 295, n. 3. (1840). — Brullé, Hym. IV. p. 27, n. 6. ♂. (1846).

Descriptio secundum Brullé:

«Viridi-aurea, dense punctata, alis subobscuris, thorace postice producto, subexcavato, segmento tertio sexdentato. Mas.

Il est d'un vert doré, particulièrement sur l'abdomen, l'ecusson, le prothorax et la tête; la partie postérieure du thorax et la base de l'abdomen sont plus vertes. Les ailes sont un peu obscures, avec l'extrémité pâle sur tout son bord.

Tout le corps est couvert de gros points, un peu moins serrés sur l'abdomen que sur la tête et le thorax; la tête offre entre le vertex et la face une ligne saillante et arquée; la première région du métathorax est avancée en forme de lobe creusé presque en goutière comme dans les *Stilbum;* le métathorax offre plusieurs excavations dont les deux moyennes sont profondes; le bourrelet du troisième segment de l'abdomen est peu marqué et suivi d'une rangée de points réguliers; le bord postérieur du même segment est armé de six dents aiguës dont les deux extérieures sont plus écartées. La base de l'abdomen offre une large impression trilobée.

Longueur: 0,010.»

Patria: insula Madagascar.

III. *Abdominis segmenta duo dorsalia viridi-aurea, secundo utrinque macula laterali magna, rotundata, nec non centro marginis apicalis cyaneis, tertium viridi-cyaneum; postscutellum inerme.*

635. **Chrysis Schönherri** DHLB.

Chrysis Schönherri, Dhlb., Dispos. p. 10, n. 9. (1845); Oefvers. K. Vetens. Acad. Förhand. p. 139, n. 5. (1850); Hym. Europ. II. p. 303, n. 172. (1854).

«Magna 3'/₂ lin. decimal. long. confertim punctata robusta virescens æneo-purpureoque picta, abdominis dorso viridi-aureo, segmentis: secundo utrinque macula laterali tertioque toto viridi-cyaneis, dentibus apicalibus brevibus: intermediis 4 acute-, externis 2 obtuse-triangularibus, alis nigro-brunneis.

Observ. Species eximia et elegans. — Corpus robustum elongatum pubescens. Caput re vera rotundato-subquadratum, sed propter oculos exsertos subtriangulum apparet, confertim modice punctatum, antice virescens postice viridi-cyaneum, vertice subruguloso, macula centrali purpurascenti ænea; cavitas facialis rectangularis parum

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

profunda, punctulato-coriacea nitida, lateribus albo-sericea, superne marginata: margine transverso inæquali, utrinque decurvo; antennæ magnitudine mediocres, robustæ fuscæ, basi viridi-cyaneæ; clypeus mediocris nitidissimus transversus, disco convexus; mandibulæ una cum reliquis oris partibus nigro-piceæ, macula mandibularum basalis intensive aureo-viridis; margo occipitalis utrinque angulo minuto spinoideo. Thorax subbrevis crassus sat convexus, crasse punctatissimus subreticulatus viridis, lateribus sternoque nitidus, dorso subopacus; pronoti margo posticus, dorsuli scutellique discus purpurascenti-ænea, metanoti discus cœruleus; postscutellum propter crassam sculpturam quasi crenulatus apparet; metanoti anguli postico-laterales robusti lati triangulares; pedes virides nitidissimi, tarsis nigro-fuscis, calcaribus spinulisque testaceo-brunneis; alæ nigro-brunneæ, venis concoloribus firmis, cellula radiali lanceolata incompleta, tegulis cyaneis. Abdomen robustum lineari subellipticum, dorso sat convexum; segmentum primum confertim modice punctatum viridi-aureum, margine summo apicali tenuiter nigro-piceo; segmentum secundum confertim punctulatum viridi-aureum, utrinque macula laterali magna rotundata nec non centro marginis apicalis cyaneis; margo lateralis (segmenti secundi) apice angulo acuto subspinoideo; segmentum tertium remote punctulatum viridi-cyaneum, disco vix nisi levissime et obsoletissime immersum, ante seriem convexiusculo terminatum, series ante-apicalis foveolis numerosis rotundatis, centralibus duabus distinctioribus, reliquis aut parvis aut mediocribus; margo apicalis brevis subtiliter punctulatus subcoriaceus, dentes apicales breves triangulares, intermedii 4 acuti, externi 2 obtusi; emarginaturæ arcuatæ: centralis paullulum angustior quam proxima, reliquæ omnes invicem latitudine subæquales; margo proprius lateralis parum obliquus, leniter curvus. Venter fortiter fornicatus, viridi-cyaneus.»

Patria: Africa meridionali-orientalis ad Port Natal.

IV. *Abdominis dorsum saturate violaceum fasciis subigneo- vel viridi-aureis; caput et thorax cyanea et viridi-cyanea, vel nigro-violacea viridi-picta; dentes duo externi angulum lateralem efficientes lati, arcuato-obtusi.*

636. **Chrysis Zetterstedti** Dhlb.

Chrysis Zetterstedti, Dhlb. Dispos. p. 11, n. 16. ♂ ♀. (excl. ♀.) (1845); Hym. Europ. II. p. 305, n. 173. ♂. tab. VI. fig. 111. (1854). — Thoms. Opusc. Entom. II. p. 107, n. 7. (1870).

Submediocris 2½ lin. decimal. long. confertim modice punctata violacea viridi picta, abdominis dorso subtiliter punctulato fasciis 3 arcuatis viridi-aureis, segmenti tertii serie ante-apicali foveolis numerosis subparvis rotundatis, margine dentibusque apicalibus brevibus.

Observ. Species pulchra et bene distincta. — Corpus mediocre elongatum pubescens. Caput rotundato-triangulum confertim permodice punctatum cyaneo-virescens vertice violaceo; cavitas facialis lata transverse quadrata punctulato-rugulosa, parum profunda subplaniuscula, supra discum fovea centrali rotundata, superne irregulariter et obsolete tranverse marginata; antennæ breves robustæ fusçæ, apice dilute brunneæ,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

basi viridi-cyaneæ; clypeus transversus perbrevis nitidissimus, disco convexus, margine apicali cupreo-æneo ad centrum arcuato-emarginato; labrum subtriangulare convexum unacum mandibulis, maxillis palpisque nigro-piceum, basis mandibularum viridi-aureo picta; margo occipitalis utrinque angulo spinoideo minuto obsoleto. Thorax modice punctato-subreticulatus viridis aut cyaneo-viridis, pedibus concoloribus, tarsis fuscis; pronoti truncatura antica tota et partis posticæ maculæ 3 interdum coëuntes in fasciolam, dorsulum et scutelli discus violacea; metanoti anguli postico-laterales mediocres triangulares; alæ sordide hyalinæ venis mediocribus brunneis, cellula radiali lanceolata incompleta: apice late aperta, tegulis cyaneis. Abdomen obtuse rectangulum, basi non latius quam apice, longitudine capitis thoracisque simul sumtorum, dorso saturate violaceum: segmenta primum et secundum margine apicali tertiumque ante seriem fasciola pulcherrima viridi-aurea, medio angusta, utrinque ampliata totumque marginem lateralem obtegente; segmentum primum modice punctatum, secundum subtiliter et fere remote punctulatum, tertium subtilius confertissime punctulatum; series ante-apicalis per carinulam brevem planam viridi-auream interrupta, foveolis profundis rotundatis numerosis violaceis, aut subparvis aut mediocribus; margo apicalis brevis aut totus viridis aut disco viridis et utrinque violascens; dentes 2 centrales robusti triangulares propter emarginaturam centralem profunde et anguste arcuatam approximati, dentes 2 proximi breves triangulares, dentes 2 externi angulum laterali-apicalem efficientes lati arcuato-obtusi, emarginaturæ externæ latæ obliquæ arcuatæ, emarginatura inter dentem utrumque centralem et dentem proximum l. secundarium mediocris recte arcuata at reliquis lenior. Venter aureo-viridis segmentis maculis marginibusque nigricantibus.»

Patria: Suecia et Norvegia (Dhlb.).

637. **Chrysis equestris** Dhlb.

Chrysis Zetterstedti, Dhlb. Dispos. p. 11, n. 16, ♂ ♀. (excl. ♂) (1845). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 563, n. 18. ♀. sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. III. p. 308, n. 51. tab. VI. fig. 34. ♀. (1866); Horæ Soc. Ent. Rossicæ. XXIII. p. 32. (genit. maris) (1888).

Chrysis equestris, Dhlb. Hym. Europ. II. p. 307, n. 174. ♀. (1854).

Submagna, elongata, sat robusta, cyanea vel virescens nigro-violaceoque picta, parcius cinereo-alboque pilosa; cavitate faciali lata, transverse-quadrata, subplanata, dense punctulato-rugulosa, superne transverse-marginata, margine inæquali subacuto; antennis brevibus, crassiusculis, nigris, articulis tribus primis cyaneis vel viridi-cyaneis, tertio longo, sequentibus duobus simul sumptis tamen breviore; genis proportionaliter longis, antennarum articulo tertio æquilongis; pronoto longo, transverso-rectangulo, antice in medio distincte sat profunde longitudinaliter sulcato; metanoti dentibus postico-lateralibus brevibus, valde latis, subtriangularibus; vertice circa stemmata, pronoti fascia mediana transversa, mesonoti lobis lateralibus scutelloque nigro-violaceis; capite thoraceque supra densius crassiusque punctato-reticulatis, reticulatione in mesonoti

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

lobis lateralibus minus distincta; abdominis segmentis dorsalibus nigro-violaceis, primo secundoque margine apicali tertioque ante seriem subigneo- vel viridi-aureo eximie fasciatis, fasciis sat latis, medio angustis, utrinque ampliatis, segmento primo basi trifossulato supra sat dense punctato, punctis magnitudine inæqualibus maioribus minoribusque, secundo dense minus profunde, tertio adhuc densius subtiliusque punctatis, illo carinula mediana indistincta, hoc supra seriem parum convexiusculo, foveolis per carinulam brevem planam viridi-auratam interruptis profunde immersis numerosis sulciformibus irregularibus violaceis, margine apicali sat longo subtiliter punctulato, dentibus quattuor intermediis robustis triangularibus sat longis, externis duobus angulum validum obtusum efformantibus, emarginaturis tribus medianis recte arcuatis, centrali profundiore, externis duabus latis oblique-arcuatis; ventre viridi-cyaneo nigroque maculato; pedibus concoloribus vel viridi-subauratis, tarsis fuscis; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata incompleta, apice sat late aperta, tegulis cyaneis vel virescentibus. — ♀; long. 9 mm.

Chrys. Zetterstedti Dhlb. valde similis et affinis; «at corpore maiore et robustiore, capite thoraceque crasse punctatis, abdominis dorso confertissime punctulato, segmenti tertii serie ante-apicali et margine longe aliter constructis, dentibus apicalibus maioribus et robustioribus certissime et facillime distinguitur.» (Dhlb. l. c.).

«*Armure.* La forme de la branche du forceps et de la volsella rappelle celle de *Chr. poecilochroa;* mais la forme des crochets est bien differente.» (Rad. l. c. tab. V. fig. 64 a, 64 b, 64 i).

Patria: Hungaria meridionalis, mense Julio sat rara (Mus. Hung.); Russia meridionalis et orientalis (non rara in provinciis Orenburgensi et Saratovensi, Eversm.; Spassk, Coll. Radoszkovszkyi!; Jekaterinoslaw, Mus. Vindob.!).

Animadversio. — Eximiæ huius speciei patriam Dahlbomus non novit.

V. *Abdominis dorsum viridi-cyaneum, cyaneum vel viride (in Chrys. oculatae Fabr. var. sumptuosa Grib. laete viridi-aureum), segmento secundo utrinque macula rotundata aurea, coccineo- vel viridi-aurea vel cupreo-aeruginosa; corpus magnum vel mediocre, viridi-cyaneum, viride vel cyaneum (in var. sumptuosa laete viridi-aureum).*

638. **Chrysis oculata** Fabr.

Chrysis oculata, Fabr. Syst. Ent. p. 357, n. 3. (1775); Spec. Ins. I. p. 455, n. 4. (1781); Mant. Ins. I. p. 283, n. 4. (1787). — Oliv. Encycl. Méth. Ins. V. p. 672, n. 6. (1790). — Christ, Naturg. p. 402. (1791). — Gmell. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2744, n. 11. (1792). — Fabr. Ent. Syst. II. p. 239, n. 5. (1793). — Donov. Ins. of India, p. . . . tab. LVI. fig. 2. (1800—1803). — Fabr. Syst. Piez. p. 171, n. 6. (1804). — Lep. Annal. du Mus. Hist. Nat. VII. p. 125, n. 4. (1806). — Dhlb. Hym. Europ. II. p. 310, n. 176. ♂ ♀. (1854).

Stilbum oculatum, Blanch. Hist. nat. III. p. 297, n. 3. (1840). — Westw. Donov. Natural. Hist. of Ins. of India. New Edit. p. 88, tab. LVI. fig. 2. (1842).

Pyria oculata, Brullé, Hym. IV. p. 19, n. 1. ♀. (1846).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Magna, robusta, viridis parumque cyanescens, parcius cinereo-alboque pilosa; cavitate faciali minus profunda, dense punctato-coriacea, argenteo-sericeo-pilosa, superne transverse-flexuoso-marginata, margine ramulum utrinque ad stemma anticum et alium ad oculum decurrentem emittente; antennis proportionaliter brevibus, crassis, fuscis, articulis duobus primis viridibus vel cyanescentibus, tertio brevi, quarto ter breviore; genis mediocribus, articulo antennarum tertio æquilongis; margine occipitali utrinque angulo spinoideo munito; vertice thoracisque dorso crassissime punctato-reticulatis interstitiisque angustis in pronoto mesonotoque subtiliter punctulatis; pronoto brevi, antice in medio parum impresso; postscutello gibbo, submarginato, margine inæquali subcrenulato; metanoti dentibus postico-lateralibus magnis, robustis, triangularibus; mesopleuris apice utrinque fortiter mucronatis; abdomine robusto, elongato, capite thoraceque simul sumptis conspicue longiore, ovali-subrectangulo, basi paullulum latiore quam apice, segmentis dorsalibus viridi-cyaneis vel viridibus, segmento secundo utrinque macula ocellari igneo-aurea viridi-aureoque circumcincta eximie ornato, primo sat sparsim crassius punctato interstitiisque subtiliter punctulatis, secundo densius punctato interstitiis lævibus, carinula mediana distincta lævi ac polita, tertio disco transverse immerso, supra seriem convexiusculo, foveolis profundis numerosis maiusculis arcuatis aut subquadratis, toto segmento parum subtilius, quam secundo, punctato, margine apicali prominulo, subtiliter punctato, sexdentato, dentibus in arcum levem dispositis, robustis, acute-triangularibus, intermediis duobus longissimis, emarginaturis tribus mediis arcuatis, centrali profundiore, externis valde obliquis latioribusque; ventre pedibusque viridi-cyaneis vel viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis subfumato-hyalinis, venis robustis, cellula radiali subtriangulariter lanceolata incompleta, apice late aperta. — ♂ ♀; long. 11—13 mm.

Patria: India orientalis (Malabaria, Fabr.; Bengalia, Donov. et Mus. Vindob.!; Ceylon, Mus. Berolinense! et Coll. Saussurei!).

var. sumptuosa Grib.

Pyria oculata Fabr. *var. sumptuosa,* Grib. Annali Mus. Civ. Stor. Nat. Genova. Sér. 2. tom. I. p. 366, n. 31. ♀. (1884).

«Typo simillima differt corpore toto læte viridi-aureo (haud obscure viridi-cyaneo vel violaceo), maculis segmenti abdominis secundi cupreo-æruginosis.» — Patria: Birmania (Grib.).

639. **Chrysis Schiödtei** Dhlb.

Chrysis Schiödtei, Dhlb. Hym. Europ. II. p. 309, n. 175. ♀. (1854).
Chrysis gemmatus, (!), Smith. Transact. Ent. Soc. Lond. p. 461, n. 14. ♀. (1874).

Magna, elongata, robusta, viridi-cyanea vel virescens, parcius cinereo-alboque pilosa; cavitate faciali quadrata, subprofunda, punctato-coriacea, medio inæqualiter canaliculata, lateribus albo-sericeo-pilosa, superne transverse-marginata, margine in-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

æquali flexuoso subacuto; antennis subbrevibus, crassiusculis, fuscis, scapo viridi, articulis duobus primis flagelli supra cyaneis, tertio longitudine mediocri, quarto subæquali; genis mediocribus, articulo antennarum quarto æquilongis; margine occipitali utrinque angulo spinoideo munito; vertice thoracisque dorso fere æqualiter crassius punctato-reticulatis; pronoto sat longo, transverse-rectangulo, antice in medio minus profunde longitudinaliter sulcato; metanoti dentibus postico-lateralibus validis, latis, triangularibus; mesopleuram margine postico ad apicem crenulato; abdomine elongato, sublineari, capite thoraceque simul sumptis longiore, dorso sat convexo, viridi-cyaneo, nitido, segmento primo margine apicali lateribusque sæpius virescentibus, secundo margine apicali utrinque macula sat magna viridi-aurea (Schiödtei, Dhlb.) vel coccineo-aurea (gemmata, Smith) ornato, carinula mediana indistincta, primo dense minus profunde ac crasse punctato, punctis in disco aliquot, lateribus numerosis multo maioribus inmixtis, secundo dense minus crasse punctato, tertio punctatura fere secundi, disco leniter transverse immerso, ante seriem convexiusculo dense punctulato, foveolis profunde immersis numerosis maiusculis arcuatis aut subquadratis, per carinulam medianam parvam interruptis, margine apicali sat longo, subtilissime punctulato fortiterque sexdentato, dentibus omnibus robustis, acute-triangularibus, emarginaturis tribus medianis arcuatis, centrali reliquis profundiore, externis valde obliquis latioribus; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tibiis sæpius viridibus, tarsis fuscis; alis fumato-hyalinis parumque violascentibus, venis firmis, cellula radiali elongata lanceolata subcompleta, apice parum aperta, tegulis viridi-cyaneis. — ♀; long. $9^1/_2$—10 mm.

Chrys. oculatae Fabr. similis; sed multo minor ac minus robustior, antennarum articulo tertio breviore supra cyaneo, vertice thoraceque supra non tam crasse punctato-reticulatis, postscutello convexo, mesopleuris apice utrinque haud fortiter mucronatis, abdominis segmentis dorsalibus punctatura subtiliori, macula eximia segmenti secundi parum minore, sæpissime viridi-aurea etc. distincta.

Patria: India orientalis (Dhlb. et Mus. Hung.; Pondichery, Coll. Andréi!); Australia (Smith et Mus. Vindob.!).

640. **Chrysis Siva** n. sp.

Mediocris, elongata, minus robusta, parcius albo-pilosa, læte-cyanea parumque violascens; cavitate faciali sat profunda, dense punctulato-coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte marginata, margine utrinque ramulum obsoletum ad stigma anticum emittente; antennis crassis, apicem versus fortiter attenuatis, fuscis, articulis duobus primis cyaneis, tertio valde brevi, secundo adhuc breviore vel subæquali, quarto fere ter breviore; genis brevibus, antennarum articulo secundo æquali; pronoto brevi, antice in medio parum impresso lateribus subrotundis; vertice densius subtiliusque, thorace supra dispersius fortiusque punctato-reticulatis; postscutello gibbo, submarginato, margine inæquali subcrenulato; mesopleuris apice triangulariter productis

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

excavatisque; abdomine læte-cyaneo, segmentis duobus primis parum, tertio intensius nigro-violascentibus, primo sparsim crasse punctato interstitiisque punctulatis, 2—3 densius sat crasse, fere cribrato-punctatis, secundo margine apicali utrinque macula rotundata sat magna viridi-aurea concinne ornato, carinula mediana obsoleta, tertio disco transverse leniter immerso, ante seriem anteapicalem modice calloso, foveolis magnis et profundis, lævibus, nigro-violaceis, circiter 10, per carinulam medianam brevem interruptis, margine apicali sexdentato, dentibus triangularibus acutis, in arcum dispositis, quattuor intermediis fere æquilongis, externis parum brevioribus, emarginaturis externis latis minus profunde arcuatis, secundariis angustioribus profundiusque arcuatis, centrali his fere æquali; ventre cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus cum metatarsis externe cyaneis, his intus et tarsorum articulis reliquis fuscis; alis fumato-hyalinis, violascentibus, nervis piceis, cellula radiali triangulariter lanceolata fere completa, tegulis cyaneis. — ♀; long. 9 mm.

Chrys. Schiödtei Dhlb. similis; sed magis læte-cyanea, antennarum articulis crassioribus, duobus primis tantum (et non tribus) cyaneis, articulo tertio insolite valde brevi, quarto fere ter breviore (in *Chrys. Schiödtei* tertio quarto fere æquali), thorace et abdomine supra fortius punctatis, serie anteapicali foveolis magnis et profundis lævibus, nigro-violaceis, dentibus apicalibus brevioribus et angustioribus, postcutello gibbo aliter sculpto, est certe distincta.

Patria: India orientalis (Bengalia, Mus. Hung.).

VI. *Abdominis dorsum laete-viride, apice nitore cyaneo; caput et thorax quoque laete-viridia cupreoque micantia.*

♀

641. **Chrysis melanops** Kirby.

Chrysis melanops, Kirby, Proced. Zoolog. Soc. Lond. p. 345, ♂. (1883).

«Long. corp. 5 lin.

Male. Bright green, with a coppery reflection on the head and thorax (very bright coppery red wherever abrated); punctures large, close together, but not confluent; ocelli black, the scape between and inmediately around also blackish; apex of abdomen (and summit, when viewed sideways) with a strong blue reflection; under surface of antennæ, the greater part of the hind legs, and the tips and under surface of the middle tibiæ and middle tarsi brown; abdomen sexdentate, with equal rather pointed teeth of moderate size; wings brown. (2049, Marœ).

Probably allied to *C. parallela,* Brullé, from Timor; but that species is varied with blue on the head and thorax, insteated of with copper.»

Patria: insula Timor Laut.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

VII. *Abdominis dorsum aut viride aut cyaneum aut viridi-cyaneum vel viridi-aeneum aut violascens, nunquam pure auratum, sed rarius tantum marginibus apicalibus viridi-subauratis.*

A. *Postscutellum inerme, licet saepius gibbum vel breviter obtuse-conicum vel levissime subprominulum.*

1) *Abdominis segmenti tertii dentes: 4 apicales et 2 laterales; dens uterque lateralis prope basin marginis lateralis et iuxta initium seriei anteapicalis situs.*

642. **Chrysis Erivanensis** Rad.

Chrysis Erivanensis, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 146, n. 56. ♂. (1879); ibid. XXIII. p. 32. (genit. maris) (1888).

»Cyaneo viridis, varioloso reticulato; cavitate faciali, clypeo pedibusque viridibus; abdominis segmentis secundo carinula mediana, tertio sexdentato; serie anteapicali foveolis submagnis rotundis, dentibus apicalibus spinoideis lateralibus obtusis a dente apicali externo longe remotis. Long. 6—8 mm.

Tête verte, reticulato-variolé; sur le vertex une tache bleue, cavité faciale, faiblement chagrinée d'un vert doré et garni de poils blancs, sa marge supérieure carenée bisinuée d'un bleu foncé. Chaperon echancré au milieu, antennes, mandibules bruns.

Corselet bleu verdâtre, varioloso-reticulé, sauf le dos qui est régulièrement variolé; area dorsale et écusson bleu ou tirant au bleu, jamais vert; une petite faussette sur le bord du prothorax.

Abdomen vert, premier segment fortement scrobiculé, sa base bleuâtre; deuxième finement scrobiculé, sa base bleue foncée, cette couleur s'étend plus ou moins sur toute la surface de ce segment, sur le dos une carinule; troisième segment finement variolo-chagriné, sa base bleuâtre; points de la serie profonds, inégales; les quatre dents interieures égales élancées; les dents latérales eloignées, remontant vers le base du segment, très peu accentué.

Pattes vertes; tarses brunes. Ventre vert. Ailes faiblement enfumées.«

»*Armure.* La branche du forceps est forte, son bord supérieur est presque droit. La forme des crochets rapelle celle-là de *Chr. lunigera.*« (Rad. l. c. tab. VI. fig. 64 a, 64 b, 64 i).

Patria: Caucasus (Erivan, Kasbek).

643. **Chrysis splendens** Dhlb.

Chrysis splendens, Dhlb. Hym. Europ. II. p. 312, n. 177. ♂. (1854).

Forma unius *Hedychri* vel *Euchroei*. Mediocris, robusta, violascenti-cyanea, longius cinereo-alboque pilosa; capite supra, pronoto utrinque, mesonoti lobis lateralibus mesopleurisque supra concinne aureo- et viridi-aureo-maculatis; cavitate faciali mediocri,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

rectangulari, viridi, subtiliter punctato-coriacea, medio longitudinaliter canaliculata, lateribus dense albo-sericeo-pilosa, superne transverse-marginata, margine sursum ter angulato et in verticem ramulos duos, supra stemma anticum concurrentes areamque subreniformem efformantes emittente; antennis mediocribus, fuscis, cano-puberulis, articulis duobus primis viridibus, tertio supra cyanescenti sat longo, quarto fere dimidio adhuc longiore; genis sat longis, articulo tertio antennarum fera æquilongis; vertice inter stemmata violaceo-maculato cum thorace supra æqualiter crasse punctato-reticulatis; pronoto sat longo, transverso-rectangulo, antice in medio sat profunde longitudinaliter sulcato; postscutello gibbo, apice crenulato; metanoti dentibus postico-lateralibus robustis, latis, acutis, apice incurvis; abdomine fere ut in *Hedychris* formato, dorso modice convexo, subviolascenti-cyaneo parumque virescenti, segmentis: primo basi in medio longitudinaliter sulcato et utrinque minus profunde fossulato, duobus primis dense crasseque, tertio adhuc densius, sed subtilius punctatis, secundo carinula mediana bene distincta sublævi, tertio brevi, sulco mediano profundo, supra seriem incrassato-convexo, foveolis mediocribus inæqualibus numerosis, margine apicali mediocri, dense punctulato, dentibus quattuor apicalibus mediocribus, spinoideis, a latere longe remotis, emarginaturis arcuatis, centrali reliquis parum angustiore, dentibus duobus lateralibus triangularibus, validis, spinoideis, iuxta initium seriei anteapicalis sitis, a dentibus apicalibus longe remotis, interstitio inter hunc dentem et dentem apicalem externum leniter convexo-arcuato; ventre violascenti aut cyanescenti, parum nigro- et viridipicto; pedibus læte-viridibus aut cyaneo-virescentibus, tarsis fuscis; alis hyalinis, venis mediocribus piceis, cellula radiali subtriangulariter lanceolata subcompleta, apice anguste aperta, tegulis violaceis. — ♂; long. 7 mm.

Species hæc eximia: maculis aureis verticis thoracisque, punctatura et segmento anali, facile cognoscitur.

Patria: Africa meridionalis (Promontorium Bonæ Spei, Dhlb.; Caffraria, Coll. Radoszkovszkyi!).

644. **Chrysis Wahlbergi** Dhlb.

Chrysis Wahlbergi, Dhlb. Dispos. p. 14, n. 28. (1845); Oefvers. K. Vetens. Acad. Förhandl. p. 141, n. 7. (1850); Hym. Europ. II. p. 314, n. 178. ♂♀. (1854).

«Magna 3—3½ lin. decimal. long. confertim modice punctata cyaneo-viridis, alis fumatis apice hyalinis.

Observ. Statura fere *Chrysidis amethystinae* Fabr.

Corpus robustum virescens pubescens confertim modice punctatum, punctura capitis et thoracis multo crassior quam abdominis. Caput rotundato-triangulum viridissimum macula verticis centrali cyanea; cavitas facialis rectangularis profunda, disco subtiliter transverse-strigosa, lateribus punctulato-coriacea albo-sericeo subvillosa, superne transverse marginata: margine flexuoso, sursum ad centrum angulato et ex angulo ramulum unicum versus stemma ductum emittente; antennæ mediocres apice brunneæ, articulis basalibus primo viridi-cyanescenti, secundo et tertio supra viridibus;

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

clypeus subbrevis transversus irregulariter trapezinus, punctatus disco convexus, margine apicali late angulato-emarginatus, margine utroque laterali oblique arcuato-emarginatus; labrum parvum semilunatum maxillæque piceæ, palpi testaceo-brunnei. Thorax crassus quadrato-subcylindricus, ad abdomen latius quam ad caput, viridis dorsuli area media basi concolore, ceterum aut mesonoto et postscutello aut tantummodo dorsuli area media (præter basin) cyaneus; alarum tegulæ aut virides aut viridi-cyaneæ; postscutellum propter sculpturam crassam margine postico leniter subangulato-prominulum; metanoti anguli postico-laterales maximi oblique transversi, irregulariter subtrapezini; mesopleuræ apice obtuse crenulato-denticulatæ; pedes virides splendidi, tarsis nigro-brunneis. Alæ fumatæ, ad certum situm luminis nonnihil violascentes, apice albo-hyalinæ, venis omnibus robustis piceis, cellula radiali elongata lanceolato-acuminata subcompleta: apice angustissime aperta. Abdomen robustum elongatum ovali-subrectangulum, capite thoraceque simul sumtis distincte longius, dorso sat convexum splendidum modice aut subcrasse punctatum, aut viridissimum aut viridi-cyaneum; segmenti tertii margo et apicalis et lateralis aut cyaneus aut violaceus, punctulatus; series ante-apicalis per carinulam brevissimam interrupta, foveolæ mediocres profundæ numerosæ rotundatæ; dentes: apicales triangulares, intermedii paullo robustiores quam secundarii; emarginatura centralis subtriangularis, utraque proxima oblique arcuata; uterque dens lateralis ad basin marginis lateralis situs validus acutangulus, a dente apicali externe longe remotus, margo inter hunc et dentem apicalem proximum obliquus arcuatus. Venter fornicatus viridi-cyaneus.»

Patria: Africa meridionali-orientalis ad Port Natal.

2) *Abdominis segmenti tertii dentes: omnes 6 apicales.*

a) *Dentes duo externi obtusi, ex apice marginis lateralis arcuato formati.*

645. **Chrysis fasciata** Oliv.

Chrysis (quinta), Schæff. Icon. Ins. Ratisbon. Vol. III. tab. 233, fig. 7. (1876).

Chrysis fasciata, Oliv. Encycl. Méth. Ins. V. p. 677, n. 26. (1790). — Latr. Hist. nat. XIII. p. 239, n. 7. (1805) (nec Fabr., nec Spin.).

Chrysis sexdentata, Panz. Faun. Ins. Germ. fasc. 51, tab. 12. (1798); Panz. Schæfferi Icon. Ins. Ratisbon. p. 193. (1804) (nec Christ, nec Fabr.).

Chrysis violacea, Panz. Krit. Rev. II. p. 103. (1806). — Först. Verh. nat. Ver. preuss. Rheinl. X. p. 304. (1853). — Dhlb. Hym. Europ. II. p. 316, n. 179. ♂ ♀. (1854) (excl. *Chrys. indigotea* Duf. syn.). — Schck, Nass. Jahrb. XI. p. 78, n. 32. (1856). — Chevr. Chrysid. du Léman, p. 56. ♀. (1862). — Schck, Progr. Gymn. zu Weilb. p. 15, n. 20. (1870). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 41 et 43. ♂ ♀. (1879). — Marq. Bullet. Soc. Hist. Nat. Toulouse, p. 158. (1879). — Lampr. Goldwesp. Deutschl. p. 19, n. 57. (1881). — Heyd. Ber. Senkenb. naturf. Ges. p. 249, n. 14. (1882). — Mocs. Chrys. faun. Hung. p. 72 et 90, n. 42. ♂ ♀. tab. I. fig. 15. (segm. anale) (1882). — Frey, Chrys. Helvet. p. 53 et 70. tab. III. fig. 23. (margo apic.) (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 32. (genit. maris) (1888).

Mediocris, elongata, violacea, longius cinereo-alboque pilosa; capite antice pedibusque, in femina etiam lateribus apiceque segmentorum dorsalium abdominis virescen-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tibus vel viridi-cyanescentibus; cavitate faciali minus profunda, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse-marginata; antennis mediocribus, crassiusculis, nigris, articulis tribus primis virescentibus vel cyanescentibus, tertio longitudine mediocri, quarto parum tantum longiore; genis sat longis, articulo antennarum tertio æquilongis; vertice thoracisque dorso densius crassiusque punctato-reticulatis; pronoto brevi, transverso-rectangulo, antice in medio obsoletius sulcato; metanoti dentibus postico-lateralibus robustis, latis, subtriangularibus; abdominis segmentis dorsalibus: primo basi in medio profunde longitudinaliter sulcato et utrinque parum impresso dense subtilius punctato punctis sparsis maioribus inmixtis, secundo dense subtilius sat regulariter punctato carinula mediana minus distincta, tertio dense subtiliter punctulato, subcoriaceo, convexo, ante seriem vix incrassato, foveolis sat profunde immersis mediocribus vel submagnis rotundatis, lateralibus parvis circiter 14, margine apicali brevi punctulato, dentibus quattuor apicalibus mediocribus acute triangularibus, externis duobus ab illis nonnihil remotis fortiter angulatis obtusiusculis, emarginaturis tribus intermediis mediocribus recte-arcuatis, centrali reliquis parum profundiore, externis duabus latis obliquis; ventre viridi; alis parum fumato-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♂ ♀; long. 7—7½ mm.

Species: cum *Chrys. indigotea* Duf. et Perr. et femina cum *Chrys. equestri* Dhlb. multum habet similitudinis.

«*Armure.* Le bord supérieur de la branche du forceps est échancré et puis allongée, à l'extrémité garni de poils assez longs. Volsella conique, pourvue de poils. La forme des crochets et du courvercle génital représentent les fig. 66i et 66k.» (Rad. l. c. tab. VI. fig. 66a, 66b.)

Patria: Gallia (Oliv.); Germania (Schæff.); Helvetia (Chevr.); Tyrolis (Dalla Torre et Kohl); Austria (Dhlb.); Hungaria centralis (Mocs.); Persia (Rad.); Guinea (Coll. Saussurei!) et Uruguay (Montevideo, Mus. Lugd. Batavorum!). — Secundum Spinola etiam Aegypti et teste Latreille-Dahlbom etiam Americæ septentrionalis incola.

646. **Chrysis distinguenda** Spin.

Chrysis distinguenda, Spin. Annal. Soc. Ent. France. VII. p. 450, n. 7. (1838).

«♀. Long. 2 lignes., Largeur ½ lign. Plus petite et proportionnellement plus étroite que la *Chrysis violacea*, Panz., avec laquelle on serait tenté de la confondre, mais dont elle diffère spécifiquement par les caractères suivants. La couleur générale du corps est vert métallique à reflets bleuâtres. (Dans la *Violacea*, elle est bleu métallique à reflets violets.) Le vertex est arrondi, et il se confond insensiblement avec le front. (Dans la *Violacea*, il en est séparé brusquement par une ligne transversale qui a un rebord assez saillant.) Le bord postérieur du troisième anneau est quadridenté, et des trois espaces interjacens, celui du milieu est, evidemment la plus petite. (Dans la *Violacea,* les quatre dents spiniformes sont équidistantes, et même dans les femelles, l'espace du milieu est quelquefois le plus large.)»

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Patria : Aegyptus.

Animadversio. — Descriptio quam maxime incompleta nescioque an speciem loco apto collocaverim vel illa ad Tetrachrysidas solum pertineat? Dahlbomus etiam hanc speciem Spinolæ non novit.

647. **Chrysis Oliveirii** RAD.

Chrysis Oliveirii, Rad. Jorn. Scienc. Mathem. Phys. e Natur. Lisboa. XXXI. p. 219, n. 124. (1881).

«Magna; caput et thorax virescentes confertim profunde scrobiculati, cavitas facialis profunda subplaniuscula, superne marginata; abdominis viridi-cyanei subtiliter scrobiculati segmentum tertium cyaneo-viride concaviusculum margine immersum; ano sexdentato, dentibus apicalibus 4, mediis acute triangularibus, 2 externis maioribus obtusis. Alis subfumatis.

Long. 10 mill.

Tête verte, densément scrobiculé; cavité faciale profonde, chagrinée, garnie de poils blancs; sa marge supérieure relevée, arquée; trois premiers articles des antennes vertes.

Thorax vert, profondement et densément scrobiculé; post-écusson relevé, les dents latérales du metanotum fortes, triangulaires.

Deux premiers segments abdominaux verts, avec un reflet bleu, regulièrement scrobiculés; troisième segment faiblement concave, sa marge anteapicale épaisse; points de la série profonds, leur nombre quinze, le bord de ce segment sexdenté; les quartre dents internes égales, triangulaires, aiguës.

Ailes enfumées.

Cette espèce par son aspect, par le nombre et la forme de ses dents apicales, se rapproche beaucoup de *Chr. violacea* (Dahlb. p. 317); mais *Chr. violacea* diffère de notre espèce par: 1) sa couleur qui est d'une couleur bleu violacée, 2) par sa cavité faciale qui est peu relevée et en ligne droite, 3) par son post-écusson qui n'est pas relevé et un peu arrondi, 4) par les dents latérales du metanotum qui sont plus petites et emoussées, 5) par la fine ponctuation du deuxième et du troisième segments, 6) par ses ailes qui sont presque transparentes, 7) par sa taille qui est plus petite.»

Patria: Africa occidentalis (Angola, Welwitsch).

b) *Dentes apicales plerumque omnes acuti: aut triangularis aut spinoidei* (solum in *Chrys. lateralis* Brullé mare dentes intermedii et externi obtuse-triangulares).

α) *Abdominis segmento tertio area postica lateribus albo- vel pallide-flavo marginatis seu albo-pellucidis.*

648. **Chrysis lateralis** BRULLÉ.

Chrysis lateralis, Brullé, Hym. IV. p. 26, n. 5. ♂ ♀. (1846).

Mediocris, robusta, cyanea vel cyaneo-viridis, parce cinereo-alboque pilosa; vertice, pronoto, mesonoti lobis lateralibus vel etiam lobo medio antice scutelloque ple-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

rumque nigro-violaceo-maculatis; cavitate faciali profunda, cyanea vel viridi-aurata, dense argenteo-sericeo-pilosa, subtiliter punctulato-coriacea, medio longitudinaliter canaliculata, superne distincte non marginata, sed supra cavitatem adest in vertice linea elevata arcuata stemma anticum includens, sicut in *Chrys. Klugii* Dhlb. (Hym. Europ. II. p. 322); antennis sat tenuibus, nigro-fuscis, articulis duobus (♂) vel tribus (♀) primis cyaneis vel viridi-cyaneis, tertio longitudine mediocri, secundo fere duplo longiore; genis brevibus sublinearibus, articulo secundo vix æquilongis; vertice thoraceque supra dense crasseque punctato-reticulatis; pronoto sat longo, medio non impresso, lateribus acute marginatis; postscutello scrobiculato leniterque angulato-prominulo et subapiculato, metathorace subtus profunde bifossulato, fossulis magnis violaceis parum rugosis; abdomine thorace concolori, segmento primo basi in medio excavato, lateribus profunde fossulatis, segmentis dorsalibus primo secundoque ante marginem apicalem nigro-violaceo-fasciatis, primo crasse sparsim cribrato-, secundo tertioque multo densius subtiliusque punctatis, interstitiis lævibus ac politis, secundo basi late nigro-violaceo carinulaque mediana sat distincta instructo, tertio disco transversaliter immerso ante marginem apicalem nigro-violaceum in mare non, in femina parum incrassato, ipso margine apicali fere lævi, foveolis apud marem minus distinctis, minutis, apud feminam magnis subovalibus satisque profundis, area postica lateribus pallide-flavo-marginatis, dentibus sex in arcum dispositis mediocribus, apud marem intermediis et externis obtuse-triangularibus, secundariis subacutis, emarginaturis minus profundis, centrali triangulari; apud feminam intermediis quattuor acute- vel subacute-triangularibus, externis duobus subacutis, emarginaturis minus profundis, fere æquilatis; ventre cyaneo vel viridi, segmento secundo basi utrinque nigro-maculato; tarsis fuscis, articulis primis supra viridibus; alis parum sordide-hyalinis, venis fuscis, cellula radiali lanceolata apice late aperta, tegulis nigris. — ♂ ♀; long. 8—8½ mm.

Chrys. Genbergi Dhlb. valde similis et affinis, sed maior ac multo robustior; femina: abdominis segmento dorsali tertio supra seriem anteapicalem magis incrassato, ipsa serie foveolis magnis et sat profundis, dentibus quattuor intermediis triangularibus; mas vero: abdominis segmento dorsali tertio foveolis minus distinctis, dentibus intermediis et externis obtuse-triangularibus, emarginatura centrali profunda, triangulari, mihi solum distincti esse videntur. — A *Chrys. Klugii* Dhlb. vero: abdominis segmento dorsali tertio margine apicali foveolisque aliter constructis, bene distincta.

Patria: Columbia (Mus. Lugdun. Batavorum!); Brasilia (provincia Piauhy, Mus. Hung.; Guaratuba et Campos Geræs, Brullé); Respubl. Argentina (Mus. Turicense!).

649. **Chrysis Genbergi** Dhlb.

Chrysis Genbergi, Dhlb. Hym. Europ. II. p. 319, n. 181. ♂. tab. XI. fig. 112. (1854).

Mediocris, sublinearis, minus robusta, viridi-cyanea, parcius cinereo-alboque pilosa; vertice circa stemmata, occipite, collo, mesonoti lobo medio plerumque nigro-violaceis; cavitate faciali subangusta, rectangulari, profunda, subtilissime punctulato-coriacea,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

medio profunde canaliculata, utrinque albo-sericeo-pilosa, superne transverse non marginata, sed supra cavitatem adest in vertice linea elevata arcuata stemma anticum includens; antennis brevibus, tenuibus, nigro-fuscis, articulis tribus primis cyaneis vel viridibus, tertio longitudine mediocri, secundo duplo longiore; genis brevibus sublinearibus; pronoto sat longo, antice in medio non impresso, lateribus acute-marginatis; vertice thoraceque supra sat crasse punctato-reticulatis; metanoti dentibus postico-lateralibus mediocribus triangularibus; abdomine elongato, capite thoraceque simul sumptis longiore, sublineari, segmentis dorsalibus primo secundoque ante marginem apicalem nigro-violaceo-fasciatis, primo basi in medio excavato lateribusque profunde fossulato, sparsim crasse cribrato-, secundo tertioque multo densius subtiliusque punctatis, interstitiis lævibus ac politis, secundo basi late nigro-violaceo carinulaque mediana sat distincta instructo, tertio disco transversaliter parum immerso supra seriem in sexu utroque vix incrassato, foveolis in femina indistinctis, in mare parvis rotundatis haud numerosis, margine apicali sat longo fere lævi, dentibus sex in arcum dispositis mediocribus, acute-triangularibus, subæqualibus, emarginaturis mediocribus modice arcuatis æquilatis, margine laterali albo-pellucidulo, colore hoc paulo ante dentem apicalem externum desinente leviter obliquo et prope dentem arcuato; ventre cyaneo vel viridi, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et tarsorum articulis primis supra viridibus vel cyanescentibus, reliquis et subtus brunneo-testaceis; alis parum sordide-hyalinis, venis piceis, cellula radiali elongato-lanceolata incompleta, apice sat late aperta. — ♂ ♀; long. 7—7½ mm.

Patria: Brasilia (Teffé et Obidos ad Amazonas, Mus. Hung.; Urisanga, Mus. Vindob.!; Neu-Freiburg, Mus. Halense Saxonum!).

650. **Chrysis Klugii** Dhlb.

Chrysis Klugii, Dhlb. Hym. Europ. II. p. 321, n. 182. ♀. tab. XII. fig. 113. (1854).

Mediocris, sublinearis, læte-viridis vel viridi-cyanea, parcius cinereo-alboque pilosa; vertice circa stemmata, pronoti truncatura antica fasciaque in medio interrupta, mesonoti lobis lateralibus anguste plerumque cyaneis vel nigro-violaceis; cavitate faciali angusta, subrectangulari, profunda, subtiliter punctulato-coriacea, lateribus albo-sericeo-pilosa, superne non marginata, sed supra cavitatem adest in vertice linea elevata arcuata stemma anticum includens; antennis brevibus, sat robustis, fuscis, articulis duobus primis viridibus vel viridi-cyaneis, tertio longitudine mediocri, secundo duplo longiore; genis brevibus linearibus; vertice thoracisque dorso dense crassius punctato-reticulatis; pronoto longo, antice in medio non impresso, lateribus acute-marginatis; postscutello margine postico propter sculpturam crassam subcrenulato et in centro marginis eiusdem leniter angulato-prominulo et subapiculato; metanoto postice foveis duabus magnis violaceis, dentibus postico-lateralibus robustis triangularibus; mesopleuris ad apicem marginis postici leniter late arcuato-emarginatis et sic distincte bidentatis; abdomine elongato, capite thoraceque simul sumptis distincte longiore, subovali, segmentis dorsalibus læte-viridibus vel cyaneis, primis duobus ante marginem

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

apicalem nigro-violaceo-fasciatis, carinula mediana sublævi colore simili distincta, 2—3 basi nigro-violaceis, primo basi utrinque profunde foveato, supra sparsim crasse cribrato-, secundo tertioque subtilius densiusque punctatis interstitiis lævibus, tertio elongato, secundo parum vel vix breviore, angustato-arcuato, disco et apice convexo-depresso, supra seriem parum incrassato, foveolis profunde immersis crassis longitudinalibus sulciformibus, circiter 14 violaceis per carinulam continuam interruptis, margine apicali valde prominulo, depresso, sublævi seu subtiliter punctulato, viridi vel violaceo, dentibus apicalibus sex in arcum brevem dispositis acute-triangularibus, emarginaturis inæqualibus, centrali lata lenissime arcuata, secundariis mediocribus oblique arcuatis, externis latissimis oblique arcuatis, lateribus post initium seriei anteapicalis sat late albo-pellucidis; ventre læte-viridi vel cyaneo, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et tarsorum articulo primo seu metatarso supra similiter coloratis, his subtus et articulis reliquis fusco-rufis; alis parum fumato-hyalinis violascentibus, venis firmis piceis, cellula radiali mediocri lanceolata incompleta, apice sat late aperta. — ♂♀; long. 8—8½ mm.

Species: abdominis segmento dorsali tertio foveolis profunde immersis crassis longitudinalibus sulciformibus margineque apicali valde prominulo, a congeneribus primo intuitu facillime cognoscenda.

Patria: Venezuela (Mus. Halense Saxonum!) et Brasilia (provincia Piauhy, Obidos ad Amazonas et Blumenau, Mus. Hung.).

β) Abdominis segmento dorsali tertio lateribus albo- vel pallide-flavo non marginatis.

651. **Chrysis monochroa** n. sp.

Mediocris, sat robusta, tota cyanea, unicolor, longius cinereo-alboque pilosa; cavitate faciali planiuscula, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne arcuatim transverse-marginata; antennis brevibus, crassiusculis, fuscis, articulis tribus primis cyaneis, tertio sat longo, quarto parum breviore; genis brevibus, articulo antennarum secundo æquilongis; pronoto brevi, transverso-rectangulo, antice in medio vix impresso; vertice densius, thorace supra parum dispersius fortius punctato-reticulatis; abdominis segmentis dorsalibus duobus primis sat dense punctatis, 2—3 carinula mediana sat distincta, tertio convexo, parte basali parum densius punctato, quam in segmentis præcedentibus, ante seriem disco subtiliter dense punctulato, foveolis sat profunde immersis numerosis mediocribus subovalibus per carinulam brevem medianam interruptis, margine apicali sat longo punctulato sexdentato, dentibus mediocribus triangularibus, intermediis quattuor fere æquilongis, lateralibus duobus parum brevioribus, in arcum dispositis, emarginaturis fere æquilatis; ventre pedibusque cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis, supra articulis primis cyaneis; alis pure-hyalinis, venis fuscis, cellula radiali lanceolata subcompleta, apice parum aperta. — ♀; long 6½ mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species » cum *Chrys. indigotea* Duf. et Perr. multum habet similitudinis.

Patria: Algeria (Oran, Coll. Saussurei!).

652. **Chrysis virescens** BRULLÉ.

Chrysis virescens, Brullé, Hym. IV. p. 27, n. 7. ♀. (1846).

« Viridis, subcyanea, alis fuscis, crebre punctata, abdomine levius punctato, utrinque punctulato, thorace postice gibbo, segmento tertio sexdentato. Fem.

Il est d'un vert bleuâtre, surtout à l'extrémité de l'abdomen, avec le thorax et le vertex nuancés de bleu foncé. Les ailes sont obscures avec l'extrémité un peu plus clair.

La tête et le thorax sont criblés de points assez gros et qui se touchent presque: ces points sont un peu plus gros sur l'écusson, sur les côtes du mésothorax et sur la base du métathorax. L'abdomen est couvert de points plus petits et plus écartés: de très-petits points se remarquent dans les intervalles, sur les côtés seulement et à la base de l'abdomen. Le prothorax offre une dépression à son milieu; les lignes interlobulaires du mésothorax sont bien marquées; la première région du métathorax est plus saillante que l'écusson, bombée et comme bossue; la base de l'abdomen est largement échancrée; le bourrelet du troisième segment est assez prononcé et suivi d'une rangée de gros points; le bord postérieur est armé de six dents aiguës, dont les deux moyennes sont plus saillantes et les deux extérieures plus courtes que les autres. »

Longueur: 0,009.

Patria: Senegalia.

653. **Chrysis therates** n. sp.

Magna, robusta, cyaneo-viridis, parce cinereo-alboque pilosa; cavitate faciali viridi, orbitis internis et clypeo parum viridi-subauratis; genis proportionaliter brevibus; antennarum scapo viridi, flagelli articulo primo supra cyanescenti, secundo longo, tertio quartoque simul sumptis longitudine æquali; cavitate faciali sat profunda, punctato-coriacea, punctis aliquot sparsis magnis lateralibus, superne marginata, margine a latera viso quasi crenulato, vertice thoracisque dorso punctato-reticulatis; abdomine cyaneo, segmento primo dorsali lateribus, secundo margine apicali et tertio ante seriem virescentibus, primo subtiliter distincte punctulato, punctis sparsis magnis et profundis intermixtis, secundo æqualiter dense minus crasse punctato, carinula mediana nulla, tertio coriaceo-rugoso, supra seriem non calloso, serie anteapicali sat profunde immersa foveolis numerosis magnis et profundis elongatis, margine apicali dentibus sex robustis acutis, intermediis quattuor fere æqualibus, externis duobus multo brevioribus triangularibus, emarginaturis: centrali late-triangulari et reliquis profundiore, reliquis profunde-arcuatis, fere æquilatis; ventre viridi et cyaneo, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque viridibus, tarsis fuscis; alis subfumato-hyalinis, venis fuscis, cellula radiali triangulariter lanceolata apice parum aperta, tegulis cyaneis. — ♀; long. 12 mm.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Species: punctatura diversa abdominis eximia est.
Chrys. virescenti Brullé similis forsanque eadem est species?
Patria: Senegalia (Coll. Rad.!).

654. **Chrysis Dewitzi** n. sp.

Submediocris vel magna, elongata, sat robusta, cyaneo-viridis, breviter cinereo-alboque pilosa; pronoti sulco longitudinali, suturis mesonoti, maculis scutelli et post-scutelli nigro-violaceis; cavitate faciali minus profunda, viridi-aurata, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse flexuoso- vel medio subtriangulariter marginata; antennis sat longis, crassiusculis, fuscis, cano-puberulis, articulis tribus primis læte-viridibus, quarto supra cyanescenti, tertio longo, secundo duplo, quarto parum tantum longiore; clypeo viridi-aurato, sparsim punctulato, apice nigro-æneo medioque emarginato; genis mediocribus, antennarum articulo secundo æquilongis; pronoto sat longo, transverso-rectangulo, antice in medio subarcuatim emarginato; vertice circa stemmata ænescenti cum mesonoti lobis lateralibus densius, sed subtilius, parte reliqua thoracis dispersius crasse punctato-reticulatis; metanoti dentibus postico-lateralibus brevibus robustis latis acutis; abdominis segmentis dorsalibus læte-viridibus nitentibus, primo dense subtiliter punctato punctis sparsim maioribus inmixtis, 2—3 dense subtilius punctatis, secundo carinula mediana sublævi distincta, tertio disco modice depressiusculo-immerso, ante seriem convexo dense punctulato, foveolis sat profunde immersis circiter 16 sat magnis subrotundis parum confluentibus violaceis, margine apicali brevi, dense punctulato, sexdentato, dentibus in arcum dispositis mediocribus acute-triangularibus, externis duobus parum latioribus, intermediis quattuor subæqualibus, externis parum brevioribus, emarginaturis tribus intermediis æqualibus arcuatis, externis latioribus subarcuatis; ventre cyaneo-viridi, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque viridi-subauratis, tarsis fuscis; alis fumato-hyalinis violascentibus, venis firmis piceis, cellula radiali lanceolata subcompleta, apice parum aperta, tegulis violaceis, externe viridibus. — ♀; long. 9—10½ mm.

Species hæc eximia, in honorem Clariss. Domini H. Dewitz, Musæi Berolinensis Custodis, qui Chrysididas Musæi mihi examinandi causa libenter commisit denominata: colore, antennis, punctatura abdominis, foveolis violaceis et dentibus analibus facile cognoscitur.

Patria: Africa occidentalis (Chinchoxo, Mus. Berolinense).

655. **Chrysis modica** Dhlb.

Chrysis mediocris, Dhlb. Dispos. p. 14, n. 31. (1845).
Chrysis modica, Dhlb. Oefvers. Vetensk. Acad. Förhandl. p. 140, n. 6. (1850); Hym. Europ. II. p. 326, n. 184. ♀. (1854).

«Submediocris vix 3 lin. decimal. long., capite thoraceque modice punctato-reticulata abdomine punctulato, cœruleo-viridis, abdominis segmento dorsali tertio disco

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

non nisi obsoletissime immerso, emarginaturis apicalibus tribus intermediis invicem subæqualibus, alis brunnescentibus, cellula radiali completa.

Observ. Chrysidi sexdentatae Fabr. assimilis, at corpore vulgo breviore, capite thoraceque modice punctatis, abdomine confertim punctulato unicolore nec fasciato, mesopleuris non apice dentatis, alis brunnescentibus etc. satis superque dignoscitur.

Corpus mediocre elongatum pubescens; caput et thorax confertim modice punctato-reticulata. Caput rotundato-triangulum viride, verticis macula centralis violascens; cavitas facialis mediocris subrectangularis parum profunda, punctulata, disco aut subtiliter canaliculata aut foveola mediana, lateribus albo-sericeo villosa, superne leniter marginata: margine transverso inæquali; antennæ robustæ, longtudine mediocres, nigro-fuscæ, basi viridi-cyaneæ; clypeus transversus mediocris punctulatus, disco convexus, margine apicali toto leniter arcuato-emarginato; mandibulæ ceteræque oris partes normales. Thorax robustus rectangulariter subcylindricus, dorso modice convexus, undique aut cœrulescenti-viridis aut viridissimus, exceptis pronoti truncatura antica maculisque 3, dorsuli suturis medianis et interdum scutelli disco nigro-æneis; postscutellum cyanescens, margine postico obtuse subprominulum et propter sculpturam subcrenulatum apparet: metanoti anguli postico-laterales mediocres triangulares; pedes thoraci concolores, tarsis fuscis; alæ brunnescentes, ad certum situm luminis subviolaceo-nitidæ, pellucidæ, venis firmis piceis, cellula radiali subtriangulariter lanceolata completa. Abdomen elongatum ovali-sublineare, basi transversa latius quam apice arcuato, capite thoraceque simul sumptis longius, dorso modice convexum aut viridi-cœruleum aut cœruleo-viridissimum, aliis confertim aliis confertissime punctulatum; segmenti tertii area antica ad seriem convexo-declivi terminata, area postica mediocris depressiuscula subtilissime punctulato-coriacea; series ante-apicalis, dentes et emarginaturæ apicales fere simillime ut in *Chryside sexdentata*. Venter viridis nigro-maculatus.»

Patria: Guinea, Promontorium Bonæ Spei et Port Natal (Dhlb.).

636. **Chrysis malachitica** Dhlb.

Chrysis malachitica, Dhlb. Hym. Europ. II. p. 335, n. 189. ♀. (1854).

«Mediocris 3 lin. decimal. long. confertim modice punctata viridi-cyanea, abdominis segmenti dorsalis tertii serie ante-apicali foveolis mediocribus orbiculatis numerosis, alis hyalinis, disco brunneis et violaceo-micantibus.

Observ. Statura fere *Chrysidis modicae.* Corpus mediocre subovale viridi-cyaneum, confertim modice punctatum, punctura verticis thoracisque subreticulata et nonnihil crassiore quam punctura abdominis, thorace abdomineque dorso valde convexis. Caput rotundato-triangulum oculis valde exsertis; cavitas facialis rectangularis subprofunda, disco subtilissime transverse strigosa, ambitu punctulato-coriacea, lateribus cano-sericeo-villosa, superne marginata (margine utrinque ramulum stemma anticum includentem emittente, Mocs.); antennæ perbreves robustæ fuscæ, basi viridi-cyaneæ; clypeus transversus mediocris trapezinus parce punctulatus planiusculus, disco parumper con-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

vexus ante marginem apicalem linea transversa impressus, ad centrum marginis apicalis lenissime arcuato-emarginatus; mandibulæ piceæ, basi virescentes; labrum mediocre semilunatum gibbum cyaneo-virescens. Thorax crassus, ad ambitum quadrato-subcylindricus, dorso valde convexus; metanoti anguli postico-laterales omnino ut in *Chr. alternanti* constructi; mesopleuræ utroque apice distincte tridentatæ; pedes cyaneo-virescentes tarsis fuscis; alæ basi apiceque hyalinæ, disco saturate brunneæ et ad certum situm luminis violascentes, venis firmis fuscis, cellula radiali triangulariter lanceolata incompleta, apice modice aperta. Abdomen ovatum, capite thoraceque simul sumptis longius, dorso valde convexum et confertim modice punctatum, in segmentis secundo et tertio lineola mediana subelevata planiuscula polita impunctata viridi observanda; segmenti tertii series ante-apicalis per carinulam brevissimam interrupta, foveolæ profundæ, magnitudine mediocres orbiculatæ numerosæ; dentes apicales acute-triangulares inæquales: 2 intermedii paullulum maiores, 2 secundarii mediocres, 2 externi perbreves; emarginatura quoque inæquales: centralis mediocris perfecte transverse arcuata, secundariæ paullulum latiores et oblique arcuatæ, externæ lenius, latius et (quam secundariæ) magis oblique arcuatæ. Venter fornicatus viridi-cyaneus.»

Patria: Promontorium Bonæ Spei.

657. **Chrysis opaca** Grib.

Chrysis opaca, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 331, n. 8. ♀. (1879).

«Mediocris, viridis, supra haud nitida, ventre et facie nitidiusculis, clypeo, carinula frontis, coxisque viridi-aureis: capite confertissime-irregulariter modice punctato: thorace crasse irregulariter (prothorace mesopleuris et postscutello subconfertim, dorsulo scutelloque sparsius) punctato interstitiis punctulato-subcoriaceis: abdomine in segmento primo crasse et profunde, in secundo modice, sparsim punctato, ad latere crebrius, interstitiis disco confertissime, regulariter et concinne, tenuiter punctulatis: segmento tertio crebre at modice, regulariter punctato-subreticulato: area anali creberrime punctulato-granosa: capite antice viso transverso trapezino: cavitate faciali modice profunda punctulato-granosa, supra conspicue transversim marginata; postscutello paullulum tumidulo gibbescenti: abdomine subconoideo, basi leniter excavato, apice arcuato sexdentato: segmenti tertii area antica haud depressa; serie modice abrupta, foveolis parvis separatis irregularibus: margine anali humili modice producto: dentibus acutis triangularibus subæqualibus: emarginaturis arcuato-triangularibus profundis, intermediis perpaullulum minoribus quam lateralibus: alis pure hyalinis. ♀.

Long. corp. mill. 8.

Il carattere più saliente e più singolare di questa Chryside è la punteggiatura dei due primi segmenti dell' addome: i quali portano alcuni punti assai grossi (più grossi sul primo, meno sul secundo) profondi e sparsi a grande distanza: gli interstizii fra di essi punti sono fittamente e regoralmente coperti da minutissimi punticini: la super-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ficie di questi segmenti mancando quindi affato di parti liscie e levigate non è per nulla brillante.

Un solo esemplare nella mia collezione.»

Patria: Africa orientalis.

658. **Chrysis Nubica** Buyss.

Chrysis nubica, Buyss. Revue d' Entom. VI. p. 197, n. 34. ♀. (1887).

«Corpore magno, robusto, uniformiter toto viridi subcyanescente, antice nullo modo nitido, albopilosello. Tarsis, pedibus, scapo secundoque articulo antennarum viridibus. Cavitate faciali canaliculata, crebre ruguloso-punctata, ad frontem abrupte terminata margine elevato circumflexo cum angulo mediano ad stemma anticum procurrente. Capitis lateribus regulariter arcuatis, cum carinula elevata, margine et linea punctorum formatis; oculis magnis, exsertissimis. Pronoto cum sulco mediano longitudinali, profundo, usque in mesonotum continuo; scutello planiusculo; postscutello obtuse conico. Vertice, thorace sternoque profunde crebreque ruguloso-punctatis, subreticulatis, interstitiis punctorum subplanis, minutissime reticulatis. Tegulis viridibus; alis sordidissimis, violascentibus, cellula radiali magna, elongata, subcompleta. Abdomine subparallelo, fortiter sed non crebre punctato, interstitiis punctorum ut in thorace minutissime reticulatis: primo segmento perbrevi; secundo segmento sat convexo, angulis laterali-apicalibus acutis; tertio segmento sexdentato, elongato, subelevato in apice, lateribus subsinuatis; serie anteapicali immersa, foveolis numerosis circa 18 obsoletis, subrotundatis; margine apicali obsolete ruguloso-punctato; dentibus subæqualibus, emarginaturis tribus interioribus, æqualibus, regulariter arcuatis. Ventre nitido, læte viridi, subparallelo, cum macula transversa nigra in secundo segmento. — Long. 12 mill.»

Patria: Nubia (Coll. Abeillei).

659. **Chrysis principalis** Smith.

Chrysis principalis, Smith, Transact. Ent. Soc. Lond. p. 461, n. 13. ♀. (1874).

Magna vel submagna, viridis vel cyanea, parcius cinereo-alboque pilosa; cavitate faciali minus profunda, dense punctato-coriacea, medio longitudinaliter subcanaliculata, aurato-viridi vel viridi-cyanea, superne plerumque acute marginata, margine medio flexuoso ramulosque duos in verticem, stemma anticum includentes areamque subreniformem plus minusve distinctam formantes emittente (fere sicut in *Chrys. splendenti*, Dhlb. Hym. Europ. II. pag. 312.); antennis proportionaliter tenuibus, fuscis, articulis tribus primis vel viridibus vel cyaneo-viridibus, articulo tertio longo, sequentibus duobus simul sumptis parum breviore; genis sat longis, articulo secundo longitudine subæqualibus; vertice thoracisque dorso sat dense crasse punctato-reticulatis interstitiisque in mesonoti lobis lateralibus punctulatis; pronoto sat longo, transverso-rectangulo,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

antice in medio minus profunde sulcato; metathorace convexo; abdominis segmento dorsali primo sparsim crasse profundeque punctato interstitiisque dense punctulatis, secundo concinne sat crasse minus dense punctato, interstitiis lævibus, carinula mediana minus distincta, tertio parte basali vel similiter vel densius punctato, supra seriem satis calloso centro punctis minoribus intermixtis, ipsa serie per carinulam medianam interrupta foveolis magnis et profundis, numerosis, subrotundis, hinc illic confluentibus, profunde immersis, margine apicali punctato-coriaceo dentibusque sex longis, in arcum dispositis armato, intermediis quattuor triangularibus, acutis vel subacutis, externis duobus obtuse-triangularibus, minoribus, emarginaturis arcuatis: centrali reliquis profundiore plerumque angustiore, externis duabus omnium latissimis; ventre viridi vel viridicyaneo, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque et tarsorum articulis plurimis supra viridibus vel cyanescentibus, tarsis fuscis; alis fumato- vel subfumato-hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta, tegulis cyaneis vel subaurato-viridibus. — ♂ ♀ ; long. 10—12 mm.

Chrys. Comottii Grib. valde similis et affinis solumque punctatura pro- et mesonoti multo densiore crassioreque differt.

Patria: inde a Himalaya (Coll. Rad.!) usque ad Bengaliam (Coll. Schmiedeknechti!) et insulam Ceylon (Mus. Berolinense!) et per Chinam (Smith et Mus. Hung.) et regnum Siamense (Coll. Rad.!) insulasque Sundaicas (Sumatra, Mus. Vindob.!; Java, Coll. Rad.!, Saussurei!, Mus. Vindob.! et Mus. Hung.; Celebes, Mus. Hung.) usque ad insulas Aru (Mus. Hung.).

660. **Chrysis Comottii** Grib.

Chrysis insularis, Smith, Journ. Proceed. Linn. Soc. Lond. Zoology. III. p. 26, n. 2. (1859) (nec Guér.).

Chrysis Comottii, Grib. Annali Mus. Civ. Stor. Nat. Genova. Ser. 2. tom. I. p. 367, n. 33. (1884).

Descriptio secundum Smith:

«Nigro-purpurea, violaceo et viridi lavata; capite, thorace abdominisque basi rude punctatis.

Length 5 lines. Dark purple, with violet and green reflections; the face, legs and thorax beneath, green; wings slightly fuscous, and iridescent; the head and thorax closely and coarsely punctured; the base of the abdomen roughly punctured, the two following segments much more finely so; the apical segment armed with six teeth, the outer ones subacute.»

Chrys. principali Smith in omnibus similis et affinis, ita, ut præter sculpturam partis posticæ pronoti et mesonoti ulteriorem diversitatem detegere nequeo. In *Chryside principali* enim hæ partes thoracis dense crasse punctato-reticulatæ sunt interstitiis in mesonoti lobis lateralibus punctulatis; in *Chryside Comottii* vero: pars postica pronoti et mesonoti lobi laterales et lobus medius parte antica sparsim crasse punctata sunt, interstitiis latis subtiliter punctulatis.

Patria: India orientalis (Pondicherry, Grib.); Sumatra (Mus. Vindob.!); Java (Coll.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Rad.!, Saussurei! et Mus. Hung.); Celebes (Makassar, Smith); Ombai (Mus. Dresdense!); et insula Timor (Grib.).

661. **Chrysis obscura** SMITH.

Chrysis obscura, Smith, Journ. Proceed. Linn. Soc. Lond. Zoology. V. p. 67, n. 2. (1861) (nec Rad.)

«Viridis, purpureo variegata; capite thoraceque confertissime punctulatis, segmentis abdominis delicatule punctatis, apice sex-dentato; alis subhyalinis.

Length 5 lines. Green, with shades of blue and blue-black; beneath entirely of a brillant green; the vertex with a large blue-black macula, which encloses the ocelli. The prothorax with a transverse black dash, and three on the mesothorax, the central one crosses the scutellum; the wings fuscous, the marginal cell enclosed. Abdomen blue-black with the apical margins of the segments bright green, the apex armed with six equal acute teeth; the postscutellum rounded.

This species is apparently most closely allied to the *C. Schiödtei* of Dahlbom, but it is much less brilliant in colour and has no vestige of a golden macula on the second segment of the abdomen; the teeth at the apex are very different, being of equal size and at equal distance from each other.»

Patria: Celebes (Makassar).

662. **Chrysis apricans** SMITH.

Chrysis apricans, Smith, Journ. Proceed. Linn. Soc. Lond. Zoology. V. p. 66, n. 1. (1861).

«Viridi-cyanea, purpureo variegata; capite thoraceque confertissime punctatis; abdominis segmentis apicalibus dentibus sex armatis.

Length 5 lines. The head and thorax green, the former with the front blue and a black stain between the ocelli; the thorax with das hes of blue; the abdomen blue, with tints of purple; the head and thorax coarsely punctured; the abdomen delicately so, the extreme base strongly punctured; beneath bright metallic green; wings sligthly fuscous; the apical segment of the abdomen armed with six teeth.»

Patria: Celebes (Makassar).

663. **Chrysis parallela** BRULLÉ.

Chrysis parallela, Brullé, Hym. IV. p. 29, n. 9. ♂. (1846).

«Viridis, supra subcyanea, alis obscuris, cellula baseos submarginali fusca, punctata, abdominis dorso punctis rarioribus, minutis, metathorace gibbo, segmento tertio sexdentato. Mas.

Il est d'un vert nuancé de blue sur la tête, en arrière du thorax et sur l'abdomen. Les ailes sont obscures, avec la cellule sous-brachiale presque entièrement brune.

La tête et le thorax sont criblés de gros points qui ne se touchent pas: ces points sont plus gros sur l'écusson, sur la prémière région du métathorax et sur la base de

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

l'abdomen. Les points de l'abdomen, excepté ceux de la base, sont plus petits que ceux du thorax et même rares sur le milieu de l'abdomen, plus serrés sur les côtés et à l'extrémité; le premier segment de l'abdomen est aussi parsemé de très-petits points, dans l'intervalle des autres. La fossette sous-antennaire de la tête est comme striée en travers; la fossette inter-oculaire moyenne est carrée, presque divisée en deux par une ligne saillante; le prothorax est creusé d'une fossette à son milieu; la première région du métathorax est bombée et un peu saillante; l'abdomen est échancré à la base; le troisième segment est presque carré, obliquement deprimé, muni d'un bourrelet suivi d'une rangée de points nombreux: son bord postérieur est armé de six dents dont les deux du milieu sont plus saillantes.

Longueur: 0,013.»

Patria: insula Timor.

664. **Chrysis intrudens** Smith.

Chrysis intrudens, Smith, Journ. Proceed. Linn. Soc. Lond. Zoology. VIII. p. 62, n. 1. (1865).

«Viridi-cyanea; capite thoraceque confertissime punctulatis; abdominis segmentis delicatule punctatis, apice sexdentato; alis subhyalinis.

Length 4½ lines. Blue-green, abdomen brightest green and subopake; head and thorax closely and strongly punctured; the flagellum black; the tarsi fuscous, with the basal joint green outside; wings subhyaline. Abdomen finely punctured, the basal segment most strongly so; the extreme base of the second and third segments blue-black; the apical segment with six acute spines.»

Patria: Nova-Guinea.

665. **Chrysis agilis** Smith.

Chrysis agilis, Smith, Transact. Ent. Soc. Lond. p. 461, n. 15. ♀. (1874).

«Female. — Length 4 lines. Dark blue; the face, body beneath and the legs more or less green. Strongly punctured; the punctures very close on the head and thorax; rather more distant on the abdomen; the puncturing on the first segment nearly as strong as on the thorax; on the two following segments much finer, increasing gradually in fineness to the apex; wings hyaline, the nervures black.»

Patria: Australia (Queensland).

666. **Chrysis scrobiculata** Mocs.

Pyria Drewseni, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 325, n. 1. (1879) (nec *Chrysis Drewseni* Dhlb.).

Chrysis scrobiculata, Mocs. Term. Füz. XI. p. 17. (1887).

«Depressiuscula, viridis hinc illinc subcyanescens parum nitida; corpore lateribus parallelis, ubicumque crasse et regulariter punctato, capite thoraceque confertius, abdomine rarius; capite lato, planiusculo trapezino; cavitate faciali granulosa, superne mar-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

ginata; mesopleuris margine postico distincte bituberculatis; postscutello levissime subprominulo scrobiculato; abdominis segmento secundo longitudinaliter carinulato: segmento tertio ante seriem undique convexiusculo; cisticillo seriei medio distincte emarginato: foveolis paucis et parvis: margine anali modice immerso, late arcuato, dentibus sex, subæqualibus, acutissimis armato: alis sordide hyalinis.

Long. corp. mill. 10.

Facilmente si distingue questa *Pyria* dalle congeneri pel suo postscudetto affato inerme, di forma appena lievissimamente conoidea: i denti del margine anale sono assai sottili ed acuti, dei loro intervalli il centrale ed i due estremi sono uguali fra di loro, ed assai più larghi che gli intermedii.

Un solo esemplare appartenente alla ricca collezione Drewsen.»

Patria: Australia.

667. **Chrysis advena** n. sp.

Mediocris, robusta, viridi-cyanea, parum violascens, cinereo-pilosa; cavitate faciali minus profunda, viridi, dense punctato-coriacea, medio longitudinaliter canaliculata, lateribus parcius argenteo-sericeo-pilosa, superne marginata, margine medio triangulariter exciso ramulum medianum perpendicularem ad stemma anticum duosque laterales aream subreniformem efformantes et stemma anticum non satis distincte includentes emittente; antennis mediocribus nigro-fuscis, articulis duobus primis viridibus, tertio longo, quarto quintoque longitudine subæquali; genis mediocribus, articulo secundo antennarum æquilongis; pronoto sat longo, transverso-rectangulo, antice in medio longitudinaliter vix impresso; vertice thoracisque dorso dense crassius punctato-reticulatis, metathorace fossula centrali magna rotundata, duabusque obliquis minoribus; abdominis segmentis dorsalibus violascentibus, segmentis primo secundoque margine postico tenuiter viridi-limbatis, primo in medio sparsim, lateribus densius punctatis interstitiisque punctulatis, secundo sat dense crasseque punctato, carinula mediana minus elevata, lævi, tertio densius subtiliusque subrugoso-punctato, supra seriem leniter calloso, foveolis medio interruptis circiter 14 sat magnis et profundis subrotundis, margine apicali sexdentato, dentibus mediocribus triangularibus subacutis, externis subobtuse-triangularibus, in arcum dispositis, quattuor intermediis æquilongis, externis duobus brevioribus, emarginaturis minus profundis, centrali lateralibus fere æquilata, secundariis parum angustioribus; ventre cyaneo-viridi, nitido, segmento tertio lateribus postice violascentibus, secundo basi utrinque nigro-maculato; pedibus cyaneis et viridibus, tarsis fuscis; alis parum fumato-hyalinis, venis nigris, cellula radiali triangulariter lanceolata, apice parum aperta, tegulis cyaneis viridi-maculatis. — ♀; long. 9 mm.

Patria: Australia (Nova Hollandia, Mus. Vindob.)

668. **Chrysis Tasmaniaca** n. sp.

Mediocris, elongata, tota cyanea, longius albo-pilosa; cavitate faciali planiuscula, dense punctulato-coriacea, lateribus albo-sericeo-pilosa, superne marginata, margine

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

medio triangulariter producto, genis mediocribus; antennarum scapo cyaneo, flagello: articulis duobus primis supra cyanescentibus, reliquis fuscis, secundo longo, tertio fere dimidio longiore, tertio quartoque simul sumptis fere æquilongo; thorace supra toto, pronoto paulo dispersius, dense punctato-reticulato; abdomine cyaneo, segmentis dorsalibus: primo disco sparsim crasse profundeque punctato, secundo sat dense crasseque, tertio multo subtilius densiusque punctato-reticulatis, secundo carinula mediana lævi ænea instructo, secundo tertioque basi late nigro-æneis, tertio convexo, supra seriem valde leniter calloso, serie anteapicali foveolis aliquot haud magnis, rotundis, lateralibus indistinctis, margine apicali subtiliter coriaceo-rugoso, dentibus in arcum dispositis, mediocribus, acutis, centralibus inter se æquilongis, externis paulo brevioribus, emarginaturis profunde arcuatis, centrali omnium latiore; ventre viridi, cyaneo et violaceo variegato, segmento secundo basi utrinque nigro-maculato; pedibus cyaneis, tarsis fusco-rufis; alis hyalinis, venis fuscis, cellula radiali lanceolata fere completa, tegulis virescenti-cyaneis. — ♂; long. 9 mm.

Chrys. advenae Mocs. similis et affinis; sed elongata, corpore toto unicolore cyaneo, ubique subtilius punctato, foveolis tantum aliquot, lateralibus indistinctis, emarginaturis externis angustioribus etc. distincta.

Patria: Tasmania (Coll. Rad.)

669. **Chrysis smaragdula** Fabr.*

Chrysis smaragdula, Fabr. Syst. Ent. p. 357, n. 2. (1775); Spec. Ins. I. p. 454, n. 2. (1781); Mant. Ins. p. 282, n. 2. (1787). — Oliv. Encycl. Méth. Ins. V. p. 672, n. 3. (1790). — Christ, Naturg. p. 404. (1791). — Gmell. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2744, n. 9. (1792). — Fabr. Ent. Syst. II. p. 239, n. 2. (1793); Syst. Piez. p. 171, n. 2. ♀. (1804). — Lep. Annal. du Mus. Hist. Nat. VII. p. 125, n. 3. (1806). — Dhlb. Dispos. p. 15, n. 33. ♀. (1845); Hym. Europ. II. p. 337, n. 190. ♀. (1854). — Aar. Transact. Amer. Ent. Soc. XII. p. 242, tab. X. fig. 82. (segm. anale) (1887).

* Conspectus specierum Hexachrysidarum Americæ septentrionalis secundum Aaron sequens est:

Abdomen closely (often densely) punctured on the dorsum, the punctures sometimes a little more separated on the sides.

Lateral margins of third segment strongly arched outwardly towards the base and sinuate just before the outher teeth ... *Texana* Grib.

Lateral margins of third segment broadly sinuate or arched inwardly; pits contained in a deep groove, caused by the swelling of the posterior margin of the anterior area ... *clara* Cress.

Lateral margins slightly bisinuated, straight or bowed outwardly, the pits contained in a moderately shallow groove, the margin of area not swelled.

The larger separated punctures on the sides of the first and second abdominal segments with the intermediate spaces mostly smooth, perhaps a very few smaller punctures here and there ... *intricata* Brullé.

The larger separated punctures on the sides of the first and second segments with the intermediate spaces rather closely beset with finer punctures (Fabricii Mocs.) ... *sexdentata* Fabr.

Abdomen with the dorsal punctures sparse, well separated.

Punctures on the third abdominal segment nearly equal over the entire surface ... *Pennsylvanica* Brullé.

Punctures on the middle of the posterior portion of the anterior area of third segment, just above the pits, very small and dense as compared with the rest ... *smaragdula* Fabr.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Maxima ac robustissima, viridis aut viridi-cyanea, cinereo-alboque pilosa; cavitate faciali minus profunda, lata, subquadrata, dense irregulariter punctata, disco sublævigata et abrupte canaliculata, superne transverse-marginata, margine biarcuato; antennis robustis, fuscis, articulis duobus primis viridi-cyaneis, tertio supra cyanescenti, sat longo, sed proportionaliter brevi, secundo duplo tantum longiore, quarto parum solum longiore; genis mediocribus, articulo antennarum secundo æquilongis; pronoto brevi, transverso-rectangulo, antice in medio longitudinaliter parum, vertice ante stemma anticum profunde impresso; thorace supra crassissime punctato-reticulato, scutello subgibbo; mesopleuris apice utroque fortiter obtuse-bispinosis marginibusque irregulariter crenulatis; metanoti dentibus postico-lateralibus maximis obliquis transversis irregulariter subtrapezinis; abdomine magno, ovali-subrectangulo, basi transverso et latiore quam apice modice arcuato, dorso convexo, viridi-cyaneo parumque virescenti, vel viridissimo, margine basali segmentorum 1—2 cyaneo; segmentis duobus primis crasse sparsim cribrato-punctatis, interstitiis primi disco subtiliter punctulatis, reliquis lævibus ac politis, secundo carinula mediana indistincta, tertio multo densius parumque subtilius punctato, ante seriem punctis sparsis maioribus interstitiisque dense punctulatis, foveis magnis ac profunde immersis subquadratis purpureo-violaceis numerosis per carinulam medianam brevem convexam interruptis, margine apicali mediocri subdepresso parce punctato, dentibus sex robustis acute-triangularibus in arcum dispositis, quattuor intermediis subæqualibus, duobus externis brevioribus; emarginaturis arcuatis, centrali et duabus secundariis mediocribus subæqualibus, externis obliquis latioribusque; ventre pedibusque viridi-cyaneis vel viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis fumatis violaceo-nitentibus, basi hyalinis, interdum etiam apice subhyalinis, venis firmis piceis, cellula radiali elongata lanceolata incompleta, apice parum aperta. — ♂♀; long. 13—15 mm.

Patria: America septentrionalis (Carolina meridionalis, Dhlb.: Pennsylvania, Delaware, North Carolina, Florida and Kentucky, Aaron; Connecticut, Coll. Saussurei!; N. Georgia, Mus. Turicense!).

670. **Chrysis Pennsylvanica** Brullé.

Chrysis pensylvanica, Brullé, Hym. IV. p. 24, n. 1. ♀. (1846).
Chrysis pennsylvanica, Aar. Transact. Amer. Ent. Soc. XII. p. 242. tab. X. fig. 86. ♂. (segm. anale) (1885).

«Viridi-cyanea, thoracis maculis cyaneis, dense punctata, alis fuscis, basi pallida, segmento tertio sexdentato. Fem.

Il est vert, nuancé de bleu-violet, avec trois taches d'un bleu foncé sur le prothorax et d'autres sur différentes parties du mésothorax. La base des antennes, le troisième article y compris, est verte ou bleue; le reste noir. Les pattes sont vertes, avec les tarses noirs. Les ailes sont enfumées, à reflet violacés; leur base est presque transparente.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Tout le corps est fortement ponctué: les points sont plus écartés sur l'abdomen. Le prothorax est sillonné au milieu; les lignes interlobulaires du mésothorax sont crénelées; l'écusson et la première région du métathorax sont simplement convexes. L'abdomen est un peu échancré à la base; son dernier segment offre de gros points en arrière du bourrelet et six dentelures à son bord libre inégalement distantes.

Longueur: 0,016.» (Brullé l. c.).

«One specimen from Florida (Philadelphia, Brullé). Deep blue with dull purple and bright green reflections, elegant reddish purple on the abdominal sutures. Basin of face punctured, a narrow, smoothed space in the centre. Head and thorax with the punctures somewhat separated, with some scattered finer punctures on the prothorax. Abdomen punctures well separated, equal. Pits rather large, deep, somewhat confluent on the dorsum, distinct and separated on the sides; pits forming the groove, which ends on each side near the base of segment. Wings subhyaline, a little clouded, the nerves somewhat rufescent; 10 mm. ♂.

The mesothoracic interlobular lines are called crenulated, by Brullé, on account of being cut by the punctures.» (Aaron l. c.)

Patria: America septentrionalis.

671. **Chrysis Fabricii** Mocs.

Chrysis sexdentata, Fabr. Ent. Syst. Suppl. p. 258, n. 20. (1798). — Panz. Faun. Ins. Germ. fasc. 51 tab. 12. figura, diagnosis et descriptio, sed non etiam patria (1798). — Fabr. Syst. Piez. p. 175, n. 28. (1804). — ? Lep. Annal. du Mus. Hist. nat. VII. p. 125, n. 5. ♀. (1806). — ? Brullé. Hym. IV. p. 25, n. 3. ♂ ♀. (1846). — Dhlb. Hym. Europ. II. p. 324, n. 183. ♂ ♀. (1854). — Aar Transact. Amer. Ent. Soc. XII. p. 241. (1885) (nec Christ).

Chrysis Fabricii, Mocs. Chrys. faun. Hung. p. 71. (1882).

Magna vel maxima, robusta, cyanea vel virescenti-cyanea aut læte-viridis nigro-violaceoque maculata, fusco-canoque pilosa; cavitate faciali longitudinali, subtrapezina, minus profunda, punctato-coriacea, lateribus cano-pilosa, superne transverse-marginata, margine inæquali utrinque deflexo subrectangulari; antennis proportionaliter brevibus, robustis, fuscis, cano-puberulis, articulis tribus primis cyaneis vel læte-viridibus, tertio sat longo, secundo duplo, quarto parum tantum longiore; genis mediocribus, antennarum articulo secundo æquilongis; mandibulis unidentatis, apice rufis; vertice ante stemma anticum sat profunde impresso; pronoto brevi, transverso-rectangulo, antice in medio parum impresso; postscutello gibbo, margine postico ad centrum obtuse-prominulo; metanoti dentibus postico-lateralibus validis latis prismatico-triangularibus; mesopleuris apice utroque fortiter tridentatis; vertice thoracisque dorso dense crasseque punctato-reticulatis; abdomine robusto, elongato, capite thoraceque simul sumptis distincte longiore, subovali, basi latiore quam apice angustato-arcuato, dorso valde convexo, viridi aut cyaneo, segmentis 2—3 basi et sæpius etiam secundo ante marginem apicalem fascia nigro-violacea, hæc multo latiore et sæpius ad latera non extensa seu abbreviata, carinula in his segmentis mediana bene distincta lævi sat lata, segmen-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tis omnibus fere æqualiter crasse sat dense cribrato-punctatis, interstitiis lævibus ac politis; tertii foveolis profunde immersis mediocribus rotundatis numerosis, per carinulam brevem robustam convexamque interruptis, margine apicali sat longo punctulato dentibusque sex mediocribus robustis acute-triangularibus subæqualibus, in arcum dispositis armato; emarginaturis tribus intermediis mediocribus, modice arcuatis, externis duabus latioribus valde oblique arcuatis; ventre pedibusque viridibus vel viridicyaneis, illo segmento secundo utrinque basi nigro-maculato, his tarsis apice et subtus fuscis; alis hyalinis vel parum sordidis, venis firmis nigro-piceis, cellula radiali elongata lanceolata subcompleta, apice parum aperta. — ♂ ♀ ; long. 10—13 mm.

Chrys. smaragdulae Fabr. similis; sed cavitate faciali superne transverso-marginata: margine inæquali utrinque deflexo subrectangulari (non biarcuato), postscutello gibbo, mesopleuris apice utroque fortiter tridentatis (non obtuse-bispinosis), alis hyalinis vel parum sordidis, non vero fumatis violaceoque nitentibus et basi hyalinis etc. optime distinguenda.

Patria: America septentrionalis (Georgia, Aaron; Tenesse, Coll. Saussurei!); Cajenna (Fabr.); Suriname (Mus. Lugdunense Batav.!); Brasilia (Dhlb.; provinc. Piauhy, Mus. Hung.; Porto Alegre, Mus. Berolin.!; Neu-Freiburg, Mus. Halense Saxonum!).

Animadversio. — Elegantis huius speciei patriam etiam Senegaliam esse — prout hoc piæ memoriæ vir: Dahlbomus scripsit — certe falsum est.

672. **Chrysis intricata** Brullé.

Chrysis intricata, Brullé, Hym. IV. p. 25, 2. ♀. (1846). — Aar. Transact. Amer. Ent. Soc. XII. p. 241. ♂ ♀. tab. X. fig. 84—85. (segm. anale) (1885).

«Viridis, abdominis dorso cyaneo, dense punctata, abdomine tenuissime punctato, alis fuscis, basi et apice pallidioribus, segmento tertio sexdentato. Fem.

Il est vert, avec l'abdomen en grande partie bleu. Les pattes et les antennes comme dans le précédent (Pennsylvanica Brullé). Les ailes sont obscures, avec la base et l'extrémité plus pâles.

La tête et le thorax sont criblés de gros points qui se touchent; l'abdomen est entiérement couvert de points très-serrés et de deux ordres pour la grosseur, mais dont les plus gros le sont beaucoup moins que ceux du thorax. Le prothorax est sillonné au milieu, les lignes interlobulaires du mésothorax sont ponctuées et comme bronzées, l'écusson et la première région du métathorax sont convexes; la base de l'abdomen est échancrée et parsemée de quelques gros points outre ceux déja mentionnés; les points placés en arrière du bourrelet du troisième segment sont très-gros et inégaux; les dents du bord libre de ce segment sont au nombre de six également saillantes et équidistantes.

Longneur: 0,013.» (Brullé l. c.).

«Seven specimens in the collection; from the localities Jowa, Georgia, Texas, Arizona, California and Dakota. From deep blue with very slight green reflections to

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

dark green with blue and bright green reflections. Basin of face punctured, in some specimens with a narrow smooth space in the extreme centre. Head and thorax densely punctured, the punctures here and there confluent. Abdomen punctured rather closely, except on the first segment and the sides of the second, where the punctures are larger and separated. In one specimen the punctures are uniformly close and equal over the entire surface of the abdomen, in another they are larger on the extreme base of the first segment, but close. In a greater number of the specimens there is a patch of close, finer punctures on each side of the dorsum of the first segment. Pits medium, distinct, or subconfluent in certain specimens. Posterior margin of anterior area of third segment not swelled, but sometimes a little advanced, or sublobed in the middle. The groove not deep, but distinct, ending on the lateral margin quite near the base of segment, one specimen with the pits semi-transparent, luteous, the same color spreading upon the apical portion of the lateral margin and coloring slightly the apical margin. There is little variation in the position of the apical teeth; some specimens have outer teeth blunt, less produced. Wings in one specimen clear hyaline, in the others infuscated or infumated; 8—9. 5 mm. ♂ ♀.» (Aaron l. c.),

Cavitate faciali lata dense punctato-coriacea, lateribus albo-sericeo-pilosa, superne transverse flexuoso-marginata; antennis longis, crassiusculis, nigris, cano-puberulis, articulis duobus primis viridibus, tertio supra cyanescenti, proportionaliter brevi, quarto vix longiore; genis mediocribus, articulo antennarum quarto æquilongis; abdominis segmenti secundi angulis laterali-apicalibus denticulo longo acuto triangulari.

Patria: America septentrionalis et Cayenne (Brullé).

673. **Chrysis clara** Cress.

Chrysis clara, Cress. Proced. Ent. Soc. Philad. IV. p. 313, n. 11. ♀. (1865).— Aar. Transact. Amer. Ent. Soc. XII. p. 240. ♂ ♀. tab. X. fig. 83. (segm. anale) (1885).

«Green, densely punctured, the head and thorax coarsely and the abdomen finely; wings subhyaline; apex of abdomen armed with six acute teeth.

Elongate, subparallel, rather robust, brillant-green, somewhat tinged with golden, the abdomen with a slight blue reflections; head and thorax densely and roughly punctured, slightly pubescent; eyes very large and subspherical; face behind the antennæ much depressed, pubescent, rugulose and bounded above by a transverse carina; antennæ black, scape green. Thorax: prothorax with a shallow fovea on its dorsal middle; dorsal lines of mesothorax well-defined; posterior angles of metathorax prominent, flattened, strongly divergent, subacute, and chaw-shaped; tegulæ green. Wings faintly tinged with fuliginous; nervures blackish. Legs green, tarsi blackish. Abdomen robust, convex, finely and very closely punctured, the punctures much larger and deeper about the middle and extreme base of the first segment, which has a depression on the basal middle; extreme basal margins of the second and third segments bluish-black; apical margin of the second segment golden, that of the third armed with six long, equidis-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tant, acute teeth, and immediately before the apical margin a very deep transverse line which has several very deep foveæ; venter deeply concave, and golden-green. Length 4½ lines.» (Cress. l. c.).

«Nine specimens from Washington Territory, Colorado, Arizona and Texas (the specimen from Colorado is the type). The color varies from emerald-green with bright brassy reflections to darker green with blue reflections. Basin of face punctured, a smooth space in the extreme middle. The larger punctures on the basal portion of the first segment with the space between them having scattered, finer punctures, also a patch of finer punctures on each side of the dorsum of the first segment. The swelling of the posterior margin of the anterior area is more exaggerated in some specimens than in others, and somewhat overhangs the pits. Pits rather large, distinct, rounded in some specimens subconfluent; the groove ends on the lateral margin near the base of segment. The apical teeth vary slightly in position, the general form as seen from above resembles the figure of *smaragdula*. The figure representing this species in drawn from the type specimen; 10 mm. ♂ ♀.» (Aaron l. c.).

Cavitate faciali sat lata minus profunda, superne transverse acute-marginata; antennis crassiusculis, nigris, cano-puberulis, articulis tribus primis viridibus vel cyaneis, tertio sat longo, secundo fere duplo longiore; genis mediocribus, articulo antennarum quarto æquilongis.

Patria: America septentrionalis.

674 **Chrysis Texana** Grib

Chrysis texana, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 329, n. 6. ♂ ♀. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 239. ♂ ♀. tab. X. fig. 87. (segm. anale) (1885).

Descriptio secundum Gribodo:

«Mediocris aut submagna robusta, cylindrica, viridis, parum nitida: capite thoraceque confertissime, abdomine rarius, mediocriter punctatis, abdominis segmento primo vero crassius punctato et punctulato: capite, prothorace paullulum latiori, antice viso transverso, trapezino: clypei margine recte truncato: cavitate faciali lata, parum profunda, punctulato-granosa, medio canaliculata, superne marginulata, carinula utrinque angulata: mesopleuris marginulatis: postscutello, ut plerumque, depresso-convexo: metathoracis angulis postico-lateralibus margine postico plus vel minus flexuosis: abdomine capite thoraceque simul sumptis vix longiore, perfecte cylindrico, apice tam lato quam basi, basi medio distincte profunde longitudinaliter foveolato: margine anali sexdentato: dentibus robustis triangularibus subæqualibus in lineam curvam plus minus convexam dispositis: emarginaturis figura sat variabilibus in diversis speciminibus sed semper magnitudine subæqualibus: alis subhyalinis, ad cellulam radialem fumatis.

♀. Statura maiori, corpore crassius et confertius punctato, interdum quoque punctulato: abdominis segmenti dorsalis tertii area antica interdum lenissime depressiuscula, supra seriem anteapicalem paullulum incrassata tumidula: serie sat immersa,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

foveolis magnis irregularibus quadratis confluentibus, foveolam transverso-arcuatam efficientibus; margine anali humili.

Long. corp. mill. 9—11.

♂. Statura minori, corpore minus punctato magis nitido: abdominis segmento dorsali tertio et in aream anticam et in marginem analem undique eandem superfiem modice convexam præbente (idest area antica ante vel supra seriem anteapicalem nonnisi perlenissime elevata, nec incrassata, nec tumidula, et margine anali haud depresso nec humili) foveolis serie magnis irregularibus confluentibus, foveam latam et profundam transverso-arcuatam efficientibus.

Long. corp. mill. 8—9.

Di questa interessante specie ho ricevuto quindici esemplari (6 femmine e 9 maschi) dal Texas: ciascheduno di essi presenta una qualche variazione nella forma del margine anale, comme pure nella punteggiatura del corpo e nella disposizione della serie anteapicale: per quanto accuratamente però io li abbia studiati non ho potuto decidermi a separarli in diverse specie, tanto bene concordano nella facies, come pure in numerosi ed importanti caratteri: notevole è specialmente la figura della serie anteapicale nel maschio: essa si presenta all' occhio come una erosione transversale, che divide la superficie del segmento in due parti disuguali.

Mia collezione e communicata dal dottore Smith.»

The color is green, with more or less blue reflections, deepest on the dorsum of abdomen; a few scattered fine punctures between the larger separated punctures on the base of the first abdominal segment. The median teeth are twice as long as the outer teeth and longer than the second pair, but they are all equal in position, and I tink that is the meaning that the above description intends to convey. Basin of face narrowly smooth, or with very fine striations in the middle. The pits in two specimens are distinct, moderate and with the shallow groove ending the base of segment. In another specimen the pits are subconfluent, and in the remaining specimen are entirely confluent on each side of the dorsum, divided in the middle and distinct and separated above the lateral margin. All of my specimens are males and agree with the description of Gribodo, but has he not taken the following species, *clara,* which is found in Texas, for the ♀. of his *texana?* The teeth and general appearance are much alike, but male specimens of *clara* have been found to agree with the females, and are almost certainly distinct from *texana;* and, furthermore, I am inclined to believe that the strue female of *texana* will resemble the male in the structure of the third segment.» (Aaron l. c.).

Patria: Texas Americæ septentrionalis.

675. **Chrysis inæquidens** Dhlb.

Chrysis inaequidens, Dhlb. Hym. Europ. II. p. 334, n. 118. ♂. (1854). — Aar. Transact. Amer. Ent. Soc. XII. p. 242. ♂. (1887).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptio secundum Dahlbom:

«Mediocris 2²/₃ lin. decimal. long. confertim modice punctata abdomine punctulato, viridi-cyanea, alis sordide hyalinis.

Observ. Statura fere *Chrysidis nitidulae* ♂. — Corpus quoad crassitiem mediocre, supra viridi-cyaneum; capite antice, pectore pedibusque viridibus, ventre fortiter fornicato ad maximam partem concolore, tarsis pedum fuscis. Caput et thorax confertim modice punctata; cavitas facialis (capitis) rectangularis punctulato-coriacea, mediocris, superne marginata: margine transverso inæquali subarcuato; antennæ mediocres fuscæ, basi virides; clypeus brevis transversus punctulatus, disco convexus, ad centrum marginis apicalis leniter arcuato-emarginatus; mandibulæ piceæ, basi virescentes. Thorax crassus subquadrato-cylindricus, dorso sat convexus; metanoti anguli postico-laterales robusti triangulares; meso-pleurarum margines obsolete crenulatæ. Abdomen mediocre, longitudine capitis thoracisque simul sumtorum, obtuse rectangulum, dorso sat convexum et creberrime punctulatum; segmenti dorsalis primi utraque area lateralis intramarginalis cuneiformis punctis crassis fere alternatim dispositis adspersa, marginulata leniter concava; segmentum dorsale tertium breve, totum depresso-convexum; series anteapicalis foveolis rotundatis numerosis inæqualibus scil. et maioribus et mediocribus et parvis; dentes apicales acute triangulares, magnitudine inæquales: intermedii 2 maiores et robustiores, secundarii 2 mediocres, externi 2 breviores et paullo latiores; emarginaturæ etiam inæquales: centralis magna triangularis profunda, secundariæ 2 mediocres modice et nonnihil oblique arcuatæ, externæ 2 parvæ etiam oblique arcuatæ.»

«This species is not in the collection and is unknown to me. — Evidently very distinct. Is it not possible that the locality may be erroneous, and that is not a North American species?» (Aaron l. c.)

Patria: America septentrionalis (New-York, Dhlb.).

676. **Chrysis stenops** n. sp.

Parva vel submediocris, elongata, angusta, viridi-cyanea, parcius cinereo-alboque pilosa; cavitate faciali valde angusta, viridi, dense punctulato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne transverse non marginata, sed supra cavitatem adest in vertice linea utrinque parallela supra arcuata et stemma anticum includens aliaque transversa ab oculo utroque stigma anticum versus ducta et sæpius cum area connexa; antennis brevibus tenuibus, nigris, articulis tribus primis viridibus, tertio sat longo, sequentibus duobus simul sumptis tamen parum breviore; genis linearibus, fere nullis; vertice thoracisque dorso maculis nigro-violaceis; pronoto proportionaliter longo, transverso-rectangulo, antice parum subarcuatim exciso, medio vix impresso, lateribus acute-marginatis; vertice thoracisque dorso fere æqualiter sat dense crasseque punctato-reticulatis; metanoto convexo, dentibus postico-lateralibus brevibus sat latis triangularibus; mesopleuris subtus triangulariter productis acuteque marginatis; abdominis segmentis dorsalibus lateribus plus minusve viridibus,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

primo secundoque in medio nigro-violaceo-fasciatis, primo sat sparsim crasse, secundo tertioque densius subtiliusque punctatis interstitiis lævibus ac politis, secundo carinula mediana sat distincta sublævi, tertio basi parum concaviusculo-immerso, supra seriem modice incrassato-convexo, foveolis minutis obliteratis vix distinctis, margine apicali sat longo subtilissime punctulato, sexdentato, dentibus a margine laterali longe remotis, mediocribus, quattuor intermediis subacutis, centralibus secundariis fere duplo longioribus, externis duobus triangularibus; ventre pedibusque viridibus parumque cyanescentibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis fuscis; alis hyalinis parum sordidis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♂♀.; long. 6—7 mm.

Species: de fronte angusta, vertice, pronoto, abdominis fasciis et segmento anali, facile cognoscitur.

Patria: Mexico (Orizaba, Mus. Vindob.; Tampico, Coll. Saussurei).

677. **Chrysis Schulthessi** n. sp.

Mediocris, elongata, sat robusta, viridi-cyanea, parcius cinereo-alboque pilosa; cavitate faciali planiuscula, sat lata, viridi, dense punctulato-coriacea, superne parum flexuoso transverse-marginata, lateribus argenteo-sericeo-pilosa; antennis sat longis, tenuibus, nigris, cano-puberulis, articulis duobus primis in mare, tribus primis in femina viridibus vel tertio tantum cyanescenti, hoc sat longo, quarto tamen breviore; genis mediocribus, antennarum articulo secundo æquilongis; pronoti impressione, mesonoti lobo medio et scutello nigro-violascentibus; pronoto sat longo, transverso-rectangulo, postscutello convexo, metanoti dentibus postico-lateralibus longis, latis, acutis, apice incurvis; mesopleuris subtus latere postico excisis et sic obtuse-bidentatis; vertice thoracisque dorso fere æqualiter dense crassius punctato-reticulatis; abdominis segmentis dorsalibus primo secundoque ante marginem apicalem fascia nigro-violacea ornato, 2—3 basi quoque similiter coloratis, vel fasciis minus distinctis, sed tunc supra maxima ex parte cyaneis, primo sat sparsim crassius, secundo parum densius subtiliusque punctatis interstitiis lævibus, 2—3 carinula abbreviata mediana sublævi sat distincta, tertio convexo, basi sat dense punctato, ante seriem disco subtiliter dense punctulato, foveolis profunde immersis sat magnis oblongis per carinulam medianam brevem interruptis, margine apicali longo, subtilissime punctulato, sexdentato, dentibus sat longis, intermediis quattuor acute-triangularibus subæqualibus, externis duobus brevioribus triangularibus, emarginaturis arcuatis subæquilatis; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis apice et subtus fuscis; alis hyalinis parum sordidis, venis fuscis, cellula radiali lanceolata apice aperta. — ♂♀; long. 8 mm.

Species in honorem A. v. Schulthess-Rechberg denominata: de cavitate faciali, mesopleuris, abdominis fasciis et segmento anali facile cognoscitur.

Patria: Mexico (Cuernavaca, Mus. Vindob.; Cordova, Coll. Saussurei).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

678. **Chrysis severa** n. sp.

Submagna, elongata, sat robusta, viridi-cyanea, supra magis cyanescens, densius cinereo-alboque pilosa; cavitate faciali planiuscula, dense punctato-coriacea, medio longitudinaliter canaliculata, lateribus argenteo-sericeo-pilosa, superne acute transverse-marginata; antennis nigris, articulis tribus primis viridibus, tertio sat longo, secundo duplo longiore; genis sat longis, articulo tertio antennarum æquilongis; pronoto brevi, transverso-rectangulo, antice in medio vix impresso; postscutello convexo, metanoti dentibus postico-lateralibus mediocribus latis acutis, apice parum incurvis; vertice dense subtilius, thorace supra crassius punctato-reticulatis; abdominis segmentis dorsalibus cyanescentibus, primo basi in medio longitudinaliter sulcato cum secundo sparsim crassius punctato interstitiisque dense subtilissime punctulatis, subcoriaceis, secundo carinula mediana distincta, tertio dense sat crasse parum rugosiuscule-punctato, supra seriem disco interstitiis angustis subtilissime punctulatis, foveolis sat profunde immersis submagnis numerosis parum confluentibus, margine apicali sat longo punctulato, sexdentato, dentibus in arcum dispositis, intermediis quattuor sat longis triangularibus subæqualibus, externis duobus parum brevioribus latius triangularibus, omnibus subacutis, emarginatura centrali secundariis parum latiore, lateralibus subæquali, profunde arcuatis; pedibus viridi-cyaneis, tarsis fuscis; alis hyalinis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♀; long. 10 mm.

Species: de punctatura duplici abdominis segmentis dorsalibus duobus primis, a congeneribus iam facillime distinguenda.

Patria: Mexico (Cordova, Coll. Saussurei).

679. **Chrysis insularis** Guér.

Chrysis insularis, Guér. Revue Zoolog. p. 148, n. 12. ♂ ♀. (1842). — Brullé, Hym. IV. p. 26, n. 4. ♀. (1846). — ? Dhlb. Hym. Europ. II. p. 332, n. 187. ♀. (1854). — Luc. Sagra's Hist. fisica de Cuba. VII. p. 755, tab. 18, fig. 5. 5 a. (1857). — Cress. Proceed. Ent. Soc. Philad. IV. p. 108. (1865).

Descriptio secundum Guérin:

«Tête et corselet d'un beau vert brillant avec le milieu du mésothorax et le bord inférieur du métathorax bleus; ce dernier simplement arrondi, sans saillie notable. Abdomen d'un beau bleu avec le bord de chaque segment tirant au vert et le dernier armé de six dents, dessous et pattes verts avec le fouet des antennes et les tarses noirs. Ailes enfumées à nervures brunes avec la cellule radiale presque fermée (mâle et femelle). — Long. 8 à 10 mill., hab. Cuba.»

Descriptio secundum Dahlbom:

«Magna 3 1/2 lin. decimal. long. robusta confertim crasse punctata virescens, abdominis dorso purpurascenti-violaceo, alis hyalinis, disco violascentibus, segmento abdominis tertio ante seriem convexo submarginato, serie ante-apicali foveolis distinctioribus, dentibus apicalibus robustis.

Chrysis insularis Guérin, secundum Spinola.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Observ. Corpus robustum elongatum parum nitidum, subopacum, confertim crasse punctatum. Caput rotundato-triangulum læte viride; cavitas facialis rectangularis parum profunda, subplaniuscula, crebre punctulata, medio canaliculata, superne marginata: margine omnino ut in *Chryside oculata* formato; antennæ longiusculæ, non crassæ, fuscæ, basi cyaneo-virides; clypeus mediocris transversus irregulariter subtrapezinus, punctulatus, disco modice convexus, ad centrum marginis apicalis leniter arcuato-emarginatus; labrum parvum semilunatum ænescens; mandibulæ castaneæ, basi viridi-pictæ. Thorax crassus quadrato-subcylindricus viridis, dorso valde convexus; dorsulum et scutellum basi, metanotum maxima ex parte, cyanea; metanoti anguli postico-laterales validi irregulariter prismatico-triangulares acuminati marginibus flexuosis; mesopleurarum margo fere ut in *Chryside aequinoctiali* crenulato-denticulatus; pedes viridi-cyanei tarsis fuscis: alæ basi apiceque albo-hyalinæ, disco fumatæ et violascentes, venis omnibus nigro-piceis firmis, cellula radiali triangulariter lanceolata incompleta, apice anguste aperta. Abdomen robustum subovale basi transversum, capite thoraceque simul sumtis conspicue longius, dorso crebre crasse punctatum interstitiis subtilissime punctulatis, pulchre violaceum purpurascens ambitu viridi-cœrulescente, margine basali segmentorum secundi et tertii nigro-æneo; segmenti dorsalis primi utraque area lateralis intramarginalis: sublinearis apice angusta, tota modice concava punctis crassis parce adspersa, superficie ceterum subtilissime coriacea, utrinque marginulata; in segmento secundo lineola mediana elevata subtilis obsoletissima; segmenti tertii area antica s. basalis medio leniter at distincte transverse immersa, ante seriem convexo-terminata; series ante-apicalis per carinulam medianam brevissimam convexam obsoletam interrupta, foveolæ numerosæ rotundatæ mediocres, distinctiores quam in *Chryside aequinoctiali;* dentes apicales robusti acute triangulares, centrales 2 paullulum maiores quam secundarii 2 mediocres, externi 2 breviores et latiores, omnes 6 leniter arcuatim dispositi; emarginaturæ mediocres, centralis obtuse subtriangularis, reliquæ scil. et secundariæ et externæ invicem æquales atque nonnihil obliquæ.»

De hac specie Cresson sequentia scripserat:

«It is impossible to say whetter the specimen which I have placed under this name, or the one described below (C. dubia), is the true *insularis,* as both seem to answer to the descriptions given by Guérin. The specimen which I here consider as *insularis,* differt from the following species by the mesothorax being more bluish, and the punctures of the abdomen not so dense, while in *dubia* they become very fine and dense towards the apical margins of the segments, and the spaces between the punctures are distinctly punctured, thereby giving the abdomen a much rougher appearance than in *insularis,* although interstices between the punctures of the latter are also punctured, but not so distinctly. The third segment of *dubia* in almost entirely green, while in *insularis* the apical margin only is green, and the six teeth on the apical margin in the latter species, are rather longer and more acute; otherwise there is scarcely and difference between to the species.» (Cresson l. c.).

Patria: insula Cuba Indiæ occidentalis.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Animadversio. — Descriptio Guérini quam maxime incompleta, species sine specimine typico rite cognosci nequit, tanto magis, quia Cresson tres adhuc alias species similes ex eadem insula descripserat. — Dahlbomus typum non vidit, ideoque dubium iustum oritur, an illius species re vera eadem sit cum Guérini specie? Ego igitur et Guérini descriptionem et Dahlbomi assumsi, cum adnotatione Cressoni, quia mihi tantum Dahlbomi speciem in tribus solum exemplaribus contigerat videre.

680. **Chrysis dubia** CRESS.

Chrysis dubia, Cress. Proceed. Ent. Soc. Philad. IV. p. 108. ♀. (1865) (nec Rad.)

«Robust, green, dorsal surface of the second and third abdominal segments deep azure-blue; the face, pectus and pleura, golden-green, wings subhyaline.

Head broad, pubescent, green, faintly tinged with blue on the vertex across which, below the ocelli, there is a twice angular carina throwing upon each side towards the ocelli a short carina; the excavation behind the antennæ finely rugose and brilliant golden-green, the punctures of the vertex and occiput are dense and coarse; mandibles piceous, green at base; cheeks carinate; antennæ blakisch, the long basal joint green, the second and third joints green above. Thorax very slightly narrowed in front; closely, uniformly and coarsely punctured, dark green above slightly tinged with bluish, the sides brighter green, the prothorax with a slight longitudinal impression on the disk; metathorax slightly tinged with dark obscure blue, the disk with two well impressed longitudinal lines; metathorax azure-blue at the extreme tip, the posterior angles large, flattaned, divergent, and acute at tip; tegulæ bright green. Wings subhyaline, slightly tinged with fuscous especially towards the base, with a slight purple iridescence; nervures blackish. Legs green, pubescent, tarsi blackish. Abdomen broad and robust, densely and deeply punctured, the punctures becoming finer towards the sides and apex of the segments, and the interstices between the punctures finely but distinctly punctured; dorsal surface of the first and second segments brillant azure-blue, shading into metallic green on the sides, and in certain lights the apical margins are slightly greenish; third segment less coarsely punctured, almost entirely bright metallic-green, tinged with blue at the base, more conspicuous in certain lights; before the apex of this segment there is a transverse row of deep punctures, the apical margin pubescent, with six short, acute, equidistant teeth, the lateral ones not so acute as the others; venter bright metallic green, polished. Length 5 lines.

Closely allied to *C. insularis,* but besides the differences enumerated above, the form is more robust, the excavation behind the antennæ is bright golden-green, and the face about the insertion of the antennæ is not densely pilose as in *insularis;* the second and third joints of the antennæ are tinged with green, while in *insularis* they are entirely blackish. It may be easily distinguished by the much denser punctation of the abdomen, which in *insularis* has a smoother appearance.»

Patria: Cuba.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

681. **Chrysis subviridis** CRESS.

Chrysis subviridis, Cress. Proceed. Ent. Soc. Philad. IV. p. 109. ♂. (1865).

«Obscure green, brighter beneath; metathorax obscure; abdomen deep blue, strongly tinged with purple, the apical margins and sides of the segments tinged with green; apical margin of third segment with six acute teeth; wings fusco-hyaline.

Head obscure green, grossly punctured, slightly pubescent; a twice angular transverse carina on the front below the ocelli; the excavation behind the antennæ finely rugose and bright metallic-green; sides of the face pilose; mandibles, except base, blackish, the long basal joint green. Thorax obscure green above, brighter on the sides and beneath, densely and coarsely punctured; mesothorax obscure dusky, especially in front, the two impressed dorsal lines distinct; metathorax tinged with blue behind, the posterior angles large, acute, slightly divergent, tegulæ green. Wings fusco-hyaline, paler at tips, with a faint purplish iridence; nervures fuscous. Legs bright green, slightly pubescent, tarsi piceous. Abdomen as wide as the metathorax and rather longer than the head and thorax, convex, sides parallel; deeply and uniformly punctured, more dense on the sides and towards the apex; deep azure-blue, strongly tinged with purple towards the base of the segments and on the sides more or less greenish; the purple base of the third segment finely and sparsely punctured, the remainder roughly punctured; before the apex a transverse row of deep punctures, the apical margin armed with six long, acute, equidistant teeth; venter deeply concave, polished blue-green. Lenght 4 lines.»

Patria: Cuba.

682. **Chrysis consimilis** CRESS.

Chrysis consimilis, Cress. Proceed. Ent. Soc. Philad. IV. p. 110. ♀. (1865).

«The description of *C. oblonga,* given above, will answer for this species, except that the mesothorax in purplish-blue, the wings have a beautiful purple iridescence, and the apex of the abdomen is armed with six teeth insteated of four.»

Patria: Cuba.

683. **Chrysis pilifrons** CAM.

Chrysis pilifrons, Cam. Biolog. Centr.-Americ. Hym. p. 465, n. 11, tab. XX. fig. 13, 13 a. (1888).

«Head and thorax dark green, mixted with dark purple; the abdomen of a brighter green, marked with broad purplish stripes across the segments. Head and thorax uniformly covered with large (comparatively) round punctures; the pleuræ with much deeper punctures; first abdominal segment with the punctures larger and more widely separated than on the second and third segments. Basin of face punctured laterally, the middle almost impunctate; the sides covered with long white hair. The rest of the head and thorax sparsely covered with long fuscous hair; the abdomen glabrous, except towards the apex. There is a (transverse) keel below the ocelli. The base of the first

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

abdominal segment is broadly, but not deeply, excavated (not divided into three lobes). The teeth on the third segment are equal in size, and almost equally distant one from another; the lateral margin is straight, except that it bulges out at the first tooth; the pits are indistinct, forming mere ill-defined depressions in the furrow, which is broad and moderately deep; the apex of the segment is impunctate or nearly so. Antennæ black, the basal three joints green. Wings infuscated, lighter towards the apex.

Length 12 millim.»

Patria: Panama.

684. **Chrysis proxima** CAM.

Chrysis proxima, Cam. Biolog. Centr.-Americ. Hym. p. 465, n. 12, tab. XX. fig. 12, 12 a. (1888).

«Similar in colour and sculpture to the preceding *(C. pilifrons)*, but smaller (8—9 millim.). The basin of the face much more densely covered with white hair (only the extreme centre being bare); there is no transverse keel above it, but a (hoofs-haped) keel starts from near the eyes above the depression and enclose the lower ocellus. The lateral margin of the third abdominal segment has a distinct curve, and the outermost tooth is not placed at the extreme edge, as in *C. pilifrons*, but a little distance from it; the teeth are smaller and more irregularly placed; the incisions are unequal — the central is the largest; there is no distinct groove or pits, although they are very faintly indicated; and the base of the abdomen is distinctly trilobate.»

Patria: Panama.

685. **Chrysis ænescens** n. sp.

Mediocris, elongata, sat robusta, obscure-viridis, parcius cinereo-pilosa; vertice circa stemmata, pronoto utrinque, mesonoto cum scutello et postscutello abdominisque segmentis dorsalibus duobus primis ænescentibus; cavitate faciali subangusta, minus profunda, dense punctato-coriacea, medio longitudinaliter canaliculata spatio centrali lævi, lateribus argenteo-sericeo-pilosa, superne arcuatim transverse-marginata; antennis brevibus, haud crassis, nigris, articulis duobus primis viridibus, tertio sat longo, secundo duplo longiore; genis sat longis, antennarum articulo tertio fere æquilongis; pronoto mediocri, transverso-rectangulo, antice in medio longitudinaliter sulcato; postscutello convexo, metanoti dentibus postico-lateralibus robustis latis acutis; vertice thoracisque dorso dense crassius punctato-reticulatis; mesopleuris subtus latere postico arcuatim excisis et hoc modo obtuse-bidentatis (sicut in *Chrys. Schulthessi* mihi); abdominis segmentis dorsalibus 2—3 basi et tertio ante seriem parum violascentibus, 2—3 carinula mediana sat lata lævi, primo dense crassius, secundo parum subtilius, tertio densius punctatis, hoc supra seriem disco dense quoque subtiliter punctulato, foveolis sat profunde immersis submagnis orbiculatis parumque confluentibus per carinulam medianam brevem interruptis, margine apicali sat longo, dense punctulato, sexdentato, dentibus in arcum dispositis sat longis, intermediis parum longioribus, intermediis quattuor acute-triangularibus, externis duobus brevioribus subacutis, emarginaturis subæqualibus, intermediis magis

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

arcuatis; pedibus viridibus, tarsis apice et subtus fuscis; alis hyalinis parum sordidis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♀; long. 9 mm.

Species: corpore viridi supra ex parte ænescenti, mesopleuris et dentibus analibus facile cognoscitur.

Patria: Cayenne (Coll. Saussurei).

686. **Chrysis Smidti** Dhlb.

Chrysis Smidti, Dhlb. Hym. Europ. II. p. 317, n. 180. (1854).

«Submagna 3 lin. decimal. long. viridi-cyanea, marginibus segmentorum abdominis dorsalium basalibus violascentibus, apicalibus virescentibus, segmenti tertii serie ante-apicali foveolis maioribus rotundatis, dentibus robustis triangularibus, alis fusco-hyalinis.

Observ. Caput, thorax et abdominis dorsum basi, crasse-, reliqua segmenta abdominis dorsalia modice-punctata. Caput cano-pubescens vertice fusco. Pectus et metanotum viridia suturis cœrulescentibus. Pronotum nigro-æneum limbo viridi. Mesonotum aut nigro-æneum aut fusco-violascens maculis viridibus indeterminatis sparsis. Scutellum et postscutellum nullo modo gibba, sed in uno plano cum reliquo thoracis tergo. Metanoti anguli postico-laterales validi acuti conico-spinoidei. Pedes virides nonnihil cœrulescentes, femoribus posticis postice nigro-ænescentibus, tarsis omnibus fuscis. Alæ fusco-hyalinæ. Abdominis dorsum depresso-convexum: linea mediana continua violacea lævissima, non convexa nec impressa sed plana; segmentum primum viride, medio cyanescens; segmentum secundum basi violaceo-fuscum, tum cyaneum et utrinque macula viridi minus distincta, margine apicali virescens; segmentum tertium margine basali tenuiter violascens, tum viride, iterum violascens et ante seriem virescens, in hoc loco (scil. ante seriem) non convexo-subelevatum nec convexo- quasi terminatum sed eandem convexo-depressitatem undique præbens; series anteapicalis mediocris per carinulam medianam brevissimam convexo-planam interrupta; margo apicalis modice prominulus convexiusculus, dentibus 6 mediocribus triangularibus acutis in arcum dispositis.»

Patria: America meridionalis.

687. **Chrysis æquinoctialis** Dhlb.

Chrysis aequinoctialis, Dhlb. Hym. Europ. II. p. 330, n. 186. ♂♀. (1854).

«Mediocris aut subparva 2—3 lin. decimal. long. sublinearis confertim modice punctata subopaca cœrulea alis albis, abdominis segmento dorsali tertio toto depresso-convexo, serie ante-apicali foveolis dentibusque analibus parvis.

Observ. Corpus sublineare, totum cœruleum subopacum, confertim modice punctatum, ore pedibusque paullo viridi-nitidis. Caput transversum suborbiculatum; cavitas facialis subquadrata subtiliter punctulata planiuscula, non profunda superne transverse

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

et subacute marginata (antennæ in speciminibus missis mutillatæ); clypeus transversus brevis parce punctulatus, disco parumper convexus, margine apicali late et leniter subarcuato-emarginatus; labrum parvum semilunatum nigro-æneum; mandibulæ ceteræque orbis partes piceæ, illæ basi virescentes; margo occipitalis utrinque angulo parvo dentiformi. Thorax subrectangulariter cylindricus, dorso depresso-convexus; metanoti anguli postico-laterales robusti acute triangulares; meso-pleuræ margine obtuse 4-denticulatæ; pedes corpori concolores, extus unacum tarsorum articulo basali virescenti nitidæ, tarsis fuscis; alæ albo-hyalinæ, venis firmis nigro-piceis, cellula radiali lanceolata subcompleta: apice angustissime aperta. Abdomen subovale, basi transversum et conspicue latius quam apice arcuato, dorso modice convexum et crebre punctatum: in utroque latere segmenti dorsalis primi intra marginem deflexum adest area cuneata concaviusculo-plana marginulata parce crasse punctata; segmenti tertii series anteapicalis foveolis parvis aut minutis rotundatis numerosis; dentes apicales parvi acute triangulares in arcum lenem dispositi, invicem æquales; emarginaturæ mediocres, modice arcuatæ, 3 intermediæ subæquales, externæ 2 paullum latiores et obliquæ; venter viridi-cyaneus nigro-maculatus.»

Patria: Brasilia.

688. **Chrysis anceps** Grib.

Chrysis anceps, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 327, n. 4. (1879).

«*Chrysidi sexdentatae* F. maxime affinis et similis, at nullo modo ejusdem varietas: etenim differt colore fere dimidio minori, et proportionaliter crassius punctato: clypeo tumidiusculo: scutello una cum postscutello mutico convexo: hoc haud tuberculato.

Long. corp. mill. 8.

La differenza importantissima che si osserva nello scudetto e nel postscudetto, tra questa specie, e la *sexdentata,* l'essere cioè queste due parti normalmente conformate nella prima non presentando alcuna gibbosità nè alcun tubercolo, unitamente alla diversità di statura, e di scultura non lasciano confondere queste specie fra di loro, quantunque la forme generale del corpo, e la colorazione di entrambe siano identiche. Aggiungasi ancora e meglio distinguerle, che nella *anceps* i tubercoli delle mesopleure sono assai meno notevoli, e per contro poi i denti del margine anale sono sensibilmente più sporgenti che non nella *sexdentata.*

Quattro esemplari appartenenti alle collezioni Drewsen, Smith, Museo di Monaco e Museo di Bruxelles.»

Patria: Brasilia.

689. **Chrysis Patagonica** n. sp.

Magna, elongata, robusta, viridis, parcius cinereo-alboque pilosa; collo, pronoti impressione et utrinque in medio macula, mesonoti suturis et scutelli medio cyaneis; cavitate faciali lata, minus profunda, viridi-aurata, dense punctato-coriacea, lateribus cano-pilosa, superne transverse flexuoso-marginata; antennis sat longis, crassis, fuscis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

cano-puberulis, articulis tribus primis viridibus, tertio sat longo, secundo duplo, quarto parum tantum longiore; genis mediocribus, antennarum articulo secundo æquilongis; pronoto sat longo, transverso-rectangulo, antice in medio parum impresso; postscutello convexo, metanoti dentibus postico-lateralibus validis latis acutis; mesopleuris apice utroque fortiter tridentatis; vertice thoracisque dorso dense crasseque punctato-reticulatis; abdomine robusto, elongato, capite thoraceque simul sumptis distincte longiore, subovali, basi latiore quam apice angustato-arcuato, dorso valde convexo cyanescenti-viridi, segmentis 2—3 basi et secundo ante marginem apicalem fascia, tertio disco macula nigro-violaceis, 2—3 carinula mediana bene distincta lævi sat lata, primo basi in medio longitudinaliter sulcato sparsim crasse cribrato-punctato interstitiisque disco subtilissime punctulatis; secundo densius subtiliusque, apicem versus adhuc subtilius punctato; tertio convexo, punctatura segmenti secundi partis posticæ, ante marginem apicalem disco etiam subtilissime punctulato, foveolis minus profundis ac magnis numerosis per carinulam medianam brevem convexamque interruptis, margine apicali longo, dense punctulato, sexdentato, dentibus in arcum dispositis mediocribus acute-triangularibus, intermediis duobus reliquis longioribus, emarginaturis intermediis modice arcuatis, externis duabus oblique-arcuatis, centrali latiore quam secundariis, externis latissimis; ventre pedibusque viridibus, illo segmento secundo basi utrinque nigro-maculato, his tarsis apice et subtus fuscis; alis hyalinis parum sordidis, venis fuscis, cellula radiali lanceolata apice sat late aperta. — ♂; long. 12 mm.

Chrys. Fabricii Mocs. (sexdentata Fabr.) similis et affinis; sed cavitate faciali superne aliter marginata, pronoto longiore, postscutello convexo, abdominis segmentis dorsalibus: secundo parte apicali et tertio densius multoque subtilius punctatis, foveolis multo minoribus et dentibus apicalibus magis acutis, est certe distincta.

Patria: Patagonia septentrionalis (Coll. Saussurei).

690. **Chrysis cognata** Grib.

Chrysis cognata, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 328, n. 5. (1879).

«*Chrysidi sexdentatae*, F., *C. anticipi,* Grib. valde similis et affinis; sed postscutello haud tuberculato neque prominulo ab una, corpore dimidio maiori et sculptura segmentorum abdominalium ab alia facile distinguitur.

Long. corp. mill. 12.

Ecco ancora una *Chrysis* molto vicina alla *sexdentata,* alla quale si avvicina a primo aspetto più ancora che non la *anceps,* essendole uguale di statura: ma qui ancora la mancanza di qualsiasi traccia di tubercolo, e di gibbosità nel postscudetto non permette di confonderle insieme. Si aggiunga che nella *cognata* la punteggiatura di tutto il corpo è relativamente più piccola ed irregolare: specialmente ciò si verifica sul 2° e 3° segmento, i quali per questa causa appaiono quasi rugulosi, subcoriacei: inoltre ancora in questa specie il terzo segmento ha il suo dorso meno convesso, lo si direbbe quasi formato di due piani inclinati anzichè da una superficie curva; il risalto della serie ante-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

apicale è assai minore, affatto appiattito poi è il margine anale, il quale invice presenta una sensibilissima incurvatura nella *sexdentata* e nell'*anceps*. Le ali sono quasi affatto ialine. I caratteri abbastanza importanti che distinguono fra di loro le *C. sexdentata, cognata* ed *anceps* non mi lasciano credere che si tratti solo di varietà molto spiccate: ad ogni modo sarebbe bene controllarli sopra un numero di esemplari maggiore di quello di cui io posso disporre.

Un solo esemplare senza indicazione di patria, appartenente al Museo di Bruxelles.

Patria: ignota, sed sine dubio America.»

691. **Chrysis prominula** Dhlb.

Chrysis prominula, Dhlb. Dispos. p. 14. n. 32. ♂. (1845); Hym. Europ. II. p. 328, n. 185. ♂. (1854).

«Maxima 4½ lin. decimal. long. robusta, capite thoraceque subcrassissime punctato-reticulata, abdomine punctulata viridis, abdominis segmento dorsali tertio disco distincte immerso, emarginatura apicali centrali multo angustiore quam reliquis, alis brunnescentibus cellula radiali incompleta.

Observ. Statura et pictura nec non abdominis punctura *Chrysidi modicae* affinis et similis; at corpore crassiori et fere duplo maiori, capite thoraceque multo crassius punctatis, mesopleuris dentatis, segmento abdominis tertio disco distincte licet leniter immerso, emarginatura centrali angusta etc. facillime distinguenda. — Etiam *Chrysidem oculatam* simulat, sed ab hac mox dignoscitur abdominis dorso immaculato, toto punctulato, serie ante-apicali foveolis omnibus rotundatis et — cum *Chr. oculatae* comparatis — parvis.

Corpus crassum elongatum. Caput transverse suborbiculatum punctato-reticulatum, parte orali transverse subrectangulari, totum viridissimum, macula verticis centrali nigro-ænea opaca; cavitas facialis quadrata confertissime punctulato-coriacea, cano-pilosella, planiuscula, superne omnino ita marginata ut in *Chryside oculata;* antennæ breves fuscæ basi viridi-cyaneæ; clypeus omnino ita constructus ut in *Chryside Wahlbergi;* labrum mediocre semilunatum convexum virescenti-æneum; mandibulæ brevissime subprismatice conicæ acutæ piceæ basi virescentes; palpi fusco-brunnei. Thorax crassus oblonge quadrato-cylindricus, postice propter metanoti angulos conspicue latior quam antice, crassissime punctato-reticulatus viridis; pronoti truncatura antica, alarum tegulæ et metanotum disco cyanea; pronoti fasciola postica, dorsuli vittæ medianæ et discus scutelli opaco nigro-ænescentes; postscutelli centrum fere ut in *Chryside oculata* obtuse prominulum et crasse foveatum nec non submarginatum: margine inæquali subcrenulato; metanoti anguli postico-laterales maximi fere ut in *Chrysidi Wahlbergi* constructi, at margo transversus posticus non ut in *Chr. Wahlbergi* arcuatus sed flexuosus; mesopleuræ margine crenato-dentatæ; pedes cyaneo-virides, tarsis fuscis, femoribus intermediis latere postico nigro-ænescentibus; alæ brunnescentes venis piceis firmis, cellula radiali lanceolata, apice late aperta. Abdomen ut in *Chryside modica* constructum; segmenta dorsalia primum et secundum viridia, tertium cyaneum nec nisi apice leviter virescens;

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

segmentum tertium disco leniter et distincte concaviusculo-immersum, tum ante seriem convexiusculo marginulatum; series anteapicalis foveolis mediocribus aut potius subparvis rotundatis numerosis; regio segmenti postica prominula subdepressa subtiliter punctulato-coriacea; dentes apicales robusti, magnitudine mediocres et invicem subæquales, emarginaturæ arcuatæ inæquales, centralis angustior, secundariæ mediocres obliquæ, externæ latiores obliquæ. Venter cyaneo-viridis nigro-maculatus formicatus.»

Patria: ignota. (Dhlb.).

B. *Postscutellum mucronatum* (*Pyria* Lep. et Serv. ex parte).

1) *Abdominis segmenti tertii dorsalis dentes: 4 apicales et 2 laterales, dens uterque lateralis prope basin marginis lateralis et iuxta initium seriei anteapicalis situs.*

a) *Abdominis segmento dorsali secundo maculis violaceis ornato.*

692. **Chrysis lyncea** FABR.

Chrysis lincea, Fabr. Syst. Ent. p. 357, n. 4. (1775); Spec. Ins. I. p. 455, n. 5. (1781); Mant. Ins. I. p. 283, n. 5. (1787).

Chrysis lyncea, Oliv. Encycl. Méth. Ins. V. p. 673, n. 7. (1790). — Christ, Naturg. p. 403. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. Tom. I. P. V. p. 2744, n. 12. (1792). — Fabr. Ent. Syst. II. p. 240, n. 6. (1793); Syst. Piez. p. 172, n. 8. (1804). — Lep. Annal. du Mus. Hist. nat. VII. p. 127, n. 16. (1806). — Dhlb. Oefvers. K. Vetensk. Acad. Förhandl. p. 141, n. 8. (1850); Hym. Europ. II. p. 339, n. 191. ♂ ♀. (1854).

Pyria armata, Lep. et Serv. Encycl. Méth. X. p. 495, n. 2. (1825). — Brullé, Hym. IV. p. 21, n. 4. ♂ ♀. (1846).

Pyria Reichei, Spin. Annal. Soc. Ent. France. VII. p. 448, n. 3. (1838) (nec Dhlb.).

Stilbum lynceum, Dhlb. Dispos. p. 15, n. 1. (1845).

Pyria lyncea, Gerst. Peter's Reise nach Mossamb. V. p. 519. (1862).

Chrysis vomerina, Costa, Annuario Mus. di Napoli. II. p. 67, n. 1969. (1864).

Magna, elongata, sat robusta, stilbiformis, viridis aut cyaneo-viridis vel viridi-cyanea, parcius cinereo-pilosa; abdominis segmento dorsali secundo utrinque in medio macula rotundata violacea sat magna, tertio plerumque cyaneo, basi et ante seriem virescenti; cavitate faciali profunda, dense punctato-coriacea, superne obsoletius marginata, margine ramulum utrinque brevem convergentem emittente; antennis sat longis, crassiusculis, apicem versus fortiter attenuatis, fuscis, articulis duobus primis viridibus, tertio brevi, secundo subæquali, quarto dimidio breviore; clypeo transverso, punctulato, apice nigro-æneo subtriangulariter emarginato; labro semilunato, fusco, fulvo-ciliato; genis brevibus, sublinearibus; fronte angusta, oculis magnis valde exsertis; margine occipitali utrinque angulo spinoideo; thorace antice fortiter angustato, pronoto transverso, antice posticeque arcuato-emarginato, antice in medio impresso, lateribus acute-angulatis, cum mesonoto sparsim profunde crasseque punctatis interstitiisque latis subtiliter punctatis, scutello crasse punctato-reticulato, postscutelli mucrone longo, triangulari, apice subobtuso, crasse profundeque punctato, supra in medio carinato, carinula polita ac lævi apice planata; metanoti dentibus postico-lateralibus magnis ac latis, triangulari-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

bus; mesopleuris apice utroque mucrone validissimo perpendiculari trigono fortissime armatis et supra hunc mucronem per sculpturam in quattuor areas divisis, tribus anticis areis sublinearibus et quarta seu postica subtriangulari: area prima serie foveolarum rotundatarum, secunda convexo-depressa sublævi subtilissime punctulata, tertia serie fovearum subquadratarum carinulis interiacentibus separatarum et quarta serie foveolarum irregularium; abdomine conico-ovali, segmentis dorsalibus valde convexis, primo sat sparsim crassius punctato interstitiisque, præsertim disco, subtilissime punctulatis, secundo adhuc dispersius crassiusque punctato, interstitiis latis lævibus, tertio disco transverse concaviusculo-immerso, in medio spatio sat magno lævi ac polito, lateribus dense subtilius punctatis, ante seriem convexiusculo, foveolis mediocribus rotundatis numerosis, margine apicali sat longo, subdepresso, parce punctulato, dentibus apicalibus quattuor robustis triangularibus, subæqualibus, duobus lateralibus brevibus angustis spinoideis, a dente apicali longe remotis, emarginaturis: centrali latiore minus, lateralibus profundius arcuatis; ventre planiusculo, subtilissime coriaceo, viridi aut viridi-cyaneo vel viridi-aurato, segmento secundo basi utrinque nigro-maculato; pedibus concoloribus, tarsis fuscis, supra viridibus, tibiis posticis latere postico cinereo-sericeo-strigatis; alis subfumatis violaceoque nitentibus, venis firmis nigro-piceis, cellula radiali elongata triangulariter lanceolata aut incompleta aut subcompleta. — ♂♀; long. 10—13 mm.

Patria: Africa tota (ubique vulgaris inde ab Algeria [Coll. Rad.!] et Aegypto [Brullé] usque ad Promontorium Bonæ Spei cum insula Madagascar insulisque reliquis); Arabia (Gerst.) item et Java (Mus. Lugdunense Batavorum!).

var. violacea Smith.

Pyria violacea, Smith, Transact. Ent. Soc. Lond. p. 465, n. 5. (1874).

Sexus uterque typo in omnibus characteribus essentialibus: antennarum, scutelli, mesopleurarum et dentium analium constructione punctaturaque penitus convenit; differt tantum: colore cyaneo plus minusve violascenti vel virescenti et abdominis segmento dorsali secundo maculis nigro-violaceis nonnunquam obsoletioribus. — Patria: Australia (Swan Riwer, Smith; Sidney, Coll. Rad!; Melbourne, Mus. Hung.; Rockhampton, Coll. Saussurei!; Queensland, Mus. Dresdense!).

693. **Chrysis bispilota** Guér.

Chrysis (Pyria) bispilota, Guér. Revue Zoolog. p. 145, n. 5. ♀. (1842).
Pyria plurimacula, Brullé, Hym. IV. p. 22, n. 5. ♂♀. (1846).
Pyria polystigma, Buyss. Revue d'Entom. VI. p. 199, n. 37. ♂. (1887); VII. p. 7. ♀. (1888).

Magna, elongata, sat robusta, viridi-cyanea vel cyaneo-viridis, parce cinereo-pilosa; vertice post ocellos, collo, pronoti truncatura antica, mesonoti lobo medio et sæpius etiam loborum lateralium lateribus metanotoque plus minusve violascentibus; cavitate

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

faciali profunda, densius punctato-coriacea, medio canaliculata, lateribus argenteo-sericeo-pilosa, superne indistincte marginata, fronte angusta; antennis tenuibus, fuscis, articulis duobus primis viridi-cyaneis vel viridibus, tertio brevi, secundo vix longiore, quarto fere dimidio breviore, genis brevibus, sublinearibus; vertice densius, thorace supra dispersius crassiusque punctato-subreticulatis, scutello crasse regulariter punctato-reticulato; pronoto brevi, antice posticeque arcuatim emarginato, lateribus angulatis; postscutelli mucrone longo, triangulari, crasse scrobiculato, medio acute carinato, apice planato subobtuso lævi; angulis postico-lateralibus triangularibus, latis ac acutis; mesopleuris apice triangulariter productis, acute marginatis excavatisque; abdomine læte cyaneo-viridi, splendido, segmentis dorsalibus secundo margine apicali et tertii basi viridi-auratis, secundo maculis quattuor rotundis nigro-violaceis ornato, intermediis nonnunquam obsoletis, carinula mediana abbreviata satis distincta, primo crasse profundeque, secundo parte basali multo subtilius dispersiusque, parte apicali cum tertio minus crasse profundeque punctatis, hoc supra seriem anteapicalem fortiter convexo medioque transversim profunde impresso, foveolis parvis, circiter 14 rotundis, dentibus lateralibus parvis, acutis, quattuor apicalibus triangularibus, mediocribus, acutis, fere æqualibus, in arcum dispositis, emarginaturis externis centrali latioribus; ventre viridi vel viridi-subaurato, segmento secundo basi utrinque nigro-maculato; pedibus læte-viridibus, tarsis subtus fuscis; tibiis posticis latere postico cinereo-sericeo-strigatis; alis subfumato-hyalinis, parum violascentibus, nervis piceis, cellula radiali triangulariter lanceolata fere completa, tegulis viridi-cyaneis. — ♂ ♀; long. 10—12 mm.

Chrys. lynceae Fabr. similis et affinis; sed punctatura ubique, præsertim in segmentis dorsalibus, multo fortiore, postscutelli mucrone parum breviore tantum apice lævi, segmento dorsali secundo sæpius maculis quattuor nigro-violaceis ornato, tertii emarginatura centrali externis angustiore, mesopleurarum apice multo breviore, eius area secunda subrugosa, a prima non satis discreta (non vero sublævi, longa ac lata et subtilissime punctulata), distincta.

Patria: Madagascar (Guérin, Brullé, Mus. Hung. et Coll. Andréi!).

b) *Abdominis segmento dorsali secundo sine maculis violaceis.*

694. **Chrysis Gabonensis** n. sp.

Magna, elongata, cyaneo-viridis, parcius cinereo-alboque pilosa; genis mediocribus; cavitate faciali coriaceo-rugosa, lateribus albo-sericeo-pilosa, superne marginata, margine medio sinuato et biangulato, e singulo angulo ramulum rectum, supra arcuatum et stemma anticum excipiente emittente (fere sicut apud *Chrysidem malachiticam,* Dhlb. Hym. Europ. II. p. 336), vertice punctato-reticulato; antennarum scapo et flagelli articulo primo supra viridi-cyaneis, reliquis fuscis, articulo secundo sat longo, 3—4 simul sumptis æquali; pronoto, mesonoti lobo medio antice et lateralibus sat dense minus crasse punctato-reticulatis, mesonoti lobo medio postice, scutello et postscutello vero scrobiculatis, huius mucrone sat magno, planato, subquadrato, parum excavato scrobi-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

culatoque; abdomine viridi, parum viridi-aurato nitente, segmento tertio ante seriem late nigro-violascenti, margine apicali post seriem anteapicalem longo ac lato, obscure nigro-æneo, sparsim subtiliter punctulato, segmentis duobus primis et tertio basi sparsim crassius minus profunde, huius margine vero ante seriem multo subtilius punctatis, secundo carinula mediana nulla, tertio disco leniter concaviusculo, supra seriem sat fortiter calloso, foveolis circiter 10 sat magnis et profundis, rotundis, margine apicali dente laterali minuto, subacuto, dentibus apicalibus robustis, triangularibus, acutis, fere æquilongis, emarginaturis: centrali externis latiore; ventre cyaneo-viridi, segmento secundo basi utrinque nigro-maculato; femoribus tibiisque viridibus, tarsis fuscis; alis subfumato-hyalinis, violascentibus, venis piceis, cellula radiali lanceolata penitus completa, tegulis viridi-cyaneis. — ♀; long. 11 mm.

Species: postscutelli mucrone et abdominis segmenti tertii margine apicali longo ac lato, obscure nigro-æneo eximia, a congeneribus iam facile cognoscitur.

Patria: Gabon Africæ occidentalis (Coll. Rad.).

695. **Chrysis mucronifera** Mocs.

Chrysis mucronata, Dhlb. Hym. Europ. II. p. 344, n. 193. ♀. (1854) (nec Brullé).
Chrysis mucronifer (!), Ab. Annal. Soc. Linn. Lyon. XXVI. p. 42. (1879).
Chrysis mucronifera, Mocs. Term. Füz. XI. p. 15. (1887).

Magna, robusta, minus elongata, viridis vel viridi-cyanea, densius cinereo-pilosa, cavitate faciali magna, subquadrata, modice profunda, dense punctato-coriacea, disco irregulariter arcuatim-strigosa, lateribus argenteo-sericeo-pilosa, superne conspicue marginata, margine medio arcuatim exciso, ramulum utrinque ad ocellos bisarcuatum emittente; antennis crassiusculis, longis, fuscis, articulis tribus primis viridibus, tertio sat longo, quarto dimidio fere adhuc longiore; genis mediocribus, antennarum articulo quarto æquilongis; margine occipitali utrinque angulo valido spinoideo; vertice densius ac subtilius, thorace supra crasse profundeque punctato-reticulatis; pronoto sat longo, transverso-rectangulo, antice posticeque subarcuatim emarginato, lateribus acute-marginatis; mucrone postscutelli brevi, obtuse-triangulari, punctato-reticulato; mesopleuris margine postico et apicali crenulatis et sic obtuse-denticulatis; metanoti dentibus postico-lateralibus acute-triangularibus, latis; abdomine ovali subrectangulo, capite thoraceque simul sumptis parum breviore, segmentis dorsalibus: primo crassius, secundo parum subtilius, tertio densius punctatis, hoc convexo, ante seriem vix calloso, foveolis numerosis rotundatis magnitudine inæqualibus, margine apicali dentibus quattuor mediocribus acute-triangularibus, a latere parum remotis, dentibus centralibus parum robustioribus quam externis, emarginaturis mediocribus, externis duabus arcuatis, intermedia triangulari, dente utroque laterali acute-triangulari robusto; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus et metatarsis supra viridibus, subtus et articulis reliquis fuscis, tibiis posticis latere postico cinereo-sericeo-strigatis; alis subfumato-hyalinis, parum violaceo-nitentibus, venis robustis piceis, cellula radiali lanceolata subcompleta, tegulis viridibus vel cyaneis. — ♂♀; long. 9—10 mm.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Species: antennis, cavitate faciali, pronoto, thoracis abdominisque punctatura, mucrone postscutelli et segmento anali, facile cognoscitur.

Patria: Africa occidentalis (respublica Liberia, Mus. Lugdunense Batavorum!; Gabon, Coll. Andréi! et Mus. Hung.; Angola, Mus. Berolinense!) et meridionalis (Promontorium Bonæ Spei, Dhlb.; Mus. Vindobonense! et Mus. Halense Saxonum!).

696. **Chrysis Gheudei** Guér.

Chrysis (Pyria) Gheudei, Guér. Revue Zoolog. p. 145, n. 4. ♂. (1842).
Chrysis Gueudei (!), Dhlb. Hym. Europ. II. p. 343, n. 192. ♂. (1854).

Chrysidi lynceae Fabr. simillima: læte-viridis subaureo-nitens, antennis tenuioribus, cavitate faciali superne convexa, non transverse obsoletius marginata, mesonoto parum densius punctato, mucrone postscutelli breviore, toto crasse punctato, summo apice tantum lævi ac polito magisque subacuto, metanoti dentibus postico-lateralibus validis irregulariter prismatico-triangularibus acutis marginibus flexuosis, abdominis segmentis dorsalibus multo brevioribus, primo crasse profundeque fere scrobiculatim punctato (sicut in *Chrys. bispilota* Guér.), secundo sine maculis nigro-violaceis, sed in medio distincte carinato, tertio ante seriem lenissime convexo, foveolis paululum minoribus et minus numerosis, foveola centrali ceteris maiore, emarginatura apicali centrali ad magnitudinem mediocri at perfecte et subprofunde transverse arcuata, emarginaturis duabus apicalibus externis latioribus minus profundis, leniter et oblique arcuatis, præsertim differt.

Patria: Madagascar (Guérin; Nossi-Bé, Coll. Andréi!).

697. **Chrysis Proteus** Smith.

Chrysis Protheus, Smith. Transact. Ent. Soc. Lond. p. 465, n. 6. (1874).

«Length 4½—5½ lines. Blue, green, or a mixture of those colours. Strongly punctured; the punctures of the sides of the pro- and mesothorax more or less confluent; the scutellum more strongly punctured; the postscutellum produced into a conical projecting tubercle, which is coarsely punctured and has a central longitudinal smooth carina: wings subhyaline, the nervures black. The apical segment of the abdomen with six teeth, four apical and two lateral.

Var. 1. Green, with a violet spoth enclosing the ocelli; the sutures of the mesothorax, the scutellum and postscutellum violet or purple; the base of the abdomen and middle of the first segment, as well as a traverse changeable fascia in the middle of the second and the third segments, violet.

Var. 2. Thorax and abdomen more or less green; the abdomen violet; beneath usually green.

This species closely resambles *P. lyncea;* its differt from that insect, being of a broader form: the abdomen is not so narrow towards the apex; the basal segment has

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

the lateral angles rounded, not sub-acute as in *P. lyncea,* and the teeth af the apex are wider appart.»

Patria: Australia septentrionalis et occidentalis.

2) *Abdominis segmenti tertii dorsalis dentes: omnes sex apicales*

698. **Chrysis canaliculata** Brullé.

Pyria canaliculata, Brullé, Hym. IV. p. 20, n. 3. ♀. (1846) (excl. Fabr. *Chrys. lynceae* syn.).

«Viridis, cyaneo-nitens, abdominis segmento secundo nonnunquam macula utrinque baseos cyanea, dense punctata, thorace postice producto, haud canaliculato, segmento tertio sexdentato. Fem.

Il est vert, nuancé de bleu et orné quelquefois d'une tache ronde d'un beau bleu, située à chacun des angles anterieurs du deuxième segment de l'abdomen. Le premier article des antennes et une partie du deuxième sont verts, ainsi que les pattes; le reste des antennes et les tarses sont noirs. Les ailes sont obscures avec les nervures noires.

La tête, le thorax et l'abdomen sont parsemés de gros points qui ne se touchent pas sur le prothorax et les lobes latéraux du mésothorax; les intervalles de ces points sont finement ponctués. Les points sont plus gros encore et se touchent sur le lobe médian du mésothorax, sur l'écusson et la première région du métathorax; les points de l'abdomen sont beaucoup moins gros et moins serrés que ceux du reste du corps et entremêlés de points plus petits. Les sillons interlobulaires du thorax sont crénelés. Les fossettes de la tête sont disposées comme dans le précédent (Pyria stilboides Spin.); le prothorax est largement canaliculé en avant; le métathorax est avancé de la même manière, mais il n'est pas creusè en gouttières; le premier segment de l'abdomen est échancré à la base et en dessus et le troisième est divisé en six dents disposées comme dans le précédent: le bourrelet que présente ce segment est peu saillant.

Longueur: 0,011.»

Patria: Senegalia.

699. **Chrysis Andromeda** Grib.

Chrysis Andromeda, Grib. Annali Mus. Civ. Stor. Nat. Genova. Sér. 2. Vol. I. p. 317, n. 59. ♀. (1884).

«Sub-magna, robusta, viridis, dorsuli area media, scutello, abdominisque segmento tertio cyaneis: capite antice viso triangulari, oculis sat exsertis: cavitate faciali lata, profunda, confertim punctulata, argenteo-villosa, superne distincte marginata; carinula, biarcuata, supra tres ramulos perbrevissimos emittente: fronte et vertice confertissime irregulariter punctatis: thorace substilbiformi crasse sat confertim punctato, interstitiis punctulatis, scutello et dorsuli area media crassissime punctato-reticulatis: postscutello producto, supra planiusculo vel subexcavato, crasse irregulariter scrobiculato, margine irregulari subcrenulato: mesopleuris crasse denseque punctatis et scrobiculatis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

subtus marginatis et mucrone valido armatis: alis fuscescentibus, cellula radiali completa: abdomine subcylindrico, convexo, capite thoraceque simul sumptis paullulum longiore, basi leniter excavato, segmenti tertii area antica medio manifeste depressiuscula, serie anteapicali parum abrupta, haud interrupta; foveolis mediocribus vel parvis, rotundatis, numerosis, subæqualibus; area anali parum immersa, producta, dentibus sex armata: his acutis, robustis, triangularibus, subæqualibus, emarginaturis tribus intermediis æqualibus arcuatis, externis conspicue latioribus obliquis subrectis, hinc dentibus intermediis adproximatis, lateralibus nonnihil remotis: segmento primo dorso vage, utrinque subconfertim crassissime punctato, hinc illinc punctulato: cœteris segmentis sparsim modice irregulariter punctatis et punctulatis, medio nitidioribus, et nullo modo carinulatis. ♀.

Long. corp. mill. 11—12.

Un esemplare venne raccolto Marchese Antinori ad Ambo-Karra, io ne ho un secondo recevuto dall' isola di Zanzibar.

Tenuto conto della grande variabilità delle specie di questa famiglia non solo nella colorazione, ma anche nella stessa forma e scultura, fui longo tempo in dubbio se questa specie potesse essere solo una varietà assai spiccata della *C. prominula* Dahlb. od anche della *C. semiaurata* Brullé, quantunque, comme puossi giudicare facilmente dalle rispettive descrizioni, esistanto fra di loro importanti differenze: ed anzi malgrado queste intendo riservare il giudizio definitivo al tempo in cui potrò esaminare io stesso i tipi autentici delle due specie sovraccennate.

Un longo studio di questa famiglia, fatto sopra ricchissimi materiali mi ha convinto della grandissima variabilità, sotto ogni riguardo, delle specie che la compongono: per cui credo che non si vada mai abbastanza guardinghi nell' affermare nouva una specie quando questa non presenti caratteri particolari pronunciatissimi: altrimenti si corre assai facilmente il rischio di non far altro che aumentare la gia ben lunga lista di specie da demolirsi.

I due esemplari di questa specie non sono perfettamente identici: in quello di Scioa la punteggiatura grosse è alquanto più rada, ma per contro sono più abbondanti i piccoli punti che stanno negli interstizii: il tubercolo del postscudetto è in esso alquanto più esile e più breve; i buchi della serie anteapicale poi sono moltissimo più grossi, quasi il triplo, che nello esemplare zanzibarese, nel quale sono invece piccolissimo.

Questa Chryside presenta il facies della *C. modica,* alla quale è molto affine. Non credo che possa essere la *C. Olivieri* Radosz. perchè in questa, secondo la descrizione, il margine apicali è inspessito: la punteggiatura dell' addome è inoltre di tutt' altra natura.»

Patria: Africa æquatorialis (Ambo-Karra) et orientalis (Zanzibar).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

700. **Chrysis Smithii** Grib.

Chrysis Smithii, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 326, n. 3. ♀. (1879).

«Submagna, robusta depressiuscula viridi-cyanea nitida: capite dense punctulato. thorace sat confertim crasse punctato, scutello et postscutello crassissime punctato-reticulatis: abdominis segmento primo modice punctato et punctulato, segmentis sequentibus sparsim punctatis: capite parvo subrotundato: clypei margine apicali profunde arcuato-emarginato: cavitate faciali mediocri superne arcuato-emarginata: thorace subconico: mesopleuris bidenticulatis, areis duabus linearibus lævibus (vel tantum lenissime sparsimque punctulatis) nitidis verticaliter instructis: postscutello lamina triangulari plana robusta conspicua armato: abdomine subconico, basi fere integro, medio haud carinulato: segmenti tertii area antica modice sed distincte ante seriem immersa: serie anteapicali modice abrupta, fere simicirculari, idest medio non nisi quam lenissime angulata: foveolis mediocribus, rotundatis, distinctis, numerosis: margine anali mediocri, dentibus sex apice armato: dentibus in curvam valde convexam dispositis: quatuor intermediis maioribus robustis (ideo emarginaturæ tres centrales profundæ, subæquales) triangularibus, duobus externis parvis vel minutissimis; alis subfumatis. ♀.

Long. corp. mill. 12.

Questa bella e ben distincta specie appartiene alla divisione seconda della quinta sezione dell'ottava falange del Dahlbom: per la forma dell'armatura del postscudetto si avvicina alla *C. Mouattii,* Guér. senonchè questa appendice è ancor più grossa è più lunga nella *Smithii.* Rimarchevoli sono pure in questa specie la forma del capo e del margine anale. Comunicata dal dottore Smith.»

Patria: Africa orientalis.

701. **Chrysis Mouattii** Guér.

Chrysis (Pyria) Mouattii, Guér. Revue Zoolog. p. 145, n. 3. ♀. (1842).

«D'un beau vert brillant à reflets d'or jaune; dessus de la tête, du corselet et du premier segment abdominal bleus; une forte saillie, aplatie en dessus, au bord postérieur du métathorax; dernier segment de l'abdomen garni de six dents. Ailes brunes à nervures noirâtres, avec la cellule radiale presque fermée (femelle). — Long. 13 mill.»

Patria: Madagascar.

702 **Chrysis semiaurata** Brullé

Chrysis semiaurata, Brullé, Hym. IV. p. 28, n. 8. ♂. (1846).

«Viridis, dense punctata, lateribus et apice aurea, dorso cyaneo, thorace postice subemarginato producto, segmento tertio sexdentato. Mas.

Il est vert, avec les côtes et l'extrémité postérieure du corps d'un vert doré et le dessus de la tête, du thorax et de l'abdomen bleus. Les ailes sont obscures.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

La tête, le thorax et l'abdomen sont couverts de gros points qui se touchent sur les deux premières parties et sont un peu écartés sur la troisième. La tête offre, entre la face et le vertex, une ligne saillante, arquée, presque sinueuse; le prothorax est creusé d'une fossette; les lignes interlobulaires du mésothorax sont peu marquées; la première région du métathorax forme une saillie un peu échancrée; la base de l'abdomen est échancrée; le bourrelet du troisième segment est assez prononcé et suivi d'une rangée de points de grosseur moyenne; le bord du même segment offre six dents saillantes, dont les deux extérieures sont un peu plus écartées que les autres.

Longueur: 0,010.»

Patria: Madagascar.

Animadversio. — Forsan est mas præcedentis?

703. **Chrysis stilboides** SPIN.

Chrysis stilboides, Spin. Annal. Soc. Ent. France. VII. p. 446, n. 3. ♀. (1838).
Stilbum sexdentatum, Guér. Revue Zoolog. p. 145, n. 2. ♀. (1842).
Chrysis nobilis, Klug, Symb. phys. Dec. V. tab. XLV. fig. 2. (1845). — Dhlb. Hym. Europ. II. p. 347, n. 195. ♀. (1854).— Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 32. (genit. maris) (1888).
Stilbum Hedenborgi, Dhlb. Dispos. p. 16, n. 2. (1845).
Pyria smaragdula, Brullé, Hym. IV. p. 19, n. 2. ♂ ♀. (1846) (excl. Lep. et Serv. syn.).

Magna vel maxima, robusta, cyanea vel viridis vel viridi-cyanea, cinereo-pilosa; cavitate faciali magna, subquadrata, minus profunda, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne transverse marginata, margine medio triangulariter exciso, ramulum utrinque stemma anticum includentem aliumque ad oculos emittente; antennis longis, crassis, fuscis, articulis duobus primis viridibus vel cyaneis, tertio valde brevi, quarto fere quater breviore, secundo æquali; genis proportionaliter brevibus, articulo antennarum secundo æquilongis; margine occipitali utrinque angulo valido spinoideo; pronoto brevi, antice posticeque arcuatim emarginato, antice in medio profunde impresso, lateribus angulatis; vertice parum densius crasse, thorace supra dispersius fortiter punctato-reticulatis interstitiisque subtiliter punctulatis; postscutelli mucrone mediocri, linguæformi, supra toto sulco excavato, cavitate scrobiculata; metanoti dentibus postico-lateralibus validis, latis, subacutis, postice subarcuatim emarginatis; mesopleuris apice dentatis et crenulatis, supra in medio canalicula lata ac profunda perpendiculari; abdomine robusto, conico-ovali, valde convexo, segmentis dorsalibus: primo basi in medio profunde longitudinaliter sulcato, supra crasse valde sparsim punctato interstitiisque subtiliter punctulatis, secundo similiter valde sparsim crasse punctato interstitiisque sublævibus, tantum microscopice punctulatis, carinula mediana nulla, tertio area basali polita, disco modice concavo-immersa et remote modice punctata, ante seriem leniter convexa, serie anteapicali continua foveolis mediocribus rotundatis numerosis distinctis, margine apicali mediocri modice punctato et punctulato subcoriaceo nonnihil depresso, dentibus omnibus sex apicalibus in arcum dispositis, mediocribus, spinoideis, subæqualibus, emarginaturis tribus intermediis fere

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

æqualibus profunde arcuatis, externis duabus conspicue latioribus oblique et leniter arcuatis; ventre pedibusque viridibus vel cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis subtus fuscis; alis fumato-hyalinis, violascentibus, venis firmis piceis, cellula radiali lanceolata incompleta, apice modice aperta. — ♂♀; long. 9—12 mm.

«*Armure.* La branche du forceps entoure la volsella; son bord est en ligne oblique et vers la extrémité bordé de poils. La longueur de la volsella est égale à la longueur de la branche du forceps. La forme des crochets représentée sur la fig. 67 i.» (Rad. l. c. tab. VI. fig. 67 a, 67 b, 67 c).

Patria: Africa tota (inde ab Algeria [Guérin] per Senegambiam [Guérin et Mus. Hung.] et Africam æquatorialem [Gribodo] usque ad Promontorium Bonæ Spei [Gerstæcker] et per Mossambique [Gerst.] ad Abyssiniam [Coll. Rad.! et Mus Hung.] et Aegyptum [Spinola, Mus. Vindob.! et Hung.]) et Arabia [Wâdy Ferran, Walcker).

704. **Chrysis simillima** Grib.

Pyria simillima, Grib. Annali Mus. Civ. Stor. Nat. Genova. Ser. XIV. p. 326, n. 2. (1879).

«*Pyriae stilboidi,* Spin. valde assimilis, at ut huius varietas nullo modo existimanda, etenim dignoscitur: capite antice viso magis angusto et triangulari; linea genarum brevissima et valde obliqua: margine cavitatis facialis subobsoleto: mesopleuris haud undique scrobiculatis, sed areis duabus latis linearibus lævibus et nitidis verticaliter instructis: postscutello haud excavato: abdominis basi latiori, antice minus excavato, angulis lateralibus obtundatis, vel oblique fere truncatis: emarginaturis analibus (seu spatiis interdentalibus) centralibus conspicue latioribus quam duabus externis.

Long. corp. mill. 11.

Molto affine alla *P. stilboides* non può però con questa confondersi per i numerosi ed importanti caratteri avanti enunciati, ai quali può aggiungersi la punteggiatura più fina e più rara di quella della *stilboides*. Potrebbe pur nascere il dubbio che questa specie fosse la *P. canaliculata*, Brullé; ma da essa si distingue, oltre che dalla diversa forma del margine anale, ancora dalla mancanza delle macchie laterali dell'addome, della larga infossatura del protorace, e dell'incavatura della base del primo segmento addominale.

Un esemplare comunicato dal dottore Smith.»

Patria: Africa orientalis.

705 **Chrysis Indica** n. sp.

Submagna, sat robusta, parcius cinereo-alboque pilosa, cyaneo-viridis, splendida; mesonoti lobo medio postice et tegulis nigro-violaceis; maculis frontis, punctis pronoti, mesopleurarum, scutelli et abdominis segmenti dorsalis primi lateralibus profundis viridi-auratis; cavitate faciali minus profunda, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne indistincte marginata; fronte impressa, vertice dense punctato-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

reticulato; antennis sat longis, crassis, fuscis, scapo viridi, flagelli articulo primo supra cyanescenti, huius secundo brevi, primo vix longiore, tertio ter breviore; genis brevibus, articulo antennarum secundo æquilongis; pronoto brevi, antice arcuatim emarginato, medio impresso, lateribus crenato-marginatis; pronoto mesonotoque sat crasse non profunde minus dense punctatis; mesonoto antice in medio area longitudinaliter-transversa acute marginata; scutello fortius punctato-striato, striis longitudinalibus et obliquis; postscutelli mucrone brevi, sat valido, subtriangulari, medio leniter excavato, postice rotundato, basi lateribus crenulatis; mesopleuris fortius punctatis, apice subtus arcuato-excisis bidentatisque, metapleuris fossulatis transverseque striatis; abdominis segmentis dorsalibus: duobus primis cyaneo-viridibus, tertio virescenti-cyaneo, primo basi et lateribus crassius sparsimque minus profunde, parte postica subtilius punctatis et punctulatis, secundo tertioque fere regulariter minus dense et profunde punctatis, secundo carinula mediana nulla, tertio disco leniter concaviusculo-immerso, ante seriem anteapicalem non calloso, foveolis circiter 12 profundis rotundisque, intermediis tribus maioribus, reliquis minutis, margine apicali sexdentato, dentibus acutis anguste triangularibus, sat magnis, in arcum dispositis, intermediis quattuor æquilongis, externis parum brevioribus, emarginaturis tribus intermediis profundis æqualibus, externis duabus minus profundis, sed latioribus; ventre cum femoribus et tibiis metatarsoque postico cyaneo-viridibus, tarsorum articulis reliquis fuscis; alis fumato-hyalinis, violascentibus, nervis piceis, cellula radiali lanceolata apice late aperta. — ♂; long. 9 mm.

Species: sequentibus duabus similis; sed mesonoto antice in medio area longitudinaliter-transversa acute marginata, scutello fortius punctato-striato, postscutelli mucrone angustiore, medio leniter excavato, postice rotundato, iam satis distincta.

Patria: India orientàlis (Mus. Hung.).

706. **Chrysis orientalis** Guér.

Chrysis orientalis, Guér. Revue Zoolog. p. 146, n. 6. ♂. (1842) (nec Dhlb.).

Submagna, robusta, parcius cinereo-alboque pilosa, viridi-aurata, vertice et mesonoto lobo medio abdominisque segmento dorsali tertio cyaneis, vel tota nigro-violacea parumque virescens; cavitate faciali sat profunda, viridi-aurata, dense punctato-coriacea, lateribus argenteo-sericeo-pilosa, superne deorsum versus parum arcuatim-marginata, margine utrinque ramulum ad stemma anticum emittente, fronte impressa; antennis fuscis, articulis duobus primis cyaneis vel viridibus, tertio valde brevi, quarto fere ter breviore, secundo subæquali, genis brevibus, articulo tertio antennarum æquilongis; vertice dense punctato-reticulato; pronoto brevi, antice in medio profunde emarginato medioque impresso, lateribus anticis haud distincte crenato-marginatis; pronoto mesonotoque sparsim crassius minus profunde punctatis punctulatisque; mesopleurarum areis profunde punctatis, apice basi spatio sublævi, imo apice subtus emarginato-bidentato; scutello crasse punctato-reticulato; postscutelli mucrone valido, haud longo, crasse scrobiculato, subtriangulari, apice subtruncato; abdominis segmentis dor-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

salibus: primo basi et lateribus crasse fere cribrato-, postice multo subtilius densiusque punctatis et punctulatis, secundo tertioque sat sparsim fere regulariter punctatis, secundo carinula mediana nulla, tertio convexo, ante seriem anteapicalem vix calloso, foveolis sat profundis inæqualibus, serie minus distincta, margine apicali sexdentato, dentibus mediocribus, triangularibus, acutis, externis duobus parum brevioribus magisque triangularibus, in arcum dispositis, emarginaturis tribus intermediis æqualibus, profundis, externis duabus latioribus; ventre viridi-cyaneo, segmento secundo basi utrinque nigro-maculato; pedibus viridi-cyaneis, tarsis fuscis; alis subfumato-hyalinis violascentibus, cellula radiali triangulariter lanceolata apice aperta, tegulis cyaneis. — ♂; long. 8—9 mm.

Patria: India orientalis (Mus. Vindob.! et Anam in Cochinchina, Coll. Rad.!) Sumatra (Guér.); Java (Mus. Hung.).

707. **Chrysis cyanochlora** Mocs.

Chrysis malachitica, Smith, Journ. Proceed. Linn. Soc. Zoology. II.p. 128, n. 2. (1858) (nec. Dhlb.)
Chrysis cyanochlora, Mocs. Term. Füz. XI. p. 15. (1887).

«Crassissime punctata viridi-cyanea, thorace viridi-aureo, alis fusco-hyalinis, abdominis segmentis apicalibus dentibus sex armatis.

Length 4½ lines. Metallic green, splashed with gold on the thorax and sides of the abdomen; the flagellum, mandibles, and tarsi black; the hinder margin of the vertex tinged with blue. The disk of the thorax blue; the tegulæ and nervures of the wings with a purple tinge; the wings subhyaline and iridescent; the lateral posterior angles of the metathorax acute; the postscutellum produced, the apex truncate. Abdomen: more finely punctured than the head and thorax, but most strongly so at the base; the basal margin with a deep excavation on each side, the lateral angles somewhat produced and obtuse; the basal margin of the second segment blue; the apical margin of the third segment armed with six acute teeth.»

Patria: Borneo (Sarawak).

Animadversio. — Est forsan præcedentis mera varietas?

708. **Chrysis incerta** Dhlb

Chrysis smaragdula, Lep. et Serv. Encycl. Méth. X. p. 495, n. 1. (1825) (nec Fabr., nec Brullé).
Chrysis incerta, Dhlb. Hym. Europ. II. p. 346, n. 194. ♂. (1854) (nec Rad.).

Magna, robusta, læte-cyanea parumque violascens, parcius cinereo-alboque pilosa; cavitate faciali minus profunda, dense punctato-coriacea, lateribus argenteo-sericeopilosa, superne transverse marginata, margine in medio emarginato, ramulum utrinque stemma anticum excipientem emittente; antennis longis, crassis, fuscis, articulis duobus primis cyaneis, tertio valde brevi, secundo vix longiore, quarto ter breviore; genis mediocribus, antennarum articulo secundo æquilongis; vertice dense crassius punctato-reticu-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

lato; pronoto brevi transverso-rectangulo, antice arcuatim exciso medioque impresso cum mesonoto sat sparsim, scutello dense crasseque punctato-reticulatis, illis spatiis lævibus subtiliter punctatis, postscutelli mucrone sat longo, crasso, linguæformi, supra toto sulco excavato, cavitate scrobiculato, lateribus crenatis; metanoti dentibus postico-lateralibus brevibus, robustis ac latis, subacutis, postice subarcuatim excisis; abdominis segmentis dorsalibus valde convexis, primo antice in medio profunde sulcato sparsim crassius punctato interstitiisque latis vage punctulatis, secundo sparsim crassius punctato, interstitiis lævibus ac politis, carinula mediana nulla, tertio punctatura secundi, tota superficie depresso-convexa, foveolis paucis minutis haud distinctis, margine apicali sexdentato, dentibus in arcum dispositis subbrevibus acute-triangularibus, fere æquilongis, emarginaturis tribus intermediis æqualibus arcuatis, lateralibus duabus multo latioribus subarcuatis; ventre pedibusque viridi-cyaneis, illo segmento secundo basi utrinque nigro-maculato, his tarsis apice et subtus fuscis; alis fumato-hyalinis violascentibus, venis firmis piceis, cellula lanceolata subcompleta. — ♂; long. 11 mm.

Exemplaribus cyaneis *Chrys. stilboidis* Spin. valde similis; sed abdominis segmenti dorsalis primi interstitiis vage (non dense) punctulatis, tertio serie foveolarum penitus obliterata, dentibus apicalibus parum brevioribus magis triangularibus, certe distincta.

Patria: Cayenna (Lep. et Serv.; Dhlb.) et Venezuela (Mus. Dresdense!).

Subgenus 9. HEPTACHRYSIS mihi.

Abdominis segmenti tertii dorsalis margo apicalis denticulis septem distinctis armatus.

*

709. **Chrysis festina** SMITH.

Chrysis festinus (!), Smith, Transact. Ent. Soc. Lond. p. 462, n. 18. ♂ ♀. (1874).

«Female. — Length 5 lines. Head and thorax green, abdomen blue, with the extreme base more or less green, beneath golden-green. Head: the face covered with silvery pubescence. The anterior angles of the prothorax acute. The head and thorax strongly and very closely punctured; at the sides of the thorax the punctures are more or less confluent. Abdomen: the first segment strongly punctured, the punctures not very close except at the sides of the segment; the second and third segments less strongly punctured, and having a central, smooth, longitudinal line; the apical margin of the third segment with seven teeth, the central one smallest. Wings hyaline, the nervures fuscous.

The male exactly resembles the female.

Both sexes have seven teeth.»

Patria: Australia occidentalis (Perth).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Subgenus 10. POLYODONTUS Rad.

«Postscutellum liberum margine undulato. Corpus ut in Chrysidibus normalibus constructum. Abdominis segmento dorsali tertio convexo margine apicali confluente et dentibus undecim spinoideis armato.» (E lingua russica in versione latina).

(πολύς, πολλή, πολύ = multus; ὀδούς, όντος = dens).

*

710. **Chrysis Stschurovszkyi** Rad.

Polyodontus Stschurovszky (!), Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 25, n. 51. ♀. tab. III. fig. 2. (1877).

«Mediocris, robustus, purpureo-aureus; capite punctato-rugoso; cavitate faciali cyaneo-violacea, subtiliter transversim strigosa, medio canaliculata, margine superno biarcuato, vertice longitudinaliter carinato; clypeus violascens, trapezinus, margine plano, emarginato, piceo; mandibulæ brunneæ; antennæ rufæ, basi violascentes: scapo maximo, pedicello subbrevi, conico, articulo tertio sequentibus longior; thorax confertim crasso-scrobiculatus; pronotum area dorsali et postscutellum plus minus viridicuprea; pronotum margine postico subarcuato; metanoti anguli postico-laterales mediocres, purpurei, rugosi; abdomen confertim punctatus, segmento tertio coriaceo, series anteapicalis foveolis parvis confluentibus; emarginatura profunde arcuata, dentibus lateralibus minoribus; venter purpurascens; pedes cyaneo-violascentes, tarsis ferrugineis; alæ sordidæ.

Long. 10 mm.»

Patria: ignota (Museum Orenburgense, Rad.).

Subgenus 11. EUCHROEUS Latr.

Abdominis segmenti dorsalis tertii margo apicalis denticulis conspicuis æqualibus vel inæqualibus lacero-serratus; mesopleuræ apice utroque bispinosæ; alæ anticæ cellula radiali valde incompleta.

(εὔχροια = color sanus, color pulcher).

*

I. *Postscutellum muticum.*

1) *Caput et thorax in feminis cyanea aureo-cupreoque variegata; in maribus cyanea, solum subaurato-viridi variegata; abdominis segmenta dorsalia duo prima aurata, basi et tertio toto cyanea vel virescenti-cyanea.*

711. **Chrysis limbata** Dhlb.

Euchroeus limbatus, Dhlb. Hym. Europ. II. p. 368, n. 203. ♀. (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 565, n. 1. ♀. (1857). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 308, n. 54, tab. VI. fig. 36. ♂. (1866); XXIII. p. 35. (genit. maris) (1888).

Euchroeus Beckeri, Tourn. Mittheil. Schweiz. Ent. Ges. Bd. V. Hft. 6. p. 309. ♀. (1879).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Sexus ab invicem colore valde differunt:

Mediocris, sat robusta, cyanea, parce albo-pilosa; genis brevibus, cavitate faciali angusta, minus profunda, punctato-coriacea, medio canaliculata, lateribus argenteo-sericeo-pilosa, superne transverse-marginata insignique area semicirculari stemma anticum excipiente et utrinque ramulum oblique demittente determinata; antennarum scapo et articulo flagelli primo supra virescenti-æneis, reliquis fuscis, tenuibus, articulo secundo mediocri, tertio parum longiore; vertice dense subtilius, thoraceque supra fortius punctato-reticulatis; abdominis segmentis dorsalibus duobus primis dense fere cribrato-punctatis, subreticulatis, tertio ante marginem apicalem subincrassato basi fortius punctato, parte apicali vero valde dense subtiliter rugoso, margine apicali brevi, testaceo, centro emarginato, utrinque irregulariter multidentato, denticulis inæqualibus, parvis et minutis, simul sumptis 16—20; pedibus virescenti-cyaneis, genibus, tibiarum apice tarsisque totis rufo-testaceis; alis sordide-hyalinis, venis mediocribus brunneis, cellula radiali triangulariter lanceolata apice valde late aperta, tegulis sordide-testaceis.

Femina: capite cyaneo, cavitate faciali viridi-aurata, clypeo aurato vel igneo-aurato, apice nigro-æneo, fronte et vertice cupreo-auratis cyaneoque tinctis; pronoto, mesonoti lobo medio, scutello et macula magna mesopleurali auratis locisque certis cupreo-nitentibus, postscutelli disco cupreo-æneo; abdominis segmentis dorsalibus duobus primis auratis, disco igneo- vel cupreo-nitentibus, primo secundoque basi et tertio toto cyaneis vel virescenti-cyaneis, secundo carinula mediana distincta nigro-ænea; ventre cyaneo, parum virescenti, segmento secundo basi utrinque nigro-maculato. — Long. $7^1/_2$—8 mm.

Mas: capite cyaneo, cavitate faciali viridi-cyanea, clypeo viridi-aurato, apice nigro-æneo, vertice utrinque ad oculos indistincte cupreo-maculato, pronoti lateribus, scutello et mesopleuris supra subaurato-viridibus; abdominis segmentis dorsalibus duobus primis igneo-auratis, basi late cyaneis viridique limbatis, secundo carinula mediana non satis distincta, tertio brevi, cyaneo, parum virescenti; ventre obscure viridi-æneo, segmento secundo utrinque nigro-maculato. — Long. $6^1/_2$ mm.

«*L'armure* se rapproche par sa forme à celle de *Chr. coeruleipes;* mais le bord supérieur de la branche du forceps et de la volsella est richement garni de poils et la volsella est de la longueur de la branche du forceps. La forme du couvercle génital est représentée sur la fig. 71 k. (Rad. l. c. tab. VI. fig. 71 a, 71 b, 71 c).

Patria: Hispania (Albarracin, Coll. Hiendlmayri!; Murcia, Coll. Fairmairei!); Russia meridionalis et orientalis (Dhlb., Coll. Rad.! et Mus. Hung.) cum Caucaso (Bacu in Daghestania, Tourn.).

2) *Corpus in feminis aureo, viridi-aureo, cupreo, cyaneo vel purpureo-violaceo variegatum; in maribus cognitis viridi-cyaneum vel cyaneum plus minusve nigro-violaceo maculatum vel coeruleum.*

712. **Chrysis purpurata** Fabr.

Chrysis purpurata, Fabr. Mant. Ins. I. p. 283, n. 8. ♀. (1787). — Vill. Linn. Ent. III. p. 259, n. 11. (1789). — Oliv. Encycl. Méth. Ins. V. p. 673, n. 10. ♀. (1790). — Gmel. Linn. Syst. Nat. Ed. XIII.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

T. I. P. V. p. 2746, n. 20. ♀ (1792). — Fabr. Ent. Syst. II. p. 240, n. 9. ♀. (1793); Syst. Piez. p. 172, n. 12. ♀. (1804) (excl. verbis: «ano quadridentato»). — Latr. Hist. nat. XIII. p. 238, n. 3. ♀. (1805). — Lep. Annal. du Mus. Hist. nat. VII, p. 125, n. 2. ♀. (1806).

Chrysis variegata, Oliv. Encycl. Méth. Ins. V. p. 677, n. 25. ♀ (1790).

Euchroeus sexdentatus, Latr. Nouv. Dict. X. p. 529. ♂. — Dhlb. Hym. Europ. II. p. 375, n. 208. ♂. (1854). — Lampr. Goldwesp. Deutschl. p. 7, n. 4. ♂. (1881).

Euchroeus quadratus, Schuck, Ent. Mag. IV. p. 169, n. 1. ♂. (1837) (excl. syn.). — Dhlb. Hym. Europ. II. p. 373, n. 207. ♂. (nec ♀) (1854). — Schck, Nass. Jahrb. XI. p. 80, ♂. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 566, n. 3. ♂. (1857). — Smith, Entom. Annual, p. 96. ♂. (1862). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 309. n. 56. tab. VI. fig. 41. ♂. (1866). — Taschb. Hym. Deutschl. p. 152. ♂. (1866). — Schck, Progr. Gymn. zu Weilb. p. 17, n. 33. ♂. (1877). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 26, n. 52. ♂. (nec ♀) (1877). — Lampr. Goldwesp. Deutschl. p. 7, n. 5, tab. I. fig. 4. ♂. (segm. anale). (1881). — Mocs. Chrys. faun. Hung. p. 73 et 90, n. 1. ♂. tab. I. fig. 16. (segm. anale) (1882). — Gog. Anal. Soc. Espaň. Hist. Nat. XVI. p. 85, n. 63. ♂. (1887). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 35. (genit. maris) (1888).

Euchroeus purpuratus, Blanch. Hist. nat. III. p. 297, n. 1. ♀. (1840). — Lep. Hym. tab. 37, fig. 4. ♀. (1845). — Dhlb. Hym. Europ. II. p. 369, n. 204. ♀. (nec ♂) (1854). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 565, n. 2. ♀. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 72. ♀. (1858). — Rad. Horæ Soc. Ent. Rossicæ. III. p. 308, n. 55, tab. VI. fig. 37—40. ♀. et var. (1866). — Schck, Progr. Gymn. zu Weilb. p. 17, n. 34. ♀. (1870). — Lampr. Goldwesp. Deutschl. p. 7, n. 6. ♀. (1881). — Mocs. Chrys. faun. Hung. p. 73 et 90, n. 2. ♀. (nec. ♂) (1882).

Euchroeus Doursi, Grib. Petit. Nouv. Entom. p. 491. ♀. var. (1875). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 95. ♀. (1879).

Euchroeus purpureus, Ab. Annal. Soc. Linn. Lyon. XXVI. p. 94. ♂ ♀. (1879). — Gog. Anal. Soc. Espaň. Hist. Nat. XVI. p. 85, n. 64. ♀. (1887).

Euchraeus purpuratus, Frey, Chrys. Helvet. p. 84. ♂ ♀. (1887).

Sexus ab invicem colore valde differunt:

Mediocris, robusta, densius cinereo-alboque pilosa; cavitate faciali angusta, rectangulari, parum profunda, dense subtiliter punctulata, in mare supra dense irregulariter subtilissime striata, medio tenuiter carinata, lateribus albo-sericeo-pilosa, superne transverse subacute-marginata, margine utrinque ramulum stemma anticum non satis distincte includentem emittente; antennis brevibus, crassis, nigris, cano-puberulis, articulis duobus primis viridibus vel viridi-auratis, tertio longitudine mediocri, quarto parum tantum longiore; clypeo magno, elongato, subtrapezino, punctulato, margine apicali subtruncato; genis longis, antennarum articulo tertio longioribus; mandibulis bidentatis, testaceis, apice nigris, basi viridibus vel viridi-auratis; pronoto sat longo, transverso-rectangulo, antice in medio parum impresso; postscutello convexo, metanoti dentibus postico-lateralibus mediocribus acute-triangularibus; vertice densius et subtilius, thorace supra parum dispersius fortiusque punctato-subreticulatis; abdomine ovato-subrectangulo, capite thoraceque simul sumptis æquilongo, dorso convexo, segmento primo parte truncata longitudinaliter striato et centro canaliculato, supra in medio sat sparsim crassius, parte reliqua subtilius densiusque punctato, secundo dense rugosiuscule-punctato, subcoriaceo, carinula mediana distincta, tertio brevi, secundo fere triplo breviore, basi

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

transverse subarcuato-sulcato, ante seriem margine convexo modice incrassato, foveolis profunde immersis, numerosis, rotundatis, mediocribus, margine apicali subbrevi sparsim punctulato, denticulis irregularibus et inæqualibus serrulato; alis hyalinis, disco leviter sordidis, venis mediocribus nigro-piceis. — Long. 6½—9 mm.

Femina: viridi- vel cupreo-aurata, ordinaliter: vertice, collo, mesonoti vittis tribus latis, abdominis segmenti dorsalis primi truncatura antica margineque apicali, secundi maculis duabus magnis basali et apicali medio anguste coniunctis et tertio toto concinne violascenti-purpureis; ventre pedibusque viridi-auratis, illo segmento secundo basi utrinque nigro-maculato, his geniculis, tibiis tarsisque testaceis, tibiis nitore cœruleo-rufo.

Mas: semper viridis vel cyanea plus minusve cyaneo vel nigro-violascenti-cyaneo vel læte-viridi picta; ventre pedibusque concoloribus, genibus, tibiarum apice tarsisque luteis.

«*Armure.* Le bord intérieur de la branche du forceps est fortement échancré et se termine par une partie cylindrique, garnie au bout et du côté extérieur de poils. Volsella garnie de poils. La tenette est de la longueur de la volsella. Les crochets sont assez larges, faiblement rétrécis au milieu. Le couvercle génital est représenté sur la fig. 72 k.» (Rad. l. c. tab. VI. fig. 72 a, 72 b, 72 c.).

Patria: Europa media et meridionalis: Germania (Klug), Saxonia (Fabr.), Helvetia (Frey-Gessner), Austria inferior (Coll. Handlirschi!), Hungaria centralis et orientalis, ubi mense Julio in florenti *Eryngio campestri* copiose inventa est (Mocs.), Gubernium Mosquense (Assmus), campi Orenburgenses et promontoria Uralensia (Eversm.), Sarepta, Georgia, Lenkoran in Transcaucasia (Rad.), Italia (Dhlb.), Hispania (Gogorza), Gallia mer. (Oliv.) cum Sibiria (Pallas), Turkestania (Rad.) et Aegypto (Waltl. et Ab.)

Animadversio. — Speciem ex Hungaria, Helvetia, Russia mer., Caucaso et Turkestania numerose a me examinatam in feminis colore et abdominis punctatura, in maribus denticulorum analium forma quam maxime variabilem inveni ita, ut haud dubitarem, etiam *Euchroeum Doursii* Grib. e Gallia mer. et Aegypto meram esse varietatem: punctatura segmentorum dorsalium subtiliore. Singulæ varietati nomen imponere difficile et superfluum est. Vidi et habeo enim feminas per benevolentiam Domini Ferd. Morawitz e territorio Maris Caspii (Krasnowodsk), ubi dorsuli vittæ abdominisque fasciæ dorsales cupreo- aut violaceo-purpureæ penitus evanescunt et animal totum supra cupreum et violaceo-cupreum est. Alias pulchras varietates e collectione egregia Dom. Radoszkovszky vidi, quas ille eleganter depinxit verbisque sequentibus descripsit (Horæ Soc. Ent. Rossicæ. III. 1866, p. 308. tab. VI. fig. 37—40).

«Cette espèce, sujette à changer de coloration, présente les variétés suivantes:

var. α. Corps vert doré; dorsulum, les écailles, bord supérieur de l'abdomen et les parties du deuxième segment non occupées par les taches, d'un rouge métallique.

var. β. Corps un peu plus petit et d'une couleur verte metallique, le reste comme dans la variété suivante.

var. γ. Tête et thorax d'une couleur cuivrée; le vertex, des lignes verticales sur le dorsulum et en partie des écailles d'un rouge violacé. L'abdomen en dessus bleu avec le bord inférieur du premier segment et deux grandes taches sur le deuxième segment, ainsi que le dessous de l'abdomen, vert doré.

var. δ. Entièrement d'une couleur cuivrée avec le dessous de l'abdomen d'un vert metallique.

var. ε. Entièrement d'une belle couleur verte metallique, avec le dorsulum, les écailles, les jointures des segments de l'abdomen et la caréne en partie cuivres, changeant quelquefois en violet.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Si l'on n'examine pas bien la description des caractères de cette espèce, on peut quelquefois confondre ces variétés avec d'autres espèces ou bien les prendre pour des espèces nouvelles. C'est pour cela que j'ai cru devoir donner des figures de ces différentes variétés, faites non d'après des exemplaires provenant de differentes localités, mais d'après ceux qui ont été récoltés dans même endroit. »

713. **Chrysis egregia** Buyss.

Euchroeus egregius, Buyss. Revue d'Entom. VI. p. 198, n. 35. ♂. (1887).

« ♂. Corpore robusto, brevi, parallelo, maiore, omnino saturate et uniformiter cœruleo, cinereo-piloso, dense reticulato. Capite magno, latiore quam pronotum; cavitate faciali profundiore; thorace tam lato quam abdomen; scutello postscutelloque gibbosis; mesopleuris bispinosis. Abdominis segmento secundo convexiore, tertio segmento minus profunde depresso, atque incrassato non abrupte sed insensibiliter. Ventre leniter virescente, secundo segmento basi nigro-bimaculato. Tarsis et articulationibus rufis; antennis obscure nigris, scapo secundoque articulo cœruleo-viridibus. — Long. 9 1/2 mill.

Une plus longue description serait inutile, tant l'*E. egregius* est voisin de l'*E. purpureus* Latr.; et, bien que cette dernière espèce soit très variable de couleur, il y a lieu de croire qu'il s'agit ici d'une espèce distincte. En effet, outre son coloris uniforme d'un beau bleu (quelques légers reflets verts sur les écailles, les tibias et le ventre), l'*E. egregius* a comme caractères différentiels sa forme parallèle, courte, trapue et plus robuste, la gibbosité du métanotum plus accentuée, le seconde segment abdominal sensiblement plus renflé, la dépression du troisième segment abdominal moins profonde, beaucoup plus large et évasée. La ponctuation est à peu près la même que chez l'*E. purpureus* Latr., mais elle n'est nullement ruguleuse et les intervalles des points sont plus plans et lisses. »

Patria: insula Cyprus (Coll. Abeillei).

3) *Corpus totum in mare cyaneum vel viridi-cyaneum; in femina: caput et thorax cyanea, facie viridi- vel igneo-aurata, abdominis dorsum saturate purpurascenti-violaceum, segmento primo vel secundo utrinque macula laterali cyanea viridique limbata.*

714. **Chrysis amabilis** Mocs.

Euchroeus amabilis, Mocs. Horæ. Soc. Ent. Rossicæ. XXIII. p. 36. ♀. (1888). — Rad. ibid. (genit. maris) (1888).

Sexus ab invicem satis differunt:

Submagna sat robusta, stilbiformis, læte-cyanea, parce albo-pilosa; genis longis ac latis, articulo secundo flagelli æquilongis; cavitate faciali angusta, minus profunda, punctato-coriacea, medio canaliculata, superne post stemma anticum semicirculariter acute-marginata, margine inferiore transverso medio parum sinuato; antennis crassis, fusco-nigris, articulo tertio mediocri, quarto parum longiore; clypeo sat longo, sparsim

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

punctato, mandibulis bidentatis, medio testaceis, apice nigris; vertice dense, mesonoti lateribus anticis sparsim, mesonoti parte postica cum scutello et postscutello vero regulariter crasse profundeque punctato-reticulatis et scrobiculatis; mesopleuris, præsertim area antica, profunde minus dense punctatis, apice arcuatim fortiter bidentato-excisis, antice in femina aureo-limbatis, postscutello inermi; abdominis segmentis dorsalibus sparsim cribrato-punctatis, interstitiis latis lævibus, tertio basi nigro-æneo, ante marginem callosum concaviusculo-immerso, serie anteapicali profunde immersa foveolis numerosis sat magnis et profundis rotundis, margine apicali denticulis circiter 12—13 bene distinctis acute-triangularibus, fere æquidistantibus, centralibus reliquis longioribus; alis fumato-hyalinis, a latere visis nigro-cyanescentibus, apice parum dilutioribus, venis nigris, cellula radiali lanceolata, tegulis in femina purpurascenti-violaceis, in mare cyaneis. — ♂ ♀ ; long. 10 mm.

Femina: cavitate faciali concinne viridi- et igneo-aurata, lateribus dense albo-sericeo-pilosa; antennarum articulo primo igneo-aurato, secundo testaceo; clypeo igneo-cupreoque aurato; abdominis segmentis dorsalibus purpurascenti-violaceis, segmento primo basi viridi-aurato et utrinque macula laterali lata subrectangulari læte-cyanea et anguste viridi-aureo-limbata ornato; segmentis ventralibus duobus primis viridi- et aureo-variegatis, secundo basi utrinque nigro-maculato, tertio toto igneo-aurato; femoribus auratis, anticis subtus cyanescentibus, genibus, tibiis tarsisque rufo-testaceis, tibiis externe dilute-coccineis seu nitore cœruleo-rufo.

Mas: cavitate faciali cyanea, lateribus parcius albo-sericeo-pilosa; antennarum articulis duobus primis viridi-auratis; clypeo viridi-aurato; abdominis segmentis dorsalibus ventralibusque unicoloribus læte-cyaneis; femoribus læte-viridibus, genibus, tibiis tarsisque rufo-testaceis, tibiis externe violascentibus.

Chrysidis torridae mihi valde similis et affinis; sed maior, mesonoto crasse sparsim concinne punctato-reticulato scrobiculatoque, abdominis segmentis dorsalibus sparsim cribrato-punctatis interstitiis latis lævibus, alis magis fumato-hyalinis; et insuper apud *Chrysidis torridae* feminam — secundum divum auctorem — abdominis segmentum dorsale secundum habet maculam illam lateralem læte-cyaneam viridi-aureoque limbatam, quæ in nostra specie in segmento primo invenitur.

« *Armure.* La branche du forceps large; le bord supérieur fortement échancré, vers l'extrémité cylindrique, recourbé, garni de poils. Volsella vers l'extrémité conique, arrondie fortement au bout, garnie de poils. La forme du crochet (avec son fourreau) est représentée sur la fig. 73 i; les crochets sont parsemés de poils minces et courts. » (Rad. l. c. tab. VI. fig. 73 a, 73 b, 73 c.).

Patria: Senegalia (Coll. Rad.!).

715. **Chrysis torrida** mihi.

Euchroeus candens, Dhlb. Hym. Europ. II. p. 371, n. 205. ♀. (1854) (nec Chrysis candens Germ.).
Euchroeus coerulans, Dhlb. Hym. Europ. II. p. 372, n. 206. ♂. (1854) (nec Chrysis cœrulans Fabr.).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Descriptiones secundum Dahlbom:

Feminæ: «Mediocris aut submagnus 3½ lin. decimal. long. robustus confertim punctatus cyaneus abdominis dorso saturate purpureo-violaceo, scapo et pedicello antennarum tibiis tarsisque luteis; alis disco ample brunneis nonnihil violascentibus, segmenti dorsalis tertii denticulis analibus robustis acute triangularibus plurimis regularibus, 11—12.

Observ. Corpus robustum. Caput punctulato-subreticulatum cyaneum; cavitas facialis tota planiuscula viridi-aurea subtiliter punctulato-coriacea albo-sericeo pilosella, medio canaliculata, superne transverse marginata: margine inæquali et cum verticis carinula arcuata cohærente, fere ut in *Chryside malachitica* formato; antennæ subbreves robustæ, flagellum nigro-fuscum, scapus et pedicellus lutei, ille postice aureo-nitens; clypeus magnus quadratus confertissime punctulatus aureus, disco transverse convexus; mandibulæ crassæ, basi virides, infra medium lutescentes, apice nigro-piceæ. Thorax cyaneus punctato-reticulatus, punctis pronoti amplioribus unde forma puncturæ reticulata ibidem optima; dorsulum violascenti- aut nigricanti-æneum; sternum viride, utrinque ad mesopleurarum spinas macula cuprea; femora viridi-aurea subtus viridi-cyanea, tibiæ tarsique lutea, illæ extus (ad certum situm luminis) nonnihil virescentes; alæ disco brunnescentes et ad certum situm luminis violascentes, basi apiceque hyalinæ, venis omnibus firmis nigro-piceis, cellula radiali triangulariter lanceolata valde incompleta. Abdominis dorsum saturate purpureo-violaceum confertius et subtenuiter punctatum; segmentum dorsale secundum utrinque macula laterali subrectangulari cyanea viridilimbata; segmentum dorsale tertium fere ut in *Euchroeo purpurato* constructum at paullo longius, basi lenius et amplius immersum, dentes anales plurimi regulares l. subæquales, punctura omnino eadem atque segmenti secundi. Venter læte viridis marginibus segmentorum aureis.»

Maris: «Mediocris 2¾ vix 3 lin. decimal. long. robustus punctatus viridi-cyaneus tarsis fuscis, alis brunneis nonnihil violascentibus, abdominis segmenti dorsalis tertii denticulis analibus valde irregularibus et inæqualibus 11—15.

Observ. Affinis et similis *Euchroeo candenti,* at facillime dignoscitur corpore breviore viridi-cyaneo, antennis pedibusque nunquam lacteo-pictis, abdominis dorso immaculato unicolore viridi-cyaneo vage l. remote punctato etc. Caput cyaneum antice virescens, constructio cavitatis facialis et clypei omnino eadem ut in *Euchroeo candente;* antennæ breves nigro-fuscæ, basi supra virides et subtus cyaneæ; mandibulæ piceo-brunneæ, basi virescentes. Thorax cyaneus; pronotum et dorsuli maculæ 2 (una in singula quaque arearum lateralium) virescentia; pectus et pedes viridia, plus minus cyanescentia; pronotum eximie reticulatum punctis nullo modo profundis sed fere planis amplis orbiculatis politis; mesonotum et postscutellum etiam punctato-reticulata sed confertius et profundius, punctis itaque non planis sed excavatis, scutelli et postscutelli crassissimis et profundissimis; metanoti angulo postico-laterales mediocres obtusi nonnihil curvi. Abdomen robustum obtuse rectangulum, longitudine capitis thoracisque simul sumtorum, dorso sat convexum politum remote punctatum punctis me-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

diocribus, viridi-cyaneum; segmenti secundi discus medianus longitudinalis subimpunctatus; segmentum tertium mediocre, secundo vix plus quam duplo brevius, transverso subrectangulum, margine anali leniter arcuatum, basi leniter transverso-immersum, ante seriem permodice convexo-incrassatum; series ante-apicalis foveolis numerosis parvis rotundatis; marginis analis denticuli fere ita inæquales et irregulares ut in *Euchroei purpurati* forma normali. Venter abdominis dorso concolor.»

Patria: Promontorium Bonæ Spei (Dhlb. et Mus. Vindob.!).

Animadversio. — Non dubito, quin duæ hæ species (quamvis feminam non nosco) per analogiam ad invicem pertineant. Quia ego *Euchroeum* tamquam subgenus tantum considero, nomina mutare debui.

4) *Abdominis segmento dorsali tertio margine apicali spinis testaceis pellucidis armato.*

716. **Chrysis pellucida** RAD.

Brugmoia pellucida, Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 26, n. 53. ♂. (non ♀), tab. II. fig. 12. (1877) sec. spec. typ. e coll. Rad.

Mediocris, robusta, cyanea vel viridis, plus minusve violaceo-picta, longius albo-pilosa; cavitate faciali angusta, sat profunda, medio dense subtilissime transverse-striata, lateribus punctato-coriacea argenteo-sericeoque pilosa, superne acute-marginata, margine transverso ramulum utrinque stemma anticum semicirculariter includentem emittente; antennis brevibus tenuibus ferrugineis, articulis duobus primis viridibus, tertio longitudine mediocri quarto parum tantum longiore; genis sat longis, antennarum articulo tertio æquilongis; mandibulis rufis, apice nigris, basi externe viridibus; pronoto sat longo, transverso, antice in medio parum impresso; postscutello convexo, metanoti dentibus postico-lateralibus mediocribus, subacutis, incurvis; mesopleuris apice utroque acute-bispinosis (sicut in reliquis speciebus huius subgeneris); vertice, pro- et mesonoto minus profunde punctato-subreticulatis, scutello et postscutello regulariter crassiusque punctato-reticulatis; abdomine brevi, ovato-subrectangulo, dorso convexo, segmentis: primo virescenti, 2—3 saturate-cyaneis nigroque violascentibus, primo parte truncata crassius longitudinaliter rugoso, secundo carinula mediana distincta sublævi ac polita, tertio brevi, secundo fere triplo breviore, basi transverse subarcuato-sulcato, ante seriem modice convexo-incrassato, duobus primis sat dense crassius, a latere visis parum subreticulato-punctatis interstitiis angustis lævibus, tertio parum subtilius punctato, foveolis minus distinctis parvis, margine apicali denticulis longis pallidis pellucidis circ. decem, subæqualibus, acutis et duobus lateralibus late-triangularibus acutis; ventre pedibusque nigro-violaceis, his geniculis, tibiarum apice tarsisque testaceis; alis albo-hyalinis, venis pallide-fuscis, cellula radiali sublanceolata valde incompleta, apice longe remota, tegulis violaceis rufo-marginatis. — ♂; long. 8—9 mm.

Patria: Turkestania (desertum Kisil-kum, Coll. Rad.).

Animadversio. — Prouti ex hac descriptione videtur, genus *Brugmoia* Rad. nihil aliud est, quam Dahlbomi genus: *Euchroeus*.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

717. **Chrysis pallispinosa** Walk.

Euchraeus pallispinosus, Walk. List of Hym. collect. by Lord in Egypt. p. 6, n. 25. (1871).

«Golden green, with short whitish pubescence. Head purple on each side between the eyes and the hind border. Antennæ black; first joint purple. Thorax purple, with a broad golden green stripe, of which the fore part has a cupreous disk. Abdomen bluish green, with a broad transverse subapical furrow; tip green, with eleven pale testaceous spines. Legs bluish green; knees, tarsi and tips of tibiæ pale testaceous. Wings pellucid; veins black. Length of the body 4 lines.»

Patria: Aegyptus (Cairo).

II. *Postscutellum mucronatum.*

718. **Chrysis festiva** Fabr.

Chrysis festiva, Fabr. Ent. Syst. II. p. 239, n. 3. (1793); Syst. Piez. p. 171, n. 3. (1804). — Lep. Annal. du Mus. Hist. nat. VII. p. 125, n. 1. (1806).
Euchroeus festivus, Dhlb. Hym. Europ. II. p. 376, n. 209. (1854).

Descriptio secundum Dahlbom:

«Mediocris viridissimus nitidus «ano serrato cœruleo» alis sordide hyalinis.

Observ. Corpus viridissimum, nonnunquam in æneum vergens. Caput, pronotum et dorsulum modice crasse punctata; pleuræ, scutellum et postscutellum crassissime punctata scabra; abdominis segmenta dorsalia medio modice punctata et ibidem maxime nitida subpolita, ad margines confertim punctulata; abdominis limbus l. margo analis punctatissimus cœruleus lineola mediana convexa viridi. Antennæ nigræ basi viridi-ænescentes. Clypeus semilunatus margine apicali summo depresso testaceo. Mandibulæ fulvæ, apice piceæ. Postscutelli mucro l. processus discoidalis horizontalis orbiculatus margine 5-dentatus: dentibus utrinque lateralibus 2 parvis subconicis, dente postico-centrali maximo rotundato, angulato et crenulato. Pedes virides, genubus, apicibus tibiarum tarsisque totis luteis. Alæ sordide hyalinæ, scil. umbris fuscis minus determinatis.»

Patria: Guinea (Fabr.) et Aegyptus (Spin.).

Subgenus 12. SPINOLIA Dhlb.

Capite thorace latiore; alis anticis cellula radiali valde incompleta, fere tantummodo dimidiata propter venam radialem subrectam iam in disco alæ desinentem; mesopleuris apice plerumque inermibus, elongato-subrotundatis, in Chrys. Rogenhoferi unispinosis; abdominis segmenti tertii dorsalis margine anali denticulis numerosissimis minutis submicroscopicis (in maribus magis conspicuis quam in feminis, in quibus margo apicalis nonnunquam potius tantum subtilissime crenulatus apparet) æqualibus subtilis-

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

sime serrulato, lateribus (iuxta initium seriei anteapicalis et denticulorum minutorum) acute- vel subacute-dentato, sicut in genere *Hedychro,* sensu nostro.

Differentia sexus: facie in feminis inter oculos plerumque angusta, in maribus multo latiore, hic punctatura ubique fortiore, abdominis segmenti dorsalis tertii margine anali breviter-, in femina latius arcuato.

Ex hac subgenere quattuor iam cognitæ sunt species, quarum conspectus synopticus sequens est:

1 (2). Ventre cyaneo-viridi vel læte-cyaneo; fronte longitudinaliter et irregulariter densius subtiliter striata; pro- et mesonoto cum scutello cupreo-æneis *insignis* Luc.

2 (1). Ventre igneo- vel cupreo- vel viridi-aurato; thorace aliter colorato.

3 (6). Abdominis segmentis dorsalibus totis cupreo- vel igneo-purpureoque auratis; ventre igneo- vel cupreo-aurato; fronte longitudinaliter non striata neque antennis pedibusque ex parte rufis.

4 (5). Etiam vertice et toto thorace supra cupreo-auratis; mesopleuris apice obtuse-tuberculatis ... ... *Rogenhoferi* n. sp.

5 (4). Vertice, pronoto, mesonoti loborum lateralium vitta vel totis, scutello alarumque tegulis viridi- et cupreo-auratis; occipite, pronoti truncatura antica mesonotique parte reliqua et postscutello læte-cyaneis vel violascenti-cyaneis; mesopleuris apice non tuberculatis ... ... *lamprosoma* Först.

6 (3). Abdominis segmentis dorsalibus: primo toto et secundi parte basali viridi-, huius parte apicali et tertio toto concinne cupreo-auratis; ventre viridi-aurato; fronte sat dense suboblique subtiliter irregulariterque striata; thorace supra cœrulescenti-cyaneo, pronoti parte postica, scutello, postscutelli medio viridi-subauratis; antennis pedibusque maxima ex parte rufis ... ... *Morawitzii* n. sp.

*

719. **Chrysis Rogenhoferi** n. sp.

Mediocris, robusta, cyanea, parce breviterque cinereo-pilosa; vertice, pro- et mesonoto, scutello, postscutello, tegulis et abdominis segmentis dorsalibus cupreo-auratis, mesopleuris supra viridi-maculatis; facie planata, dense punctato-coriacea, medio longitudinaliter anguste canaliculata; fronte lata, convexa; antennis brevibus, crassis, nigris, cano-puberulis, articulis: primo violaceo, secundo supra viridi, tertio longo, quarto duplo longiore; clypeo viridi-subaurato, apice nigro-æneo; genis valde brevibus sublinearibus; pronoto sat longo, transverso, antice in medio parum impresso; vertice, pro- et mesonoto cum scutello dense subtilius punctato-coriaceis, postscutello crassius punctato-subreticulato; metanoti dentibus postico-lateralibus validis, brevibus, latis subobtusis; mesopleuris apice obtuse-spinosis seu potius obtuse-tuberculatis; abdominis segmentis dorsalibus: primo parte truncata irregulariter minus crasse longitudinaliter rugosiusculo, medio supra breviter subsulcato, margine apicali anguste subtiliter punctulato, secundo carinula mediana basali lævi, segmentis omnibus brevibus capite thoraceque vix longioribus convexisque valde dense subtiliter punctulato-coria-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

ceis; tertio foveolis parum immersis obsoletis, margine apicali brevi punctulato, imo margine anguste nigro-æneo, arcuato, denticulis fere nullis, lateribus distincte angulatis; ventre igneo-cupreoque aurato, segmento secundo basi utrinque maculis et segmentorum marginibus nigris; femoribus nigro-violaceis, tibiis viridibus, tarsis fuscis; alis hyalinis, disco parum sordidis, venis fuscis. — ♀; long. 8 mm.

Species quoad colorem cum *Chryside Dournovi* Rad. multum habet similitudinis. Patria: Græcia (Attica, Mus. Cæs. Vindob.).

Animadversio. — Insigne hoc animal, in honorem Clariss. Domini A. Rogenhofer, Musæi Cæsarei Vindobonensis Custodis — cuius benignitate iam totius usus sum — denominatum, a speciebus reliquis huius subgeneris in nonnullis aberrat: tuberculo nempe mesopleurarum et abdominis segmenti tertii margine apicali denticulis microscopicis nullis; sed in reliquis illis penitus convenit. Mihi unicum tantum specimen contigit lustrare illudque feminam et detecto mare collectisque exemplaribus numerosis, notæ illæ aberrantes forsan non constantes obvenient?

720. **Chrysis insignis** Luc.

Chrysis insignis, Luc. Explor. de l'Algér. Zoolog. III. p. 307, n. 345. Hym. tab. XVII. fig. 2. ♂. (1849). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 76 et 87. tab. II. fig. 50. (margo apic.) (1879) (excl. syn.?).

Mediocris, robusta, parcius cinereo-pilosa; capite læte-cyaneo, nitido, vertice viridi- et cupreo-æneo; mandibulis bidentatis, nigris, medio rufis, basi cyaneis (♂) vel viridibus (♀); genis linearibus, clypeo viridi-aurato; antennis tenuibus, haud longis, apicem versus fortiter attenuatis, articulis duobus primis in femina viridibus, in mare cyaneis, 3—5 fuscis, reliquis fusco-rufis; facie planata, dense subtransverse coriaceo-rugosa, medio canaliculata; fronte plana, in mare subtus utrinque impressa, longitudinaliter et irregulariter densius subtiliter striata, vertice dense minus crasse punctato-subreticulato; thorace crasso, quadrato-subcylindrico, pro- et mesonoto, scutello et postscutello vel toto vel solum in medio cupreo-æneis, subobscuris; metanoto læte-cyaneo, mesopleuris in mare concoloribus, in femina viridi-æneis; thorace supra coriaceo densius punctato-reticulato, punctatura in mare fortiore magisque distincta, quam in femina, pronoto brevi transverso, parte antica in medio impressa; abdomine thoracis latitudine, segmentis dorsalibus igneo- vel coccineo-auratis, segmento primo macula baseos semicirculari violacea viridi-aureo-limbata, irregulariter longitudinaliterque transverse-striata, superne spatio lævi sparsim crasseque punctato, supra in femina valde dense subtilius, in mare paulo dispersius fortiusque rugosiuscule-punctatis, margine apicali anguste lævi ac polito, segmento secundo carinula mediana obsoleta, tertio serie anteapicali foveolis in femina obsoletis, in mare aliquot minus profundis distinctis, imo margine nigro-violaceo, in femina vix, in mare distincte subtilissime serrulato; ventre pedibusque in femina cyaneo-viridibus, tarsis fuscis, in mare læte-cyaneis, ventre nitidissimo parum virescenti, tarsis fusco-rufis; alis subhyalinis, parum sordidis, venis fuscis, tegulis virescenti-æneis. — ♂♀; long. 8 mm.

Chrys. lamprosomati Först. similis et affinis; sed fronte longitudinaliter et irregulariter densius subtiliter striata (non vero subreticulata), antennis apicem versus fusco-rufis,

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

thorace supra scutelloque cupreo-æneis, sine vittis dorsuli scutelloque viridi-aureis, abdominis segmento tertio margine anali in femina nigro-violaceo, non vero concinne purpureo, ventre non igneo- vel cupreo- et viridi-aurato; a *Chrys. Rogenhoferi* vero: fronte aliter sculpturata, vertice thoraceque supra non cupreo-æneis, iam satis distincta.

Patria: Algeria (Lacalle et Bougie, Luc.; Sebdou, Mus. Hung.; Bône, Coll. Pérezi!).

Animadversio. — Mihi haud impossibile esse videtur, Clariss. Dom. Abeille specimen typicum Lucasii cum *Spinolia magnifica* Dhlb. non recte comparavisse. Descriptio enim *Chrysidis insignis,* quamvis magnopere incompleta, ad hanc speciem magis applicari potest, quam ad *Spinoliam magnificam.* Constat nempe mihi ex descriptione, Lucasium exemplaria masculina præ oculis habuisse; et quamvis de sculptura singulari faciei frontisque nullam faciat mentionem, figura non tam robusta tabulæ et expressio illa unica «abdomine infra viridi-subcyaneo» huic animali magis convenit, quam *Spinoliae magnificae,* magnæ ac robustæ, ventre semper igneo- vel cupreo- et viridi-auratæ. Insuper etiam animal nutrix *Chrysidis lamprosomatos: Odynerus spiricornis* Spin. nempe non est Algeriæ seu Juliæ Cæsareæ incola. — De cetero comparationis causa *Chrysidis insignis* descriptio apud Lucasium sequens est:

«Long. 9 millim. enverg. 14 millim.

Capite sat fortiter granario, viridi, in medioque cyaneo; antennis fusco-tomentosis, duobus primis articulis cyaneo-violaceis; thorace granario, prothorace, lateribus mesothoracis metathoraceque antice viridibus; mesothorace subtus viridi subcyaneo metathoraceque ad basim cyaneo-violaceo; abdomine fortiter confertimque punctato, rubro aurato metallico, primo segmento antice cyaneo marginato, infra viridi subcyaneo; pedibus cyaneis, tarsis rufescentibus.

Elle est plus grande que l. *C. ignita,* dans le voisinage duquel cette espèce vient se ranger. La tête, assez fortement chagrinée, est d'un vert foncé, avec toute la partie située entre les yeux, et où viennent s'insérer les antennes, d'un bleu foncé; une tache de cette couleur se fait remarquer derrière les yeux; il est aussi à remarquer qu'à sa partie antérieure elle est finement bordée de vert metallique. Les mandibules sont d'un noir roussâtre. Les antennes, d'un brun tomenteux, ont leurs deux premiers articles d'un bleu violacé. Tout le thorax est plus fortement chagriné que la tête; le prothorax ainsi que les paraptères, les côtes du mésothorax et la partie antérieure du métathorax sont d'un vert foncé; tout le mésothorax en dessus est d'un vert légèrement teinté de bleu, avec la base du métathorax d'un beau bleu violacé; tout le sternum est de cette couleur, ainsi que les parties latérales du prothorax. Les ailes, à nervures noires, sont très-légèrement teintées du brun roussâtre. L'abdomen, parsemé de points assez forts et serrés, est d'un rouge doré, avec un reflet d'un vert metallique, et toute la partie antérieure du premier segment, bordée de bleu; en dessous il est d'un vert légèrement teinté de bleu. Les pattes sont bleues, avec les tarses roussâtres.» — Si tamen *Chrys. insignis* Luc. et *lamprosoma* Först. una eandemque essent species, tunc hic descriptum animal: *Chrysidem (Spinoliam) Algiram* nominandam optarem.

721. **Chrysis lamprosoma** Först.

Chrysis lamprosoma, Först. Verh. nat. Ver. preuss. Rheinl. X. p. 311, n. 74. ♀. (1853) sec. spec. typ. Mus. Nat. Hung.

Spinolia magnifica, Dhlb. Hym. Europ. II. p. 363, n. 202. ♂. (1854).

Chrysis segusiana, Gir. Verh. Zoolog.-Botan. Gesellsch. Wien. XIII. p. 23. ♂ ♀. (1863).

Chrysis sulcata, Rad. Horæ Soc. Ent. Rossicæ. III. p. 302, n. 20, tab. III. fig. 11. ♀. (1866) sec. spec. typ. e coll. Rad. (nec Dhlb.).

Chrysis pulchra, Rad. Horæ Soc. Ent. Rossicæ. XV. p. 143, n. 29. ♀. (non ♂.) sec. spec. typ. e coll. Rad. (1879).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Magna, robusta, læte- vel violascenti-cyanea, parcius cinereo-alboque pilosa; vertice viridi-aurato, pronoto (præter impressionem basalem anticeque cyaneis) et scutello cupreo-auratis, mesonoti lobis lateralibus vitta vel totis tegulisque alarum viridi- vel cupreo-auratis; facie planata punctato-coriacea, medio longitudinaliter canaliculata, superne depresso-convexa, non marginata; antennis mediocribus, minus robustis, fuscis, cano-puberulis, articulis duobus primis et tertii basi cyaneis vel viridibus, tertio longo, quarto quintoque simul sumptis fere æquilongo; clypeo magno, transverso-inæquali, regione apicali depresso nitido nigro-æneo et utrinque inter centrum et marginem foveolato, ad centrum marginis apicalis leniter arcuato-emarginato; genis brevibus, antennarum articulo tantum secundo æquilongis; pronoto sat longo transverso-rectangulo, antice in medio profunde impresso; postscutello convexo, metanoti dentibus postico-lateralibus brevibus, obtusis; mesopleuris punctulato-coriaceis viridi-maculatis vel lineatis, subtus acute-marginatis; vertice thoracisque dorso punctato-coriaceo subreticulato; abdomine brevi, longitudine capitis thoracisque simul sumptorum, igneo- vel purpurascenti-aurato, dorso convexo, segmento primo macula baseos semicirculari violascenti-cyanea viridique limbata, longitudinaliter substriato, supra sparsim punctato interstitiisque punctulatis, centro fossula sublævi; margine apicali segmentorum primi secundique lævi ac polito; 2—3 imo basi nigro-æneis, secundo carinula mediana abbreviata nigro-ænea vel purpureo-ænea; segmentis omnibus dense punctato- vel in speciminibus minoribus punctulato-coriaceis; tertio supra seriem leniter incrassato-convexo, foveolis mediocribus vel submagnis rotundatis numerosis, margine apicali in femina concinne purpureo, brevi, dense punctulato, subtilissime serrulato, in mare magis distincte quam in femina, lateribusque utrinque acute- vel subacute-distincte angulato; ventre igneo- vel cupreo-aurato, in speciminibus minus recentis viridi-subaurato, segmento secundo basi utrinque nigro-maculato; pedibus violascenti-cyaneis, tibiis externe viridi-subauratis, tarsis fuscis; alis hyalinis, disco et ad costam cellulæ radialis nonnihil sordidis, venis mediocribus piceis, cellula radiali valde incompleta. — ♂ ♀; long. 9—12 mm.

Patria: Tyrolis (Bozen, Calvarienberg, Coll. Schmiedechnechti!); Italia (Suse in Pedemontano, Gir.); Constantinopolis (Dhlb.); Asia minor (Brussa, Mus. Hung. et Vindob.!); Caucasus (Rad.!), species elegantissima et ubique rara.

722. **Chrysis Morawitzii** n. sp.

Magna, robusta, parce cinereo-alboque pilosa; facie angusta, frontem versus fortiter dilatata, cœrulescenti-cyanea, dense minus crasse transversim subrugosa, medio canaliculata; fronte planata, cœrulea, sat dense suboblique subtiliter et irregulariter striata; vertice dense minus crasse rugoso-punctato viridi-cyaneo, parum virescenti, circa stemmata postica et occipite magis cœruleis; antennis haud longis, tenuibus, apicem versus fortiter attenuatis, scapo toto et articulis 2—3 supra viridi-subauratis, his infra articulisque reliquis rufis, parum infuscatis, tertio sat longo, sequentibus duobus

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

simul sumptis æquali; clypeo viridi-cyaneo, ante apicem transverse impresso, apice parum reflexo, virescenti; genis brevibus, linearibus; mandibulis basi viridi-æneis, medio rufis, apice piceis; thorace crasso, quadrato-subcylindrico, sat dense fortius punctato-subreticulato, cœrulescenti-cyaneo, pronoti parte postica, scutello, postscutelli medio pleurisque viridi-subauratis; pronoto sat longo, parte antica in medio parum impresso, scutello convexo, metanoti dentibus postico-lateralibus brevibus, robustis, obtusis; abdomine thoracis latitudine, segmento primo toto secundique parte basali viridi-auratis, macula baseos semicirculari cyanea, secundi parte apicali et tertio toto concinne cupreo-auratis, primo fortius dispersiusque, secundo densius subtiliusque, tertio valde dense rugosiuscule-punctatis, 1—2 margine apicali anguste lævi ac polita ænescenti, secundo carinula mediana sat distincta purpurascenti, tertio serie anteapicali foveolis numerosis subrotundis profundisque, margine apicali sat distincte serrulato lateribusque utrinque subacute-angulatis; ventre viridi-aurato, segmento secundo utrinque nigro-maculato et marginibus segmentorum violaceo-ænescentibus; femoribus totis et tibiis solum externe viridi-auratis, his intus et apice cum geniculis tarsisque rufis; alis subhyalinis, parum sordidis, venis fuscis, tegulis viridi-cyaneis. — ♂; long. 12 mm.

Faciei frontisque sculptura *Chrys. insigni* Luc. similis; sed multo maior aliterque colorata.

Magnificam hanc speciem cum aliis aliquot insignibus benevolentiæ Dom. Ferdinandi Morawitz, Hymenopterologiæ doctissimo cultori, debeo.

Patria: Territorium Maris Caspii (Krasnowodsk, Mus. Hung.).

Subfamilia VII. PARNOPINAE Aaron.

Transact. Amer. Ent. Soc. XII. p. 211. (1885).

Maxillæ et labium abnormia: ligula et maxillarum processus longissima, producta in rostrum tenue, filiforme, promuscidem Apum simulans, in quiete sub pectore reflexum. Pronotum transverso-rectangulum. Alæ anticæ cellula discoidali distincta. Unguiculi tarsorum infra mutici. Abdomen segmentis cataphractis conspicuis 3 (♀) vel quattuor (♂), supra depresso-convexum, subtus aut planiusculum aut subfornicatum, segmenti ultimi margo apicalis serrulatus.

Ex hac subfamilia hucusque unicum tantum cognitum est genus.

Genus XIII. PARNOPES Latr.

Précis des charact. génériques des Insectes p. 127. (1796); Hist. nat. III. p. 318. (1802) et XIII. p. 236, gen. 359. (1805); Gen. Crust. et Ins. IV. p 47, gen. 476. (1809). — Dhlb. Hym. Europ. II. p. 372, gen. 12. (1854).

(*πάρνοψ, πάρνοπος* vel *πάρνοπες, ὁ* = animal Antiquorum quoddam damniferum).

Corpus: elongatum, robustum, magnum aut mediocre.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Caput: rotundato-triangulum; *cavitate faciali:* pro scapis quiescentibus minus profunda. *Antennae:* breves vel mediocres, plerumque crassiusculæ. *Clypeus:* submagnus, transversus, latus. *Mandibulae:* margine interno ante apicem acute unidentatæ. *Genae:* sublineares, fere nullæ. *Occiput:* angulo spinoideo nullo.

Thorax: longiusculus, subtetraëdro-cylindricus aut subcylindricus vel quadrato-subcylindricus. *Pronotum:* proportionaliter longum. *Scutellum disco:* elevatum, planum, trapezinum. *Postscutellum:* centro aut tuberculatum, aut mucronatum: mucrone plano subhorizontali abdomen versus directo et fere instar sellæ equestris formato, margine lacero. *Mesopleurae:* subtiliter marginatæ: margine aut subintegerrimo aut crenulato.

Pedes: fere ut in *Chrysidibus* constructi, sed minus robusti, spinulis articulorum in tarsis apicalibus longioribus.

Alae: mediocres, plurimis apicem abdominis vix attingentes, hyalinæ vel parum sordidæ; *anticae:* tantummodo duabus cellulis completis, costali et mediali nempe; cellula submediali prima subcompleta, cellula radiali solum inchoata, propter venam radialem paulo post stigma desinentem; *posticae:* venis duabus: costali et postcostali atque cellula costali.

Abdomen: ovato-subrectangulum; segmentum dorsale ultimum maximum, parte basali et maxima modice convexum, ante marginem analem utrinque elliptico- aut ovato-immersum carinula mediana brevi convexaque intercedente, serie anteapicali nulla, limbo anali crasso duplici serie serrulato: serie superiore marginem dorsalem sequente aut a tuberulis aut a spinulis microscopicis constituta, serie inferiore secundum marginem ventralem ducta et denticulis vel subtriangularibus vel spinoideis distinctis instructa. *Tubulus feminarum:* absconditus, plerumque invisibilis.

Differentia sexus: facile observanda e numero segmentorum dorsalium, abdomen in femina e tribus, in maribus e quattuor constans segmentis.

Generis *Parnopes* iam 11 cognitæ sunt species, Australia excepta, ex omni orbis terrarum parte; et quidem: e regione palæarctica 4, æthiopica 3, orientali 1, nearctica 2 et neotropica 1. — Ex his apud Dahlbomum 4 tantum invenimus species.

*

I. *Abdominis segmenta dorsalia viridi-, cyaneo-, violaceo- et viridi-aureo variegata, sed nunquam ex parte carnea vel testacea.*

723. **Parnopes apicalis** WALK.

Parnopes apicalis, Walk. List of Hym. collect. by Lord in Egypt. p. 6, n. 24. (1871).

»Golden green. Head and thorax scabrous, with whitish pubescence. Front slightly excavated; mouth black, rostriform. Antennæ black; first joint green. Hind part of the thorax with a purple tinge. Abdomen purple towards the tip; apical segment with white pubescence, and with a dentate and slightly retuse border; under side black. Legs green; knees, tarsi and tips of tibiæ tawny. Wings cinereous; veins black. Fore

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

wings brownish on more than one-third of the apical part. Length of the body 4'/₂ lines.»

Patria: Tajura in Africa circa Mare Rubrum.

724. **Parnopes smaragdinus** SMITH.

Parnopes smaragdina, Smith, Transact. Ent. Soc. Lond. p. 453, n. 6. ♂ ♀. (1874).

«Female. — Length 4'/₂ lines. Head and thorax green, abdomen green, with tints of blue in certain lights. Head, thorax and tegulæ of the wings strongly punctured, the scutellum most coarsely so; the scape of the antennæ green, the flagellum black, with one or two of the basal joints obscurely rufo-piceous. Thorax: the posterior margin of the post-scutellum trilobate, the central lobe small and rounded; wings fusco-hyaline, darkest towards their base; legs green, with the tarsi and tibiæ within rufo-testaceous. Abdomen: finely and closely punctured; on the basal segment the punctures are distant at its base, and very fine and close at its apical margin; the apical margin of the third segment finely denticulate; the base and apex of the segment violet.

The male, in colour and punctation, exactly resembles the female, the apical margin of the fourth segment being similarly denticulated.»

Patria: Senegambia Africæ occidentalis.

725. **Parnopes viridis** BRULLÉ.

Parnopes viridis, Brullé, Hym. IV. p. 13. ♂. (1846).

«Metallico-viridis, punctata, apice, scutello et metathoracis basi subcyaneis, alis obscuris, tibiis tarsisque rufis, scutello et metathoracis basi rugosis. Mas.

Le corps est d'un vert métallique, légèrement bleuâtre sur l'écusson, la première région du métathorax, les paraptères et le dernier segment de l'abdomen. Le premier article des antennes est d'un vert métallique, ainsi que les cuisses et une partie du côté extérieur des quatre jambes de devant. L'extrémité des cuisses, les jambes et les tarses sont roux et le bout des articles des tarses postérieurs est brun. Les antennes sont noires, excepté leur premier article. Les segments du ventre sont bruns avec le bord plus pâle. Le base des mandibules est rousse. Les ailes sont obscures,comme enfumées, avec les nervures principales noires.

Le vertex et le thorax sont parsemés de gros points peu rapprochés, dont les intervalles sont très-finement ponctués. L'écusson et la première région du métathorax sont fortement rugueux; ce dernier est avancé en arrière et trilobé. L'abdomen est parsemé de points rares; les bords antérieur et postérieur de chaque segment sont couverts de points plus petits et très-nombreux. Le dernier segment offre deux fortes impressions en arrière et son bord est crénelé et épineux. Les pattes sont ponctuées.

Longueur du corps: 0,012.»

Patria: India orientalis (Pondichéry).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

726. **Parnopes Edwardsii** Cress.

Euchroeus Edwardsii, Cress. Transact. Amer. Ent. Soc. VII. Proc. Ent. Sect. p. IV. (1879).
Parnopes Edwardsii, Cress. l. c. p. X. (1879). — Aar. Transact. Amer. Ent. Soc. XII. p. 244. ♂ ♀. tab. VIII. fig. 49. ♀. (1885).

»Bright metallic-green, more or les varied with blue in certain lights; head rugose; thorax coarsely and confluent punctured; postscutellum with a quadrate, transversely compressed process on the disk above; wings fusco-hyalin, paler at base; tarsi fuscous, pale at tip; abdomen subdepressed, deeply punctured, third dorsal segment with a deep, oblique subapical groove on each side, not reaching the base of the segment, the apical margin finely and irregularly spinulose; venter piceous, polished. — Length 45 inch.« (Smith l. c.).

»The color varies from emerald-green with golden or brassy reflections to deep blue and purple with some green reflections; two specimens from Vancouver are dull colored, partly fuscous on the thorax, the single male specimen is deep blue. One Californian specimen has strong cupreous and golden reflections on the pro- and mesothorax. Projection of the poscutellum quadrate, straight and entire on its posterior margin. The many small apical teeth are fine and sharp.

California and Vancouver Island; seven specimens including the types.« (Aaron l. c.).

Patria: America septentrionalis (California, Cress.; Vancouver Island, Aaron; Webber lake, Coll. Saussurei!).

727. **Parnopes chrysoprasinus** Smith.

Parnopes chrysoprasina, Smith, Transact. Ent. Soc. Lond. p. 454, n. 8. ♂. (1874). — Aar. Transact. Amer. Ent. Soc. XII. p. 245. ♂. (1885).

Submagnus, sat robustus, viridis, parum violascens, cinereo-pilosus; cavitate faciali minus profunda, sublævi ac nitida, superne non marginata; antennis brevibus, crasiusculis, rufo-testaceis, cano-puberulis, parum, scapo fortius infuscatis, flagelli articulo secundo sequentibus duobus simul sumptis æquali; genis brevibus, linearibus; vertice thoraceque supra crasse punctato-reticulatis; postscutelli processu subquadrato, depresso, apice in medio sat profunde exciso, lateribus subrotundis; mesopleuris crasse rugoso-punctatis, inermibus, margine apicali arcuatis; pronoto antice in medio sat profunde longitudinaliter sulcato; metanoti angulis postico-lateralibus brevibus, robustis, subacutis, apice incurvis; abdominis segmentis dorsalibus viridibus, segmentis parte basali et imo apicali, quarto fere toto violascentibus, primo parte truncata trifossulato, 1—2 disco crasse, sed dispersius, 3—4 densius paulo subtiliusque punctato-rugosis, 2—3 basi et apice punctatura multo subtiliore densioreque, tertio carinula mediana distincta, margine apicali irregulariter crenato-denticulato, 2—4 lateribus postice angulis acutis sordide-pellucidis; ventre fusco-testaceo, subnitido; femoribus tibiisque externe viridibus, his intus cum geniculis tarsisque rufo-testaceis infuscatisque; alis fusco-hya-

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

linis, basi dilutioribus, venis fuscis, tegulis magnis, fusco-testaceis, marginibus pallidioribus, crasse punctatis, basi et externe violaceo tinctis. — ♂; long. 10 mm.

Præcedenti similis; sed processu postscutelli apice in medio sat profunde exciso, facillime distinguendus.

Patria: America septentrionalis (California septentrionalis, Smith et Mus. Vindob.!).

II. *Abdominis segmenta dorsalia ex parte testacea, rufo-testacea vel carnea.*

728. **Parnopes Fischeri** Spin.

Parnopes Fischeri, Spin. Annal. Soc. Ent. France. VII. p. 455, n. XII. ♀. (1838). — Dhlb. Hym. Europ. II. p. 383, n. 212. ♀. (1854).

Descriptio secundum Dahlbom:

«Mediocris 3 lin. decimal. long. sparse aut subremote punctata polita viridissima tegulis viridi-cyaneis, antennis genibus tibiisque ex parte tarsisque totis lutescentibus, margine anali triangulari subcarneo, alis hyalinis ad costam sordidis venis firmis piceis.

Observ. Pictura, punctura et politura corporis nec non forma segmenti abdom. dorsalis ultimi a reliquis speciebus huius Generis valde diversa.

Corpus lineari-subellipticum, angustius et multo minus robustum quam in *Parnope carnea*, viridissimum nitidum. Caput confertim punctato-rugulosum; cavitas facialis mediocris subquadrata planiuscula punctulato-coriacea albo-sericea, superne libera nec marginata; antennæ perbreves, scapus viridi-cyaneus, subtus castaneo-lineatus, pedicellus castaneus, flagellum subferrugineo-fuscum; clypeus magnus transversus subsemilunatus punctulatus, transversaliter subcarinato-convexus, margo apicalis (anne labrum clypeo arctissime coniunctum?) albus submembranaceus leniter arcuato-emarginatus l. potius arcuato-detrusus; mandibulæ castaneæ, basi apiceque nigro-piceæ; maxillæ nigro-piceæ violascentes, palpi lutei, ligula his concolor. Thorax rectangulariter cylindricus, dorso convexo-depressus; pronotum nitidum vage punctatum interstitiis non politis at subtilissime punctulatis, utroque margine laterali leniter arcuato-emarginatum, hinc omnes anguli laterales et antici et postici nonnihil prominuli; dorsulum politum nitidissimum vage l. remote sed irregulariter punctatum; scutellum crassissime punctato-reticulatum et scrobiculatum; metanotum coriaceum plus minus nitidum, postscutelli processus crasse punctato-rugosus, irregulariter subsemicircularis, margine inæqualiter crenulatus; metanoti anguli postico-laterales mediocres; mesopleuræ-nitidæ crasse punctato-reticulatæ, margine apicali arcuatæ et crenulato-denticulatæ; tibiæ virides; femora tibiæque antica latere antico, femora posteriora postice, tibiæ posteriores latere infero, genua et apices tibiarum omnia tarsique toti, lutea. Abdomen ovato-subconicum, dorso politum viridissimum punctis et mediocribus et minutis vage adspersum; segmentum dorsale tertium conico-subtriangulare, utraque impressio antemarginalis obliqua sublinearis; margo analis subcarneus irregulariter multispinulosus. Venter (in specimine communicato) piceus fornicatus, in speciminibus recentioribus forsitan metallice violascens, etenim Col. Spinola l. c. dixit: «Ventre violet metallique.»

Patria: Aegyptus.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

729. **Parnopes elegans** KLUG.

Parnopes elegans, Klug, Symb. phys. Dec. V. tab. 45, fig. 1. ♀. (1845). — Dhlb. Hym. Europ. II. p. 382, n. 210. ♀. (1854).

Descriptio secundum Dahlbom:

«Mediocris 2'/₂ lin. decimal. long. viridis aureo-nitida, ore, antennis, tegulis, pedibus margineque anali testaceis aut sublutescentibus, alis hyalinis venis tenuibus testaceis.

Observ. Parnopi carneae quoad picturam quodammodo similis; at facile dignoscitur corpore breviore magis nitido, ore, antennis, pedibus, alarum tegulis et venis abdomineque testaceis, hoc dorso viridi-aureo-micante, postscutello vix tuberculato etc. segmentum dorsale tertium ad apicem utrinque — ut in *P. carnea* — ovato-impressum, impressione albo-sericea.»

Patria: Nubia («ad Ambukohl Aethiopiæ mense Julio semel lecta» Klug. l. c.).

730. **Parnopes fulvicornis** CAM.

Parnopes fulvicornis, Cam. Biolog. Centr.-Americ. Hym. p. 466, n. 1, tab. XX. fig. 1, 1a. (1888).

Mediocris, minus robustus, parce albo-pilosus, læte æruginoso-æneoque viridis, antennis (scapo supra viridi-aurato), clypei apice, alarum tegulis, abdominis segmento dorsali tertio margine apicali, ventre, geniculis, tibiis tarsisque rufo-testaceis vel fulvis; genis fere nullis; cavitate faciali planiuscula, subtiliter punctulato-coriacea denseque argenteo-sericeo-pilosa; antennis brevibus, crassiusculis, articulo tertio brevi, quarto quintoque simul sumptis æquali; vertice circa stemmata impresso sat dense, thorace supra dispersius crassiusque punctato-reticulatis; processu postscutelli sat longo, subquadrato, fusco-testaceo, apice in medio profunde exciso; scutelli et postscutelli lateribus argenteo-sericeo-pubescentibus; abdominis segmentis dorsalibus dense sat crasse punctatis, 2—3 imo margine basali testaceo-brunneo parumque violascenti pellucido, primo parte truncata trifossulato, 1—3 margine apicali mesopleurisque argenteo-sericeo-pubescentibus, tertio ante marginem apicalem utrinque transverse fossulato, imo margine apicali inæqualiter serrulato; femoribus tibiisque anticis in medio æneo-viridibus; alis hyalinis, venis testaceis, tegulis magnis ovalibus, testaceis, crassius punctatis. — ♀; long. 6'/₂—9 mm.

Patria: Mexico (Presidio, Cam. et Mus. Hung.).

731. **Parnopes Popovii** EVERSM.

Parnopes Popovii, Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 567, n. 2. ♀. (1857) sec. spec. typ. e coll. Rad. — Rad. Horæ Soc. Ent. Rossicæ. III. p. 309, n. 58. tab. VI. fig. 42. ♀. (1866).
Parnopes Sinensis, Smith, Transact. Ent. Soc. Lond. p. 454, n. 7. ♂. (1874).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Magnus, robustus, parce albo-pilosus, læte-cyaneo-violascens, abdominis segmentis dorsalibus ex parte rufo-testaceis; cavitate faciali haud profunda, virescenti, dense punctulato-coriacea argenteo-sericeoque pilosa, in medio longitudinaliter canaliculata, antennarum scapo violascenti, flagelli articulis fusco-rufis, primis argenteo-pubescentibus, secundo longo, quarto quintoque simul sumptis æquilongo; genis linearibus, mandibulis in medio rufis; occipite triangulariter profunde exciso; vertice circa stemmata impresso sat dense, thorace supra dispersius crassiusque punctato-reticulatis; alarum tegulis magnis, nigro-violaceis, crasse punctatis, testaceo-marginatis, margine postico subtruncato; postscutelli processu valido, planato, crasse profundeque punctato, postice truncato, ceterum forma *P. carnei* simili; metanoto in medio acute tricarinato, spatiis interiacentibus subtransverse inæqualiter rugosis; abdominis segmentis dorsalibus anticis crasse sparsim fere cribrato-, ultimo crasse rugoso-punctatis, illorum interstitiis lævibus ac politis, primo basi longitudinaliter canaliculato, canaliculæ lateribus lævibus, tertio ante marginem apicalem utrinque transverse fossulato, ipso margine inæqualiter serrulato; ventre rufo-testaceo; femoribus violascentibus, geniculis, tibiis tarsisque rufo-testaceis, tibiis externe parum infuscatis; alis sordide-hyalinis, venis fuscis. — Long. 13—14 mm.

Femina: abdominis segmento dorsali primo fere toto et tertii dimidio apicali cyaneo-violaceis, primi margine apicali in medio secundoque toto rufo-testaceis.

Mas: abdominis segmento dorsali primo fere toto quartoque cyaneo-violaceis, primi margine apicali in medio, secundo tertioque totis rufo-testaceis.

Species: a *P. carneo* valde distincta, non tantum colore, sed etiam occipitis et metanoti sculptura, postscutelli processu apice truncato, alarum tegulis maioribus, postice latioribus et subtruncatis.

Patria: Kiachta in Sibiria ad limites Mongoliæ (secundum Rad.) (Coll. Rad.!); China septentrionalis (Shangai, Smith; Tschifu Mus. Vindob.!; Ta-tschian-sy, Mus. Hung.).

732. **Parnopes grandior** Pall.

Chrysis grandior, Pall. Reise, I. Anhang, p. 474, n. 76. ♂, (1771). — Christ, Naturg. p. 398, tab. XLIV. fig. 3. ♂. (1791).

Chrysis carnea, Fabr. Syst. Ent. p. 357, n. 5. (1775); Spec. Ins. I. p. 455, n. 6. (1781); Mant. Ins. I. p. 283, n. 6. (1787). — Vill. Linn. Ent. III. p. 258, n. 8. (1789). — Rossi, Faun. Etr. II. p. 75, n. 843. tab. VIII. fig. 5. (1790). — Oliv. Encycl. Méth. Ins. V. p. 673, n. 8. (1790). — Christ. Naturg. p. 402. (1791). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2745, n. 13. (1792). — Fabr. Ent. Syst. II. p. 240, n. 7. (1793). — Coqueb. Illustr. Icon. Ins. Dec. II. p. 61. tab. XIV. fig. 11. (1801). — Illig. Rossi Faun. Etr. Ed. II. T. II. p. 120, n. 843, tab. VIII. fig. 5. (1807).

Parnopes carnea, Fabr. Syst. Piez. p. 177, n. 1. (1804). — Latr. Hist. nat. XIII. p. 237. (1805). — Lep. Annal. du Mus. Hist. nat. VII. p. 124. (1806). — Ahrens, Faun. Ins. Europ. fasc. II. tab. 17. (1814). — Blanch. Hist. nat. III. p. 294, tab. III. fig. 1. (1840). — Dhlb. Dispos. p. 17, n. 1. (1845). — Lep. Hym. tab. XXXVII. fig. 1. (1845). — Luc. Explor. de l'Algér. Zoolog. III. p. 304, n. 307. (1849). — Dhlb. Hym. Europ. II. p. 385, n. 213. ♂ ♀. (1854). — Schck, Nass.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Jahrb. XI. p. 80. (1856). — Eversm. Bullet. Soc. Nat. Moscou. XXX. Nr. IV. p. 566, n. 1. (1857). — Court. Annal. Soc. Linn. Maine-et-Loire. III. p. 72. (1858). — Chevr. Chrysid. du Léman, p. 127. ♂ ♀. (1862). — Taschb. Hym. Deutschl. p. 152. (1866). — Schck, Progr. Gymn. zu Weilb. p. 17, n. 35. (1870). — Rad. Fedts. Reise in Turkest. Hym. Chrysid. p. 27, n. 54. (1877). — Ab. Annal. Soc. Linn. Lyon. XXVI. p. 95. (1879). — Lampr. Goldwesp. Deutschl. p. 6, n. 8. tab. I. fig. 29. (segm. anale) (1881). — Heyd. Ber. Senkenb. naturf. Ges. p. 251, n. 23. (1882). — Gog. Anal. Soc. Españ. Hist. Nat. XVI. p. 87, n. 65. ♂ ♀. (1887).

Parnopes Doursi, Sich. i. l., Dours, Cat. syn. Hym. de France, p. 118, n. 2. (1874).

Parnopes carnea F. *var. unicolor*, Grib. Annali Mus. Civ. Stor. Nat. Genova. XIV. p. 338, n. 17. ♂. (1879).

Parnopes grandior, Mocs. Chrys. faun. Hung. p. 74 et 90, n. 1. ♂ ♀. (1882). — Frey, Chrys. Helvet. p. 85. ♂ ♀. (1887). — Destef. Natural. Sicil. VII. p. 95. ♂ ♀. (1888). — Rad. Horæ Soc. Ent. Rossicæ. XXIII. p. 37. (genit. maris) (1888).

Magnus, robustus, subobscurus, æruginoso-æneoque viridis, breviter cinereo-alboque pilosus; abdominis segmentis dorsalibus: primo margine apicali et reliquis totis carneis; geniculis, tibiis tarsisque et alarum tegulis rufo-testaceis; cavitate faciali brevi transverso-quadrata, punctulato-coriacea, medio sublævi longitudinaliter canaliculata et utrinque dense argenteo-sericeo-pilosa, superne utrinque modice impressa, minus distincte transverse submarginata; antennis mediocribus brunnescentibus, cano-puberulis, scapo nigro-piceo aut nigro-æneo, articulo secundo flagelli longo, tertio quartoque simul sumptis fere æquilongo; clypeo magno, transverso, punctulato, viridi, aut aureo-viridi, aut aureo, disco convexo, margine apicali nigro-piceo, polito, centro arcuato-emarginato; genis linearibus, fere nullis; mandibulis bidentatis, piceis, ante apicem rufis; pronoto sat longo, transverso, antice in medio parum impresso, cum mesonoto, scutello postscutelloque crasse punctato-reticulatis; postscutelli processu longo, irregulariter subsemicirculari, apice angustiore, truncato, margine inæqualiter crenulato; mesopleurarum margine apicali irregulariter subarcuato, crenulato-denticulato; metanoti dentibus postico-lateralibus brevibus, validis, subacutis; abdomine robusto, obtuse-rectangulo, basi transverso, apice arcuato, dorso modice convexo, segmentis in femina 1—2, in mare 1—3 margine apicali depresso fulvo vel testaceo, primo æruginoso-viridi, secundo in mare lateribus violaceo-maculatis, segmentis omnibus disco sat sparsim crasse, in marginibus basalibus et apicalibus dense subtiliter punctatis; tertio semicirculari, convexo punctato-subruguloso, medio distincte carinato, ante marginem utrinque ovato- aut subtriangulariter oblique-depresso, depressionibus largiter albo-sericeo-pilosis, margine apicali robusto arcuato, denticulis numerosis acutis spinoideis serrulato; alis sordide-hyalinis, venis firmis piceis, tegulis testaceis aut luteis sparsim punctatis margine pallido. — ♂ ♀; long. 9—12 mm.

Variat mas: abdomine toto carneo (*unicolor* Grib.), vel abdominis segmentis dorsalibus 2—3 medio concinne violaceo-fasciatis (*fasciatus* mihi), antennarum flagello, femoribus posterioribus et alarum tegulis rufo-testaceis, maculis lateralibus violaceis abdominis segmenti dorsalis secundi nullis (*Caspicus* mihi).

«*Armure.* Dufour dans ses «Recherches anatomiques et physiologiques» (p. 521,

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

t. 9, fig. 117) donne la description et le dessin de l'armure de cette espèce. La branche du forceps est grande, nue, arrondie à l'extrémité. Volsella est inserée dans la branche, et on ne peut pas voir, si la tenette existe ou non. Les crochets (fig. 741) à leur extrémité (leur tête) ont la forme d'une flêche; plus bas on voit du chaque côté un dent; la forme du fourreau est aussi rémarquable. Le couvercle génital est représenté sur la fig. 74 k.» (Rad. l. c. tab VI. fig. 74 a, 74 b, 74 c, 74 i).

Patria: Germania (Ahrens); Helvetia (Chevr.); Tyrolis (Dalla Torre et Kohl); Hungaria (Mocs.); Hispania (Gog.); Gallia (Fabr.); Italia (Rossi; Sicilia Destef.; Sardinia, Costa); Russia septemtr. Varsovia (Rad.), merid. et orient. (Pallas, Eversm.); Caucasus (Rad.); Turkestania (Rad.); Syria (Mus. Hung.); Persia (Rad.); Algeria (Luc. et Coll. Saussurei!).

733. **Parnopes denticulatus** Spin.

Parnopes denticulata, Spin. Annal. Soc. Ent. France. VII. p. 455, n. 6. ♂. (1838). — Dhlb. Hym. Europ. II. p. 382, n. 211. ♂. (1854).

Descriptio secundum Dahlbom:

«Mediocris 3 lin. decimal. long. viridi-aurea antennarum flagellis, pedibus, abdominisque segmentis dorsalibus primo, secundo et tertio rufo-testaceis, tegulis margineque anali pallidis, alis hyalinis venis mediocribus fuscis.

Observ. Insectum non vidimus, unde tantummodo notas a Dom. Spinola relatas referre possumus. Antennæ, pedes abdominisque segmenta dorsalia tria antica rufo-testacea; caput, scapus antennarum, thorax, coxæ pedum abdominisque segmentum dorsale quartum metallice viridia ex aureo resplendentia. Alarum tegulæ abdominisque margo analis pallescentes. Postscutellum tuberculatum: tuberculo parvo obtuso leniter emarginato. Abdominis segmentum dorsale quartum convexum nec ante marginem utrinque — ut in reliquis huius generis speciebus — depressum; margo analis arcuatus nonnihil incrassatus fortiter serrulatus: denticulis acutis oblique pendulis.»

Patria: Aegyptus (Spin.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

CHRYSIDIDÆ VITAM AGUNT PARASITICAM APUD INSECTA SEQUENTIA:

Parasita.	*Nutrix.*
Cleptes nitidulus Fabr.	Nematus Ribesii Scop. (Dahlbom).
Cleptes semiauratus Linn.	Nematus Ribesii Scop. (Lepeletier). ?Nematus cœruleocarpus Htg. (Fletscher).
Ellampus æneus Panz.	Cemonus unicolor Jur. (Schenck).
Ellampus auratus Linn.	Nematus Ribesii Scop. (Bouché). Trypoxylon figulus Linn. (Dufour et Perris). Cemonus unicolor Jur. (Smith, Goureau, Giraud, Mocsáry). Philanthus triangulum Fabr. (Latreille). Cerceris ornata Fabr. (Walckenaer).
— — var. maculatus Buyss.	Trypoxylon figulus Linn. (Buysson).
Ellampus bidentulus Lep.	Psen caliginosus Westw. (Westwood).
Ellampus nanus Saund.	Solierella pisonoides Saund. (Saunders).
Ellampus Panzeri Fabr.	Mimesa bicolor Jur. (Schenck).
Holopyga amœnula Dhlb.	Chalicodoma muraria Fabr. (Schenck).
Holopyga ardens Coqueb.	Tachysphex nitidus Spin. (Dours). Odynerus sinuatus Fabr. (Rudow).
Holopyga coriacea Dhlb.	Halictus morio Fabr. Panurgus calcaratus Scop. (Rudow, teste Lamprecht)
Holopyga ignicolis Fabr.	?Cerceris quadrifasciata Pz. (Friese). Mimesa unicolor Vanderl. (Smith).
Holopyga purpurascens Dhlb.	Stizus tridens Fabr. (Rudow).
Holopyga rosea Rossi	Tachysphex pectinipes L. (Smith). Harpactus tumidus Pz. (Shuckard).
Holopyga rugosa Sm.	Pelopœus separatus Sm. (Ezra Downes).
Hedychrum Cirtanum Grib. (cupreum Rad.)	Osmia metallica Luc. (Dours, Radoszkovszky).
Hedychrum nobile Scop. (lucidulum Fabr.)	Odynerus parietum Linn. (André). Halictus leucozonius Kirby (Smith). Osmia nigriventris Zett. (Kawal). Chalicodoma muraria Fabr. (Lepeletier).
Chrysogona pumila Klug.	Chalicodoma spec. (Pérez).
Stilbum cyanurum Forst.	Pelopœus destillatorius Illig. (Lichtenstein, Destefani).
— — var. Siculum Tourn.	Chalicodoma Sicula Rossi (Tournier).
— — var. nobile Sulz.	Chalicodoma muraria Fabr. (Lichtenstein).
— — var. amethystinum Fabr.	Eumenes tinctor Christ (Smith, Magretti).
Chrysis æstiva Dhlb.	Chalicodoma muraria Fabr. (Destefani).
Chrysis analis Spin.	Osmia metallica Luc. (Lucas).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis Austriaca Fabr.	Odynerus crassicornis Pz. (Lamprecht). Osmia parietina Smith (Smith). Osmia cæmentaria Gerst. (Mocsáry).
Chrysis barbara Luc.	Osmia ferruginea Latr. Osmia cœrulescens L. (Lucas).
Chrysis basalis Dhlb.	Odynerus Dantici Rossi (Dours). Osmia metallica Luc. (Radoszkovszky).
Chrysis chrysoprasina Först.	?Chalicodoma pyræneica Lep. ?Osmia emarginata Gir. (Frey-Gessner).
Chrysis cuprata Dhlb.	?Celonites abbreviatus Vill. (Sichel per Lichtenstein).
Chrysis cuprea Rossi	Osmia bicolor Schrk. (Lichtenstein). ?Osmia aurulenta Pz. (Friese).
Chrysis cyanea Linn.	Nitela Spinolæ Dhlb. (Giraud). Cemonus unicolor Jur. (Goureau). Trypoxylon figulus Linn. (Dufour et Perris, Giraud, Lichtenstein). Odynerus parietum Linn. (André). Chelostoma florisomne Linn. (Westwood, Smith). Osmia ænea Linn. Osmia Giraudi Schmiedk. (Frey-Gessner).
Chrysis desertorum Buyss.	Andrena octomaculata Pérez (Abeille-Buysson).
Chrysis dichroa Dhlb.	Osmia aurulenta Pz. (Thalhammer). *
Chrysis emarginatula Spin.	Anthidium caturigense Gir. (Giraud).
Chrysis fasciata Oliv.	Trypoxylon figulus Linn. (Schenck). Discœlius zonalis Pz. (Pérez). Odynerus lævipes Shuck. (Dufour et Perris, Giraud, Lichtenstein).
Chrysis fulgida Linn.	Odynerus spinipes Linn. (Smith, Billups). Odynerus crassicornis Pz. (Mocsáry). Odynerus murarius Linn. Odynerus parietum Linn. (Lamprecht).
Chrysis Helvetica Mocs.	?Anthophora atro-alba Lep. ?Anthophora intermedia Lep. (Tournier).
Chrysis ignita Linn.	Ptosima novemmaculata Fabr. (Laboulbéne) (Coleopteron.?? Mocs.). * Philanthus triangulum Fabr. (Latreille) Cerceris ornata Latr. (Walckenaer). Vespa rufa Linn. (Smith). Eumenes unguiculus Vill. (Perris). Eumenes coarctatus Linn. (Lucciani). Eumenes pomiformis Rossi (André). Odynerus crassicornis Linn. (Mocsáry). Odynerus Antilope Pz. (Westwood.). Odynerus lævipes Shuck. (Dufour et Perris).

* Speciem e nido *Osmiae aurulentae* Pz., in testis vacuis *Helicis hortensis* Müll. collocato, educavit Dom. Thalhammer.

** Vide meam animadversionem in pag. 25.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis ignita Linn.	Odynerus parietum Linn. (Schenck). Odynerus murarius Linn. (Dahlbom). Odynerus pictus Curt. (Bignell). Odynerus bifasciatus Linn. (Kawal). Odynerus spinipes Linn. (Laboulbéne, Lucas, Chapman, Billups). Anthophora crinipes Smith (Lichtenstein). Colletes Davesianus Kirby (Smith). Osmia emarginata Lep. / Osmia cæmentaria Gerst. (Lichtenstein). Osmia bicornis Linn. (Smith). Chelostoma florisomne Linn. (Lichtenstein).
Chrysis incisa Buyss.	Scolia (Elis) collaris Fabr. (Abeille-Buysson).*
Chrysis indigotea Duf. et Perr.	Odynerus lævipes Shuck. (Dufour et Perris).
Chrysis Joppensis Buyss.	Eucera bidentata Pérez (Abeille-Buysson).
Chrysis lusca Fabr.	Pelopœus fabricator Smith (Collectio Andréi).
Chrysis Mulsanti Ab.	Osmia aurulenta Pz. (Lichtenstein).
Chrysis neglecta Shuck.	Odynerus lævipes Shuck. (Lichtenstein). Odynerus parietum Linn. (Dahlbom). Odynerus reniformis Gmel. (Pérez). Odynerus spinipes Linn. (Smith, Giraud, Chapman, Billups, Frey-Gessner).
Chrysis nitidula Fabr.	Odynerus nitidulator Sauss. (Pérez). Osmia metallica Luc. (Radoszkovszky). Odynerus murarius Linn. (Sickmann).
Chrysis Osiris Buyss.	Osmia Lhotelleriei Pérez (Lhotellerie teste Buysson).
Chrysis Osmiæ Thoms.	Osmia nigriventris Zett. (Zetterstedt). Osmia parietina Smith (Smith). Osmia tuberculata Nyl. / Chelostoma maxillosum Linn. (Frey-Gessner).
Chrysis pelopæicida Buyss.	Pelopœus violaceus Fabr. (Abeille-Buysson).
Chrysis pruna Grib. (viridana Rad.).	Osmia metallica Luc. (Dours, Radoszkovszky).
Chrysis pubescens Smith	Pelopœus bilineatus Smith (Ezra Downes).
Chrysis pustulosa Ab.	Osmia adunca Panz. / Osmia cæmentaria Gerst. (Frey-Gessner).
Chrysis splendidula Rossi (cyanopyga Dhlb.)	Lophyrus pini Linn. (Lamprecht).
Chrysis Ruddii Shuck	Eumenes unquiculus Vill. (Pérez). Odynerus spinipes Linn. / Osmia cæmentaria Gerst. (Lichtenstein).
Chrysis rutilans Oliv. (splendidula Dhlb.)	Odynerus lævipes Shuck. (Perris).
Chryis Saussurei Chevr.	Odynerus Nugdunensis Sauss. (Friese). Osmia ænea Linn. / Osmia Giraudi Schmiedk. (Frey-Gessner).
Chrysis sexdentata Christ.	Odynerus parietum Linn. (André).
Chrysis simplex Dhlb.	Osmia cæmentaria Gerst. (Gerstaecker, Mocsáry).

* Vide meam animadversionem in pag. 192.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Chrysis splendidula Rossi	Odynerus lævipes Shuck. (Giraud). Odynerus bifasciatus Linn. (Lamprecht). Anthidium spec. (Fabré).
Chrysis succincta Linn. var. Germari Wesm.	Odynerus Dantici Rossi (Giraud).
« « « « bicolor Lep.	Odynerus spinipes Linn. (Frey-Gessner).
Chrysis trimaculata Först.	Osmia bicolor Schrk. (Lichtenstein, Schmiedeknecht, Frey-Gessner).
Chrysis viridula Linn. (sinuosa Rad.)	Odynerus parietum Linn.? (Bormans). Odynerus spinipes Linn. (Westwood, Chapman, Billups, Frey-Gessner). Odynerus reniformis Gmel. (Pérez). Osmia metallica Luc. (Dours, Radoszkovszky).
Chrysis (Spinolia) insignis Luc. ...	Odynerus spiricornis Spin. (Giraud).
Chrysis (Euchrœus) Doursi Grib.	Bembex olivacea Fabr. (Dours).
Parnopes grandior Pall.	Bembex rostrata Linn. (Latreille). Bembex repanda Latr. Bembex oculata Jur. (Abeille).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

SPECIES,

QUÆ SINE SPECIMINIBUS TYPICIS ERUI NEQUEUNT.

1. **Chrysis beryllina,** Zschach, Mus. Leskeanum, p. 73, n. 401. (1788). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2747, n. 23. (1792).

Descriptio secundum Gmelin :

«Chr. capite cæruleo virescente, thorace cæruleo, anterius virescente, posterius bidentato, abdomine viridi ex rufo cærulescente, pedibus cæruleis : punctis testaceis.

Habitat in Europa.»

2. **Chrysis inermis,** Zschach, Mus. Leskeanum, p. 73, n. 406. (1788). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2747, n. 25. (1792).

Descriptio secundum Gmelin :

«Chr. cærulea, thorace anterius viridi, abdomine aureo integro.

Habitat in Europa.»

3. **Chrysis chrysorrhoea,** Zschach, Mus. Leskeanum, p. 73, n. 407. (1788). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2747, n. 26. (1792).

Descriptio secundum Gmelin :

«Chr. viridis, abdominis segmento ultimo aureo integro.

Habitat in Europa.»

4. **Chrysis Leskii,** Zschach, Mus. Leskeanum, p. 74, n. 408. (1788). — Gmel. Linn. Syst. Nat. Ed. XIII. T. I. P. V. p. 2747, n. 27. (1792).

Descriptio secundum Gmelin :

«Chr. viridis, macula ante scutellum abdomineque integro viridi-aureis.

Habitat in Europa.»

5. **Chrysis Cæsar,** Christ, Naturg. p. 397, tab. 44, fig. 1. ♂. (1791).

«Mit gedörntem Brustschild und ungezaktem Hinterleib.

Länge 8 Linien.

Eine sehr schöne Goldwespe grosser Gattung. Die Hauptfarbe, worin sie durchaus schillert, ist die grüne, und dann die blaue Farbe. Der Kopf ist nicht gross, und die Augen sind bräunlich. Die drei in Triangel stehende Ocellen sind hell und gelblich, und stehen in einer Fläche, die grün goldfarb ist. Die Fresszangen sind schwarz. Die Fülhörner stehen nahe am Maul, und haben 10 Glieder und das Grundgelenk. Der Kopf stehet ganz am Bruststük, welches dik und gross ist, in der Mitte erhaben, und von einer sonderbaren Zeichnung und Schönheit. Es hat glatte und matte Zierraten oder punktirte Flächen. Am Ende des Brustschildes sind in der Mitte zwo kleine Spizzen, die auf den Hinterleib gehen und neben hat das Bruststük auch Ekken oder Spizzen. Der Hinterleib ist dik, oval, und bestehet wie gewönlich aus einer kurzen Anfangsdekke, einem grossen gewölbten Schild, und sodann etlichen Halbringen, darunter sich der Leib vor sich bewegen kann, wenn er besonders anglen will. Vermittels dieser Ringe kann sie sich wie ein Wurm zusammenkrümmen. Die Füsse sind zart, ebenfalls goldgrün, und endigen sich die Fussblätter in zwo Klauen. Die Flügel haben schwarzbraune Adern.

Ist an den malabarischen Ufern zu Hause.»

6. **Chrysis succincta,** Christ, Naturg. p. 400, tab. 44, fig. 6. (1791) (excl. syn.) (nec Linn.)

«Mit gedörntem Brustschild und ungezaktem Hinterleib.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Länge 3 und eine halbe Linie.

Eine grüne Goldwespe mit rotem Hinterleib.

Der Kopf ist auf der Stirne roth und auf der Fläche grüngold. Die vordere Hälfte des Brustschilds ist hauptsächlich roth und die andere Hälfte grün, überhaupt aber in verschiedenen Abteilungen in solcher Schimmer von roth, violet, grün, gelb und blau, dass die Beschreibung des Prachts dieses kleinen Insekts unter dem Vergrösserungsglas sehr umständlich ausfallen musste. Das Bruststük endiget sich in zwei austehende Ekken. Der Hinterleib ist fast rund, roth wie ein Rubin und auf der Wölbung violet. Die Flügel ziemlich braun, Brust und Füsse grüngold.

Linne beschreibet diese Wespe mit dreizanigtem After, so aber etwa das andere Geschlecht sein dürfte.»

7. **Chrysis punctata,** Christ, Naturg. p. 400, tab. 44, fig. 7. (1791).

«Mit gedörntem Brustschild und ungezaktem Hinterleib.

Länge 2 und einviertel Linie.

Eine Gattung der kleinsten Goldwespen. — Der Kopf ist oben dunkelblau ; der Brustschild ist in vier Theile durch drei Quereinschnitte geteilt, wovon die zwei erstern in der Mitte dunkelblau und die zwei letztern grüngold haben, auf dem letzten aber in der Mitte ein schwarzer Flek, der keinen Goldglanz hat ; die daneben ausstehende scharfe Ekke aber sind goldgrün. Die drei Schalen des Hinterleibes, der kuglichrund sind, ist rothgold, und oben auf der Wölbung ganz dunkelroth. Die Fläche am Bauch, die Füsse, Brust und Fülhörnergrundgelenke sind goldgrün. Die Flügel sind an der äussern Hälfte braun und haben einen Randflekken.»

8. **Chrysis cyanaea,** Christ, Naturg. p. 403, tab. 44, fig. 11. ♂. (1791) (excl. syn.) (nec Linn.).

«Mit gedörntem Brustschild und gezaktem Hinterleib

Länge 5 Linien.

Eine blaue Goldwespe. — Der Hauptgoldglanz derselben ist eine schöne dunkelblaue Farbe, welche im Licht etwas in Grüne spielt, vorzüglich aber am Hinterleib und an den Füssen. Der Bau ihres Körpers gleichet der vorhergehenden.

Die Augen sind schwarz, die Ocellen gelblich. Das Grundgelenk der Fülhörner hat einen blauen Goldglanz, und die zwei ersten daran befindlichen Glieder oberhalb ; die übrigen 10 aber sind schwärzlich. Die Fresszangen sind klein und haben schwarze Zäne. Das Maul hat Fressspitzen. Das Bruststük hat Einschnitte und Ekke. Der Hinterleib aber hat nur drei Ringschalen, wovon die mitlere etwas weniges beträchtlicher ist, als die zwei übrigen. Der etwas weniges hervorstehende Hinterleib ist am After in fünf Zakken ausgebogt. Die Gewerbknöpfe der Flügel haben keine Schuppe zur Bedekkung. Die am Rand der Flügel zusammenstossende Adern bilden auf iedem zwei Punkte.»

9. **Chrysis virens,** Christ, Naturg. p. 405, tab. 45, fig. 6. (1791) (nec Cress.)

«Mit ungedörntem Brustschild und ungezaktem Hinterleib.

Länge 4 und eine halbe Linie.

Eine grün und blau schillernde Goldwespe. — Der Kopf schillert vorzüglich blau : der Brustschild vorne und hinten grün und in der Mitte blau : der Hinterleib grün, mit einem metalligen Goldglanz. Füsse und Fülhörner sind schwarz, und die Flügel haben einen kleinen Randflek.»

10. **Chrysis suavis,** Christ, Naturg. p. 406, tab. 45, fig. 8. et 9. (1791).

«Mit ungedörntem Brustschild und ungezaktem Hinterleib.

Länge 3 und eine halbe Linie.

Eine kleine sehr schöne Chrise, in der Grösse einer Stubenfliege. Der Kopf ist oben glänzendblau und vorne grün, die Augen und Fülhörner aber schwarz. An dem Bruststük ist oben ein solcher grüner Saum, das Bruststük selbst aber glänzet grün und blau, und hat am Schluss einen ganz blauen Saum. Der Hinterleib bestehet aus vier purpurroten und gleich einem Rubin glänzenden Schalen, unten aber hat der Leib grüne Goldfarbe. Die Füsse sind glänzend blau.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Das Männchen. Dieses ist von dem vorgehenden Weibchen in nichts unterschieden, als in Ansehung der Grösse, worin es von demselben um den dritten Theil übertroffen wird.»

11. **Chrysis fervida,** Christ, Naturg. p. 406. tab. 45. fig. 10. (1791) (excl. syn.) (nec Fabr.)

«Mit ungedörntem Brustschild und gezaktem Hinterleib.

Länge 3 Linien.

Eine kleine ganz grüne Goldwespe, deren Schönheit das Vergrösserungsglas in einem hohen Grade vorstellet.

Der Kopf gleichet mattgearbeitetem grünem Golde, die Augen, Ocellen, Fresszangen und Fülhörner aber sind schwarz, das Grundgelenk am letztern aber ist grün. Das Bruststük ist sehr niedlich gebaut und ist gleichsam aus vier Stükken zusammengegossen. Das erste ist in der Mitte in einem halben Zirkel glatt, und die obere Einfassung matt oder mit vertieften Punkten, am welchem Stük unter die zwei Vorderfüsse stehen. Das andere Stük ist ganz glatt, wie polirt, das dritte wieder punktirt, und das vierte Stük, welches unter die Flügel lauft, eben so. Auf dem zweiten glatten Stük stehen die Flügel auf einem erhabenen glatten Knopf, der aber wieder mit einem rau oder punktirt gearbeitetem Band eingefasset ist, welches selbst in dem Lauf der Punkte seine besondere Schönheit und Regelmässigkeit hat, welche Einfassung zugleich das glatte Bruststük zierlich umgibt. Der Hinterleib hat drei Schalen zur Bedekkung, davon die mitlere die grösste ist, welche glatt sind, grün glänzen und ins Purpurrote schimmern. Jede Schale oder Ring hat neben an beden Seiten einen starken Punkt mit Vertiefung und Erhöhung, und einer veränderten Goldfarbe, als wenn solche mit sechs Nägeln aufgenagelt wären. Die Füsse sind ebenfalls glänzendgrün, die Schienbeine haben Dorne, und die Fussblätter endigen sich in zwei Klauen. Die Flügel sind bräunlich und haben einen Schatten.»

12. **Chrysis puberula,** Spin. Gay's Hist. fisica y politica de Chile. Tom. VI. p. 407, n. 5. ♀ (1851).

«Hembra: largo del cuerpo dos líneas. Ancho del mismo media linea. El único ejemplar que es el objeto de este articulo, no tiene de comun con las dos especies precedentes mas que el color azul y uniforme de su manto dorsal, y es notable por lo largo de sus pelos herizados. Esta circunstancia le valió e nombre de «*Puberula*», bien que sea de naturaleza variable con el tiempo, y que no me inspice grande confianza. Las formas rehechas de nuestra especie chilena y el contorno de su último anillo la colocân al lado de una «*Versicolor*», Ins. lig. I. 2. p. 241, n. LXXXV, à la cual me remito para mas amplios pormenores, y notablemente respecto à la grande diferencia de colores. He aquí algunas aclaraciones relativas à las formas. Las dos especies tienen la carena transversa de la frente igualmente bien expreseda; però en la «*Versicolor*», esta carena elega al borde de las ojas y parece formada por la reunion de tres líneas rectas que hacên entre si ángulos muy obtusos y abiertos por delante; en la «*Puberula*», es my feblemente arqueada y no alcanza al borde de los ojos. En ambas la longitud relativa de las diferentes piezas integrantes del corselete son las mismas que en la «Gayi», perdo cada una de ellas es mas ancha proporcionalemente à su longitud. Los tres segm. abdominales de la «*Puberula*» son uniformente convexos y sin trazas de carenas medianas. La base del primiero no tiene escotadura y no se ve mas que un hoyuelito poco hundido. El contorno interior y el posterior del tercero son contínuos en semi-elipse, precedidos du un surco ancho, fuertemente punctuado, encorvado en et mismo sentido que el borde, pero de mas feble encorvadura en el arco. — Macho desconocido.

De las provincias centrales.»

13. **Hedychrum spina,** Blanch. Hist. nat. III. p. 296, n. 4. (1840) (excl. Lep. syn.) (nec. Lep.).

«Long. 2. lign. — Cette espèce, la plus petite du genre, a la tête et le corselet d'un vert bleuâtre, et trés-fortement pontués; les ailes grisâtres, les pattes vertes, avec les tarses testacés; l'abdomen terminé par une très-petite pointe, entièrement d'un vert doré, avec les reflets cuivreux. — Cette espèce se trouve aux environs de Paris; mais on la rencontre rarement.»

14. **Hedychrum flavitarse,** Costa, Ricerche Entomologiche sopra i Monti Partenii, p. 27, n. 26. (1858).

«Affine all' *Hed. cupratum.*»

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

15. **Hedychrum coerulescens,** Chevr. Chrysid. du Léman, p. 87. ♀. (1862) (excl. Lepeletieri syn.) (nec. Lep.).

«Long. 0,009.

La couleur bleue-verdâtre de tout l'insecte, çà et là lavée d'une teinte violacée et sans aucun reflet doré ou empourpré, permet de déterminer facilement cette espèce.

Femelle. — Tête médiocrement ponctuée. Impression faciale, mandibules et chaperon . . . . .? (détruits par les larves). Antennes obscures ; les deux premiers articles, mais principalement le premier, bleus. Prothorax sensiblement moins haut que le mésothorax, plus fortement ponctué que l'occiput ; les points çà et là inégaux, assez rapprochés, reposant sur une surface peu tendue ; sa partie centrale avec une dépression large, mais fort peu profonde et passablement irregulière. Ses deux angles antérieurs non adoucis ; les postérieurs assez lourds, plus fortement et plus brusquement coudés à l'extérieur que de coutume. Les côtés latéraux du prothorax plutôt parallèles entre eux que légèrement obliques. Les points du mésothorax un peu plus faibles que ceux du prothorax, sauf à la base du compartiment interne, où ils paraissent concorder avec ceux de l'écusson (autant qu'il m' est permis d'en juger, l'écusson étant détruit un grande partie). Postécusson grand, passablement convexe, surtout vu de profil ; ses points, marginés, plus fort que ceux de l'écusson. Côtés perpendiculaires de la poitrine comme tuméfiés ; longitudinalement traversés par un faible sillon ; leur extrémité assez tronquée, s'infléchissant fortement sous cette dernière, tandis que les espèces précédentes (Hedychrum lucidulum, ardens, rutilans) ces côtés se présentent sous la forme d'un triangle à surface assez plane, l'angle inférieur étant purement arrêté. Ponctuation de ces côtés, peut-être légèrement plus faible et un peu moins régulière que celle du postécusson. Angles du métathorax plutôt finement rugueux que pontués.

Abdomen à peine aussi long que la tête et le thorax. Troisième segment normalement arrondi antérieurement, sans aucune trace de l'aspérité des côtés latéraux ; sa ponctuation un peu plus accentuée et plus serrée que celle du deuxième. Les points du premier plutôt plus fins que ceux du second. Impression de la base médiocre ; sa partie centrale ayant une gouttière large mais peu profonde, à peine sensible. Pattes, de la couleur du corps ; tarses, segments du ventre . . . ? (absents). Ailes assez également enfumées ; radiale à peine fermée ; l'abord de l'extrémité de sa nervure inférieure, trés-ténu.

Male . . . ?

Je n'ai jamais rencontré cet insecte, mais il en existe un exemplaire dans les cartons de M. de Saussure avec une étiquette portant le nom de Genéve. Si cette espèce vit reellement dans notre pays, elle doit y être fort rare.»

Est species forsan exotica??

16. **Hedychrum carinulatum,** Spin. Gay's Hist. fisica y politica de Chile. Tom. VI. p. 411, n. 2. ♂. (1851) (nec Schck).

«Macho: tallo, brillo metálico, tinte uniforme y punctuacion del dorso como en el «*Difficile*«, con el cual lo habia yo confundido al principio. Delantera de la cabeza convexa? medio de la frente liso, luciente y sin tener mas que algunas arrugas transversales poco aparentes. Borde posterior de la cabeza recto. Protórax proporcionalmente algo mas largo que en el «*Difficile*», borde anterior recto. Escudo y post-escudo no hinchados y suavemente inclinados ; el segundo cortado posteriormente en línea recta y visibilmente ribeteado. Pieza mediana de la faz posterior del metatórax fuertemente carenada ; carena mediana longitudinal y trinchante. (Es lo que ma ha seguerido el nombre especifico que he empleado). Abdomen come en el «*Difficile*«, borde posterior del último anillo igualmente redondeado y entero ; una feble depression visible à poco distancia del borde y simulando el surco que existe en las especies del G. *Chrysis* (y aun mas aparente que en nuestro *Ch. episcopalis).* Colores del «*Difficile*», tarsos testaceos.»

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

SPECIES,
AD ALIAS HYMENOPTERORUM FAMILIAS PERTINENTES, E FAMILIA CHRYSIDIDARUM ELIMINANDAE.

1. **Chrysis dubia,** Rossi. Faun. Etrusca. II. p. 77, n. 849. ♀. (1790) = *Celonites abbreviatus* Vill.
2. **Chrysis Hesperidum,** Rossi, ibid. p. 78, n. 852. ♀. (1790) = *Eniaca* (Chalcis) *Hesperidum* Rossi.
3. **Chrysis plumata,** Rossi, ibid. p. 79, n. 853. ♀. (1790) = *Eurytoma plumata* Rossi.
4. **Chrysis Adonidum,** Rossi, ibid. p. 79, n. 854. ♀. (1790).
5. **Chrysis insida,** Rossi, ibid. p. 80, n. 855. ♀. (1790).
6. **Chrysis sispes,** Fabr. Syst. Ent. p. 359, n. 15. (1775 = *Smiera sispes* Fabr.
7. **Cleptes stigma,** Fabr. Syst. Piez. p. 155, n. 5. (1804).
8. **Cleptes fulgens,** Fabr. ibid. p. 155, n. 6. (1804).
9. **Cleptes muscarum,** Fabr. ibid. p. 156, n. 7. (1804).
10. **Cleptes larvarum,** Fabr. ibid. p. 156, n. 8. (1804).
11. **Cleptes coccorum,** Fabr. ibid. p. 156, n. 9. (1804).
12. **Cleptes minutus,** Fabr. ibid. p. 156, n. 10. (1804).

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

I. INDEX UNIVERSALIS.

Præfatio ... —
Literatura Chrysididarum ... 1
1. Opera, in quibus descriptiones continentur ... 1
2. Opera, enumerationes specierum vel biologiam solum continentia ... 14
Recensio critica operum de speciebus Chrysididarum tractantium ... 20
Familia: Chrysididæ Leach ... 25
1. Characteres Familiæ normales ... 25
2. Distributio geographica, vivendi modus et differentia sexus ... 25
3. Locus Chrysididarum in systemate et adnotationes generales ... 27
4. Partes corporis Chrysididarum ... 27
Conspectus subfamiliarum ... 30
Conspectus generum ... 31
Chrysididæ vitam agunt parasiticam apud Insecta sequentia ... 617
Species, quæ sine speciminibus typicis erui nequeunt ... 621
Species, ad alias Hymenopterorum familias pertinentes, e familia Chrysididarum eliminandæ ... 625
Index ... 626
Emendanda ... 639
Explicationes tabularum ... 640

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

II. INDEX SUBFAMILIARUM, GENERUM, SUBGENERUM SPECIERUMQUE.

(Synonyma literis obliquis sunt excusa.)

Allocœlia mihi 61.
Capensis Sm. 62.
Allocœlinæ mihi 61.
Amisega Cam. 34.
cuprifrons Cam. 35.
Anthracias Klug 62.
capensis Sm. 62.
Brugmoia Rad. 33.
pellucida Rad. 602.
Chrysidinæ mihi 175.
Chrysis Linn. Mocs. 193.
Aaroni mihi 386.
Abeillei Grib. 420.
Abyssinica Rad. 521.
admiranda n. sp. 528.
Adonidum Rossi 625.
adulterina Ab. 481.
advena n. sp. 563.
aenea Fabr. 96.
aeneipes Tourn. 314.
ænescens n. sp. 577.
æquinoctialis Dhlb. 578.
aerata Dhlb. 243.
æruginosa Dhlb. 466.
æstiva Dhlb. 476.
Aethiopica mihi 362.
affinis Luc. 278.
agilis Sm. 562.
albipennis Dhlb. 287.
albipilis n. sp. 366.
albitarsis n. sp. 252.
albolimbata n. sp. 353.
albomarginata n. sp. 409.
Algira n. sp. 606.
aliena n. sp. 332.

Chrysis
alternans Dhlb. 425, 427, 428.
amabilis Mocs. 599.
Amasina n. sp. 495.
Amazonica n. sp. 337.
amethystina Fabr. 192.
amethystina Dhlb. 370.
amœna Ev. 530.
analis Spin. 453.
analis Shuck. 447.
analis Chevr. 455, 461.
analis Rad. 460.
— *var. incerta* Rad. 464.
— *var. Perrisi* Rad. 454.
anceps Grib. 579.
Anceyi Buyss. 299.
Andréi n. sp. 215.
Andromeda Grib. 587.
Angolensis Mocs. 354.
angolensis Rad. 354.
angularis n. sp. 366
angulata Dhlb. 505.
angulata Ab. 506.
angustifrons Ab. 274.
Annamensis n. sp. 377.
annulata Buyss. 422.
apicalis Rad. 466.
apricans Sm. 561.
ardens Coqueb. 152.
areata n. sp. 361.
Ariadne n. sp. 416.
armena Dhlb. 510.
arrogans n. sp. 532.
artifex Sm. 287.
Asiatica Rad. 460.

Chrysis
assimilis Dhlb. 183.
aspera Brullé 328.
Audouini Blanch. 540.
aurata Linn. 90.
aureicollis Ab. 264.
aureola Först. 301.
aureo-maculata Dhlb. 418.
aurichalca Lep. 282.
aurichalcea Wesm. 314.
aurichalcea Först. 282.
aurichalcea Prov. 499.
aurifascia Brullé 427.
aurifrons Dhlb. 263.
aurimacula n. sp. 421.
auripes Wesm. 493.
auropicta n. sp. 264.
auropunctata n. sp. 474.
Aurora Christ 441.
aurotecta Ab. 448.
aurulenta n. sp. 472.
Australasiæ Grib. 520
Australiaca n. sp. 201.
Austriaca Fabr. 254.
Austriaca Dhlb. 255.
Austriaca Zett. 260.
Azteca n. sp. 209.
Baeri Rad. 273.
barbara Luc. 286.
basalis Dhlb. 221.
basalis Gog. 294.
basalis Destef. 312.
bella Cress. 383.
bellula Guér. 295.
Bengalensis n. sp. 527.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Chrysis
beryllina Zschach 621.
bicolor Dhlb. 258, 259.
bicolor Destef. 312.
bicolor Lep. 314.
— *var. Gribodoi* Ab. 313.
bidentata Vill. 320.
bidentata Linn. 441.
— *var. fenestrata* Ab. 444.
— *var. integra* Ab. 445.
— *var. intermedia* Buyss. 444.
— *var. gemma* Ab. 442.
— *var. pyrrhina* Ab. 445.
— *var. Sicula* Ab. 442.
bihamata Spin. 316.
binominata *(fraterna)* n.sp. 399.
bipartita Mocs. 539.
bipartitus Sm. 539.
bispilota Guér. 583.
Blanchardi Luc. 349.
Blancoburgensis Schmkn. 243.
Bohemanni Dhlb. 185.
Branicki Rad. 365.
Branickii Mocs. 365.
Brasiliana Mocs. 333.
brasiliana Guér. 333.
Brasiliensis Brullé 400.
brevidens Tourn. 491.
brevidentata Schck 490.
brevitarsis Thoms. 492.
Brulléi Ab. 335.
Buyssoni mihi 323.
caerulans Brullé 383.
Cæsar Christ 621.
Caffra n. sp. 214.
Caledonica Mocs. 202.
calens Fabr. 191.
calens Christ 312.
Californica Mocs. 292.
californica Grib. 292.
calimorpha Mocs. 535.
callaina Grib. 354.
callosa n. sp. 407.
canaliculata Brullé 587.
candens Germ. 226.
candens Dhlb. 228.
candens Dhlb. 301.
candens Buyss. 229.

Chrysis
Capensis Mocs. 289.
capensis Mocs. 289.
capitalis Dhlb. 200.
carina Brullé 339.
carinaeventris Mocs. 274.
carinata Guér. 404.
carinata Say 335.
carinata Dhlb. 289.
carinulata n. sp. 402.
carnea Fabr. 614.
carnifex n. sp. 517.
caucasica Rad. 537.
cavifrons Brullé 390.
cerastes Ab. 494.
— var. Caucasica mihi 496.
chalcochrysa Mocs. 467.
chalcophana n. sp. 213.
Charon n. sp. 495.
Chevrieri Mocs. 479.
— var. orientalis mihi 480.
Chevrieri Ab. 445.
chilensis Spin. 404.
chlorata n. sp. 397.
Chloris n. sp. 480.
chlorochrysa Mocs. 513.
chlorophana Mocs. 390.
chloroprasis Buyss. 217.
chlorosoma Dhlb. 379.
chlorospila Klug 372.
chrysochlora n. sp. 515.
chrysoprasina Först. 472.
— var. imperatrix Buyss. 473.
chrysorrhousa Zschach 621.
chrysostigma Mocs. 450.
Circe n. sp. 230.
cincta Brullé 425.
cingulata Först. 423.
cingulicornis Först. 423.
Cirtana Mocs. 267.
cirtana Luc. 267.
clara Cress. 568.
clypeata n. sp. 393.
cobaltina Aar. 208.
cœlestina Klug 364.
coerulans Fabr. 382.
coerulans Rad. 348.
coerulea Dhlb. 97, 106.

Chrysis
cœruleans Fabr. 382.
coeruleipes Fabr. 282.
coeruleipes Först. 273.
cœruleiventris Ab. 218.
coerulescens Fabr. 282.
cognata Grib. 580.
Comottii Grib. 560.
communis Walk. 370.
comparata Lep. 431.
comparata Ev. 481.
comparata Ab. 479.
comparata Lampr. 490.
compta Rad. 481.
comta Först. 481.
confluens Dhlb. 301.
conica Brullé 395.
consanguinea n. sp. 299.
consimilis Cress. 576.
consobrina n. sp. 458.
coronata Spin. 445.
crassimargo Spin. 231.
crassiscuta n. sp. 524.
cribrata Gerst. 454.
Cristovallensis Montr. 539.
cruenta Mocs. 435.
cuprata Dhlb. 276.
cuprea Rossi 282.
cuprea Brullé 501.
curvidens Dhlb. 490.
cyanaea Christ 622.
cyanea Linn. 319.
cyanea Vill. 348.
cyaniventris n. sp. 238.
cyanocœlia n. sp. 249.
cyanochlora Mocs. 593.
cyanochroa Först. 348.
cyanochrysa Forst. 479, 488.
cyanopyga Dhlb. 446.
— *var. dominula* Ab. 446.
cyanura Forst. 190.
cyanura Dhlb. 222.
cyanura Ev. 224.
cylindrica Ev. 441.
Dahlbomi Chevr. 454.
Dalmanni Dhlb. 293.
Daphne Sm. 498.
Daphnis Mocs. 298.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis
decora Mocs. 448.
decorata n. sp. 424.
delicatula Dhlb. 359.
Demabendae Rad. 538.
Demavendæ Rad. 538.
densa Cress. 291.
dentipes Rad. 373.
desertorum Buyss. 240.
Destefanii mihi 229.
Dewitzi n. sp. 556.
diacantha n. sp. 318.
diademata n. sp. 414.
Diana n. sp. 401.
dichroa Dhlb. 273.
— var. minor mihi 274.
Dichrysis Licht. 316.
dimidiata Fabr. 441.
dira Mocs. 352.
discreta Aar. 315.
dissimilis Dhlb. 376.
distinctissima Dhlb. 396.
distinguenda Spin. 550.
distinguenda Dhlb. 479.
distincta Mocs. 464.
divergens Cress. 208.
diversa Dhlb. 364.
dives Luc. 271.
dives Dhlb. 535.
dives Chevr. 533.
dominula Ab. 446.
Doriæ Grib. 206.
dorsalis Aar. 384.
dorsata Brullé 301.
Dournovii Rad. 285.
Dournovi Mocs. 285.
Drewseni Dhlb. 468.
dubia Cress. 575.
dubia Rossi 625.
dubia Rad. 362.
dubitata mihi. 498.
edentula Schrk 127, 172.
edentula Rossi 441.
egregia Buyss. 599.
Ehrenbergi Dhlb. 509.
electa Walk. 426.
elegans Lep. 300.
elegans Brullé 273.

Chrysis
elegantula Spin. 425.
elongata Mocs. 204.
emarginata Marq. 231.
emarginatula Spin. 231.
episcopalis Spin. 414.
episcopalis Guér. 405.
Erigone n. sp. 239.
Erivanensis Rad. 547.
erratica Buyss. 370.
— *var. mossulensis* Buyss. 370.
erythromelas Dhlb. 444.
equestris Dhlb. 542.
euchlamys mihi 508.
excavata Brullé 399.
excisa Mocs. 454.
exigua n. sp. 456.
eximia n. sp. 428.
exulans Dhlb. 433.
Fabricii Mocs. 566.
faceta Aar. 303.
facialis Buyss. 502.
Fairmairei n. sp. 485.
fallax Mocs. 305.
fasciata Oliv. 549.
fasciata Fabr. 339.
fasciata Donov. 431.
fasciata Spin. 396.
fasciata Spin. 265.
fasciolata Klug 361.
fausta Sm. 201.
Fedtschenkoi Rad. 223.
fenestrata Rad. 444.
fervida Fabr. 131.
fervida Christ 623.
festina Mocs. 594.
festinus Sm. 594.
festiva Fabr. 603.
filiformis n. sp. 266.
flammea Lep. 245.
flavitarsis Först. 453.
fossulata Mocs. 375.
fossulatus Sm. 375.
foveata Dhlb. 292.
foveata Rad. 197.
fraterna n. sp. 322 (399).
Frey-Gessneri Grib. 385.
Frivaldszkyi Mocs. 312.

Chrysis
frontalis Klug 500.
fugax Ab. 206.
fulgida Linn. 434.
fulminatrix Buyss. 280.
fulvicornis n. sp. 373.
fumipennis Sm. 341.
fuscipennis Brullé 370.
fuscipennis Dhlb. 106.
Gabonensis n. sp. 584.
gastrica Dhlb. 249.
Gayi Spin. 403.
gemma Ab. 442.
gemmatus Sm. 544.
genalis Mocs. 197.
Genbergi Dhlb. 552.
Germari Wesm. 314.
Gestroi Grib. 285.
Gheudei Guér. 586.
Ghiliani Grib. 290.
gibba Brullé 403.
gibbosa n. sp. 334.
Gogorzæ Licht. 294.
Goliath Ab. 531.
Gonochrysis Licht. 287.
gloriosa Dhlb. 469.
gloriosa Fabr. 130.
gracilenta n. sp. 375.
gracilis Schck 491.
gracillima Lampr. 182.
Graelsii Guér. 453.
graja n. sp. 258.
grandior Pall. 614.
grandis Brullé 404.
gratiosa n. sp. 225.
Gribodoi Ab. 313.
Grohmanni Dhlb. 469.
Guerini Mocs. 405.
Gueudei Dhlb. 586.
Guineensis n. sp. 352.
Gyllenhali Dhlb. 272.
Gyllenhali Mocs. 266.
halictula Grib. 204.
Handlirschi n. sp. 477.
Hecate n. sp. 378.
Hecuba n. sp. 438.
Helvetica Mocs. 461.
Heptachrysis mihi 594.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Chrysis
Hesperidum Rossi 625.
Hexachrysis Licht. 333.
Hiendlmayri n. sp. 236.
hilaris Dhlb. 204.
Himalayensis Mocs. 523.
hirsuta Gerst. 261.
hirsuta Aar. 386.
Humboldti Dhlb. 222.
— var. minor mihi 223.
— var. minuta mihi 224.
humeralis Klug 500.
humilis Buyss. 220.
hungarica Scop. 312.
hybrida Lep. 279.
hydropica Ab. 230.
ignifrons Brullé 262.
ignita Linn. 487.
— *var. Alcione* Shuck. 488.
— *var. Asterope* Shuck. 488.
— var. brevidens Tourn. 491.
— *var. Celeno* Shuck. 488.
— var. curvidens Dhlb. 490.
— *var. Electra* Shuck. 488.
— var. infuscata mihi 490.
— var. Japonica mihi 490.
— var. longula Ab. 491.
— *var. Maia* Shuck. 488.
— var. obtusidens Duf 490.
— var. rutiliventris Ab. 491.
— *var. Taygeta* Shuck. 488.
ignita Fabr. *var.* 254.
ignita Dhlb. 493.
igniventer Guér. 490.
igniventris Ab. 494.
igniventris Marq. 488.
Illigeri Wesm. 314.
imbecilla n. sp. 344.
impar Dhlb. 477.
impar Rad. 477.
imperatrix Buyss. 473.
imperforata Grib. 412.
imperialis Westw. 431.
imperialis Dhlb. 429.
imperiosa Mocs. 526.
imperiosus Sm. 526.
impostor Mocs. 381.
impressa Schuck. 488.

Chrysis
inæqualis Dhlb. 483.
— var. Caucasica mihi. 484.
inæquidens Dhlb. 570.
incerta Dhlb. 593.
incisa Buyss. 506.
inclyta n. sp. 398.
incrassata Spin. 224.
indica Schrk 346.
Indica n. sp. 591.
indigotea Duf. et Perr. 346.
— var. Daghestanica mihi 347.
inermis Zschach 621.
inflata Aar. 386.
infuscata Brullé 289.
inops Grib. 519.
insida Rossi 625.
insignis Luc. 605.
insoluta Ab. 431.
insperata Chevr. 447.
insularis Guér. 573.
insularis Sm. 560.
integer Cress. 204.
integerrima Klug 309.
integra Fabr. 445.
integra Dhlb. 144, 152.
integra Montr. 202.
integra Cress. 208.
integrella Dhlb. 256.
interceptor Sm. 380.
intricans Spin. 396.
intricata Brullé 567.
intrudens Sm. 562.
intrudens Sm. 380.
inusitata Aar. 207.
Iris Christ. 348.
janthina Mocs. 374.
janthina Först. 346.
janthinus Sm. 374.
Japonica Mocs. 198.
japonicus Cam. 198.
Joppensis Mocs. 270.
joppensis Buyss. 270.
iucunda n. sp. 430.
jugum Dhlb. 199.
Keriensis Mocs. 516
keriensis Rad. 516.
Kessleri Rad. 469.

Chrysis
Kirschii n. sp. 485.
Klugii Dhlb. 553.
Kohli n. sp. 275.
Kokandica Mocs. 372.
kokandica Rad. 372.
Kolazyi n. sp. 464.
Kriechbaumeri Grib. 200.
Krüperi n. sp. 216.
Kuthyi n. sp. 212.
laborans Costa 358.
læta Dhlb. 351.
lætabilis Buyss. 369.
Lagodechii Rad. 274.
Laïs Ab. 227.
Lampas Christ 154.
lamprosoma Först. 606.
lateralis Brullé 551.
lateri-dentata Aar. 207.
lativentris Tourn. 258.
lauta Cress. 390.
lazulina Först. 287.
Leachei Dhlb. 311.
Leachi Ab. 311.
Leachii Shuck. 311.
lepida n. sp. 278.
Leskii Zschach 621.
leucocheila n. sp. 408.
leucophris n. sp. 409.
leucostigma n. sp. 410.
limbata Ev. 595.
lincea Fabr. 582.
littoralis n. sp. 359.
longigena n. sp. 357.
longirostris Grib. 403.
Lucasi Ab. 277.
lucidula Fabr. 172.
lunigera Dhlb. 330.
lusca Fabr. 527.
— var. concinna Grib. 528.
Lydiæ n. sp. 268.
lyncea Fabr. 582.
— vas. violacea Sm. 583.
Luzonica n. sp. 328.
maculata Fabr. 120.
maculicornis Klug 364.
macrostoma Grib. 269.
malachitica Dhlb. 557.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis
malachitica Sm. 593.
mandarina n. sp. 522.
manicata Dhlb. 486.
manicata Rad. 479.
Maracandensis Mocs. 372.
maracandensis Rad. 372.
marginalis Brullé 413.
marginalis Schck 454.
marginata n. sp. 451.
Mariae Buyss. 470.
Maroccana Mocs. 446.
martia Patt. 262.
mediocris Dhlb. 304.
mediocris Dhlb. 556.
megacephala Dhlb. 510.
Megerlei Dhlb. 259.
melanophris n. sp. 303.
melanops Kirby 546.
mendax Ab. 239.
meta Aar. 502.
mexicana Guér. 335.
mexicana Cam. 210.
Mexicana Mocs. 210.
micans Oliv. 106.
micans Rossi 537.
Miegii Guér. 483.
minutissima Rad. 369.
minutula Schck 312.
Mionii Guér. 350.
mirabilis Rad. 503.
mixta Dhlb. 256.
Mlokosewitzi Rad. 213.
Mocquerisi Buyss. 233.
Mocsáryi Rad. 426.
modica Dhlb. 556.
monochroa n. sp. 554.
Monochrysis Licht. 309.
montana Aar. 385.
Montezuma Mocs. 340.
montezuma Cam. 340.
Morawitzii n. sp. 607.
Mouattii Guér. 589.
mucronifer Ab. 585.
mucronifera Mocs. 585.
mucronata Brullé 330.
mucronata Dhlb. 585.
Mulsanti Ab. 241.

Chrysis
multicolor Walk. 261.
mutabilis Buyss. 496.
mutata Mocs. 501.
mutica Först. 260.
neglecta Shuck. 255.
Nisseri Dhlb. 342.
nitidula Fabr. 347.
nitidula Germ. 314.
nitidula Dhlb. 184.
nobilis Sulz. 191.
nobilis Schrk 172.
nobilis Fuessly 190.
nobilis Klug 590.
Nortoni Aar. 387.
Novaræ n. sp. 381.
Nubica Mocs. 559.
nubica Buyss. 559.
obliterata Mocs. 377.
oblonga Cress. 392.
obscura Sm. 561.
obscura Rad. 467.
obsoleta Dhlb. 488.
obtusidens Duf. et Perr. 490.
obtusiventris Först. 312.
ocellata Blanch. 435.
oculata Fabr. 543.
— var. sumptuosa Grib. 544.
Oliveirii Rad. 551.
Olivieri Brullé 336.
Olochrysis Licht. 196.
opaca Grib. 558.
optima Aar. 207.
Oraniensis Mocs. 283.
oraniensis Luc. 283.
opulenta n. sp. 500.
orientalis Guér. 592.
orientalis Dhlb. 377.
ornata Mocs. 221.
ornatrix Christ 435.
ornatus Sm. 221.
Osiris Buyss. 247.
Osmiæ Thoms. 258.
Ottomana n. sp. 239.
pacifica Say 203.
pallidicornis Spin. 510.
palliditarsis Spin. 363.
pallispinosa Walk. 602.

Chrysis
Panamensis Mocs. 342.
panamensis Cam. 342.
Panzeri Fabr. 69.
parallela Brullé 561.
parallelus Sm. 381.
Parthenope n. sp. 394.
parvula Fabr. 335.
Patagonica n. sp. 579.
patriarchalis Rad. 308.
Pattoni Aar. 386.
pelopæicida Bruyss. 219.
pellucida Rad. 601.
pellucida Buyss. 323.
pellucidula Aar. 386.
peninsularis Buyss. 310.
Pennsylvanica Mocs. 565.
pennsylvanica Aar. 565.
pensylvanica Brullé 565.
Pentachrysis Licht. 519.
peracuta Aar. 388.
peregrina Buyss. 388.
Pérezi n. sp. 461.
perpulchra Cress. 205.
Perrini Rad. 454.
persica Rad. 183.
Pharaonum Mocs. 500.
Phryne Ab. 228.
picticornis mihi 236.
pilifrons Cam. 576.
placida Mocs. 433.
plurimacula Brullé 583.
plusia n. sp. 535.
plumata Rossi 625.
pœcila Mocs. 440.
pœcilochroa n. sp. 459.
Polinieri Guér. 321.
porphyrea n. sp. 284.
postica Brullé 340.
prasina Klug 318.
prasina Dhlb. 498.
prasinus Cress. 390.
prima Schæff. 488.
principalis Sm. 559.
producta Brullé 333.
prominula Dhlb. 581.
propingua n. sp. 343.
propria Aar. 389.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis
Proteus Sm. 586.
proxima Cam. 577.
pruna Grib. 286.
Przewalskii Rad. 504.
psittacina Buyss. 421.
puberula Spin. 623.
pubescens Sm. 376.
pulchella Spin. 533.
— var. spinifera Ab. 534.
pulchella Frey 535.
pulchellus Cam. 370.
pulcherrima Lep. 444.
pulcherrima Cress. 390.
pulchra Rad. 606.
pumila Klug 183.
punctata Christ 622.
punctatissima Spin. 339.
punctatissima Vill. 191.
purpurascens n. sp. 272.
purpurata Fabr. 596.
purpurea Sm. 379.
purpureifrons Ab. 281.
purpuriventris Cress. 392.
pusilla Fabr. 99.
pustulosa Ab. 259.
pyrrhina Dhlb. 445.
pyrocœlia n. sp. 255.
pyrogaster Brullé 246.
pyrophana Dhlb. 507.
quadrispina Buyss. 368.
quadri-tuberculata Cam. 211.
quarta Schæff. 282.
quinquedentata Mocs. 520.
quinta Schæff. 549.
Radoszkovszkyi Grib. 291.
Ragusæ Destef. 345.
Ramburi Dhlb. Mocs. 449.
Ramburi Dhlb. 449, 450.
rastellum Brullé 394.
refulgens Spin. 245.
refulgens Klug 500.
regia Fabr. 172.
regina Buyss. 513.
Reichei Dhlb. 356.
remota Mocs. 513.
resecta Grib. 206.
reversa Mocs. 202.

Chrysis
reversus Sm. 202.
Rhodia n. sp. 258.
Ribbei n. sp. 524.
Ritsemæ n. sp. 338.
Rogenhoferi n. sp. 604.
Rosae Dhlb. 154.
rosea Rossi 154.
Rosenhaueri Först. 457.
Ruddii Shuck. 493.
rufa Panz. 154.
rufitarsis Brullé 307.
rufiventris Dhlb. 243.
rufiventris Rad. 254.
rutilans Oliv. 447.
— var. Asiatica mihi 448.
rutilans Dhlb. 472.
rutilans Rad. 473.
rutiliventris Ab. 491.
sabulosa Rad. 536.
Sarafschana mihi 437.
Saussurei Chevr. 302.
Schiödtei Dhlb. 544.
Schlettereri n. sp. 494.
Schönherri Dhlb. 540.
Schousbœi Dhlb. 469.
Schousboei Rad. 301.
Schousboei Marq. 465.
Schulthessi n. sp. 572.
Sciœnsis Grib. 321.
scita Mocs. 257.
scitula Cress. 517.
scrobiculata Mocs. 562.
scutellaris Fabr. 457.
— *var. modesta* Tourn. 457.
scutellaris Panz. 69.
secunda Schæff. 172.
seducta Sm. 326.
segmentata Dhlb. 457.
Segusiana Gir. 606.
Sehestedti Dhlb. 415.
selenia Costa 330.
semiaurata Fabr. 47.
semiaurata Brullé 589.
semicincta Lep. 429.
semicyanea Brullé 227.
seminigra Walk. 475.
semiviolacea n. sp. 484.

Chrysis
Senegalensis Mocs. 350.
separanda mihi 235.
Servillei Brullé 384.
severa n. sp. 573.
sexdentata Christ 537.
sexdentata Fabr. 566.
sexdentata Panz. 549.
Shanghaiensis Sm. 522.
Sibylla n. sp. 359.
sicula Ab. 442.
similaris Tourn. 258.
similis Lep. 537.
simillima Grib. 591.
simplex Dhlb. 252.
simulans n. sp. 380.
Sinaica Mocs. 415.
sinaica Walk. 415.
Singalensis n. sp. 324.
singularis Spin. 180.
sinuata Brullé 307.
sinuata Dhlb. 295, 440.
sinuata Rad. 440.
sinuosa Dhlb. 295.
sinuosa Rad. 441.
sinuosiventris Ab. 305.
sispes Fabr. 625.
Siva n. sp. 545.
smaragdicolor Walk. 206.
smaragdula Fabr. 564.
smaragdula Lep. et Serv. 593.
Smidti Dhlb. 578.
Smithii Grib. 589.
Smyrnensis n. sp. 268.
socia Dhlb. 269.
Somalina n. sp. 512.
soluta Dhlb. 184.
soluta Rad. 348.
Sonorensis Mocs. 309.
sonorensis Cam. 309.
soror Dhlb. 419.
speciosa Rad. 417.
spectabilis n. sp. 525.
spina Brullé 521.
spinidens Mocs. 516.
spinifer Ab. 534.
spinigera Spin. 441.
— var. imperforata Grib. 412.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysis
Spinolae Montr. 193.
splendens Dhlb. 547.
splendida Fabr. 193.
splendidula Rossi 446.
spendidula Dhlb. 447.
stenops n. sp. 571.
stilboides Spin. 590.
Stondera Panz. 435.
Stoudera Jur. 435.
Stouderi Labr. et Imh. 435.
striatellus Nort. 186.
strangulata Gog. 506.
Stschurovszky Rad. 595.
Stschurovszkyi Mocs. 595.
subfoveolata Brullé 406.
subsinuata Marq. 304.
subviridis Cress. 576.
succincta Linn. 312.
— var. bicolor Lep. 314.
— var. Germari Wesm. 314.
— var. Gribodoi Ab. 313.
succincta Christ 621.
succincta Panz. 314.
succincta Dhlb. 314.
succincta Chevr. 314.
succinctula Dhlb. 312, 314.
sulcata Dhlb. 237.
sulcata Rad. 606.
sumptuosa Sm. 215.
superba Cress. 391.
superba Tourn. 461.
superba Rad. 448.
suavis Christ 622.
Sybarita Först. 455.
— var. Valesiana Frey 456.
Syriaca Guér. 414.
Taczanovszkyi Rad. 470.
taeniophris Först, 483.
Tafnensis Mocs. 250.
tafnensis Luc. 250.
tarsata Dhlb. 213.
Taschenbergi n. sp. 316.
Tasmaniaca n. sp. 563.
Taurica n. sp. 345.
tenella n. sp. 197.
terminata Dhlb. 518.
tertia Schæff. 320.
Tetrachrysis Licht 339.
Texana Mocs. 569.
texana Grib. 569.
thalassina Zschach 441.
Thalhammeri n. sp. 456.
therates n. sp. 555.
Thuringiaca Schmiedkn. 256.
Tolteca n. sp. 341.
torrida mihi 600.
tota Aar. 204.
Transcaspica n. sp. 306.
transversa Dhlb. 248.
triacantha n. sp. 325.
tricolor Luc. 429.
tridens Lep. et Serv. 335.
tridens Brullé 335.
tridentata Dhlb. 335.
trigona n. sp. 327.
trimaculata Först. 243.
tripartita Aar. 388.
trisinuata n. sp. 288.
truncata Guér. 335.
truncata Dhlb. 95.
truncatella Dhlb. 332.
Uljanini Rad. Mocs. 436.
Uljanini Rad. 436, 437.
uncifer Ab. 493.
uncifera Mocs. 493.
undulata Rad. 467.
unicolor Dhlb. 287.
unicolor Brullé 335.
unicolor Luc. 277.
uniformis Dhlb. 256.
unita n. sp. 211.
vagans Rad. 178.
Vahli Dhlb. 536.
varicolor Sm. 539.
varicornis Spin. 235.
varicornis Dhlb. 235.
varicornis Rad. 236.
varidens Ab. 465.
varidens Gog. 508.
variegata Oliv. 597.
variicolor mihi 539.
venusta Cress. 390.
venusta Mocs. 279.
verna Dhlb. 478.
versicolor Spin. 308.
versicolor Luc. 446.
versuta Mocs. 380.
verticalis Patt. 186.
vestigator Sm. 325.
virens Christ 622.
virens Cress. 335.
virescens Brullé 555.
virgo Ab. 183.
viridana Dhlb. 217.
viridana Rad. 286.
viridifrons Sm. 202.
viridimargo Buyss. 470.
viridis Oliv. 395.
viridis Guér. 187.
viridis Brullé 350.
viridissima Klug 367.
viridula Linn. 441.
— var. cingulicornis Först. 444.
— var. erythromelas Dhlb. 444.
— *var. erythromelas* Frey 444.
— var. integra Fabr. 445.
— var. intermedia Buyss. 444.
— var. pulcherrima Lep. 444.
violacea Panz. 549.
violacea Rossi 106.
violacea Schrk 348.
vitripennis Schck 488.
volatilis Sm. 374.
vomerina Costa 582.
Wahlbergi Dhlb. 548.
Westermanni Dhlb. 350.
Wüstneii n. sp. 294.
xanthocera Klug 474.
Zetterstedti Dhlb. 541.
Zetterstedti Dhlb. 542.
zonata Dhlb. 416.
Zuluana n. sp. 358.

Chrysogona Först. 181.
armata n. sp. 187.
Bohemanni Dhlb. 185.
gracillima Först. 182.
Frey-Gessneri n. sp. 186.
pumila Klug 183.
Saussurei n. sp. 187.
soluta Dhlb. 184.
tarsata Tourn. 183.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Chrysogona
verticalis Patt. 186.
Chrysura Dhlb. 222, 287.
Humboldti Dhlb. 222.
unicolor Dhlb. 287.
Cleptes Latr. 35.
Abeillei Buyss. 59.
ærosus Först. 58.
aerosus Tourn. 59.
Afer Mocs. 53.
afra Luc. 53.
aliena Patt. 39.
alienus Mocs. 39.
Americana Prov. 40.
americana Cress. 39.
Americanus Mocs. 40.
aurata Panz. 48.
aurata Dhlb. 56.
auratus Mocs. 56.
Aurora Sm. 38.
Chryzeri mihi 50.
coccorum Fabr. 625.
consimilis Buyss. 44.
Diana n. sp. 46.
fallax n. sp. 49.
fasciata Dhlb. 37.
fasciatus Mocs. 37.
fulgens Fabr. 625.
ignita Fabr. 52.
ignita Chevr. 50.
— *var. Chevrieri* Frey 50.
ignitus Mocs. 52.
— var. scutellaris mihi 53.
insperata Aar. 40.
insperatus Mocs. 40.
larvarum Fabr. 625.
minutus Fabr. 625.
Morawitzii Rad. 60.
muscarum Fabr. 625.
nigriventris Dhlb. 60.
nitidula Fabr. 42.
nitidulus Mocs. 42.
orientalis Dhlb. 57.
pallipes Lep. 48.
Pérezi Gog. 46.
Provancheri Aar. 40.
purpurata Cress. 39.
purpuratus Mocs. 39.
Cleptes
Putoni Buyss. 56.
Radoszkovszkyi Mocs. 44.
Saussurei n. sp. 57.
semiaurata Fabr. 48.
semiauratus Linn. 47.
semicyanea Tourn. 51.
semicyaneus Mocs. 51.
speciosa Aar. 55.
speciosus Mocs. 55.
splendens Fabr. 48.
stigma Fabr. 625.
syriaca Buyss. 54.
Syriacus Mocs. 54.
thoracica Guér. 42.
xanthomelas n. sp. 36.
Cleptinæ Aar. 35.
Cymura Dhlb. 158.
splendida Dhlb. 158.
Diplolepis Fabr. 52.
chrysis Fabr. 52.
Diplorrhos Aar. 33, 81.
plicatus Aar. 81.
Elampus Dhlb. 63.
ambiguus Dhlb. 63.
ambiguus Ev. 80.
affinis Wesm. 97.
aeneus Schck 97.
auratus Wesm. 90.
bidens Först. 73.
bidentulus Dhlb. 85.
bidentatus Luc. 441.
bidentatus Ev. 85.
bipartitus Frey 68.
Chevrieri Tourn. 98.
chlorosoma Luc. 95.
chrysonotus Dhlb. 65.
coeruleus Dhlb. 74.
coeruleus Thoms. 95.
coeruleus Schck 106.
corruscans Nort. 102.
corruscans Prov. 77.
Cressoni Aar. 104.
cribratus Klug 129.
cyanescens Prov. 101.
femoralis Ev. 73.
Frivaldszkyi Frey 67.
Gayi Spin. 79.
Elampus
iridescens Nort. 105.
laeviventris Nort. 101.
marginatus Prov. 105.
Mocsáryi Rad. 80.
minutus Wesm. 99.
minutus Dhlb. 95.
micans Klug 108.
Panzeri Shuck. 69.
productus Dhlb. 67.
punctulatus Frey 89.
purpurascens Prov. 103.
pusillus Wesm. 84, 8·.
pusillus Schck 100.
pygmaeus Schck 97.
Sanzii Gog. 71.
sinuosum Nort. 103.
speculum Nort. 105.
Spina Dhlb. 73.
spina Court. 67.
spinosus Prov. 77.
truncatus Dhlb. 95.
variatus Aar. 104.
versicolor Aar. 77.
viridi-cyaneus Nort. 77.
viridis Cress. 78.
viridis Prov. 78.
violaceus Wesm. 95, 106.
Wesmaeli Chevr. 85.
Ellampinæ Mocs. 63.
Ellampus Spin. Schck 63.
æneus Fabr. 96.
— var. blandus Först. 97.
— var. Chevrieri Tourn. 98.
— var. pygialis Buyss. 98.
Afer n. sp. 75.
albipennis n. sp. 80.
ambiguus Dhlb. 66.
angustatus n. sp. 75.
appendicinus Ab. 86.
auratus Linn. 90.
— var. abdominalis Buyss. 91.
— var. cupratus mihi 92.
— var. Gasperinii mihi 92.
— var. maculatus Buyss. 92.
— var. triangulifer Ab. 91.
— var. virescens mihi 91.
bidens Först. 73.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Ellampus
bidentulus Lep. 84.
bipartitus Tourn. 68.
blandus Först. 97.
caudatus Ab. 109.
chrysonotus Först. 129.
coerulescens Mocs. 107.
cœruleus Dhlb. 74.
coriaceus Dhlb. 113.
coruscans Nort 102.
Cressoni Aar. 104.
curtiventris Tourn. 92.
deflexus Ab. 112.
diversus Aar. 102.
Eversmanni mihi 80.
Friesei n. sp. 109.
Frivaldszkyi Mocs. 67.
Gayi Spin. 79.
generosus Först. 127.
hyalinus Aar. 107.
Horváthi n. sp. 82.
imbecillus n. sp. 98.
inflammatus Först. 130.
intermedius Aar. 105.
iridescens Nort. 105.
Kohli n. sp. 70.
læviventris Cress. 101.
marginatus Patt. 78.
Mexicanus n. sp. 72.
micans Klug 108.
Mocsáryi Rad. 80.
nanus Saund. 83.
nitidus Aar. 72.
omaloides Buyss. 111.
Panzeri Fabr. 69.
parvulus Dhlb. 88.
plicatus Aar. 81.
politus Buyss. 89.
praestans Först. 106.
productus Schck 67.
productus Aar. 78.
puncticollis Mocs. 99.
— var. atratus Mocs. 99.
punctulatus Dhlb. 89.
punctulatus Mocs. 93.
pusillus Fabr. 99.
pyrosomus Först. 65.
Rudowi Buyss. 93.

Ellampus
rufitarsis Tourn. 74.
Sanzii Gog. 71.
Sareptanus n. sp. 83.
Schmiedeknechti n. sp. 83.
sculpticollis Ab. 86.
semicircularis Aar. 103.
seminudus Aar. 76.
similis n. sp. 96.
sinuosus Say 103.
speculum Say 105.
spina Lep. 67.
socius n. sp. 88.
soror n. sp. 68.
Tiberiadis Buyss. 110.
truncatus Dhlb. 95.
Turkestanicus n. sp. 101.
variatus Aar. 104.
versicolor Aar. 77.
violaceus Scop. 106.
— var. virens mihi 107.
violascens n. sp. 81.
viridicyaneus Nort. 77.
viridis Cress. 78.
viridiventris Mocs. 74.
Wesmæli Chevr. 85.
Wesmaeli Mocs. 82.
Euchraeus Walk. Frey.
pallispinosus Walk. 603.
purpuratus Frey. 597.
Euchroeus Latr. 33, 595.
amabilis Mocs. 599.
Beckeri Tourn. 595.
candens Dhlb. 600.
coerulans Dhlb. 600.
Doursi Grib. 597.
Edwardsii Cress. 611.
egregius Buyss. 599.
festivus Dhlb. 603.
limbatus Dhlb. 595.
purpuratus Blanch. 597.
purpureus Ab. 597.
quadratus Shuck. 597.
sexdentatus Latr. 597.
Hedychridium Ab. Buyss. 33. 133.
aheneum Ab. 146.
anale Ab. 141.
ardens Frey. 153.

Hedychridium
Buyssoni Ab. 148.
coeruleum Aar. 137.
coriaceum Frey. 150.
cupratum Frey. 153.
dimidiatum Aar. 136.
elegantulum Buyss. 152.
flavipes Ab. 134.
gratiosum Ab. 151.
guatemalense Cam. 138.
heliophilum Buyss. 148.
incrassatum Ab. 147.
integrum Ab. 145.
minutum Gog. 150.
minutum Ab. 153.
— *var. coriaceum* Ab. 150.
— *var, homeopathicum* Ab. 153.
— *var. infans* Ab. 153.
— *var. reticulatum* Ab. 149.
monochroum Buyss. 135.
nanum Ab. 155.
roseum Ab. 155.
— *var. chloropyga* Buyss. 155.
— *var. femoratum* Ab. 155.
— *var. nanum* Buyss. 155.
sculpturatum Ab. 143.
viride Aar. 137.
Hedychrinæ mihi 113.
Hedycrium Lec. 103.
sinuosum Lec. 103.
Hedycrum Wesm. 152.
ardens Wesm. 152.
coriaceum Wesm. 152.
fervidum Wesm. 174.
regium Wesm. 173.
roseum Wesm. 154.
Hedychrum Latr. Mocs. 155.
aheneum Dhlb. 146.
alterum Lep. 172.
anale Dhlb. 141.
ardens Shuck. 152.
asperum Brullé 121.
aulicum Spin. 172.
auratum Latr. 90.
aureicolle n. sp. 168.
bidentulum Lep. 84.
— *var. aenea* Shuck. 97.
— *var. imperiale* Shuck. 106.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Hedychrum
bidentulum var. viride Shuck. 97.
Brasilianum Dhlb. 163.
callosum Rad. 146.
carinulatum Spin. 624.
carinulatum Schck 153.
chalconotum Först. 131.
chalybaeum Dhlb. 156.
chloroideum Dhlb. 115.
Cirtanum Grib. 165.
cœlestinum Spin. 158.
coerulescens Lep. 106.
coerulescens Shuck. 156.
coerulescens Chevr. 624.
coeruleum Nort. 137.
continuum Aar. 152.
coriaceum Dhlb. 150.
Cressoni Nort. 163.
cupratum Dhlb. 153.
cupreum Dhlb. 144.
cupreum Rad. 165.
cupricolle Cress. 126.
curvatum Först. 115.
cyaneum Brullé 159.
cyaneum Mocs. 157.
cyaniventre Cress. 123.
difficile Spin. 139.
dimidiatum Say 136.
Erschovi Rad. 154.
fastuosum Luc. 127.
Fellmannii Luc. 131.
femoratum Dhlb. 151.
femoratum Mocs. 155.
fervidum Latr. 131.
fervidum Lep. 174.
flammulatum Sm. 160.
flavipes Ev. 133.
flavitarse Costa 623.
Frivaldszkyi n. sp. 164.
Gerstæckeri Chevr. 169.
gratiosum Marq. 151.
incrassatum Dhlb. 147.
incrassatum Rad. 174.
indica Blanch. 69.
integrum Dhlb. 145, 153.
janthinum Dhlb. 159.
Janus Hald. 103.
japonicum Cam. 173.

Hedychrum
Lewisi Cam. 118.
longicolle Ab. 169.
longipilis Tourn. 173.
Louisianae Nort. 161.
lucidulum Latr. 172.
lucidum Lep. 130.
luculentum Först. 171.
maculatum Lep. 120.
mauritanicum Luc. 117.
metallicum Dhlb. 158.
micans Luc. 127.
minimum Duf. et Perr. 90.
minutum Lep. 152.
Mlokosewitzi Rad. 125.
nanum Chevr. 155.
neotropicum n. sp. 164.
nigropilosum n. sp. 162.
nitidum Lep. 131.
nitidum Panz. 97, 106.
nobile Scop. 172.
numidicum Luc. 128.
obscurum Tourn. 169.
obsoletum Say 121.
orientale Sm. 119.
Panzeri Panz. 69.
Phœnix Buyss. 170.
plagiatum Mocs. 142.
purpurascens Dhlb. 144.
regium Lep. 172.
roseum Lep. 154.
rufum Panz. 154.
rugosa Sm. 125.
rutilans Dhlb. 174.
— var. viridi-auratum mihi 175.
scutellare Tourn. 142.
sculptiventre Buyss. 166.
semicyaneum n. sp. 168.
semiviolaceum n. sp. 165.
simile mihi 157.
sinuosum Say 103.
Solandii Court. 133.
Solsky Rad. 116.
speculum Say 105.
spina Lep. 67.
spina Blanch. 623.
stilboides Walk. 158.
suave Tourn. 155.

Hedychrum
Szabói n. sp. 167.
timidum Dhlb. 160.
ventrale Say 122.
vernale Cress. 123.
virens Dhlb. 170.
— var. Caucasicum mihi 171.
viride Guér. 128.
viride Cress. 127.
viridiaureum Tourn. 174.
violaceum Brullé 161.
violaceum Prov. 122.
Willii Cress. 161.
Zelleri Dhlb. 134.
Zimmermanni Dhlb. 121.
Heterocœlia Dhlb. 60.
nigriventris Dhlb. 60.
Homalus Saund. 83.
nanus Saund. 83.
Holopyga Dhlb. Mocs. 114.
ahenea Dhlb 146.
Algira n. sp. 149.
amœnula Dhlb. 127.
— var. punctatissima Dhlb. 128.
— var. viridis Guér. 128.
analis Dhlb. 141.
angustata Schck 127, 129.
ardens Coqueb. 152.
— var. homeopathica Ab. 153.
— var. infans Ab. 153.
aspera Brullé 121.
bellipes Mocs. 134.
bifrons Ab. 133.
Bogdanovi Rad. 126.
Bogdanovii Rad. 126.
Buyssoni Ab. 148.
Capensis n. sp. 136.
caudata Ab. 109.
chalybaeus Marq. 156.
chloroidea Ab. 116.
chrysonota Först. 129.
cicatrix Ab. 108.
cœrulea Nort. 137.
compacta Cress. 122.
coriacea Dhlb. 150.
cribrata Klug 129.
cuprata Dhlb. 153.
cupricollis Cress. 126.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Holopyga
curvata Först. 115.
cyaniventris Cress. 123.
deflexa Ab. 112.
difficilis Spin. 139.
dimidiata Say 136.
Dohrni Dhlb. 122.
elegantula Buyss. 152.
femorata Dhlb. 151.
fervida Fabr. 131.
flavipes Ev. 133.
gencrosa Schck 117, 129.
gloriosa Fabr. 130.
-- var. Caucasica mihi 131.
gloriosa Ab. 127.
— *var. amoenula* Dhlb. 127.
— *var. aureomaculata* Ab. 127.
— *var. fastuosa* Ab. 127.
— *var. lucida* Ab. 130.
— *var. mauritanica* Ab. 117.
-- *var. micans* Ab. 127.
Guatemalensis Mocs. 138.
guatemalensis Cam. 138.
heliophila Buyss. 148.
horus Aar. 123.
imperialis Gradl 130.
incrassata Dhlb. 147.
Indica n. sp. 118.
insperata n. sp. 119.
integra Dhlb. 144.
janthina Dhlb. 117.
iucunda n. sp. 150.
Jurinei Chevr. 130.
lazulina Dhlb. 124.
Lewisi Cam. 118.
maculata Fabr. 120.
Mauritanica Luc. 117.
micans Dhlb. 108.
miliaris Cam. 138.
miranda Ab. 132.
Mlokosewitzi Rad. 125.
monochroa Buyss. 135.
Novaræ n. sp. 124.
obsoleta Say 121.
orientalis Sm. 119.
ovata Dhlb. 127.
— *var. gloriosa* Dhlb. 130.
— *var. ignicollis* Dhlb. 129.

Holopyga
plagiata Mocs. 142.
punctatissima Dhlb. 128.
punctatissima Schck 127.
purpurea Sm. 119.
purpurascens Dhlb. 144.
reticulata Ab. 149.
rosea Rossi 154.
-- var. chloropyga Buyss. 155.
var. nana Chevr. 155.
rugosa Sm. 125.
sculpturata Ab. 143.
scutellaris Tourn. 142.
semi-ignita Marq. 109.
Sicheli Chevr. 115.
similis Mocs. 130.
smaragdina Tourn. 115.
Solskii Rad. 116.
Solskyi Rad. 116.
splendens Chevr. 131.
splendida Schck 129.
suturalis n. sp. 140.
torosa n. sp. 139.
varia Schck 129.
ventralis Say 122.
vernalis Cress. 123.
viridis Cress. 137.
Zelleri Dhlb. 134.
Ichneumon Linn.
auratus Panz. 48.
Chrysis Fabr. 52.
ignitus Fabr. 52.
nitidulus Fabr. 42.
semiauratus Fabr. 47.
splendens Fabr. 48.
Notozus Först. 33, 65.
affinis Schck 70.
ambiguus Schck 66.
anomalus Först. 95.
bidens Först. 73.
bipartitus Tourn. 68.
coeruleus Schck 74.
constrictus Först. 69.
elongatus Schck 70.
Frivaldszkyi Först. 67.
hyalinus Aar. 77.
intermedius Aar. 105.
marginatus Patt. 78.

Notozus
minutulus Schck 70.
nitidus Aar. 72.
Panzeri Först. 69.
productus Schck 67.
productus Aar. 78.
pulchellus Schck 70.
pyrosomus Först. 65.
rufitarsis Tourn. 74.
seminudus Aar. 76.
truncatus Lampr. 95.
versicolor Aar. 77.
viridi-cyaneus Aar. 77.
Omalus Dhlb. 33, 63.
aeneus Panz. 96.
-- *var. Chevrieri* Ab. 98.
— *var. pygialis* Buyss. 98.
ambiguus Ab. 66.
appendicinus Ab. 86.
auratus Dhlb. 90.
— *var. abdominalis* Buyss. 91.
-- *var. maculatus* Buyss. 92.
— *var. triangalifer* Ab. 91.
bidentulus Ab. 85.
chrysonotus Ab. 65.
coeruleus Dhlb. 106.
coriaceus Dhlb. 113.
corruscans Aar. 102.
curtiventris Tourn. 92.
diversus Aar. 102.
iridescens Aar. 105.
laeviventris Cress. 101.
minutus Marq. 100.
nitidulus Marq. 97.
nitidus Aar. 106.
Panzeri Ab. 70.
parvulus Dhlb. 88.
politus Buyss. 89.
productus Ab. 67.
punctulatus Dhlb. 89.
pusillus Dhlb. 100.
Rudowi Buyss. 93.
sculpticollis Ab. 86.
scutellaris Ab. 70.
semicircularis Aar. 103.
sinuosus Aar. 103.
superbus Ab. 73.
triangulifer Ab. 91.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Omalus
truncatus Ab. 95.
viridiventris Ab. 74.
Wesmaeli Ab. 85.
Parachrysis Grib. 403.
longirostris Grib. 403.
Parnopes Latr. 108.
apicalis Walk. 609.
carnea Fabr. 614.
— *var. unicolor* Grib. 615.
chrysoprasina Sm. 611.
chrysoprasinus Mocs. 611..
denticulata Spin. 616.
denticulatus Mocs. 616.
Doursi Sich. 615.
Edwardsii Cress. 611.
elegans Klug 613.
Fischeri Spin. 612.
fulvicornis Cam. 613.
grandior Pall. 614.
— var. Caspicus mihi 615.
— var. fasciatus mihi 615.
— var. unicolor Grib. 615.
Popovii Ev. 613.
Sinensis Sm. 613.
smaragdina Sm. 610.
smaragdinus Mocs. 610.
viridis Brullé 610.
Philoctetes Ab. Buyss. 33, 107.
caudatus Buyss. 109.
deflexus Buyss. 112.
micans Buyss. 108.
omaloides Buyss. 111.
Tiberiadis Buyss. 110.
Platycelia Dhlb. 509.
Ehrenbergi Dhlb. 509.
Pleurocera Guér. 188.
viridis Guér. 189.
Polyodontus Rad. 33, 595.
Stschurovszky Rad. 595.
Pyria Lep. et Serv. 33, 582.
armata Lep. et Serv. 582.
bispilota Guér. 583.
canaliculata Brullé 587.
Drewseni Grib. 562.
Gheudei Guér. 586.
lusca Lep. et Serv. 527.
lyncea Gerst. 582.
Mouattii Guér. 589.
oculata Brullé 543.
— *var. sumptuosa* Grib. 544.
plurimacula Buyss. 583.
polystigma Buyss. 583.
Reichei Spin. 582.
simillima Grib. 591.
smaragdula Brullé 590.
violacea Sm. 583.
tridens Lep. et Serv. 335.
Sphex Linn.
ignita Poda 488.
Nobilis Scop. 172.
semiaurata Linn. 47.
Violacea Scop. 106.
Spinolia Dhlb. 33, 603.
magnifica Dhlb. 606.
Spintharis Klug Dhlb. 176.
chrysonota Dhlb. 178.
deaurata n. sp. 179.
destituta Dhlb. 180.
fasciolata Klug 361.
frontalis Klug 500.
humeralis Klug 500.
integerrima Klug 309.
maculicornis Klug 364.
pallipes Tourn. 177.
prasina Klug 318.
pumila Klug 183.
Spintharis
refulgens Klug 500.
singularis Spin. 180.
vagans Rad. 178.
viridissima Klug 367.
xanthocera Klug 474.
Stilbum Spin. 189.
amethystinum Sm. 191, 192.
— *var. festivum* Mocs. 190.
calens Spin. 191.
— var. speciosa Ghil. 191.
calens Ab. 190.
cyanurum Forst. 190.
— var. amethystinum F. 192.
— var. nobile Sulz. 191.
— var. Siculum Tourn. 191.
— var. splendidum Fabr. 193.
Hedenborgi Dhlb. 590.
lynceum Dhlb. 582.
nobile Mocs. 191.
oculatum Blanch. 543.
sexdentatum Guér. 590.
siculum Tourn. 191.
splendidulum Westw. 192.
splendidum Blanch. 190.
splendidum Dhlb. 192.
splendidum Sm. 193.
splendidum Ab. 191.
variolatum Costa 193.
viride Guér. 193.
Wesmaeli Dhlb. 190.
Westermanni Dhlb. 191.
Vespa Fourcr.
aurata Fourcr. 90.
carbunculus Fourcr. 172.
cuprea Fourcr. 174, 320.
ignita Fourcr. 479.
rufescens Fourcr. 47.
viridis Fourcr. 172.

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

EMENDANDA.

Pag.	64	lin.	24	post «espèces»	adde:	donnera.
«	81	«	23	«*Dipllorrhos*»	lege:	*Diplorrhos*.
«	83	«	4	«*Omalus*»	«	Homalus.
«	98	«	15	«*Bouiss*»	«	Buyss.
«	130	«	22	«*lucidulum*»	«	lucidum.
«	292	«	10	«*Annuali*»	«	Annali.
«	320	«	16	« *Vespa cuprea* »	Fourcr.	delenda est.
«	399	«	37	«*fraterna n. sp.*»	lege:	binominata n. sp.
«	549	«	26	«*1876*»	«	1776.

(Errata leviora ipse Lector benignus corrigere velit).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

EXPLICATIONES TABULARUM.

TABULA I.

Fig. 1. **Chrysis ignita** LINN.; *f.* «la volsella», *g.* «sa tenette» (secundum Radoszkovszky).
« 2. « « « ; «les deux crochets», *h.* «le fourreau» (sec. Rad.).
« 3. **Amisega cuprifrons** CAM. (sec. Cam.).
« 4. **Chrysis ignita** LINN.; «le forceps», *dd* «la branche», *ff* «la volsella», *g* «la tenette». La *branche* du *forceps* forme une seule piece avec sa base *(e)*, *qq* «la pièce basilaire» (sec. Rad.).
« 5. « « « ; «disposition des segments intérieurs de la femelle» (sec. Rad.).
« 6. **Amisega cuprifrons** CAM.; apex abdominis (sec. Cam.).
« 7. **Chrysis ignita** LINN.; «l'oviscape», *a* «côté supérieur de l'armure copulatrice», *b* «côté inférieur», *c* «branche du forceps vue de côté» (sec. Rad).
« 8. **Ellampus auratus** LINN.; ala antica.
« 9. **Hedychrum** genus; ala antica.
« 10. **Cleptes xanthomelas** n. sp.
« 11. **Cleptes orientalis** DHLB.; ala antica: *a* margo anticus, *b* margo apicalis, *c* margo posticus, *d* vena costalis, *e* vena medialis, *f* vena analis, *u* venula transverso-medialis, *v* venula transverso-submedialis prima, *w* venula transverso-submedialis secunda, *h* vena cubitalis rudimentaria, *i* vena discoidalis rudimentaria, *p* venula transverso-discoidalis prima, *1* stigma, *2* cellula radialis incompleta, *15* cellula costalis completa, *16* cellula medialis completa, *17* cellula submedialis prima completa, *18* cellula submedialis secunda rudimentaria, *19* cellula discoidalis plerumque rudimentaria, *20* regio cellulæ analis (secundum Dahlbom).
« 12. « « « ; ala postica: *a* vena costalis et margo anticus, *b* vena postcostalis, *c* vena medialis, *d* vena analis, *ab* spinulæ recurvæ quibuscum ala postica ad alam anticam sub volatu affigitur, *1* regio stigmaticalis, *2* cellula costalis (sec. Dhlb.).
« 13. **Chrysis ignita** LINN.; «couvercle génital» (sec. Rad.).
« 14. **Ellampus** (Notozus) **productus** AAR.; abdominis segmentum tertium (sec. Aaron).
« 15. **Ellampus** (Omalus) **semicircularis** AAR.; abdominis segmentum tertium (sec. Aaron)
« 16. **Ellampus** (Omalus) **pusillus** FABR.; abdominis segmentum tertium (sec. Dhlb.).
« 17. **Ellampus** (Notozus) **viridicyaneus** NORT.; abdominis segmentum tertium (sec. Aaron).
« 18. **Ellampus** (Omalus) **auratus** LINN.: abdominis segmentum tertium (sec. Dhlb.).
« 19. **Ellampus** (Notozus) **marginatus** PATT.; abdominis segmentum tertium (sec. Aaron).
« 20. **Ellampus** (Notozus) **Panzeri** FABR.; unguiculi tarsorum (sec. Dhlb.).
« 21. **Holopyga amoenula** DHLB.; unguiculi tarsorum (sec. Dhlb.).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Fig. 22. **Hedychrum nobile** Scop.; unguiculi tarsorum (sec. Dhlb.).
" 23. **Ellampus punctulatus** Dhlb. (sec. Dhlb.).
" 24. **Hedychridium** subgenus; unguiculi tarsorum.
" 25. **Hedychrum coelestinum** Spin. unguiculi tarsorum.
" 26. **Ellampus** (Notozus) **Panzeri** Fabr.; abdominis segmentum tertium a latere visum (sec. Dhlb.).
" 27. **Ellampus ambiguus** Dhlb.; abdominis segmentum tertium a latere visum (sec. Dhlb.).
" 28. **Ellampus Gayi** Spin.; abdominis segmentum tertium a latere visum (sec. Dhlb.).
" 29. **Ellampus** (Diplorrhos) **plicatus** Aar.; abdominis segmentum tertium a latere visum (sec. Aaron).
" 30. **Hedychrum nobile** Scop.; abdominis segmentum tertium.
" 31. **Holopyga Zelleri** Dhlb. (sec. Dhlb.).
" 32. **Chrysogona Sausurei** n. sp.; abdominis segmentum tertium maris.
" 33. " " " abdominis segmentum tertium feminæ.
" 34. **Pleurocera viridis** Guér.; tarsus anticus.
" 35. " " " ; abdominis segmentum tertium.
" 36. " " " ; tibia antica cum calcari antico.
" 37. " " " ; antenna.
" 38. **Chrysogona pumila** Klug.
" 39. **Chrysogonæ** generis ala antica.
" 40. **Chrysogona Bohemanni** Dhlb.; abdomen (sec. Dhlb.).
" 41. **Pleurocera viridis** Guér.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

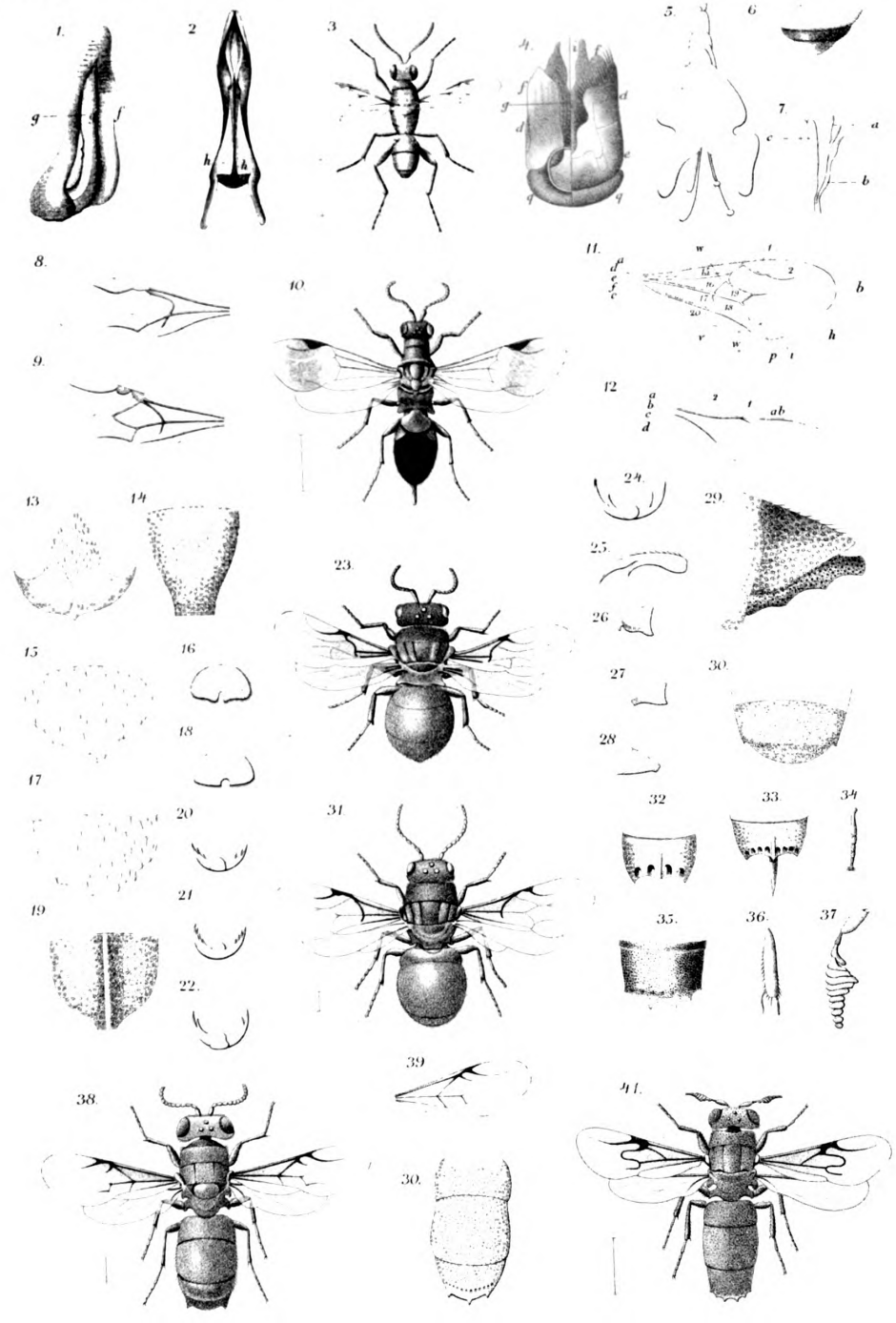
TABULA II.

Fig. 1. **Chrysis socia** Dhlb.; abdominis segmentum tertium (sec. Dhlb.).
« 2. **Chrysis incrassata** Spin.; abdominis segmentum tertium a latere visum (sec. Dhlb.).
« 3. **Stilbum cyanurum** Forst.; caput antice visum.
« 4. « « « ; ala antica (sec. Dhlb.).
« 5. **Chrysis Sonorensis** Cam.; abdominís segmentum tertium (sec. Cameron).
« 6. **Chrysis Dalmanni** Dhlb.; abdominis segmentum tertium (sec. Dhlb.).
« 7. **Chrysis elegans** Lep.; abdominis segmentum tertium (sec. Dhlb.).
« 8. **Chrysis quadrituberculata** Cam.; abdominis segmentum tertium (sec. Cameron).
« 9. **Chrysis Meta** Aar.; abdominis segmentum tertium (sec. Aaron).
« 10. **Chrysis Pattoni** Aar.; abdominis segmentum tertium a latere visum (sec. Aaron).
« 11. **Chrysis perpulchra** Cress.; abdominis segmentum tertium (sec. Aaron).
« 12. **Chrysis montana** Aar.; abdominis segmentum tertium (sec. Aaron).
« 13. **Chrysis dorsalis** Aar.; abdominis segmentum tertium (sec. Aaron).
« 14. **Chrysis propria** Aar.; abdominis segmentum tertium et margo apicalis (sec. Aaron).
« 15. **Chrysis succincta** Linn.; abdomen (sec. Dhlb.).
« 16. **Stilbum cyanurum** Forst.; abdomen (sec. Dhlb.).
« 17. **Chrysis venusta** Cress.; margo apicalis (sec. Aaron).
« 18. **Chrysis scitula** Cress.; abdominis segmentum tertium (sec. Aaron).
« 19. **Chrysis densa** Cress.; abdominis segmentum tertium (sec. Aaron).
« 20. **Chrysis Aaroni** mihi (hirsuta Aar.); abdominis segmentum tertium (sec. Aaron).
« 21. **Chrysis Humboldti** Dhlb. (sec. Dhlb.).
« 22. **Chrysis inflata** Aar.; abdominis segmentum tertium (sec. Aaron).
« 23. **Chrysis peracuta** Aar.; abdominis segmentum tertium (sec. Aaron).
« 24. **Chrysis Frey-Gessneri** Grib.; abdominis segmentum tertium (sec. Aaron).
« 25. « « « « ; abdominis segmentum tertium a latere visum (sec. Aaron).
« 26. **Chrysis lauta** Cress.; abdominis segmentum tertium (sec. Aaron).
« 27. « « « **var. pulcherrima** Cress.; abdominis segmentum tertium (sec. Aaron).
« 28. **Chrysis Nortoni** Aar.; abdominis segmentum tertium (sec. Aaron).
« 29. « « « ; abdominis segmentum tertium (sec. Aaron).
« 30. **Parnopes grandior** Pall.; meso- et metathorax.
« 31. « « « ; abdominis segmentum tertium.
« 32. **Chrysis pellucidula** Aar.; abdominis segmentum tertium.
« 33. **Chrysis Amasina** n. sp.; abdominis segmentum tertium.
« 34. **Chrysis Branickii** Rad.; abdominis segmentum tertium.
« 35. **Chrysis angulata** Dhlb. abdominis segmentum tertium.
« 36. **Chrysis punctatissima** Spin. (fasciata Fabr.); abdominis segmentum tertium (sec. Dhlb.).
« 37. **Chrysis clara** Cress.; abdominis segmentum tertium a latere visum (sec. Aaron).
« 38. **Chrysis angularis** n. sp.; abdominis segmentum tertium.

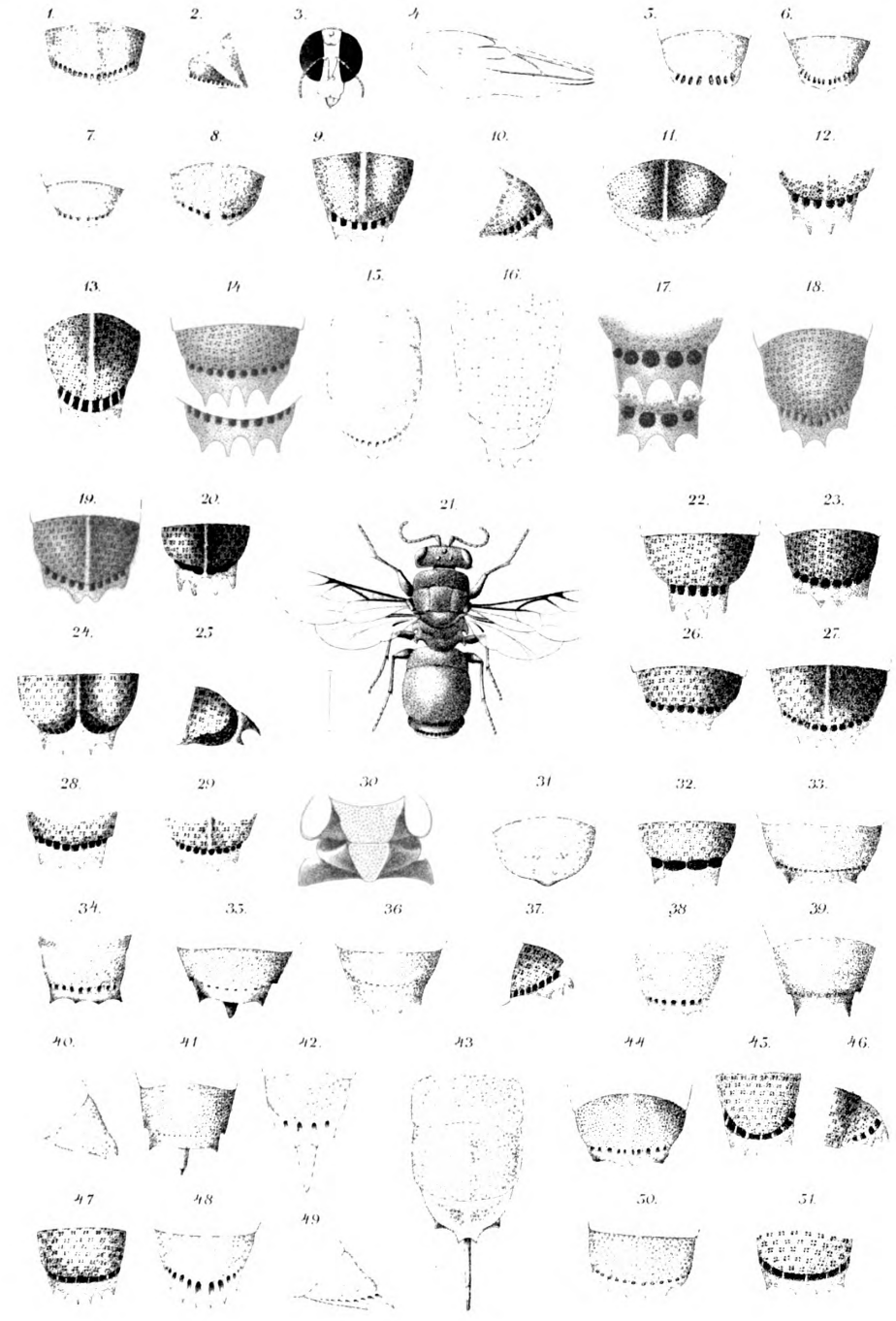
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Fig. 39. **Chrysis Przewalskii** RAD.; abdominis segmentum tertium.
" 40. **Chrysis punctatissima** SPIN. (fasciata Fabr.); abdominis segmentum tertium a latere visum (sec. Dhlb.).
" 41. **Chrysis incisa** BUYSS.; abdominis segmentum tertium.
" 42. **Chrysis Panamensis** CAM.; abdominis segmentum tertium (sec. Cameron).
" 43. **Chrysis carinata** GUÉR. (chilensis Spin.); abdomen (sec. Dhlb.).
" 44. **Chrysis mirabilis** RAD.; abdominis segmentum tertium.
" 45. **Chrysis smaragdula** FABR.; abdominis segmentum tertium (sec. Aaron).
" 46. **Chrysis Texana** GRIB.: abdominis segmentum tertium a latere visum (sec. Aaron).
" 47. **Chrysis intricata** BRULLÉ; abdominis segmentum tertium (sec. Aaron).
" 48. **Chrysis Klugii** DHLB.; abdominis segmentum tertium (sec. Dhlb.)
" 49. " " " ; abdominis segmentum tertium a latere visum (sec. Dhlb.).
" 50. **Chrysis Zetterstedti** DHLB.; abdominis segmentum tertium (sec. Dhlb.)
" 51. **Chrysis Pennsylvanica** BRULLÉ; abdominis segmentum tertium (sec. Aaron).

Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google



Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

A M. T. AKADÉMIA KIADÁSÁBAN MEGJELENT ÉS MINDEN KÖNYVKERESKEDÉSBEN KAPHATÓ:

A VESZETTSÉG GYÓGYITÁSÁRÓL.

KISÉRLETI ÉS STATISZTIKAI TANULMÁNY

TEKINTETTEL KÜLÖNÖSEN A PASTEUR-FÉLE PROPHYLACTICUS GYÓGYITÁSRA.

IRTA

Dr. HŐGYES ENDRE

L. TAG.

Ára 80 kr.

A PÓKOK (ARANEINA), KÜLÖNÖSEN A KERÉKHÁLÓS PÓKOK (EPEIRIDÆ)

TERMÉSZETES OSZTÁLYOZÁSÁNAK KISÉRLETE.

IRTA

Dr. LENDL ADOLF.

Ára 50 kr.

A XIX. SZÁZAD PHYSIKAI KUTATÁSÁNAK MOZGATÓ ESZMÉIRŐL.

IRTA

HELLER ÁGOST.

Ára 20 kr.

KÓRODAI ADATOK A VEGYES FERTŐZETI BETEGSÉGEK ISMERETÉHEZ.

IRTA

Dr. KORÁNYI FRIGYES

L. TAG.

Ára 10 kr.

Digitized by Google
Original from UNIVERSITY OF MICHIGAN
Generated for Norman Johnson (The Ohio State University) on 2016-01-29 22:06 GMT / http://hdl.handle.net/2027/mdp.39015061406073
Public Domain in the United States, Google-digitized / http://www.hathitrust.org/access_use#pd-us-google