

the basis, and infuscated at the tip; tibiæ brownish, darker at the tip; tarsi brown. Wings with a brownish-cinereous tinge, stigma pale brownish, small, oblong; second longitudinal vein arcuated at the basis; its inner section not much shorter than the third vein, with which it forms a straight line; its outer section forms a knee or a right angle at its basis, usually with a stump of a vein, projecting from this angle; submarginal and first posterior cells precisely of the same length; second posterior cell attenuated at its basis; discal cell elongated, square; great cross-vein inserted before the middle of the discal cell; fifth longitudinal vein inflected at the tip. Although the first longitudinal vein, in this species, as in all the *Cylindrotomæformia* is incurved towards the second, it has, at some distance before the tip, a rather indistinct, slender, oblique cross-vein, connecting it with the costa.

Hab.—White Mountains, N. H., (*nob.*); two male specimens.

Catalogue of HYMENOPTERA in the Collection of the Entomological Society of Philadelphia, from Colorado Territory.

BY E. T. CRESSON.

(Communicated March 13th, 1865.)

The greater part of the collection composing the papers which I propose to publish under the above title, was collected in the mountain region of Colorado Territory, in the summer of 1864, by Mr. James Ridings, and most generously presented to the Entomological Society by Dr. Thomas B. Wilson.

The species are numerous, and most of the families are well represented; many of the species, especially those belonging to the Eumenidæ and Apidæ, are beautifully adorned, and almost too brilliant in their colors to be inhabitants of a climate so temperate as that of the mountain region of Colorado Territory.

Fam TENTHREDINIDÆ.

Genus **CIMBEX**, Fabr.

Cimbex americana, Leach.

Cimbex americana, Leach, Zool. Miscel. iii, p. 104. Norton, Proc. Ent. Soc. Philad. i, p. 201 (with full synonymy).

One ♂ specimen with hyaline wings.

Genus **TRICHIOSOMA**, Leach.

Trichiosoma triangulum, Kirby.

Trichiosoma triangulum, Kirby, Fauna Bor.-Am. iv, p. 254. Norton, Proc. Ent. Soc. Philad. iii, p. 5.

Two specimens.

Genus **SCHIZOCERUS**, Latr.

1. **Schizocerus plumiger**, Klug.

Hylotoma plumigera, Klug, Berlin Magazin, 1814, p. 306.

Cryptus Klugii, Leach, Zool. Miscel. iii, p. 125.

Schizocerus plumigera, Norton, Proc. Ent. Soc. Philad. iii, p. 7.

Three ♀ specimens. The specimens before me of this species, are bright honey-yellow, sometimes saffron-yellow, especially the thorax, shining; in one specimen the head is entirely black, in the other two most of the cheeks, the occiput, and an obscure spot on each side of the face, are saffron-yellow; the antennæ are entirely black; on the thorax beneath, in front of the intermediate legs, there are two large, approximate, black marks; the legs are black, the two anterior pairs are tinged with piceous, with the tips of their femora, and their tibiæ and tarsi more or less testaceous, especially within; the extreme base of the abdomen has two transverse fuscous marks, and the extreme tip is blackish; the wings are tinged with fuliginous, especially about the base. Length $3\frac{1}{4}$ —4 lines; expanse of wings 7 — $8\frac{1}{2}$ lines.

2. *Schizocerus abdominalis*. n. sp.

Black, polished; prothorax and abdomen honey-yellow; wings tinged with fuliginous.

Male.—Black, polished; face clothed with short, pale, sericeous pubescence; mouth piceous; antennæ as long as the head and thorax, black, the third joint pale within, furcate, and clothed with long, black pubescence. Thorax smooth and polished; prothorax honey-yellow; tegulæ piceous. Wings ample, broad, tinged with fuliginous, especially about the base; nervures and stigma black. Legs shining black, the anterior tibiæ and tarsi pale. Abdomen bright honey-yellow, with two transverse spots at the extreme base, and the extreme tip, fuscous. Length $3\frac{1}{2}$ lines; expanse of wings $7\frac{1}{2}$ lines.

One specimen. This may be the ♂ of *S. plumiger*.

Genus **DOSYTHEUS**. Leach.

1. *Dosytheus bicolor*, Beauv.

Tenthredo bicolor, Beauv. Ins. Afriq. et Amér. p. 97. pl. 9, fig. 1.

Dosytheus bicolor, Norton, Proc. Bost. Soc. Nat. Hist. viii, p. 153.

One ♀ specimen.

2. ? *Dosytheus aprilis*. Norton.

Dosytheus aprilis, Norton, Proc. Bost. Soc. Nat. Hist. viii, p. 152.

One specimen, the legs of which are entirely black, in which respect it resembles *D. insignis*, Norton MSS., but the color of the abdomen is pale honey-yellow; it may, however, be a variety of the latter species.

Genus **NEMATUS**, Jurine.

1. *Nematus brunneus*, Norton.

Nematus brunneus, Norton, Proc. Ent. Soc. Philad. iii, p. 8.

One ♀ specimen.

2. *Nematus integer*. Say.

Nematus integer. Say, Bost. Journ. Natural Hist. i, p. 218. Norton, Proc. Bost. Soc. Nat. Hist. viii, p. 158.

One ♀ specimen.

Genus **SELANDRIA**. Leach.

Sec. I. Tribe 2.

1. *Selandria barda*. Say.

Selandria barda. Say, Bost. Journ. Nat. Hist. i, p. 218. Norton, Proc. Bost. Soc. Nat. Hist. viii, p. 220.

One specimen.

2. *Selandria dubia*, n. sp.

Black: most of thorax yellowish-rufous: wings fuliginous, apical third and posterior pair smoky-hyaline.

Female.—Shining black, robust; head with scattered punctures, the labrum and base of mandibles clothed with pale pubescence; antennæ about as long as the head and mesothorax together, stout, first joint short, subglobose, second a little shorter than the first, third half again as long as the first and second together, remaining joints subequal, subserrate beneath, the terminal joint the shortest. Thorax rufo-ferruginous, polished; pleura protuberant, the posterior portion on the sides and beneath, black; metathorax black; tegulæ rufo-ferruginous. Wings ample, smoky-hyaline, faintly iridescent, the basal two-thirds of the anterior pair fuliginous, darker at base; nervures and stigma black; anal angle of the posterior wings pure hyaline, beautifully iridescent; the left wing with one middle cell, but none on the right wing, the outer nervule entirely obliterated. Legs entirely black, slightly sericeous. Abdomen short, almost as broad as long, depressed, entirely shining black, the extreme apex fringed with pale pubescence. Length $3\frac{3}{4}$ lines; expanse of wings 9 lines.

One specimen. Closely allied to *S. barda* Say, but is larger, more robust, and with greater expanse of wings.

Sec. III. Tribe 2.

3. *Selandria montana*, n. sp.

Whitish: vertex and mesothorax brownish: antennæ piceous: dorsal surface of abdomen, shining black: wings tinged with yellowish-fuscous; legs pale, blackish at tips.

Female.—Head whitish, finely pubescent; the vertex, occiput, and stains on the cheeks, pale-brownish; tips of mandibles piceous; antennæ short, piceous, proportioned as in the preceding species. Thorax whitish, minutely punctured, finely pubescent; mesothorax, scutellum, part of metathorax, a stain on each side of the pleura beneath, and another just beneath the wings, brown; tegulæ whitish. Wings ample, subhyaline, iridescent, the anterior pair uniformly tinged with pale yel-

lowish-fuscous, the posterior pair hyaline, faintly dusky at tips; nervures fuscous, the costal nervure except the outer margin, the stigma except a spot on its middle, and the nervures at the base of the wings, pale; posterior wings with two middle cells. Legs whitish, their femora tinged with fulvous; the four anterior tibiæ behind, slightly interrupted in the middle, base and apex of the posterior tibiæ within, and most of the tarsi, blackish. Abdomen shining black above, the extreme sides, apex, and the venter entirely, whitish. Length $3\frac{1}{4}$ lines; expanse of wings $7\frac{1}{2}$ lines.

One specimen.

Genus **ALLANTUS**, Panz.

Allantus uncinetus, Norton.

Allantus uncinetus, Norton, Proc. Ent. Soc. Philad. iii, p. 9.

Eight ♀, eight ♂ specimens.

Genus **MACROPHYA**, Hartig.

Macrophya epinota, Say.

Allantus epinotus, Say, Bost. Journ. Nat. Hist. i, p. 215. Norton, Bost. Journ. Nat. Hist. Dec. 1860, p. 257.

Macrophya epinotus, Norton, Proc. Bost. Soc. Nat. Hist. ix, p. 118.

Eight ♀, eleven ♂ specimens.

Genus **TENTHREDO**, Linn.

1. **Tenthredo pectoralis**, Norton.

Tenthredo pectoralis, Norton, Proc. Ent. Soc. Philad. iii, p. 11.

One ♀, one ♂, specimens.

2. **Tenthredo semirufa**, Norton.

Tenthredo semirufus, Norton, Proc. Ent. Soc. Philad. iii, p. 12.

Two ♀ specimens.

3. **Tenthredo variegata**, Norton.

Tenthredo variegatus, Norton, Proc. Ent. Soc. Philad. iii, p. 12.

One ♂ specimen.

4. **Tenthredo variata**, Norton.

Tenthredo variatus, Norton, Proc. Ent. Soc. Philad. iii, p. 12.

Two ♀, five ♂ specimens.

5. **Tenthredo xanthus**, Norton.

Tenthredo xanthus, Norton, Proc. Ent. Soc. Philad. iii, p. 13.

Twenty-four (♂ ♀) specimens.

6. **Tenthredo rafipes**, Say.

Tenthredo rafipes, Say, Long's 2nd Exp. ii, p. 317.

One ♀ specimen.

7. **Tenthredo pleuralis**, n. sp.

Black: clypeus, labrum, mandibles, margins of prothorax, most of legs and body beneath, white; apical half of abdomen ferruginous; wings subhyaline.

Female.—Head black shining, quadrate, vertex depressed, eyes pro-

minent; a small spot at the base of each antenna within, a minute dot on the inner orbit near the summit of the eyes, the clypeus, labrum, mandibles except tips, lower half of cheeks, and the palpi, white; antennæ as long as the head and thorax, rather slender, entirely black. third joint one-fourth longer than the fourth, the fourth and fifth equal in length, remaining joints shorter, subequal, gradually attenuated. Thorax shining black, minutely sculptured; the broad upper, and narrow lower margins of the prothorax, a large broad mark on each side of the pleura, and most of the two spaces on each side between and above the four posterior coxæ, white; postscutellum deeply punctured, with a minute white dot on each side; tegulæ white. Wings ample, pale yellowish-hyaline, iridescent; nervures blackish, yellowish at base as well as the costa and base of stigma. Legs whitish; the femora and tibiæ behind, especially at tips, black; tarsi ochraceous. Abdomen shining; the basal half above black, white on each side, remaining segments ferruginous; venter whitish, tinged with ferruginous at tip; ovipositor whitish, sheaths black. Length $5\frac{1}{2}$ lines; expanse of wings 11 lines.

Male.—More slender than the female, the antennæ a little longer, the pleura entirely white, the base of the abdomen blackish, and the remaining segments honey-yellow, the apical ventral segments tinged with the same color; the wings have a very faint tinge of yellowish. Length $4\frac{1}{2}$ lines; expanse of wings $9\frac{1}{2}$ lines.

One ♀, one ♂, specimens.

Genus **LYDA**, Fabr.

1. **Lyda brunnicans**, Norton.

Lyda brunnicans, Norton, Proc. Ent. Soc. Philad. iii, p. 15.

One ♀ specimen.

2. **Lyda multisignata**, Norton.

Lyda multisignatus, Norton, Proc. Ent. Soc. Philad. iii, p. 15.

One ♀ specimen.

3. **Lyda cavifrons**, n. sp.

Black; face, mouth, outer orbits, tegulæ and legs, pale luteous; wings fusco-hyaline; face concave.

Female.—Shining black; head with a deep longitudinal furrow on each side of the ocelli, extending from the base of the antennæ to the occiput, connected by a cross furrow just behind the ocelli; face concave, the margins prominent, subcarinate, with a longitudinal ridge on the middle of the clypeus; the face, two spots above the base of antennæ, clypeus, labrum, mandibles, palpi, lower inner orbits, the outer orbits, interrupted in the middle and extending on each side behind

the eyes to the occiput, yellowish or pale luteous; antennæ dull black, 27-jointed, the scape beneath luteous, first joint stout, nearly four times longer than the second. Thorax polished; tegulæ and a spot before it, pale luteous. Wings ample, stained with pale fuscous, clearer at base, with a brassy and iridescent reflection; nervures black, pale at base as well as the costal nervure; marginal dividing nervure not coinciding with the second submarginal nervure, the third branchial cell with an incomplete cross nervure. Legs pale luteous; the coxæ, and the trochanters except tips, black; tarsi dusky at tips; anterior tibiæ without side spur, each of the four posterior tibiæ with two side spurs. Abdomen shining black; the extreme lateral margins of the dorsal segments and the apical margins of the ventral segments pale luteous; extreme apical segment testaceous. Length 4 lines; expanse of wings 8 lines.

One specimen.

Fam. UROCERIDÆ.

Genus **UROCERUS**, Geoffroy.

1. *Urocerus flavicornis*. Fabr.

Sirex flavicornis, Fabr. Ent. Syst. ii, p. 126; Syst. Piez. p. 49.

Sirex bizonatus, Steph. Brit. Entom. Mand. vii, p. 114, pl. 36. Kirby, Fauna Bor-Amer. iv, p. 256.

Ten ♀ specimens.

2. *Urocerus caudatus*. n. sp.

Black; prothorax narrow, rugose, with a stripe on each side and a spot on each side of occiput, whitish; wings subhyaline; legs obscure luteous; ovipositor longer than abdomen.

Female.—Black, subopaque; head subglobose, rugose, thinly clothed with black pubescence, long on the cheeks beneath; behind the ocelli and the cheeks polished, with a few deep scattered punctures, a longitudinal furrow on the disk, with a depression on each side; mandibles polished, and, as well as the lower part of the cheeks, tinged with piceous; an ovate whitish spot on each side of the occiput, antennæ slender, about half the length of the body, entirely black, 23-jointed, slightly pubescent, the basal joint long and thickened at tips, roughly punctured, third joint nearly as long as the first, remaining joints gradually shorter to the tip, the terminal joint minute, about half as long as the penultimate. Thorax rugose, thinly clothed with short black pubescence; prothorax large, narrow, depressed, subquadrate, coarsely rugose, the sides above covered with small irregular tubercles, anterior margin broadly emarginate above, excavated beneath, on each lateral margin a broad longitudinal whitish stripe, extending from the tegulæ

to the extreme anterior margin and ends in the excavation; mesothorax rather small, rugose, especially in the middle; scutellum suborbicular, rugose; pleura densely punctured or finely rugose; tegulae fuscous, rugose. Wings subhyaline, slightly and somewhat irregularly stained with fuscous, with a faint violaceous reflection; nervures fuscous, costa testaceous. Legs slender, slightly pubescent, and, including their coxae, entirely obscure luteous, somewhat tinged with brownish. Abdomen elongate, narrow, deep black, somewhat velvety, immaculate; apical segment polished, with a subtriangular depression on the disk, the apex much prolonged, sublanceolate, slightly dilated beyond the middle, pointed at tip and irregularly serrate and punctured on the sides; ovipositor as long as the body, reddish-brown, polished, sheaths piceous, yellowish on the inside, the outer surface covered with oblique striae; venter piceous-black, shining. Length 12 lines; expanse of wings $15\frac{1}{2}$ lines.

One specimen. This may be identical with *U. spectrum* of Europe, but the descriptions do not quite agree and I have no specimens of the latter for comparison.

Fam. CYNIPIDÆ.

Genus **IBALIA**, Latreille.

Ibalia ensiger, Norton.

Ibalia ensiger, Norton, Proc. Ent. Soc. Philad. i, p. 200.

One ♀ specimen differs from the type, from Pennsylvania, only by the abdomen being less broad, not so much compressed and margined on the upper edge with blackish; the anterior wings have a cloud beneath the stigma.

Fam. EVANIIDÆ.

Genus **FÆNUS**, Fabricius.

1. **Fœnus occidentalis**, Cresson.

Fœnus occidentalis, Cresson, Proc. Ent. Soc. Philad. iii, p. 131.

Four ♀ specimens.

2. **Fœnus perplexus**, Cresson.

Fœnus perplexus, Cresson, Proc. Ent. Soc. Philad. iii, p. 131.

Five ♀ specimens.

3. **Fœnus montanus**, Cresson.

Fœnus montanus, Cresson, Proc. Ent. Soc. Philad. iii, p. 132.

One ♀ specimen.

4. **Fœnus incertus**, Cresson.

Fœnus incertus, Cresson, Proc. Ent. Soc. Philad. iii, p. 133.

Seven ♀ specimens.

Genus **AULACUS**, Jurine.

Aulacus rufitarsis, Cresson.

Aulacus rufitarsis, Cresson, Proc. Ent. Soc. Philad. iii, p. 134.

Six ♀ specimens.

Fam. **ICHNEUMONIDÆ**.

Subfam. **ICHNEUMONIDES**.

Gen. **ICHNEUMON**, Linn.

1. **Ichneumon Blakei**, Cresson.

Ichneumon Blakei, Cresson, Proc. Ent. Soc. Philad. iii, p. 139.

One ♂ specimen.

2. **Ichneumon montanus**, Cresson.

Ichneumon montanus, Cresson, Proc. Ent. Soc. Philad. iii, p. 141.

Four ♀, seven ♂ specimens. Two females have a more or less distinct whitish annulus on the antennæ.

3. **Ichneumon pedalis**, Cresson.

Ichneumon pedalis, Cresson, Proc. Ent. Soc. Philad. iii, p. 141.

One ♀, two ♂ specimens. The ♀ has the antennæ porrect, sericeous, and shorter than in ♂; the wings are uniformly tinged with fuliginous, instead of fuscous, and the legs are dark rufous, with the tarsi more or less dusky.

4. **Ichneumon semilævis**, Cresson.

Ichneumon semilævis, Cresson, Proc. Ent. Soc. Philad. iii, p. 142.

Two ♀ specimens.

5. **Ichneumon macilentus**, n. sp.

Black; face, spot before tegulæ and most of tibiæ and tarsi, yellowish; wings subhyaline; central area of metathorax quadrate.

Male.—Long and rather slender, dull black; the face, inner orbits, clypeus except its basal margin and a spot at tip, the mandibles except extreme base and apex, and the palpi, yellow; antennæ dull black, two-thirds the length of the body, stout at base and gradually attenuated towards the tip, basal joint beneath with a yellow line. Thorax shining, very closely and finely punctured, slightly pubescent; pleura covered with fine punctures and somewhat longitudinally striated, especially behind; a small yellowish spot immediately before the tegulæ; scutellum smooth and polished, with a deep excavation in front; metathorax opaque, finely rugose, the elevated lines well defined, the central area moderate, quadrate, somewhat elevated and flattened. Wings uniformly tinged with pale fuscous, honey-yellow at base; nervures blackish; areolet subtriangular or slightly subrhomboidal. Legs black; a spot on the four anterior coxæ and trochanters beneath, tips of their femora, and the basal third of the posterior tibiæ beneath, yellow; the four anterior tibiæ, and all the tarsi, dusky-yellow, the posterior pair

above almost entirely dusky. Abdomen long and rather slender, opaque black, densely and finely punctured; first segment somewhat shining, covered with fine longitudinal striæ, the sides with short transverse striæ; basal foveæ of the second segment small and well impressed; beneath black, stained with obscure testaceous. Length $7\frac{1}{2}$ lines; expanse of wings $11\frac{1}{2}$ lines.

One specimen.

6. **Ichneumon audax**, Cresson.

Ichneumon audax, Cresson, Proc. Ent. Soc. Philad. iii, p. 143.

Three ♂ specimens.

7. **Ichneumon caliginosus**, Cresson.

Ichneumon caliginosus, Cresson, Proc. Ent. Soc. Philad. iii, p. 144.

One ♀ specimen.

8. **Ichneumon luctus**, n. sp.

Ichneumon tenebrosus, Cresson, Proc. Ent. Soc. Philad. iii, p. 145.

One ♂ specimen. The name *tenebrosus* is preoccupied by Wesmæl for an European species of this genus.

9. **Ichneumon cordatus**, Cresson.

Ichneumon cordatus, Cresson, Proc. Ent. Soc. Philad. iii, p. 146.

One ♂ specimen.

10. **Ichneumon obliteratus**, Cresson.

Ichneumon obliteratus, Cresson, Proc. Ent. Soc. Philad. iii, p. 147.

One ♂ specimen.

11. **Ichneumon subcyaneus**, Cresson.

Ichneumon subcyanus, Cresson, Proc. Ent. Soc. Philad. iii, p. 148.

One ♀ specimen. Differs from the type, from New Jersey, only by the annulus of the antennæ being more distinct, the wings darker, and the abdomen more deeply tinged with bluish.

12. **Ichneumon brevicinctor**, Say.

Ichneumon brevicinctor, Say, American Entomology, pl. 22.

One ♂ specimen.

13. **Ichneumon apicalis**, Cresson.

Ichneumon apicalis, Cresson, Proc. Ent. Soc. Philad. iii, p. 152.

One ♂ specimen.

14. **Ichneumon ventralis**, n. sp.

Black, thorax polished; face, mouth, scape of antennæ beneath, tegulæ and a spot before and beneath, scutellum, most of legs and basal half of venter, bright yellow; lateral margins of abdomen above, the apical segment and the apical half of venter, fulvous; wings subhyaline; central area of metathorax subquadrate.

Male.—Black; head polished; the face, inner orbits, clypeus, mandibles except tips, and the palpi, bright yellow; antennæ two-thirds

the length of the body, dull black, slender at tips, scape beneath yellow. Thorax polished, minutely punctured, the punctures more distinct on the pectus and pleura which are somewhat striated; tegulæ, a short line before and another beneath, bright yellow; scutellum flat, polished, feebly punctured, bright yellow, in one specimen with a large cordate yellow mark truncate at tip and covering nearly the entire surface; metathorax finely rugose, opaque, the elevated lines sharply defined, the central area rather large, rounded before, and open behind. Wings subhyaline, stained with yellowish-fusces, especially towards the tips; nervures pale fusces, yellowish at base, the stigma tinged with ferruginous; areolet subtriangular; the cubital nervures with a short rudimental nervure within the submarginal cell. Legs bright yellow, shining; the four anterior femora tinged behind with fulvous, with a black spot at base; posterior coxæ, basal joint of the trochanters within, and their femora except extreme base and apex, black, tips of their tibiæ dusky. Abdomen dull black, closely and finely punctured; basal segment bilineated, rugose, somewhat striated; basal foveæ of second segment small, deep and striated; extreme lateral margins of the second and following dorsal segments and the two apical segments entirely, fulvous; beneath fulvous, shading into yellow at base, the basal segment black. Length 6—6½ lines; expanse of wings 9½—10 lines.

Two specimens.

15. *Ichneumon variegatus*. Cresson.

Ichneumon variegatus. Cresson. Proc. Ent. Soc. Philad. iii, p. 153.

Twenty-seven ♂ specimens. This species varies greatly in the markings, especially of the abdomen; the large yellow mark on the metathorax is sometimes much reduced, and often assumes the shape of a W; the postscutellum is sometimes yellow and sometimes black; the basal segment of the abdomen is always black, occasionally with a yellow band at tip or a minute yellow dot on each side; the second and third segments vary from entirely yellow to entirely ferruginous, but generally the former has the basal half yellow and the apical half ferruginous, and the third segment entirely yellow, the incisures are more or less broadly black, sometimes forming a band, dilated in the middle; in one specimen the second segment is yellowish-ferruginous, with the base and a quadrate spot on each side at tip, black; the remaining segments are generally dark ferruginous, with a black band across the base, sometimes much dilated in the middle and forming a quadrate mark covering one-half or two-thirds of the segment, and the extreme apical margins of the segments are sometimes yellowish; two specimens have no ferruginous color whatever on the abdomen, it being yellow

and black, and the wings are more or less varied with yellowish; these two specimens have the appearance of being distinct species, but only in the coloration, which can scarcely be a guide in such a variable species as this.

16. *Ichneumon inconstans*. Cresson.

Ichneumon inconstans, Cresson, Proc. Ent. Soc. Philad. iii, p. 153.

Two ♂ specimens.

17. *Ichneumon infucatus*. n. sp.

Black: face, clypeus, scape of antennæ beneath, tegulæ and a spot before and beneath, scutellum, most of legs, and most part of three basal segments of abdomen, yellowish; wings fusco-hyaline; central area of metathorax quadrate.

Male.—Black, clothed with short fuscous pubescence; face and clypeus, yellow; palpi testaceous, black at base; tips of mandibles brown; antennæ more than half the length of the body, dull black, slender at tips, the basal joint beneath yellow. Thorax very closely punctured, especially on the pectus and pleura which are indistinctly striated; a cuneiform spot before and a short line beneath the wings, yellow; scutellum subconvex, polished, entirely pale yellow, with a deep excavation in front, and the spaces on each side very much depressed; metathorax coarsely rugose, the elevated lines tolerably well defined, the central area rather large and quadrate, slightly rounded in front; tegulæ pale yellowish, dusky behind. Wings uniformly fusco-hyaline, tinged with yellowish; nervures fuscous, stigma fulvous; areolet subtriangular. Legs black; anterior femora except base, middle trochanters beneath, tips of their femora, spot on the posterior trochanters beneath, extreme base of their femora, the four anterior tibiæ, basal two-thirds of the posterior pair, and all the tarsi, yellow, the latter more or less dusky at tips. Abdomen elongate, rather robust towards the base, closely punctured; basal segment broad at tip, bilineated, indistinctly striated, the dilated portion at tip yellowish-ferruginous, margined on the sides and behind with yellow, and shading into brown-black towards the base, sides of the segment transversely striated; second and third segments orange-yellow, the basal foveæ of the second segment as well as the basal half of the lateral margin, and basal margin of third segment, black; fourth segment dull orange-yellow, with the basal margin, dilated in the middle, black; remaining segments black, narrowly margined at tip with ferruginous, the extreme tip fulvo-ferruginous; beneath varied with yellow and dull fulvous. Length 7 lines; expanse of wings 11 lines.

One specimen. Closely allied to *Ich. inconstans*, but is shorter, more robust, more roughly punctured and somewhat differently colored, espe-

cially the abdomen, which has the first segment more broadly dilated at tip.

18. *Ichneumon bipunctatus*. n. sp.

Black; spot on each side of clypeus, spot on tegulæ and a line beneath, spot on tip of scutellum, legs, and most of second and third segments of abdomen, yellow or yellowish-ferruginous; wings subhyaline: central area of metathorax large, quadrate.

Male.—Black, closely punctured, clothed with short pale pubescence; head entirely black, except a yellowish spot on each side of the clypeus; palpi pale; antennæ more than half the length of the body, slender at tip, entirely dull brown-black. Thorax shining, the punctures more sparse on the mesothorax; anterior margin of the tegulæ, and a short line beneath the fore-wing, pale yellowish; scutellum shining, depressed, deeply excavated in front, with a yellow spot at extreme tip, the lateral carina sharply defined; metathorax rugose, the elevated lines tolerably well defined, the central area large, quadrate, slightly transverse, with the posterior margin indented. Wings subhyaline, uniformly tinged with pale fuscous; nervures fuscous, paler at base; areolet subtriangular. Legs yellowish, the femora, and the tips of the tibiae and tarsi, more or less stained with ferruginous. Abdomen elongate, dull black, very closely punctured; basal segment bilineated and finely aciculate; second and third segments yellowish-ferruginous, the latter with a large fuscous mark at base covering nearly half of the segment; extreme lateral and apical margins of the remaining segments obscurely dull ferruginous; beneath dull yellowish, black at base and apex. Length $6\frac{1}{2}$ lines; expanse of wings $10\frac{1}{2}$ lines.

One specimen. Easily recognized by the black head, which is ornamented only by a yellowish spot on each side of the clypeus.

19. *Ichneumon delicatus*, n. sp.

Yellow: vertex, occiput; antennæ except basal joint beneath, spot on each side of the pectus, mesothorax except two dorsal lines, sides of scutellums, broad sutures of pleura, and the basal middle of the fourth, fifth and sixth segments of abdomen, black; femora and stains on the abdomen, pale ferruginous: wings subhyaline: central area of metathorax moderate, subquadrate.

Male.—Head bright yellow; a large mark extending from the base of the antennæ, covering the ocelli, and the back part of the head, black, leaving the frontal orbits narrowly yellow; antennæ two-thirds the length of the body, brown-black, sericeous, basal joint beneath yellow. Thorax delicately punctured, shining black; broad upper and lower margins of the pectus, two central longitudinal lines on the mesothorax confluent on the middle, tegulæ, a line beneath the wings and a large irregular mark on each side of the pleura covering two-thirds

of its entire surface, all bright yellow; scutellum rather convex and polished, entirely yellow, as well as a small transverse spot on postscutellum; metathorax finely rugose, pale yellow, tinged with dull ferruginous at base, the extreme basal and apical sutures, and two spots on the extreme lateral margin, black, the elevated lines tolerably well defined, the central area moderate, and subquadrate. Wings subhyaline, slightly stained with yellowish-fuscous, especially along the nervures; nervures ferruginous, paler at base; areolet 5-angular, or subtriangular. Legs, including the coxæ, yellow; the femora behind, and the posterior legs more or less ferruginous; the anterior and posterior coxæ at base beneath, and tips of the posterior tibiæ, black. Abdomen elongate, rather slender, bright yellow; basal segment bilineate, ferruginous, yellow at tip and shading into blackish towards the base; second segment with a transverse ferruginous stain near the tip, the basal foveæ deep, somewhat linear and fuscous, as well as the incisure at base; third segment entirely bright yellow, except the basal incisure which is narrowly black; three following segments dull ferruginous, the fourth and fifth broadly, the sixth narrowly margined at tip with yellow, with a more or less broad transverse black mark at base; apical segment fulvo-ferruginous; beneath pale yellow, the basal segment black, and the apical segments more or less fulvous. Length $6\frac{1}{2}$ lines; expanse of wings $9\frac{1}{2}$ lines.

One specimen. Allied to *Ich. Grotei*, but quite distinct.

20. *Ichneumon Grotei*. Cresson.

Ichneumon Grotei, Cresson, Proc. Ent. Soc. Philad. iii. p. 154.

Five ♂ specimens.

21. *Ichneumon rubellus*, n. sp.

Black; face, base of antennæ beneath, tegulæ, a spot before and a spot beneath the wings, scutellum, mark on metathorax behind and most of legs, yellow; abdomen, except basal segment and incisures, ferruginous; wings subhyaline; central area of metathorax quadrate.

Male.—Black; face, clypeus, inner orbits, mandibles except tips, and palpi, bright yellow; antennæ more than half the length of the body, dull black, scape beneath bright yellow. Thorax shining, finely and rather closely punctured; tegulæ, a line before and a short one beneath the tegulæ, yellow; scutellum yellow; metathorax finely rugose, the elevated lines distinct, the central area moderate, quadrate, posterior face with a large yellow mark, sometimes reduced and forming a W. Wings subhyaline, sometimes uniformly pale fuscous, yellowish at base; stigma generally ferruginous; areolet 5-angular. Legs yellow; the four anterior femora with a black spot behind; the posterior coxæ,

their femora except extreme base and apex, and the apical third of their tibiae, black, sometimes tinged with rufous; posterior tarsi tinged with ferruginous. Abdomen orange-ferruginous; basal segment slender, bilineated, finely aciculate, black; basal foveæ of the second segment linear, oblique, black; basal incisures of the third to sixth segments black, that on the fifth and sixth segments sometimes very broad; beneath ferruginous, stained on the middle with yellow; one specimen has a ferruginous spot on the apical middle of the basal segment, and the basal half of the second segment is yellowish. Length 6—6½ lines; expanse of wings 9½—10 lines.

Five specimens.

22. *Ichneumon pictifrons*. Cresson.

Ichneumon pictifrons, Cresson, Proc. Ent. Soc. Philad. iii, p. 160.

One ♂ specimen.

23. *Ichneumon bizonatus*. Cresson.

Ichneumon bizonatus, Cresson, Proc. Ent. Soc. Philad. iii, p. 160.

One ♀ specimen.

24. *Ichneumon ambiguus*. Cresson.

Ichneumon ambiguus, Cresson, Proc. Ent. Soc. Philad. iii, p. 161.

One specimen. Differs from the type, from Pennsylvania, only by the larger size (length 11½, expanse 18 lines), by the wings having a violaceous reflection, and by the hind tarsi being entirely black.

25. *Ichneumon montivagus*. n. sp.

Black; frontal orbits, sides of face, cordate spot beneath antennæ, most of clypeus, scutellum and the four anterior tibiae and tarsi, except tips, white; wings fuliginous; abdomen, except basal segment, yellowish-ferruginous; central area of metathorax large, quadrate.

Male.—Deep black, closely punctured; frontal orbits, very broad on each side of the face, a subcordate spot beneath the base of antennæ, and the clypeus, except a spot on the middle anteriorly, white; antennæ about half the length of the body, entirely dull black. Thorax black; scutellum flat, white, except its extreme basal corners; metathorax finely rugose, the elevated lines tolerably well defined, the central area large and quadrate. Wings fuliginous, with violaceous reflection; nervures black; areolet almost triangular. Legs black, extreme tips of the anterior femora, their tibiae except a spot beneath at tip, the two basal joints of their tarsi, a spot at the extreme tip of the middle femora beneath, basal half of their tibiae, three basal joints of their tarsi, a line on each side of the posterior tibiae near the base, and the base of the first joint of their tarsi beneath, all white. Abdomen elongate, yellowish-ferruginous; basal segment black, bilineated and very finely acicu-

late: basal foveæ of the second segment deep and oblique. Length $8\frac{1}{2}$ lines; expanse of wings $13\frac{1}{2}$ lines.

One specimen. Closely allied to *Ich. ambiguus*, but very distinct by the markings of the face and legs, and by the shape of the central area of the metathorax.

26. *Ichneumon vinulentus*, Cresson.

Ichneumon vinulentus, Cresson, Proc. Ent. Soc. Philad. iii, p. 162.

Three ♂ specimens.

27. *Ichneumon allapsus*, n. sp.

Black; face, tegulæ, scutellum, and most of legs, bright yellow; abdomen, except base, dull rufous; wings subhyaline; central area of metathorax large, suborbicular.

Male.—Black; face, frontal orbits, clypeus, mandibles and palpi, bright yellow; antennæ more than half the length of the body, black, basal joint beneath yellow. Thorax closely punctured; tegulæ, a spot before and a short line beneath the anterior wing, yellow; scutellum slightly convex, entirely bright yellow, as well as a spot of the same color on the postscutellum, often wanting; metathorax rugose, dull black, sometimes with a W-shaped yellow mark on the posterior part, sometimes interrupted on the middle and forming an angular mark on each side, which is more or less reduced in different specimens; in six specimens the metathorax is immaculate; the elevated lines are well defined, the central area large and suborbicular, being broadly rounded in front and truncate behind. Wings subhyaline, slightly stained with fuscous, with a tinge of yellowish; nervures fuscous, yellowish at base, stigma mostly ferruginous, sometimes fuscous; areolet 5-angular, somewhat triangular. Legs yellow; the four anterior femora behind, the posterior coxæ, their femora and apical half or one-third of their tibiæ, black; tarsal claws dusky. Abdomen elongate, dull rufous; the basal segment, and the base of the second segment more or less, black; in one specimen the basal half of the second segment is black, while in others the lateral margins are black nearly to the tip of the segment; basal segment slender, bilineated and aciculate; beneath rufo-ferruginous, more or less stained with yellowish. Length 6—7 lines; expanse of wings 10—11 lines.

Seventeen specimens. Closely allied to *Ich. vinulentus* but is smaller, with the markings bright yellow instead of white, and with the central area of the metathorax differently shaped.

28. *Ichneumon consimilis*, Cresson.

Ichneumon consimilis, Cresson, Proc. Ent. Soc. Philad. iii, p. 163.

One ♂ specimen.

29. *Ichneumon juxtus*, Cresson.

Ichneumon juxtus, Cresson, Proc. Ent. Soc. Philad. iii, p. 163.

One ♂ specimen.

30. *Ichneumon animosus*, Cresson.

Ichneumon animosus, Cresson, Proc. Ent. Soc. Philad. iii, p. 164.

Two ♂ specimens.

31. *Ichneumon festus*, n. sp.

Black; clypeus except a spot on the middle, spot on mandibles, and another on tegulæ and scutellum, yellow; legs ferruginous varied with yellowish; wings subhyaline; second and third segments of abdomen stained with dull rufous; central area of metathorax quadrate.

Male.—Deep black; clypeus yellow, with a large fuscous spot on the anterior middle; mandibles with a yellowish spot near the tips; palpi ferruginous; antennæ entirely black, thickened towards the base. Thorax shining, delicately sculptured above, closely punctured on the pleura; a spot on the tegulæ and a minute spot before and beneath the anterior wing, yellow; scutellum punctured, deeply excavated in front, with a large yellowish spot at tip; metathorax rugose, the elevated lines well defined, the central area large and quadrate. Wings subhyaline, slightly tinged with fuliginous and yellowish; nervures fuscous, yellowish at base; areolet 5-angular. Legs yellowish, stained with ferruginous; the coxæ and trochanters black, the posterior femora and tips of their tibiæ, ferruginous. Abdomen black, the second and third segments more or less stained with dull rufo-ferruginous; basal segment bilineated and aciculate; basal foveæ of the second segment deep, oblique and striated; apical segments polished; beneath stained with dull rufous. Length $6\frac{1}{2}$ lines; expanse of wings 11 lines.

One specimen.

32. *Ichneumon vultus*, Cresson.

Ichneumon vultus, Cresson, Proc. Ent. Soc. Philad. iii, p. 165.

One ♂ specimen.

33. *Ichneumon discus*, Cresson.

Ichneumon discus, Cresson, Proc. Ent. Soc. Philad. iii, p. 168.

One ♂ specimen.

34. *Ichneumon longulus*, Cresson.

Ichneumon longulus, Cresson, Proc. Ent. Soc. Philad. iii, p. 171.

One ♂ specimen.

35. *Ichneumon propinquus*, Cresson.

Ichneumon propinquus, Cresson, Proc. Ent. Soc. Philad. iii, p. 172.

Seven ♀ specimens.

36. *Ichneumon subfulvus*. n. sp.

Fulvo-ferruginous, shining; antennæ involute: spaces on each side of scutellums, and narrow apical margins of the second, third and fourth abdominal segments, black; wings yellowish; central area of metathorax elongate-subquadrate, smooth and polished.

Female.—Uniform fulvo-ferruginous, shining; head and thorax finely punctured; eyes small, ovate; antennæ three-fourths the length of the body, slender, involute beyond the middle, basal joint robust, globular; scutellum subconvex, smooth and polished, the spaces on each side and behind, black; metathorax clothed with pale pubescence, slightly sculptured, the elevated lines not well defined, the central area large, elongate-quadrate, extending all the way to the base, smooth and polished; tegulae tinged with yellowish. Wings uniformly tinged with yellowish-fuscous, slightly iridescent; the nervures yellowish, nearly hyaline; areolet 5-angular. Legs color of the body; tips of the posterior tibiae dusky. Abdomen elongate-ovate, smooth and polished; basal segment gradually dilated at tip, depressed and polished; basal foveæ of the second segment obsolete; narrow apical margins of the second and two following segments, black, subobsolete on the fourth segment; beneath tinged with yellowish; ovipositor subexserted. Length 4—5 lines; expanse of wings $6\frac{1}{2}$ — $7\frac{1}{2}$ lines.

Two specimens. Closely allied to *Ich. suturalis* and *propinquus*, but much smaller, more slender, the wings differently colored, the body smoother, the antennæ longer, more slender, and the metathorax differently sculptured.

37. *Ichneumon subfuscus*. Cresson.

Ichneumon subfuscus, Cresson, Proc. Ent. Soc. Philad. iii, p. 173.

One ♀ specimen.

38. *Ichneumon brevipennis*, Cresson.

Ichneumon brevipennis, Cresson, Proc. Ent. Soc. Philad. iii, p. 174.

One ♀ specimen.

39. *Ichneumon lævigatus*, Cresson.

Ichneumon lævigatus, Cresson, Proc. Ent. Soc. Philad. iii, p. 176.

One ♀ specimen.

40. *Ichneumon dorsalis*, Cresson.

Ichneumon dorsalis, Cresson, Proc. Ent. Soc. Philad. iii, p. 177.

One ♀ specimen.

41. *Ichneumon magnus*. n. sp.

Black; a line on each side of the face, and the anterior tibiae in front, whitish; wings fusco-hyaline; second and third segments of abdomen honey-yellow; central area of metathorax small, saggitate.

Male.—Large, black, closely punctured; the face with a white line

on each side; antennæ half the length of the body, fuscous, thickened at base, gradually attenuated to the tips which are very slender, basal joint black. Thorax entirely black; scutellum subconvex, closely punctured, deeply excavated in front with a sharply-defined carina on each side of the excavation; metathorax rugose, the elevated lines well defined, the central area small, saggitate, flattened, shining and somewhat striated; tegulae piceous. Wings ample, deep fusco-hyaline, rather paler at tip, and with a slight violaceous reflection; nervures and stigma black; areolet 5-angular; the second recurrent nervure bent in the middle with a short process on the outside; the cubital nervure with a rather long oblique rudimental nervure within the submarginal cell. Legs shining black; the four anterior femora at extreme tips within, the anterior tibiæ within and a line on the basal joint of their tarsi within, whitish; the four anterior tibiæ and tarsi tinged with piceous. Abdomen elongate, rather stout, deep shining black; basal segment shining, bilineated, sparsely punctured, slender at base, dilated at tip, where it is tinged with obscure ferruginous; second and third segments bright honey-yellow, the basal foveæ of the second segment very deep, transverse; beneath colored same as above. Length $10\frac{1}{2}$ lines; expanse of wings $19\frac{1}{2}$ lines.

One specimen. This is one of the largest and finest species of *Ichneumon* known to me; it is easily recognized by its jet-black color, with the second and third segments of the abdomen honey-yellow.

42. *Ichneumon limbifrons*, Cresson.

Ichneumon limbifrons, Cresson, Proc. Ent. Soc. Philad. iii, p. 182.

One ♂ specimen.

43. *Ichneumon exiguus*, Cresson.

Ichneumon exiguus, Cresson, Proc. Ent. Soc. Philad. iii, p. 182.

One ♀ specimen.

44. *Ichneumon involutus*, Cresson.

Ichneumon involutus, Cresson, Proc. Ent. Soc. Philad. iii, p. 183.

One ♀ specimen.

Genus **STILPNUS**, Grav.

1 *Stilpnus obscurus*, n. sp.

Black: legs and abdomen, except base, ferruginous; antennæ brown: wings obscure hyaline.

Male.—Black, shining; mandibles and palpi pale testaceous, the former blackish at tips; face slightly pubescent; antennæ three-fourths the length of the body, brownish, paler and tinged with ferruginous at base beneath, the joints very distinct. Thorax smooth and polished, apparently impunctured; metathorax subrugose, with the elevated lines

tolerably well defined; tegulae yellowish-testaceous. Wings obscure hyaline, faintly iridescent; nervures fuscous, yellowish at base. Legs pale ferruginous; the coxae entirely, and the femora above more or less, piceous. Abdomen depressed, subsessile, dark ferruginous, shining, broadest behind the middle, and incurved at tip; basal segment black, finely sculptured, broad at tip with a stout tubercle on each side about the middle, and two well defined central longitudinal carinae. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

One specimen.

2. *Stilpnus? compressus*, n. sp.

Shining black; tibiae and most of second and third abdominal segments, dull ferruginous; wings hyaline, iridescent; abdomen elongate, compressed, slender at base.

Male.—Black, polished; head transverse, subquadrate, smooth, slightly pubescent, more dense on the face, which is short; mandibles rufo-piceous; antennae stout, as long as the head and thorax, slightly involute, entirely black, and clothed with very short pale pubescence. Thorax somewhat narrow, shining black, sparsely punctured, slightly clothed with pale pubescence; the prothorax obliquely striated; scutellum slightly prominent, rugose on the sides; metathorax elongate, rugose, the elevated lines well defined and longitudinal, forming a very long and broad central area, which extends nearly the whole length of the metathorax and somewhat depressed; tegulae piceous. Wings rather ample, hyaline, beautifully iridescent; nervures and stigma fuscous, yellow at base. Legs short, rather stout, black, thinly clothed with pale pubescence; tips of the femora, and the tibiae entirely, ferruginous; the anterior tarsi tinged with yellowish. Abdomen elongate, black, highly polished, broad and compressed at tip; basal segment long, slender, subcylindrical, strongly arcuated and gradually swollen towards the tip; the incisure between the first and second segments deep; most of the second and third segments stained with dull rufo-ferruginous; remaining segments compressed; venter much compressed and edged like a knife towards the tip. Length $3\frac{1}{4}$ lines; expanse of wings 5 lines.

One specimen. This singular insect seems to agree in every respect with the genus in which I have placed it, except the shape of the abdomen which is entirely different from any other species of the genus known to me.

Genus **MESOLEPTUS**, Grav.1. **Mesoleptus valens**, n. sp.

Black: most of mandibles, palpi, tegulæ and most of tibiæ and tarsi, yellowish: femora and basal half of abdomen, rufous: wings hyaline.

Female.—Large, black, thinly clothed with a very short pale pubescence; face finely rugose; mandibles yellowish, black at tips which are deeply cleft; palpi yellowish; antennæ more than half the length of the body, entirely black. Thorax finely punctured, subsericeous, shining; scutellum subconvex, deeply excavated in front; metathorax rugose, with a deep central excavation posteriorly, the elevated lines not well defined; tegulæ yellow. Wings hyaline, faintly tinged with fuliginous; nervures fuscous, yellowish at base; areolet small, triangular, subpetiolated. Legs yellowish; coxæ, tips of the posterior tibiæ, the apical half of the basal joint of their tarsi, and the remaining joints of their tarsi except extreme base, blackish; the four anterior femora tinged with ferruginous and the posterior pair entirely ferruginous. Abdomen elongate, slender at base and robust at tip, smooth and polished, black; basal segment slender at base, much swollen at tip, arcuated, its apical half, as well as the whole of the second and third segments, rufous; apex slightly pubescent; venter yellowish at base; ovipositor exerted about the length of the first segment, piccous, ferruginous at tip, valves black. Length $4\frac{1}{4}$ lines; expanse of wings 7 lines.

One specimen.

2. **Mesoleptus montanus**, n. sp.

Black: legs rufous, four posterior tibiæ and tarsi annulated with white; wings hyaline, iridescent, areolet minute, petiolated; basal segment of abdomen much dilated at tip; ovipositor long.

Female.—Black, somewhat shining, slightly pubescent, more dense on the face; most of the mandibles, palpi and tegulæ, yellowish-white; antennæ piceous, more than half the length of the body; metathorax deeply sulcate on the posterior middle, indistinctly striated transversely, the elevated lines well defined, the central area not defined. Wings hyaline, beautifully iridescent; nervures and stigma blackish, the former pale at base; areolet minute, subtriangular and petiolated. Legs pale rufous; the coxæ, posterior trochanters, and extreme tips of posterior femora, black; anterior legs pale in front; the four posterior tibiæ and tarsi blackish, the tibiæ with a broad exterior white line between the base and middle, and a white spot at extreme base, and the base of the tarsal joints also white. Abdomen rather robust, subfusiform, entirely black; first segment slender at base and much swollen at tip; apical segments broad and faintly subcompressed; ovipositor

exserted nearly the whole length of the abdomen, rufo-piceous. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{4}$ lines.

One specimen. Very closely allied to *M. validus* from Pennsylvania, but is smaller, the areolet of the wings differently shaped and the legs somewhat differently colored.

3. *Mesoleptus macer*, n. sp.

Black; mandibles and tegulæ yellowish; legs ferruginous; wings hyaline, areolet minute, petiolated; abdomen subcompressed; ovipositor long.

Female.—Slender, black, somewhat shining, closely and finely punctured, slightly pubescent; most of the mandibles, palpi, and the tegulæ, pale yellowish; antennæ two-thirds the length of the body, slender, curled at tips, entirely black; metathorax subrugose, the elevated lines sharply defined, the central area small and triangular. Wings hyaline, beautifully iridescent; nervures and stigma blackish, the former yellowish at base; areolet minute, slightly oblique and petiolated. Legs slender, obscure ferruginous, the two anterior pairs tinged with yellowish, the posterior pair with dusky; coxæ and posterior trochanters piceous. Abdomen elongate, slender at base, gradually broader and subcompressed towards the tip, entirely black; tip of the first segment swollen; venter tinged with obscure yellowish; ovipositor exserted about half the length of the abdomen, rufo-piceous, valves black. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

One specimen. Allied to *M. dubitatus*, but the abdomen is entirely black, and the form more slender.

Genus **CTENISCUS**, Haliday.

1. *Cteniscus excelsus*, n. sp.

Black; most of the head and antennæ, four stripes on mesothorax, spots on pleura, scutellums, two spots on metathorax, legs and bands on abdomen, white or yellowish-white; wings hyaline; abdomen clavate.

Female.—Black; the face, broad frontal orbits, dilated at the summit, a small spot behind the eyes, lower half of the cheeks, clypeus, mandibles except extreme tips, and the palpi, white, slightly tinged with yellowish; cheeks with a well defined longitudinal carina on each side; a minute black puncture on each side of the face immediately above the clypeus; antennæ two-thirds the length of the body, slender, filiform, pale yellowish, blackish towards the base, especially above; basal joint beneath yellowish-white. Thorax shining, minutely punctured, clothed with a thin pale pubescence; mesothorax polished, impunctured; upper and lower margins of the prothorax, dilated above, the pectus in front of the anterior coxæ entirely, a spot beneath the tegulæ, an irregular mark on each side of the pleura, enclosing a black

spot, a dot beneath the hind wing, four longitudinal (two central and a lateral) stripes on the mesothorax, dilated behind, the tegulæ, scutellum and postscutellum, and a large spot on each side of the metathorax, yellowish-white; scutellum prominent; metathorax finely sculptured, the elevated lines well defined, the central area moderate, elongate-subquadrate. Legs slender, and including their coxæ, yellowish-white; the four anterior femora at base within, the posterior coxæ at base within, their femora within except tips, and their extreme base exteriorly, black; posterior tibiæ within except extreme base, and their tarsi entirely, fuscous. Abdomen strongly clavate, polished; a spot on the tip of the first segment, and the broad apical margins of the remaining segments, white; basal segment depressed, with two tolerably well-defined central carinæ, and a stout tubercle on each side at base and a smaller one on each side about the middle; apex thickened and incurved, faintly compressed; venter white, the extreme base black; ovipositor subexserted. Length $4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

One specimen.

2. *Cteniscus venustus*, n. sp.

Ferruginous; face, mouth, lower half of cheeks, pectus, spot on scutellum, base of legs and apex of abdomen, yellowish; wings fuscous; abdomen clavate.

Female.—Head brownish-ferruginous, polished; face, inner orbits, clypeus, mandibles except extreme tips, lower half of the cheeks and the palpi, pale yellowish; antennæ, slender, filiform, nearly three-fourths the length of the body, pale fulvous, blackish at the base, basal joint beneath ferruginous. Thorax smooth and polished, brownish-ferruginous; lower margin of the prothorax, anterior part of the pleura, the pectus, the tegulæ and a spot beneath, yellow; scutellum prominent, yellowish-ferruginous, with a yellow spot at tip; postscutellum tinged with yellowish; metathorax polished, the elevated lines sharply defined, the central area rather small, elongate. Wings ample, fuscous, paler at tips; nervures fuscous, costa and stigma yellowish; areolet triangular, oblique. Legs slender, pale yellowish; the four anterior femora exteriorly, the posterior femora entirely, and their tarsi, ferruginous; extreme base and apex of the posterior tibiæ, dusky. Abdomen clavate, smooth and polished, incurved at tip, pale ferruginous; narrow apical margins of the second and third segments above, broad apical margin of the fourth, and nearly the whole of the remaining segments yellowish-white; basal segment with a stout tubercle on each side near the base and a smaller one on each side about the middle. Length $4\frac{1}{2}$ lines; expanse of wings $7\frac{1}{4}$ lines.

Two specimens.

3. *Cteniscus abdominalis*. n. sp.

Black: face, mouth, lower part of cheeks, pectus, tegulae and scutellums, yellowish: apex of antennae, most of legs and abdomen ferruginous, the latter yellowish at tip; wings hyaline.

Female.—Head black, shining, densely and minutely punctured, thinly pubescent; face, inner orbits not reaching the summit of the eyes, clypeus, lower part of the cheeks, mandibles except extreme tips, and the palpi, pale yellowish; antennae nearly as long as the body, fulvo-ferruginous, the basal half above and the base beneath, dusky. Thorax black, polished, slightly pubescent; lower margin of prothorax, two spots on the anterior margin of pleura, pectus, tegulae and a short line beneath, yellowish; scutellum not prominent, yellowish, pubescent; postscutellum yellow; metathorax black, shining, subobsoletely rugose, the elevated lines well defined, the central area large, quadrate. Wings hyaline, iridescent; nervures and stigma fuscous; areolet triangular. Legs yellow; the four anterior femora tinged with ferruginous; the posterior coxae ferruginous, yellowish at tips, their femora rufo-ferruginous, black at extreme base and apex, their tibiae and tarsi blackish, the former ferruginous about the middle. Abdomen clavate, smooth and shining, pale ferruginous or honey-yellow; narrow apical margins of the second and third segments, and most of the remaining segments obscure yellowish. Length $4\frac{1}{2}$ lines; expanse of wings 7 lines.

One specimen.

Genus *TROGUS*, Grav.1. *Trogus flavipennis*, Cresson.

Trogus flavipennis, Cresson, Proc. Ent. Soc. Philad. iii, p. 287.

One specimen.

2. *Trogus flavitarsis*, n. sp.

Black; face white; tarsi yellow; wings fuliginous.

Male.—Black, opaque, very closely and finely punctured; the face, clypeus except anterior middle, labrum, and a spot on mandibles, whitish; palpi pale, blackish at base; face narrow; antennae as long as the body, entirely black, very slender at tips, the joints prominent on their middle, giving the antennae a subserrate appearance. Thorax densely punctured, the dorsal lines of the mesothorax well impressed; scutellum obtusely elevated, with a very deep excavation in front bordered on each side by a sharply defined carina; metathorax coarsely rugose, the elevated lines rough and well defined, the central area moderate, quadrate; on each side of the metathorax posteriorly a short obtuse, compressed tubercle; tegulae shining black. Wings fuliginous, the anterior pair with an obscure violaceous reflection, the posterior pair some-

what iridescent; nervures black; areolet 5-angular, or subtriangular. Legs long, black; the femora tinged with fuscous; the tibiæ yellowish-fuscous, the anterior pair palest; all the tarsi yellow, the posterior pair dusky at base. Abdomen black; the basal segment depressed, strongly arcuated, bilineated and punctured; apical segments smooth and shining. Length 6 lines; expanse of wings $10\frac{1}{2}$ lines.

One specimen.

Genus **CRYPTUS**, Fabr.

1. **Cryptus robustus**, Cresson.

Cryptus robustus, Cresson, Proc. Ent. Soc. Philad. iii, p. 289.

Ten ♀ specimens. This fine species varies by the basal joint of the antennæ being sometimes entirely black, by the wings being sometimes fuscous with a violaceous reflection, and by the apex of the abdomen being often more or less varied with bright rufous. I omitted to mention, in the description of this species, that the second, third and fourth joints of the four anterior tarsi are short, triangular, dilated and spinose, which seems to be an important character of this species.

2. **Cryptus proximus**, Cresson.

Cryptus proximus, Cresson, Proc. Ent. Soc. Philad. iii, p. 290.

Two ♀ specimens. One specimen has the wings varied with fuscous, while those of the other specimen are uniformly fuliginous. The tarsi are slender and simple.

3. **Cryptus luctuosus**, Cresson.

Cryptus luctuosus, Cresson, Proc. Ent. Soc. Philad. iii, p. 290.

One ♀ specimen.

4. **Cryptus nubilipennis**, Cresson.

Cryptus nubilipennis, Cresson, Proc. Ent. Soc. Philad. iii, p. 291.

One ♀ specimen.

5. **Cryptus crassicornis**, Cresson.

Cryptus crassicornis, Cresson, Proc. Ent. Soc. Philad. iii, p. 292.

Six ♂ specimens. This may be the male of *C. robustus*.

6. **Cryptus excelsus**, Cresson.

Cryptus excelsus, Cresson, Proc. Ent. Soc. Philad. iii, p. 293.

Six ♀, one ♂, specimens.

7. **Cryptus ultimus**, Cresson.

Cryptus ultimus, Cresson, Proc. Ent. Soc. Philad. iii, p. 305.

One ♀ specimen

Genus **PHYGADEUON**, Grav.

Phygadeuon montanus, Cresson.

Phygadeuon montanus, Cresson, Proc. Ent. Soc. Philad. iii, p. 309.

One ♀ specimen.

Genus **PHYTODIETUS**, Grav.**Phytodietus pleuralis**, n. sp.

Black; face, mouth, base of antennæ beneath, line on each side of mesothorax, most of thorax beneath, scutellums, and apical margins of abdominal segments, white; most of legs pale ferruginous, posterior tibiæ and tarsi blackish, the former with a broad whitish annulus; wings hyaline.

Male.—Black, shining; face, frontal orbits, clypeus, mandibles except tips, lower half of the cheeks, and the palpi, white; antennæ as long as the body, slender, brownish, the two basal joints beneath, and the third and fourth joints exteriorly, whitish. Thorax black, polished; mesothorax with a broad white line on each side, dilated and recurved anteriorly; the tegulæ, one or two spots beneath, lower margin of the prothorax, the pectus entirely, and the pleura beneath and extending up on each side anteriorly, white; a minute spot on each side of the scutellum at base, a spot on its tip, the postscutellum, and the posterior margins of the spaces on each side, also white; metathorax entirely black, and covered with very fine transverse striæ. Wings hyaline, beautifully iridescent; nervures fuscous, pale yellowish at base; areolet triangular, oblique. Legs: the four anterior coxæ and trochanters, second joint of posterior trochanters, and the four anterior femora, tibiæ and tarsi in front, white, tinged with pale ferruginous behind; posterior coxæ, first joint of their trochanters and their femora except extreme tips, pale ferruginous; their tibiæ and tarsi black, the former with a broad annulus about the middle, and the latter at extreme base, whitish. Abdomen black, polished; the apical margin of all the segments with a narrow white fascia, broader on the extreme sides. Length 3 lines; expanse of wings $5\frac{1}{2}$ lines.

One specimen.

Genus **MESOCHORUS**, Grav.**Mesochorus agilis**, n. sp.

Black; most of mandibles and tegulæ, yellow; clypeus, legs, and band on abdomen, dull luteous; wings hyaline.

Female.—Black, polished, clothed with a short, fine, pale sericeous pubescence; most of clypeus, extreme lower portion of the cheeks, mandibles except tips, and the palpi yellowish, the two latter paler; antennæ longer than the body, very slender, brown-black. Thorax shining black; tegulæ and a spot before, pale yellowish; metathorax shining, the elevated lines not well defined, the central area very elongate. Wings very large and ample, hyaline, iridescent; nervures pale fuscous, yellowish at base, as well as the costa and stigma; areolet rather large, rhomboidal. Legs obscure luteous, posterior coxæ fuscous, tips of their tibiæ and their tarsi dusky. Abdomen piceous, polished;

apical margin of the second segment and the whole of the third, obscure luteous; venter stained with yellowish; ovipositor short. Length $3\frac{1}{4}$ lines; expanse of wings 7 lines.

One specimen.

Genus **GLYPTA**, Grav.

Glypta varipes, n. sp.

Black; legs ferruginous, posterior tibiæ and tarsi black, the former lined with whitish; wings subhyaline.

Female.—Black shining, closely and finely punctured; face with a slight swelling on the middle; labrum testaceous; antennæ two-thirds the length of the body, piceous, brownish at tips; tegulæ and a dot before yellowish-white. Wings subhyaline, faintly tinged with fuliginous, somewhat iridescent; nervures fuscous, yellowish at base, costa and stigma pale fuscous. Legs, including the coxæ ferruginous, the two anterior pairs tinged with yellowish, their tarsi varied with dusky; posterior tibiæ and tarsi blackish, the former with a broad whitish line on the outside, not reaching the tips but interrupted near the base, in one specimen this line is obscurely defined; joints of the tarsi whitish at base. Abdomen black; venter yellowish; ovipositor about as long as the body. Length $3\frac{1}{2}$ — $4\frac{1}{4}$ lines; expanse of wings 6—7 lines.

Two specimens.

Genus **LAMPRONOTA**, Haliday.

Lampronota montana, n. sp.

Black; abdomen and legs, except base, rufous; wings fuliginous; ovipositor as long as the body.

Female.—Black, finely and very closely punctured; labrum and mandibles rufo-piceous; antennæ two-thirds the length of the body, piceous, paler towards the tips; tegulæ piceous; scutellum convex; metathorax densely punctate, with a single, sharply defined, transverse, arcuated carina behind the middle. Wings fuliginous, with a deep purplish reflection; nervures and stigma black; areolet small, triangular and petiolated. Legs rufous; the coxæ and trochanters, and sometimes the posterior tibiæ and tarsi, black. Abdomen rufous; the first segment, except apical margin, black; extreme sides of the second and third segments sometimes blackish; ovipositor as long as the body, rufous, valves black. Length $4\frac{3}{4}$ —6 lines; expanse of wings $7\frac{1}{2}$ —9 $\frac{1}{4}$ lines.

Eight specimens.

Genus **PIMPLA**, Fabr.

1. **Pimpla tenuicornis**, n. sp.

Black; legs except hind tibiæ and tarsi, ferruginous; hind tibiæ with a pale annulus near the base; antennæ long and very slender; wings fusco-hyaline.

Female.—Black, polished; palpi pale fuscous; antennæ three-fourths

the length of the body, very slender and of equal thickness throughout, brownish, basal joint swollen and black. Thorax smooth and polished; metathorax indistinctly sculptured, with an elongate-subquadrate central area; tegulae piceous. Wings fusco-hyaline, with a slight violet reflection; nervures and stigma black, the latter with a pale spot at base; areolet rather small, triangular and somewhat oblique. Legs stout, pale ferruginous; the anterior coxae and the posterior tibiae and tarsi blackish, their tibiae with a small pale annulus near the base. Abdomen robust, broad, recurved and truncate at tip; entirely black; the four basal segments very closely punctured, except their apical margins which are smooth and shining, as well as the apical segments entirely; ovipositor nearly as long as the abdomen, stout, rufo-piceous, valves short and black. Length $4\frac{3}{4}$ lines; expanse of wings $7\frac{1}{4}$ lines.

One specimen.

2. *Pimpla pedalis*, n. sp.

Black; legs except hind tibiae and tarsi, rufous; wings subhyaline.

Male.—Black, very closely punctured; palpi fuscous; antennae filiform, rather slender, brown-black, three-fourths the length of the body. Thorax shining, not distinctly punctured; metathorax finely punctured, central area not distinct. Wings obscure hyaline, with a bluish-violet gloss; nervures and stigma black; areolet triangular, rather oblique. Legs stout, dull rufous; anterior coxae, and the posterior tibiae and tarsi, blackish. Abdomen elongate, entirely black, closely punctured. Length 5 lines; expanse of wings $8\frac{1}{2}$ lines.

One specimen. May be the ♂ of *P. tenuicornis*.

3. *Pimpla fulvescens*, n. sp.

Yellowish-fulvous, polished; face, tegulae and scutellum yellow; wings yellowish-hyaline.

Male.—Bright yellowish-fulvous, polished, impunctured; face flat, yellow; eyes large and prominent; clypeus, mandibles, palpi and cheeks, pale yellowish-fulvous, tips of the mandibles blackish; antennae stout, filiform, two-thirds the length of the body, dull ferruginous, the two basal joints beneath yellowish. Thorax: mesothorax somewhat rugose in front, with a blackish depression on each side, and longitudinal, sub-obsolete, pale brownish stain on each side of the middle; prothorax and pleura with several irregular fuscous spots; scutellum rather prominent, yellowish, with the excavation in front blackish; postscutellum also yellowish as well as the tegulae and a spot beneath; metathorax smooth and polished, stained with fuscous at base. Wings ample, yellowish-hyaline, with a slight brassy gloss; nervures blackish, honey-yellow at base as well as the costa and stigma; areolet subtriangular

and oblique. Legs stout, pale yellowish-fulvous, the posterior pair more deeply tinged with fulvous. Abdomen elongate, slightly dilated and depressed near the tip, smooth and highly polished; basal segment with a rather deep channel down the middle, and the apical segment with a slight central groove. Length $4\frac{3}{4}$ lines; expanse of wings 9 lines.

One specimen.

Genus **EPHIALTES**. Grav.

Ephialtes occidentalis, n. sp.

Black; tegulae and legs, except hind tibiae and tarsi, pale ferruginous; wings hyaline.

Female.—Deep black; head smooth and polished; palpi pale; antennae black (apical half wanting). Thorax polished, clothed with fine pale pubescence; mesothorax smooth, somewhat rugose on the disk behind the middle lobe, which is prominent; pleura feebly punctured; scutellum polished; metathorax minutely rugose, with a rather deep central longitudinal channel, bordered on either side by a well-defined carina which diverges and becomes obsolete before reaching the tip; tegulae yellowish-ferruginous. Wings hyaline, faintly tinged with yellowish, and stained with honey-yellow at extreme base, iridescent; nervures and stigma black, the former honey-yellow at base; areolet triangular. Legs long, pale ferruginous; posterior tibiae and tarsi blackish; middle tarsi dusky. Abdomen elongate, slender, covered with very minute, dense, transverse striae; five basal segments long, narrow, subequal, each being about three times longer than wide, the sixth segment about half the length of the fifth, basal segment depressed on the disk, with two central and a lateral, well-defined carinae, the base broadly excavated; second segment with an oblique deeply impressed line on each side ending in a depression on the lateral middle; third and the following segments with a longitudinal depression on the lateral middle; extreme apex of the segments shining, prominent on the disk and excavated on each side; ovipositor very slender, ferruginous, about half again as long as the body, valves black, very finely pubescent. Length $14\frac{1}{2}$ lines, of ovipositor 22 lines; expanse of wings $15\frac{1}{2}$ lines.

One specimen. Closely allied to *E. manifestator* Linn. (Europe), but the hind legs, segments of the abdomen, and the ovipositor, are much longer and the abdomen is much narrower than in that species; the coloration is much the same in both species.

Genus **RHYSSA**, Grav.

1. **Rhyssa Nortoni**, Cresson.

Rhyssa Nortoni, Cresson, Proc. Ent. Soc. Philad. iii, p. 317.

One ♀ specimen.

2. *Rhyssa persuasoria*, Linn.

Ichneumon persuasorius, Linn. Faun. Succ. n. 1593. DeGeer. Mém. i, pl. 36, fig. 8. Sulzer, Gesch. pl. 26, fig. 12. Gmel. Syst. Nat. 2618, n. 16. Panz. Faun. Germ. p. 19. pl. 18.

Pimpla persuasoria, Fabr. Syst. Píez, p. 112.

Rhyssa persuasoria, Grav. Ichn. Eur. iii, p. 267. Steph. Brit. Ent. Suppl. p. 2 pl. 39, fig. 1 ♂. Cresson, Proc. Ent. Soc. Philad. iii, p. 318.

One ♀, two ♂ specimens. We have several ♂ and ♀ specimens of this species from Canada.

Genus **METOPIUS**, Panz.1. *Metopius rufipes*. n. sp.

Black; legs rufo-ferruginous; sides of the face, a line before and a spot beneath the wings, scutellum, spot on each side of metathorax and apical margins of abdominal segments, yellow; antennæ thickened beyond the middle; wings yellowish-fuscous, hyaline at tips.

Female.—Black, opaque, coarsely punctured; face yellow, depressed on the middle and surrounded by a sharply defined carina, forming somewhat of a shield-shaped enclosure and which encloses a large oblong black mark, with a longitudinal carina down the middle, covered with fine punctures, interspersed with large deep punctures; anterior margin of the clypeus carinated and somewhat recurved; labrum and mandibles clothed with pale setæ, the latter rufo-piceous about the middle; palpi testaceous; antennæ about as long as the head and thorax, subclavate, being gradually thickened beyond the middle, blackish above, dull ferruginous beneath. Thorax closely and roughly punctured, slightly pubescent; a line before and a spot beneath the anterior wings, yellow; prothorax striated on the sides; scutellum flat, quadrate, bright yellow, with a few deep scattered punctures, the posterior margin deeply emarginate, so that the lateral angles are prominent and spiniform, but not acute, at base there is a deep transverse excavation which is striated and black, the sharp carina on each side is yellow and continues to the tip of the scutellum, which has also a well impressed line down the middle; postscutellum and metathorax black, the latter is rugose, with a smooth polished space on each side at base enclosed by a well defined carina, on each side, just above the middle coxæ, a large rounded yellow spot, as well as a dot above it; tegulæ black. Wings ample, yellowish-fuscous, with a slight brassy gloss, the apex beyond the areolet hyaline; nervures fuscous, the costa and stigma honey-yellow; areolet large, and subrhomboidal. Legs rufo-ferruginous, short, the posterior pair very robust. Abdomen black, depressed, broader and incurved at tip, deeply, closely and coarsely punctured; apical half of the three basal segments, and the apical third of the remaining segments, bright yellow; basal half of the first and second segments tinged

with obscure ferruginous; beneath black, stained with yellowish towards the base. Length 6 lines; expanse of wings 11 lines.

One specimen. This fine species may be readily distinguished by the subelavate antennæ, the red legs, and broad yellow fasciæ of the abdomen.

2. *Metopius pulchellus*, n. sp.

Ferruginous; back of head, incisures of thorax and abdomen, blackish; face, tegulæ and a line before, two lines on pleura, scutellums, sides of metathorax, and the first and most of the third and following segments of abdomen, bright yellow; wings varied with fuscous, violaceous at tips; antennæ long, filiform.

Female.—Head blackish; a transverse line behind the ocelli, a spot on lower part of cheeks, the labrum and mandibles, ferruginous; frontal orbits and face bright yellow, the latter finely punctured and flattened on the middle, which is surrounded by a sharply defined carina, forming a perfect shield-shaped enclosure, on the middle there is a longitudinal ferruginous stain but no vestige of a carina as in the preceding species; between the antennæ there is a short, yellow, very prominent ridge; palpi ferruginous, the second joint very much dilated and yellowish; antennæ more than half the length of the body, subfiliform, slender at tips, the basal half ferruginous, the remainder dusky, basal joint beneath tinged with yellowish. Thorax closely and deeply punctured, ferruginous; anterior part of the mesothorax and the sutures of the thorax beneath, blackish; upper margins of the prothorax, an elongate spot on the anterior margin of the pleura, the tegulæ and a short line beneath, and a dot on each side of the pleura just above the middle coxæ, yellow; scutellum flat, quadrate, deeply punctured, yellow, ferruginous at base, the apical margin deeply emarginate, the lateral angles very prominent and acute, the lateral carinæ sharply defined, yellowish at base and apex, the excavation in front deep and blackish; postscutellum yellow; metathorax punctured, ferruginous, with two confluent yellow spots on each extreme side, the lower one the largest, on the disk there are three approximate, well defined, longitudinal carinæ, forming two elongate central areas. Wings varied with fuscous, with a brassy gloss, the apical margins palest, the marginal cell darkest, with a deep violaceous reflection; nervures fuscous, costa and stigma yellowish; areolet large, subrhomboidal. Legs moderately stout, ferruginous; tips of the middle coxæ, spot on the posterior coxæ at base above, the trochanters, tips of the femora, and four anterior tibiæ and tarsi, yellow; posterior tibiæ and tarsi tinged with yellowish at base, dusky at tips. Abdomen depressed, broad and strongly incurved at tip, densely and coarsely punctured, the three basal segments rugoso-

punctate; extreme basal margins of the segments black; the second except extreme apical margins, and base of third segments ferruginous, the remainder bright yellow; posterior margins sinuate, the basal segment with two central carinæ; beneath dusky, varied with yellowish. Length 5 lines; expanse of wings 9 lines.

One specimen. The colors of this lovely species are remarkably bright and distinct.

Genus **BASSUS**, Grav.

1. **Bassus orbitalis**, n. sp.

Black; inner orbits, clypeus, mandibles, palpi, sides of mesothorax, tegulæ, scutellums, anterior coxæ, and broad annulus on posterior tibiæ, white; wings hyaline; legs pale rufous.

Female.—Black; inner orbits, ending in a confluent spot beneath the eyes; clypeus, mandibles and palpi, white; clypeus depressed, the basal margin prominent, the apex emarginate in the middle or bilobate; antennæ about half the length of the body, entirely black. Thorax closely punctured, the mesothorax shining; a broad line on each side of the mesothorax, tegulæ, a spot before and a line beneath, and a spot on each side of the pleura just behind the anterior coxæ, white; scutellum with a broad white mark on its middle, dilated at tip; postscutellum with a white transverse line; metathorax dull black, rugose, pubescent, the elevated lines tolerably well defined. Wings ample, hyaline, beautifully iridescent; nervures and stigma blackish, the costa, base of stigma and nervures at base of wings, yellowish. Legs pale rufous, the anterior pair tinged with yellowish in front; anterior coxæ and trochanters, white; posterior tibiæ and tarsi black, the former with a broad white annulus about the middle. Abdomen black, depressed; the three basal segments densely punctured and opaque, with a deeply impressed transverse line behind the middle; apical segments polished, and, except the fourth segment, impunctured; first segment narrower than the thorax, much depressed, with two well defined longitudinal carinæ at base; extreme base of second segment deeply incised and crenulated. Length $3\frac{1}{2}$ lines; expanse of wings 6 lines.

One specimen.

2. **Bassus maculifrons**, n. sp.

Black; a spot on each side of face, a large spot on the middle, clypeus, mandibles, angular mark on each side of mesothorax, tegulæ, scutellum, and spot on each side of second and remaining abdominal segments, whitish; legs pale rufous; wings hyaline, iridescent.

Female.—Black, shining; a large quadrate spot on the middle of the face, a spot on the lower orbits on each side of clypeus, the clypeus, mandibles and palpi, yellowish-white; clypeus profoundly impressed on

each side, the basal margin prominent, the apical margin subtruncate and brownish; antennæ more than half the length of the body, entirely black. Thorax shining, closely and finely punctured; mesothorax with a broad, white hooked line on each side; tegulæ, a spot before and a line beneath the anterior wing, a large quadrate spot on the scutellum covering nearly its entire surface, and a transverse line on the post-scutellum, white; metathorax finely and densely rugose, without elevated lines. Wings ample, hyaline, beautifully iridescent; nervules pale fuscous, whitish at base, as well as the costa and a spot at the base of the stigma. Legs pale rufous; anterior coxæ and trochanters yellowish-white; tips of the posterior tibiæ and their tarsi entirely, dusky. Abdomen shining black, very closely and minutely punctured and subdepressed at base, apex subcompressed; on each lateral apical corner of the second and following segments, a rather large whitish spot. Length 3 lines; expanse of wings 6 lines.

One specimen.

Genus **BANCHUS**, Fabr.

1. **Banchus superbus**, n. sp.

Black; face, orbits, antennæ beneath, hooked mark on each side of mesothorax in front, a transverse line on its disk, a large elongate mark on the pleura, scutellum, apex and spot on each side of metathorax, most of legs, and broad apical margins of abdominal segments, bright yellow; wings yellowish-hyaline.

Male.—Black, shining; face—except a central longitudinal black line, dilated at base of clypeus with a black dot on each side of it,—the clypeus, frontal orbits—confluent with a line that passes in front of the ocelli and enclosing a large black spot behind the insertion of each antenna,—broad outer orbits, and the mandibles except extreme tips, all bright yellow; palpi pale, varied with fuscous; clypeus with a deeply impressed line down its middle; antennæ as long as the body, slender, curled at tips, black above, yellowish beneath, except at extreme apex, basal joint bright yellow beneath. Thorax closely punctured; a large hooked mark on each side of mesothorax anteriorly, a small transverse line on its disk, emarginate behind, tegulæ, a transverse line beneath, a large elongate mark on each side of the pleura anteriorly, a sinuate line on the upper margin of the prothorax, a spot on each side of the collar, and a spot in front of each anterior coxa, emarginate before, all bright yellow; scutellum prominent convex, polished, bright yellow, with a very small, acute, dusky tubercle on its disk; postscutellum also bright yellow; the carinæ on each side of the mesothorax behind, and on each side of both scutellums, yellowish; metathorax very closely and finely punctured, its posterior face excavated, abrupt and bright

yellow, almost confluent with a large bright yellow spot on extreme side. Wings rather ample, yellowish-hyaline, with a slight purplish-iridescent reflection; areolet rhomboidal. Legs long and slender, bright yellow; the posterior coxæ except the tips beneath, basal half of their trochanters, all the femora behind, except extreme base and apex, and the apical third of the posterior tibiæ, black; posterior tarsi varied with dusky. Abdomen subsessile, arcuated, fusiform, subcompressed, black, smooth and polished; each segment above with a bright yellow apical band, very broad on the three basal segments and narrow on the others, those on the first and second segments strongly sinuate anteriorly, and that on the fourth segment dilated on the middle anteriorly; venter compressed, black, banded with yellow. Length $5\frac{1}{2}$ lines; expanse of wings 11 lines.

One specimen.

2. *Banchus spinosus*, n. sp.

Black; face, orbits, clypeus, mandibles, basal joint of antennæ beneath, two spots on front of mesothorax, two lines on pleura, scutellums, metathorax behind, legs and bands on abdomen, yellow or orange-yellow; scutellum with a long acute spine; wings yellowish-hyaline.

Male.—Black, shining, very closely punctured; face, except a broad line down the middle, frontal orbits, a dot on each side of anterior ocellus, a line on the outer orbit, clypeus except basal margin, and most of the mandibles, yellowish; clypeus excavated on the disk; palpi blackish; antennæ nearly as long as the body, curled and slender at tips, black, the basal joint beneath yellow. Thorax: a triangular spot on each side of the mesothorax anteriorly, tegulæ, and a line beneath, a narrow line on the anterior margin of the pleura, and a spot beneath the base of the posterior wing, yellow; scutellum prominent, polished, yellow, with a long acute blackish spine on the disk, pointing behind; postscutellum also yellow; metathorax finely and densely sculptured, its posterior face yellow, abrupt, bounded above and on the sides by a sharply defined carina. Wings ample, yellowish-hyaline, with a brassy gloss, and a slight iridescent reflection; nervures and stigma fuscous; areolet moderate, subtriangular. Legs long, especially the posterior pair, orange-yellow; the coxæ black, the two anterior pairs yellow in front, the posterior pair with two short yellowish lines on the outside; tips of the posterior tibiæ and their tarsi except base, dusky or blackish. Abdomen strongly arcuated, broad and compressed, black, the apical margins of the four basal segments broadly yellow, more or less tinged with orange, a spot on each side of the fifth and sixth and most of the seventh segment, of the same color; basal segment narrow, with

a stout tubercle on each side before the middle; venter compressed, blackish, stained with yellowish at base and apex. Length $5\frac{1}{2}$ lines; expanse of wings $11\frac{1}{4}$ lines.

One specimen. Very distinct from the preceding species, and is at once distinguished by the long acute spine on the scutellum.

Genus **EXETASTES**. Grav.

1. **Exetastes niger**, n. sp.

Black, shining; wings fuliginous; legs sometimes reddish.

Female.—Deep black, head and thorax opaque, closely and finely punctured; antennæ longer than the body, slender, especially at tips, entirely piceous-black; scutellum convex, rather prominent, densely and deeply punctured; metathorax finely rugose without elevated lines. Wings ample, uniform dark fuliginous, with a violaceous reflection; nervures and stigma black; areolet rather large, subtriangular, oblique and subpetiolated. Legs long, rather slender, black, the two anterior pairs more or less honey-yellow, sometimes dusky, the posterior femora sometimes dusky, sometimes stained with rufous, and the apical joints of their tarsi sometimes testaceous. Abdomen subsessile, deep black, smooth and polished, sometimes strongly arcuated, rather slender and depressed at base and broad and subcompressed towards the tip which is truncate; first segment with a slight prominence on each side of the middle and a slight longitudinal depression on the disk; ovipositor very short, rufous, valves thickened, blackish, whitish on the inside. Length $6-6\frac{1}{2}$ lines; expanse of wings $11-11\frac{1}{2}$ lines.

Male.—Resembles the female, with the wings not so deeply fuliginous, sometimes fuscous and darker along the nervures; the legs also vary in coloring, one specimen has the four anterior femora, tibiae and tarsi, and the posterior femora, rufous; the abdomen is not so broad and subcompressed towards the apex; otherwise there seems to be no difference. Length $6-7$ lines; expanse of wings $11-12$ lines.

Two ♀, four ♂ specimens.

2. **Exetastes flavipennis**, n. sp.

Black, shining; wings deep yellow with the apical margins broadly fuliginous.

Female.—Deep black; head and thorax subopaque, very closely and finely punctured, rather thinly clothed with short black pubescence; antennæ three-fourths the length of the body, slender, piceous; thorax and metathorax as in the preceding species; tegulae piceous. Wings rather ample, deep yellowish-hyaline, the apical margins broadly fuliginous; nervures and stigma honey-yellow; areolet as in the preceding species. Legs black, sometimes tinged with fuscous, the anterior pair

more or less testaceous in front. Abdomen deep black, smooth and polished, shaped as in the preceding species. Length 6—7½ lines; expanse of wings 11—11½ lines.

Five specimens. Easily recognized by the deep yellow wings, broadly margined at tip with fuliginous.

3. *Exetastes cæruleus*, n. sp.

Deep blue, polished; antennæ black; wings fuscous; legs pale rufous.

Female.—Brilliant deep blue, with a violet shade in certain lights, smooth and polished; head and thorax delicately punctured; antennæ nearly as long as the body, slender, black; mesothorax and scutellum rather conspicuously tinged with purple, more distinctly punctured than the head; metathorax densely punctured, smooth about the base above, the dorsal middle has a slight longitudinal prominence, which is faintly sulcate; tegulæ black. Wings deep fusco-hyaline, darker along the nervures, with a rather strong metallic and iridescent reflection; nervures black; areolet as usual. Legs elongate, pale rufous; the coxæ and trochanters blue; extreme tips of posterior tibiæ and basal joint of their tarsi, blackish. Abdomen subfalcate, broad and compressed at tip, brilliant deep blue with a slight violet reflection, smooth and highly polished; ovipositor very short, pale rufous. Length 5½ lines; expanse of wings 8½ lines.

One specimen. A very handsome species, with the colors remarkably brilliant.

4. *Exetastes abdominalis*, n. sp.

Blue black; abdomen rufous; wings fusco-hyaline.

Female.—Slender, blue-black, polished, delicately punctured; antennæ more than half the length of the body, slender, black or piceous-black; metathorax finely rugose. Wings fusco-hyaline, sometimes fuliginous with a strong violaceous reflection; nervures black; areolet as usual. Legs long, black, sometimes more or less tinged with piceous, the two anterior pairs in front, and the apical joints of the posterior tarsi more or less, tinged with testaceous; posterior coxæ very robust, subglobose, sometimes tinged with rufous at base beneath. Abdomen long and rather slender, pale rufous, sometimes bright saffron-yellow, smooth and polished, the basal half depressed, the apical half broad and subcompressed; the basal segment with a stout tubercle on each side before the middle, the extreme base often blackish; ovipositor short, pale rufous, valves black, whitish within; venter more or less stained with yellowish, especially at base. Length 5½—7 lines; expanse of wings 9—10 lines.

Six specimens.

Var. *a*.—♀. Head and thorax more deeply tinged with blue and having a more or less violet reflection; the legs, except coxæ and trochanters, rufous, the posterior tibiæ and tarsi more or less dusky; in one specimen the posterior tarsi has the third and fourth joints bright yellow; in two specimens the basal segment of the abdomen is entirely blue-black; the wings have a strong violaceous reflection. Same size.

Three specimens. This may be a distinct species, in which case it may be named *E. rufipes*. There is, however, no difference between the two, except coloration, principally of the legs.

5. *Exetastes affinis*, n. sp.

Black; abdomen except extreme base, rufous; wings fuliginous.

Female.—Closely resembles *E. abdominalis*, but is more robust, more deeply punctured, the color of the head and thorax is deep black, without any tinge of bluish, so conspicuous in the preceding species; the punctures of the thorax are very close and fine, but distinct; the metathorax is finely and very densely rugose, opaque; the legs are entirely deep black, except the anterior pair in front where there is a tinge of obscure testaceous; the wings are uniform dark fuliginous, the anterior pair with a strong violaceous reflection, while the posterior pair is iridescent; the abdomen is short, much more robust, pale rufous, with the basal half of the first segment and the extreme tip of the venter, black. Length 6 lines; expanse of wings $10\frac{1}{2}$ lines.

One specimen.

6. *Exetastes flavitarsis*, n. sp.

Black; face, two spots in front of mesothorax, tegulæ, four anterior legs and posterior tarsi, yellow; posterior femora and tibiæ, and the abdomen except base, ferruginous; wings hyaline.

Male.—Black, shining, minutely punctured, clothed with a very short palish pubescence; face, orbits, interrupted in front and behind, clypeus, mandibles except tips, and the palpi, yellow; antennæ about as long as the body, black or brown-black, the basal joint beneath yellow; in one specimen there is an obscure pale annulus about the middle. Thorax: line on each side of the collar, a spot or hooked line on each side of the mesothorax in front, sometimes much reduced or entirely wanting, the tegulæ and a line beneath, yellowish; scutellum at tip and the postscutellum rufo-piceous; in one specimen the scutellum has an obscure yellowish stain. Wings hyaline, iridescent, sometimes very faintly tinged with yellowish-fuscous; nervures fuscous, yellowish at base; areolet shaped as usual, but scarcely subpetiolated. Legs slender, the posterior pair very long; the two anterior pairs yellow, more or less tinged with honey-yellow, their coxæ black above and yellow beneath;

posterior coxæ black, with a more or less distinct broad yellow line beneath and sometimes a dull rufous line or spot above; posterior femora rufous, blackish at base and apex, their tibiæ yellowish-ferruginous, with the apical half black, their tarsi yellow, dusky or blackish at base and apex. Abdomen long, slender and subcylindrical, smooth and shining, pale rufo-ferruginous; the basal segment except tip, black; sometimes there is a small rufous spot on the dorsal middle of this segment, and in one specimen the segment is ferruginous except the extreme base; there is also a stout tubercle on each side about the middle. Length $4\frac{1}{2}$ — $5\frac{1}{2}$ lines; expanse of wings $7\frac{1}{2}$ — $8\frac{1}{2}$ lines.

Six specimens.

7. *Exetastes consimilis*, n. sp.

Black; face, except a central line, hooked line on each side of mesothorax, tegulæ, and most of legs, yellow; abdomen except base, and posterior femora, ferruginous; wings pale yellowish-hyaline.

Male.—Closely resembles *E. flavitarsis*, but is larger; the face has a black line down the middle and a black dot on each side just above the clypeus; the orbits are not yellow except for a short distance on each side of the antennæ, the mandibles are yellow, with the base and apex black; palpi testaceous; the antennæ are about three-fourths the length of the body, and *entirely* black; the thorax is more dull, the mesothorax has a broad hooked line on each side, the tegulæ has a yellow spot in front, as well as a line beneath; the scutellum and postscutellum are *entirely* black; the metathorax is finely rugose, with a well-defined, transverse, arcuated carina near the base; the wings are faintly pale yellowish-hyaline, iridescent, the areolet smaller, triangular and *petiolated*; the legs are yellow, the four anterior femora, tibiæ and tarsi very slightly tinged with honey-yellow; the middle coxæ above and the posterior pair *entirely*, are black; the posterior femora are ferruginous, their tibiæ yellowish, dusky at tips as well as the whole of their tarsi; the abdomen is rather longer, more cylindrical, the basal segment is distinctly punctured and excavated at base, without distinct lateral tubercles, while the second segment has a stout tubercle on each side near the base; the basal segment except apex is blackish, and the seventh segment has a dusky stain on each side. Length 6 lines; expanse of wings 9 lines.

One specimen.

8. *Exetastes fascipennis*, n. sp.

Ferruginous; incisures of thorax and antennæ, black, the latter with a yellowish annulus; clypeus yellowish; wings yellowish-hyaline, with a dusky band beyond the middle.

Female.—Uniform ferruginous, face paler; inner orbits obscurely

and the clypeus, yellowish; antennæ more than half the length of the body, black, the basal joint ferruginous, a more or less distinct yellowish annulus about the middle. Thorax very closely and minutely punctured; the pleura beneath much depressed and black just behind the base of the anterior legs; spaces on each side of the scutellum, and the sutures of the metathorax, black; scutellum rather prominent, the carinæ on each side in front sinuate and blackish; metathorax very closely punctured, with a central longitudinal line, well impressed at base, but becomes obsolete before reaching the tip; tegulæ pale ferruginous. Wings yellowish hyaline, with a brassy and iridescent reflection; the apical margins, and a broad transverse band just before the middle, pale fuscous, the transverso-medial nervure margined with fuliginous; nervures fuscous, ferruginous at base, as well as the costa and stigma except tip; areolet subtriangular, subpetiolated. Legs color of the body, the two anterior pairs, and the posterior tarsi tinged with yellowish, the posterior tibiæ blackish at tips. Abdomen elongate, subcylindric, subdepressed, smooth and shining, paler at base and apex, the latter subcompressed and tinged with yellowish; venter varied with yellow at base; ovipositor short, rufo-piceous, valves black, pale at tips. Length $4\frac{1}{2}$ —6 lines; expanse of wings $7\frac{1}{2}$ —9 lines.

Five specimens.

9. *Exetastes scutellaris*, n. sp.

Fulvo-ferruginous; antennæ, sutures of thorax, hind legs in part, and spots on venter, blackish; face and scutellum, yellow; wings fusco-hyaline, costa and stigma yellowish.

Female.—Bright fulvo-ferruginous, smooth and polished, the head in front and the mouth, strongly tinged with yellowish; the vertex with a dusky spot enclosing the ocelli; antennæ dusky, paler beneath towards the base; mesothorax tinged with yellowish, with three broad, longitudinal, dusky stripes, the central one entire, the lateral ones abbreviated before; most of tegulæ and a line just beneath the anterior wings, yellow; scutellum prominent, bright yellow, sometimes with a slight tinge of ferruginous; postscutellum yellowish-fulvous; spaces on each side of the scutellums, a small stain on each side of the pleura anteriorly, and an oblique line beneath the posterior wings, blackish; metathorax with a slightly impressed central longitudinal line. Wings uniform fusco-hyaline, somewhat tinged with yellowish, with a subvioletaceous reflection, the posterior pair iridescent; nervures fuscous, pale at base, costa and stigma yellowish-fulvous; areolet large, obliquely subrhomboidal. Legs color of the body, the two anterior pairs tinged with yellowish; tips of the posterior femora, apical half of the tibiæ,

and the basal joint of their tarsi. dusky. Abdomen subfusiform, bright fulvo-ferruginous, smooth and polished, broad and subcompressed towards the apex, in two specimens broad and subdepressed and more or less varied with dusky (probably from discoloration); venter yellowish. spotted with dusky; ovipositor short, ferruginous, valves black, whitish within. Length $4\frac{1}{2}$ — $5\frac{1}{2}$ lines; expanse of wings 9—10 lines.

Male.—Resembles the female but more slender; the face is entirely bright yellow; the fuscous spot on the vertex is larger and extends to the base of the antennæ; the antennæ are much longer and fusco-ferruginous beneath, dusky above, the basal joint beneath is yellowish; the anterior lateral margins of the mesothorax are broadly yellow; most of the prothorax and the whole of the pleura, except two small ferruginous spots, are blackish, as well as the extreme lateral and apical margins of the metathorax; the legs have more of a yellowish tinge; the posterior tibiæ are blackish, yellowish at base, their tarsi are yellowish, with the basal joint blackish; the abdomen is subcylindric and of a uniform bright fulvous color, with the venter tinged with yellowish. Length 6 lines; expanse of wings 10 lines.

Five ♀, one ♂, specimens.

10. *Exetastes decoloratus*. n. sp.

Black; face, two lines on mesothorax, most of metathorax and legs, and the abdomen, obscure ferruginous; orbits and scutellum yellow; wings hyaline.

Male.—Head black, pubescent; face pale ferruginous; orbits yellow; clypeus and spot on mandibles, yellowish-ferruginous; palpi dusky; antennæ as long as the body, black, the basal joint beneath ferruginous. Thorax very finely punctured, opaque above, somewhat shining beneath; two longitudinal lines on the mesothorax much dilated in front, a line over the collar, upper margin of the prothorax, a spot beneath the tegulæ, all obscurely ferruginous; scutellum rather depressed, shining, bright yellow; postscutellum piceous; metathorax finely punctured, clothed with pale pubescence, black with the upper surface mostly ferruginous, divided down the middle by a black line; tegulæ dull honey-yellow. Wings hyaline; nervures fuscous, pale ferruginous at base; areolet moderate, subrhomboidal, subpetiolated. Legs long and slender, ferruginous, the two anterior pairs more or less tinged with yellowish; four anterior coxæ above, base and apex of the posterior pair, their trochanters above, a line on all the femora above, and tips of the posterior pair, black or blackish; posterior tarsi dull yellowish with the base and apex dusky. Abdomen rather short, narrow, arcuated, subdepressed, smooth and polished, ferruginous, slightly clouded with dusky; extreme base of first segment black, with a stout tubercle on

each side before the middle. Length $4\frac{1}{2}$ lines; expanse of wings 9 lines.

One specimen.

11. *Exetastes obscurus*, n. sp.

Brownish-ferruginous, opaque, abdomen polished; antennæ and sutures of the thorax, black; wings pale fusco-hyaline.

Female.—Dull ferruginous, slightly tinged with brownish, opaque, very closely and minutely punctured, slightly pubescent; mandibles and palpi blackish; antennæ half the length of the body, black, the basal joint beneath dull ferruginous; sutures of the thorax and a sub-obsolete spot on the mesothorax in front, black; scutellum rather prominent, somewhat shining; metathorax densely punctured; tegulæ piceous. Wings pale fusco-hyaline, with a slight yellowish tinge; nervures and stigma brownish; areolet subrhomboidal, subpetiolated. Legs dusky ferruginous; the two anterior pairs pale in front, dusky behind; the four anterior coxæ piceous above, as well as the posterior trochanters; a line on the posterior femora above, and their tibiae and tarsi more or less, dusky. Abdomen robust, strongly arcuated, broader and subcompressed at tip, entirely rufo-ferruginous, smooth and polished; ovipositor short. Length 5 lines; expanse of wings 9 lines.

One specimen.

CERATOSOMA, nov. gen.

Body moderately robust, smooth and highly polished. *Head* transverse; cheeks convex; the front depressed behind the antennæ; middle of the face rather prominent; clypeus transverse, depressed, the basal margin carinate, apical margin more or less emarginate; mandibles stout, depressed, of equal width from the base to the apex, the latter obtusely bifid; palpi slender throughout. *Antennæ* about half the length of the body in ♀, longer in ♂, stout, of equal thickness; basal joint short and subglobose, obliquely truncate exteriorly and receiving the second joint, which is short and transverse; third joint minute; fourth joint longest, as long as the fourth and fifth joints taken together, thickened towards the apex; remaining joints subequal, becoming very gradually shorter towards the tip; terminal joints slightly longer than the two penultimate joints, obtusely pointed. *Thorax* robust, somewhat gibbous; pleura flattened; scutellum as in *Bauchus*; metathorax short, convex, not abrupt behind. *Wings* ample, broad and obtusely rounded at tips, the venuration much as in *Bauchus*, except that the cells are broader and less elongate; the areolet is moderately large and of a subtriangular rhomboidal shape. *Legs* moderately long, and robust; the posterior coxæ and trochanters very robust, the femora subcompressed, the posterior pair robust and rather short; tarsal claws

acute, with a small tooth near the tip, pulvilli moderate. *Abdomen* subsessile, elongate, fusiform, rather convex above with the apex prolonged and acutely pointed in ♀, subdepressed and obtusely pointed in ♂; basal segment longer than wide, broader at tip; the second, third and fourth segments slightly broader than long, each with a deep oblique groove on each side above, as in *Glypta*, those on the fourth segment obsolete; ovipositor not exerted.

This genus is closely allied to *Bauchus* and *Exetastes*, but differs from both genera by the broader wings, the shorter and stouter legs, and the remarkable shape of the abdomen of the ♀, which is elongate and gradually acuminate towards the tip, which is acutely pointed; the obliquely grooved dorsum of the second and third segments seem to be a well marked character of this genus, and are similar to those of *Glypta*.

***Ceratosoma apicalis*. n. sp.**

Ferruginous; most of head, sides of mesothorax, spot on pleura, scutellums, apex of metathorax, posterior tibiæ and tarsi except tips, and bands on abdomen, bright yellow; wings deep yellowish-fuscous, apex hyaline.

Female.—Head yellow, the depressed space behind the antennæ black; middle of the face, clypeus, palpi, and two spots on the occiput, fulvous; tips of mandibles black; antennæ about half the length of the body, entirely fulvous. Thorax fulvo-ferruginous; lateral margins of mesothorax, broad in front and narrow behind, a transverse irregular mark on the disk, sometimes wanting, tegulæ, a line beneath the base of anterior wing, a large spot on each side of pleura anteriorly, both scutellums, and the apical half or one-third of the metathorax, sometimes reduced to a large spot on each side, all bright yellow. Wings deep yellowish-fuscous, with an obscure brassy gloss; the anterior pair with the apex, beyond the areolet, hyaline and iridescent; nervures fusco-ferruginous, the costa and stigma fulvous; areolet large, subtriangular, or subrhomboidal. Legs bright fulvo-ferruginous, the two anterior pairs tinged with yellowish; posterior tibiæ and tarsi yellow, their apical half fusco-ferruginous. Abdomen fulvo-ferruginous, darker towards the apex which is elongate and acute; apical margins of the four basal segments with a broad bright yellow band, broadest on the first segment where the band is dilated on each side; one specimen has a black mark on the extreme basal middle of each segment, larger and more conspicuous on the apical segments which have a dark rufous tinge; venter more or less compressed, fulvo-ferruginous, stained at base with yellowish. Length 6—7 lines; expanse of wings 9½—10½ lines.

Male.—Resembles the female, but the antennæ are nearly as long as the body; the face is entirely yellow, as well as the basal margin of the clypeus, which has a small black spot on each side; the front, behind the antennæ, is black except the orbits which are yellow; the lateral yellow margins of the mesothorax are broader and more distinct, there is a large yellow mark on the disk connected with the lateral stripe anteriorly by a narrow line on each side of the middle; sides of the pleura, except a space beneath the posterior wings, yellow; the apical half of the metathorax is yellow, dilated on the middle anteriorly, there is also an obscure yellowish, rounded spot on each side at base; the fifth segment of the abdomen has an obscure yellowish apical band. Length 6 lines; expanse of wings $10\frac{1}{2}$ lines.

Three ♀, one ♂, specimens.

We have a rather smaller species belonging to this genus, found in the Eastern and Middle States, and which I have named *C. fasciata*. It is black, with the face, cheeks, a line or spot on each side of the mesothorax, tegulæ, a line beneath the anterior wing, anterior margin of the pleura, scutellum, posterior half of the metathorax, the legs in part, and a broad apical band on each abdominal segment, yellow; the wings are deep yellowish-fuscous, with a brassy and subviolaceous gloss. I shall describe it more fully in a future Paper.

Genus **CAMPOPLEX**. Grav.

Campoplex laticinctus, n. sp.

Black; wings hyaline; third and fourth segments of abdomen rufous.

Female.—Black, opaque, clothed with short pale pubescence; face closely punctured; upper margin of mandibles testaceous; antennæ rather stout, more than half the length of the body, entirely opaque black. Thorax very closely punctured; metathorax depressed on the disk and covered with fine transverse rugæ, with a well-defined, irregular arcuated carina at base; tegulæ piceous-black. Wings hyaline, faintly tinged with dusky about the apical margins; nervures fuscous; areolet large, subtriangular. Legs piceous-black, the anterior pair yellowish in front. Abdomen very slender at base, gradually broader and compressed beyond the second segment, black, somewhat shining the third and fourth segments bright rufous, the second sometimes tinged with fuscous or rufous; first segment long, very slender at base, and somewhat swollen at tip; second segment not as long as the first, and nearly three times longer than broad, subcompressed; ovipositor very short. Length 6 lines; expanse of wings 8 lines.

Two specimens.

Genus **ANOMALON**. Grav.1. **Anomalon curtum**. Norton.

Anomalon curtus, Norton, Proc. Ent. Soc. Philad. i. p. 362.

Four ♂ specimens.

2. **Anomalon propinquum**, n. sp.

Black; face, orbits, most of legs, tegulæ, scutellum and broad stripe on each side of abdomen, yellow; antennæ fuscous; wings hyaline.

Male.—Black, opaque, very closely punctured, thickly clothed with a very short, pale glittering pubescence; head a little wider than the thorax; face, the orbits uninterrupted, clypeus, mandibles except tips, and the palpi, yellow; antennæ about as long as the head and thorax, dusky-ferruginous, paler beneath, the three basal joints yellow beneath. Thorax: scutellum suborbicular, prominent, convex and entirely yellow; metathorax coarsely rugose, its posterior face depressed; tegulæ yellow. Wings hyaline, iridescent; nervures pale fuscous, yellow at base. Legs yellow; posterior coxæ, their femora, and apical third of their tibiæ, black; basal joint of posterior tarsi with the apex dusky; posterior femora short, hardly longer than the basal joint of their tarsi. Abdomen elongate, slender at base, gradually broader and subcompressed beyond the first segment, black; second segment with its venter and a longitudinal stripe on each side, yellow; remaining segments black, with a broad yellow stripe on each side; first and second segments about equal in length, the former cylindrical, slightly swollen at tips, the second segment subcompressed. Length 8 lines; expanse of wings $9\frac{1}{2}$ lines.

One specimen. Very closely allied to *A. curtum*, but is differently colored, the hind legs shorter and more robust, and the two basal segments of the abdomen shorter.

Genus **EXOCHILUM**. Wesm.**Exochilum mundum**, Say.

Ophion mundus, Say, Bost. Journ. Nat. Hist. i, p. 228.

Anomalon flavipes, Brullé, Hym. iv, p. 170.

Exochilum mundus, Norton, Proc. Ent. Soc. Philad. i, p. 360.

One ♂ specimen.

Genus **PANISCUS**, Grav.**Paniscus geminatus**, Say.

Ophion geminatus, Say, Contrib. Macl. Lyc. i, p. 76.

Paniscus geminatus, Norton, Proc. Ent. Soc. Philad. i, p. 364.

Two ♀ specimens.

Genus **OPHION**, Fabr.**Ophion bifoveolatus**, Brullé.

Ophion bifoveolatus, Brullé, Hym. iv, p. 139. Norton, Proc. Ent. Soc. Philad. i, p. 358.

One ♀, three ♂ specimens.

Genus **TRACHYNOTUS**, Grav.**Trachynotus reticulatus**, n. sp.

Black; antennæ, legs and abdomen brown-black; frontal orbits, an obsolete interrupted line on each side of mesothorax, and the anterior legs in front, pale yellowish; wings hyaline, iridescent.

Male.—Dull black, coarsely and transversely rugose; head subquadrate, smooth and shining, the face very finely sculptured, thinly clothed with short pale glittering pubescence; frontal orbits, more or less interrupted, pale yellowish; mandibles tinged with ferruginous; antennæ slender, nearly half the length of the body, entirely piceous-black. Thorax transversely rugose, the mesothorax rough and somewhat reticulated, with a more or less interrupted yellowish longitudinal line on each side, sometimes obsolete; prothorax striated; pleura finely rugose; scutellum coarsely rugose, with a very deep excavation in front; metathorax coarsely reticulated, the extreme base with a very irregular transverse carina on each side of the middle, enclosing a narrow, nearly smooth space; tegulæ piceous, with the posterior margin pale yellowish. Wings hyaline, iridescent; nervures black, pale at base. Legs piceous-brown, the two anterior pairs more or less yellowish; the posterior pair blackish, their tibiæ and tarsi tinged with rufo-piceous. Abdomen very long and slender, thickened and subcompressed at tip; brown-black; sometimes the basal sides of the first segment and a spot on each side of the apex, are pale yellowish; the three basal segments long and linear, the second the longest; the third, fourth and fifth segments are more or less tinged with rufo-piceous. Length $5\frac{1}{2}$ lines; expanse of wings 6 lines.

Three specimens.

Genus **CREMASTUS**, Grav.**Cremastus fulvescens**, n. sp.

Fulvous; face, broad outer orbits, clypeus, mandibles, and legs in part, yellow; tips of posterior tibiæ, black; wings dark fuscous.

Female.—Head transversely subglobose, very finely and closely punctured, shining, clothed with fine pale pubescence; yellow, the occiput and posterior margin of the cheeks fulvous, the vertex, behind the insertion of the antennæ blackish; cheeks smooth and polished with a few scattered delicate punctures; tips of mandibles black; antennæ filiform, rather more than half the length of the body, dusky ferruginous, the basal joint beneath yellowish. Thorax fulvous, shining, sparsely punctured, clothed with a short, thin, yellowish pubescence; prothorax densely punctured; mesothorax and pleura polished, sometimes more or less black beneath the four anterior legs, the mesothorax densely punctured on the disk and transversely striated on the posterior

middle; scutellum tinged with yellow, rather prominent and closely punctured; metathorax opaque fulvous, reticulated, with a central longitudinal channel, pubescent; tegulae tinged with yellowish. Wings ample, dark fuscous, with a more or less violaceous reflection, sometimes tinged with deep yellowish about the base; nervures fuscous, pale at base, costa and stigma yellowish. Legs yellowish; the four anterior femora behind, tinged with fulvous; tarsi dusky at tips; posterior coxae, trochanters above, and their femora fulvo-ferruginous; extreme tips of their femora and the apical fourth of their tibiae, black. Abdomen about twice the length of the head and thorax, fulvous, the two basal segments long and very slender, the remainder broad and much compressed; basal segment long and slender, cylindrical, very slightly swollen at tip, second segment linear, subcompressed, slightly longer than the first, its dorsal edge blackish; venter tinged with yellowish; ovipositor very short. Length $9\frac{1}{2}$ lines; expanse of wings 11 lines.

Male.—Resembles the female, but the antennae are longer, the pleura beneath, between the four anterior legs, is deep black, as well as the posterior femora above and the extreme apex of the abdomen.

Four ♀, one ♂, specimens.

Var. *a*.—*C. APICALIS*, ♀.—Most of prothorax, the pleura, except a large rufous stain on each side, the sides and base of the metathorax more or less, and the two apical segments of the abdomen, black; the mesothorax in front is sometimes more or less dusky.

Six ♀ specimens.

Var. *b*.—*C. SEMINIGER*, ♂ ♀.—Vertex, occiput and thorax entirely black in ♂; the mesothorax in ♀ with two obscure rufous stains behind the middle, the scutellum entirely, and two stains on the disk of the metathorax, rufous; antennae of ♂ brown-black; posterior femora black, most of the femora of the ♂, also black; two apical segments of the abdomen in both sexes, black; sometimes the whole of the fourth segment and some of the ventral segments, are also black.

One ♀, two ♂ specimens

Var. *c*.—*C. NIGRICANS*, ♀.—Head rufous, tinged with yellowish in front, the vertex and tips of mandibles black; antennae fusco-ferruginous; thorax dull black, the mesothorax above obscurely stained with rufo-piceous; tegulae rufous; wings colored rather darker, the costa and stigma fuscous; legs rufous, the two anterior pairs ferruginous, the posterior coxae, femora, and apical half of their tibiae, black, their tarsi yellow, blackish at extreme tips; abdomen rufous, with the dorsal

edge of the second, most of the third, and all of the remaining segments, shining black; ovipositor as long as the first segment of the abdomen, rufous, valves black.

One specimen. This may be a distinct species, as the punctures of thorax are closer and more distinct, and the hind legs seem to be shorter and more robust.

Genus **PORIZON**, Grav.

1. **Porizon fuscipennis**, n. sp.

Black; orbits, mandibles, tegulae, venter and spots on apical segments of abdomen above, yellow; legs and apex of abdomen, rufous; wings fuscous; ovipositor long.

Female.—Black, shining, finely pubescent, head delicately punctured; clypeus rufo-piceous; mandibles large, projecting, of equal breadth, and when closed together there is left a large semicircular opening between them and the clypeus, tinged with ferruginous, their tips black; palpi yellowish; antennae about as long as the head and thorax, rather slender and entirely piceous-black. Thorax black, shining, closely punctured; anterior middle of the mesothorax flatly elevated; scutellum prominent, flattened, with a sharp carina on each side and a deep excavation in front; metathorax densely punctured, with sharply defined elevated lines, forming a small, distinct, elongate, 5-angular central area, the apex rather abrupt and transversely striated; tegulae yellow. Wings ample, short and broad, uniform dark fuscous; nervures black. Legs ferruginous, the two anterior pairs yellowish in front, the coxae and most of the posterior tibiae, fuscous; all the tarsi yellowish. Abdomen ferruginous, the two basal segments, except extreme tips, blackish; the remaining segments with most of their apical margins yellowish, much dilated in the middle, sometimes this yellowish color is obscure and somewhat dusky; venter entirely yellowish; apical segment above much swollen at tip; ovipositor as long as the abdomen, blackish. Length 5 lines; expanse of wings $7\frac{1}{2}$ lines.

Two specimens. Easily distinguished by the broad dark fuscous wings.

2. **Porizon albipennis**, n. sp.

Black; orbits, two spots on clypeus, mandibles, tegulae, legs in part, the venter and apical margins of dorsal segments of abdomen, pale yellowish; most of legs pale ferruginous; wings whitish-hyaline; stigma blackish.

Female.—Black; orbits, abbreviated in front, anterior margin or two spots on clypeus, and the mandibles, yellowish-white; antennae two-thirds the length of the body, piceous-black. Thorax closely and very finely punctured; the elevated lines on the metathorax sharply defined, the central area large, elongate, irregular 5-angular; tegulae

pale yellowish-white. Wings whitish-hyaline, iridescent, stigma large, blackish, the nervures subhyaline. Legs pale ferruginous; anterior coxæ, annulus on four posterior tibiæ and their tarsi at base, whitish; remainder of the posterior legs, blackish. Abdomen slender at base, broad and compressed beyond the first segment, black, shining, feebly punctured; first segment swollen at tip, the second covered with very fine longitudinal striæ; apical margins of the remaining segments pale yellowish, dilated into a large spot on the dorsal edge; venter pale yellowish, spotted with blackish; ovipositor longer than the abdomen, piceous. Length 4 lines; expanse of wings 5 lines.

Two specimens.

Genus **XYLONOMUS**, Grav.

Xylonomus cineticornis, n. sp.

Black: antennæ with a broad white annulus beyond the middle: wings subhyaline; tarsi brownish; ovipositor longer than the body.

Female.—Deep black, subopaque; head minutely sculptured, the cheeks indistinctly aciculate; clypeus small, transverse-ovate, deeply concave, piceous, as well as the palpi; antennæ more than half the length of the body, slender, black, with a broad, pure white annulus just beyond the middle. Thorax: mesothorax very closely punctured, rugose on the disk posteriorly, the middle lobe prominent; prothorax and pleura sparsely and delicately punctured, polished, clothed beneath with a very fine, short, silvery-white pile; scutellum flatly elevated, closely and minutely punctured, shining, with a deep transverse excavation in front; metathorax rugose, with well-defined elevated lines, forming a broad, elongate central area, constricted into a narrow neck towards the base; behind the central area the tip of the metathorax is abruptly excavated and bounded above by a sharply defined carina which ends on each side in a prominent, subacute tubercle; sides of the metathorax more densely rugose; tegulæ piceous. Wings long and narrow, hyaline with a slight tinge of yellowish-fuscous, and a sub-metallic, iridescent reflection; nervures and stigma black, the former piceous at base, the stigma with a white dot at base. Legs elongate, piceous-black; the four anterior tibiæ stouter than their femora; the anterior legs in front and all the tarsi, brownish, the extreme tips of the latter black; anterior tibiæ with a yellow spot at the base within. Abdomen about twice as long as the head and thorax; first segment one-third the length of the abdomen, depressed, finely sculptured, gradually broader towards the tip and depressed on each side, the lateral margins carinate, with a small tubercle on each side before the middle; second segment with a deeply impressed oblique line on each side at

base; remaining segments gradually broader and subcompressed, the apex obliquely truncate, the apical dorsal segment somewhat recurved; ovipositor longer than the body, ferruginous, valves black. Length $9\frac{1}{2}$ lines; expanse of wings $12\frac{1}{2}$ lines.

One specimen. Readily recognized by the deep black color, with antennæ broadly annulated with pure white.

Genus **ODONTOMERUS**, Grav.

1. **Odontomerus Æthiops**, n. sp.

Piceous-black, polished; wings subhyaline, violaceous; legs piceous; ovipositor longer than the body, ferruginous.

Female.—Entirely piceous-black, polished; head very finely punctured, very dense on the face, clothed with a short, thin, dull yellowish pubescence; (antennæ broken off.) Thorax indistinctly punctured, slightly pubescent; scutellum flatly elevated, closely punctured, with a deep transverse excavation in front; metathorax indistinctly sculptured, with tolerably well-defined elevated lines, forming an elongate, irregular central area, the extreme apex very abruptly truncate, smooth and shining, and enclosed by a sharply defined carina; tegulae piceous. Wings long, narrow, fusco-hyaline, paler at base, with a rather strong violaceous reflection; nervures and stigma black, the former brownish at base. Legs robust, piceous, the tibiae and tarsi clothed with a very fine, dense, appressed, brownish-sericeous pile; the tooth on the posterior femora beneath large and subacute. Abdomen elongate, robust, subsessile or slightly subpetiolated, polished, delicately punctured, the apex broad and truncate, subcompressed; basal segment twice broader at tip than at base, rather deeply channelled about the middle; ovipositor longer than the body, ferruginous, valves piceous, thickened at tips and pale yellowish within. Length $6\frac{1}{2}$ lines; expanse of wings $10\frac{1}{2}$ lines.

Male.—More slender and of deeper black than the female; the antennæ are two-thirds the length of the body, piceous-black; the wings are almost hyaline; the abdomen is rather slender, subcylindrical, and almost petiolated, the first segment rugose, the second and third rather densely punctured, the others smooth and polished. Length $6\frac{1}{2}$ lines; expanse of wings $9\frac{1}{2}$ lines.

Two specimens.

2. **Odontomerus abdominalis**, n. sp.

Black; legs and abdomen, except base, rufo-ferruginous; wings fusco-hyaline, violaceous; ovipositor as long as the body.

Female.—Black, shining, indistinctly punctured, slightly pubescent; antennæ nearly as long as the body, piceous-black. Thorax much as

in the preceding species, except that the spaces on each side of the scutellums are striated, and the central area of the metathorax more suddenly and broadly dilated posteriorly. Wings fusco-hyaline, with a strong violaceous reflection; nervures and stigma black. Legs very robust, rufo-ferruginous, the tibiae and tarsi covered with a very short yellowish-sericeous pile; coxae and trochanters piceous. Abdomen robust, broadly subfusiform, subpetiolated, smooth and polished, rufo-ferruginous; first segment piceous at base, twice broader at tip than at base, with a small tubercle on each side about the middle; apex slightly subcompressed and rather paler in color than the rest of the abdomen; ovipositor as long as the body, bright ferruginous, valves piceous, thickened at tips and whitish within. Length $4\frac{1}{2}$ lines; expanse of wings 8 lines.

Two specimens.

Subfam. BRACONIDES.

TENTHREDOIDES, nov. gen.

Body short and stout. *Head* transverse, not broader than the thorax; vertex subconvex; occiput concave; cheeks prominent; front excavated behind the antennae; ocelli approximately arranged in a triangle on the vertex; eyes small, oval; clypeus very transverse, subtruncate in front; mandibles moderate, fitting close against the clypeus when shut; palpi rather slender, filiform. *Antennae* more than half the length of the body in ♀, as long as the body in ♂, thickened, slender at tips. *Thorax* short, robust, somewhat gibbous; mesothorax subconvex, trilobate, the dorsal lines very deep and converging on the disk where they become confluent; sides of prothorax and of pleura excavated; scutellum subtriangular, with a deep transverse, crenulated excavation in front, the spaces on each side rather deeply excavated; metathorax short, transverse, abrupt behind. *Wings* ample, broadly rounded at tips; nervures robust, those beyond the middle subobsolete, stigma large; marginal cell elongate, broad at base, rather suddenly constricted at the tip of the second submarginal cell, and thence narrowed to the tip which is somewhat incurved and reaches the extreme apex of the wing, this nervure is subobsolete; first submarginal cell about as broad as long, of an irregular subtriangular form; second submarginal cell elongate, being nearly three times longer than broad, subobsoletely defined towards the tip, the apical nervure oblique, very indistinct; third submarginal cell indistinctly defined; discoidal cell about half the size of the first submarginal, elongate and narrowed at tip; prædiscoidal cell closed, as large as the discoidal, the side nervures

oblique; parallel nervure not interstitial; nervures of the posterior wing robust. *Legs* short and robust; coxæ small, the posterior pair compressed or somewhat twisted. *Abdomen* sessile, short, broadly ovate in ♀, less broad in ♂, depressed; apex in ♀ subcompressed, the ovipositor subextended, the ventral valve large, and shaped somewhat like a plow-share.

This genus has much the general appearance of certain *Tenthredinids* genera, by means of the short, robust form, the large, broad wings and the nearly sessile abdomen. It belongs to the *Polymorphes* of Wesmæl, but I am unable to identify it with any of the genera described in that division. The marginal and second and third submarginal cells of the anterior wings are indistinctly defined, the nervures being subobsolete.

I notice in the Society's Collection, two or three species from the Atlantic States, which belongs to this genus; all have dark fuscous wings, and the body of one species is entirely black; the others are similarly colored to the following.

***Tenthredoides seminiger*. n. sp.**

Yellowish-red, shining; head, antennæ, breast, metathorax, coxæ and trochanters, black; wings blackish-fuscous; metathorax coarsely rugose.

Female.—Head black, smooth and polished, slightly pubescent; narrow inner and broad outer orbits, and the basal margin of the clypeus, rufous; antennæ entirely black. Thorax yellowish-red, smooth and polished; mesothorax with two approximate black dots, sometimes confluent, on the extreme anterior margin, sometimes concealed by the head; pectus, and the pleura except the broad anterior margin, black; space on each side of the scutellum obliquely striated, its lower margin flat, polished and black, as well as the space on each side of the post-scutellum; metathorax black, opaque, coarsely rugose, the disk having a longitudinal ovate excavation, surrounded by a well-defined earina; tegulae yellowish-red, bordered behind with black. Wings uniform blackish-fuscous; nervures black; lower margin of the first submarginal cell, two dots at tip of prædiscoidal cell, and a furcate line at tip of second submarginal cell where it joins the marginal, hyaline. Legs yellowish-red, the coxæ and trochanters black, the four posterior tarsi, and tips of the posterior femora within, more or less dusky. Abdomen about as long as the thorax, broadly ovate, depressed, polished, yellowish-red, basal segment orange-yellow, with a more or less distinct black mark on the prominent dorsal middle; valves of the ovipositor robust, black. Length $3\frac{1}{2}$ lines; expanse of wings 8 lines.

Male.—Resembles the female, but the antennæ are as long as the

body, and the abdomen more depressed, less broad, and obtusely rounded at tip.

Fourteen ♀, three ♂ specimens.

Genus **HELCON**, Nees.

1. **Helcon occidentalis**, n. sp.

Black, polished; legs dull honey-yellow, posterior tibiæ and tarsi blackish, their femora beneath with a stout, obtuse spine; wings hyaline.

Male.—Black, polished; head delicately punctured, finely pubescent; face opaque, very closely punctured; between the insertion of the antennæ a very prominent acute carina; labrum fringed with yellowish pubescence; palpi testaceous; antennæ three-fourths the length of the body, slender, curled at tips, entirely piceous-black, somewhat paler at base. Thorax finely pubescent, shining; prothorax irregularly rugose, subopaque; pleura somewhat rugose, with a smooth polished space on each side beneath the wings; mesothorax smooth and polished, trilobate, the middle lobe very prominent, convex; scutellum depressed, obtuse at tip, closely punctured, with a deep transverse excavation in front, divided in the centre by a sharp carina; the spaces on each side of the scutellum, striated; metathorax coarsely rugose, subopaque, on the basal middle a shallow longitudinal channel bounded on either side by a well-defined carina slightly diverging posteriorly; tegulæ honey-yellow. Wings hyaline, very faintly tinged with dusky, slightly iridescent; nervures and stigma black, the former yellowish at base. Legs, including the coxæ, dull honey-yellow, the posterior pair stoutest and darkest; tips of the posterior coxæ, upper and lower margins of their femora, their tibiæ entirely, and most of their tarsi, blackish, their femora with a stout, obtuse tooth beneath towards the tip. Abdomen subsessile, depressed at base, deep black, polished; first and second segments obsoletely sculptured, the former gradually broader at tip, the second segment with a broad, shallow, oblique depression on each side at base; remaining segments subconvex, smooth and polished; venter subcompressed. Length $6\frac{1}{2}$ lines; expanse of wings $11\frac{1}{2}$ lines.

One specimen.

2. **Helcon fulvipes**, n. sp.

Black, polished; wings fuliginous; legs fulvo-ferruginous; ovipositor as long as the body.

Female.—Head as in the preceding species, except that the face is subrugose, and the palpi dusky testaceous; antennæ as long as the body, entirely black. Thorax much as in the preceding species, but the rugosity of the prothorax and pleura is more dense; the middle lobe of the mesothorax is prominent and convex, the groove on each side is

coarsely rugose, the two becoming confluent on the disk in a large depressed and coarsely rugose space; scutellum sparsely punctured with a deep, broad, arcuated excavation in front, which has five short sharply-defined longitudinal carinae; metathorax rugose or somewhat reticulated, with several well-defined longitudinal carinae; tegulae piceous. Wings fuliginous, with a slight violet reflection; nervures and stigma black. Legs, including the coxae, entirely fulvo-ferruginous, the posterior tibiae and tarsi tinged with dusky, their femora simple. Abdomen subsessile, depressed at base, broad and subcompressed at tip, smooth and polished, except the basal segment which is densely and rather finely rugose; the second segment is finely aciculate on each side at base; ovipositor as long as the body, ferruginous, valves blackish. Length 5 lines; expanse of wings $8\frac{1}{2}$ lines.

One specimen. Distinct from the preceding species by the sculpture of the mesothorax and basal segment of the abdomen, also by the color of the wings and legs.

Genus **CHELONUS**, Jurine.

1. **Chelonus sericeus**. Say.

Sigalphus sericeus, Say, Long's 2nd Exp. ii, p. 321.

Chelonus sericeus, Say, Bost. Journ. i, p. 266.

Three specimens.

2. **Chelonus rufiventris**. n. sp.

Black; wings subhyaline; tegulae, four anterior tibiae and tarsi and annulus on posterior tibiae, testaceous; abdomen dull rufo-ferruginous.

Male.—Black, opaque, densely rugose, very finely and sparsely pubescent; face transversely striated; tips of mandibles piceous; antennae entirely black, longer than the head and thorax, slender at tips. Thorax more coarsely rugose than the head; spaces on each side of the scutellums striated, with an intervening flattened, smooth and highly polished space; metathorax short, abruptly truncate behind, coarsely rugose or somewhat reticulated, the posterior truncation bounded above by a well-defined carina, and has on each side a subacute tubercle; tegulae pale testaceous, dusky on the outer margin. Wings subhyaline, tinged with yellowish-fuscous; the nervures as in *sericeus*, with the second submarginal cell more elongate, and its outer nervure obliterated. Legs piceous-black; tips of the femora, the four anterior tibiae and tarsi, a broad annulus on the posterior tibiae and the base of their tarsi, testaceous. Abdomen broadly rounded behind, dull rufo-ferruginous, slightly varied with dusky above towards the base, where the surface is covered with irregular longitudinal rugae, the rugosity becoming very fine and in-

distinct towards the tips; venter very deeply concave. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

One specimen.

3. *Chelonus iridescens*. n. sp.

Black, subsericeous; antennæ piceous; most of legs pale ferruginous; wings fuliginous, the apical margins beautifully iridescent.

Male.—Black, opaque, subsericeous, sculptured like *C. rufiventris*, except that the face is not transversely striated; palpi and antennæ piceous, the latter sericeous, longer than the head and thorax; tegulæ also piceous. Wings uniform pale fuliginous, the apical margins, especially of the posterior pair, beautifully iridescent; nervures and stigma black; the second submarginal cell complete. Legs black, the anterior femora, tibiæ and tarsi, apical half of the intermediate femora, their tibiæ and tarsi, tips of the posterior femora, their tibiæ except base and apex, and the base of their tarsi, pale ferruginous. Abdomen shaped and sculptured similar to *C. rufiventris*, subsericeous; venter deeply concave. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

One specimen.

4. *Chelonus lævifrons*. n. sp.

Black, subsericeous; most of legs pale ferruginous; wings hyaline, iridescent; face almost smooth; antennæ nearly as long as the body; abdomen above covered with longitudinal striæ.

Male.—Black, opaque, finely rugose, subsericeous; head very finely sculptured, the face almost smooth, and somewhat shining; mandibles and palpi piceous; antennæ three-fourths the length of the body, entirely piceous. Thorax sculptured similar to the preceding species, but more finely rugose, and the metathorax has two sharply defined diverging carinæ on the dorsal middle; tegulæ fuscous. Wings hyaline, very slightly tinged with dusky, beautifully iridescent; nervures pale fuscous; second submarginal cell almost closed. Legs blackish, the tibiæ and tarsi pale ferruginous, the posterior tibiæ dusky at base and apex, as well as the tips of all the tarsi; most of the anterior femora and the tips of the posterior pair, pale ferruginous. Abdomen oblong-ovate, apex obtuse, but not broadly rounded; upper surface subconvex and covered with fine irregular longitudinal striæ, which become finer and less distinct towards the tip; venter deeply concave. Length $1\frac{3}{4}$ line; expanse of wings 3 lines.

One specimen. Much smaller than *C. iridescens*, with the antennæ longer, the face almost smooth, and the abdomen more elongate and not so blunt at tip.

Genus **AGATHIS**, Latr.1. *Agathis vulgaris*, n. sp.

Orange-yellow: tip of rostrum, palpi, antennæ, tegulæ, pleura beneath, coxæ and trochanters, tips of posterior femora, their tibiæ except an annulus about the middle, and their tarsi entirely, black; wings dark fuscous, with a subhyaline patch beneath the stigma; metathorax with well-defined longitudinal and transverse elevated lines; body polished.

Female.—Bright orange-yellow, sometimes honey-yellow, smooth and polished, sparsely and delicately punctured, slightly pubescent; on each side of the face a large, deep, blackish puncture; tip of the rostrum and the palpi, black; antennæ more than half the length of the body, dull black, sericeous, the basal joint shining. Thorax: mesothorax trilobate, the central lobe prominent with a deep groove down its middle; pleura more closely punctured, the space between the four anterior legs black; scutellum subconvex, the excavation in front very deep with several short, well-defined carinæ; on each side of the scutellum two black transverse lines; metathorax with several well-defined longitudinal and transverse lines, forming a small quadrate central area; tegulæ black. Wings ample, uniform dark fuscous, the posterior pair somewhat iridescent, nervures black; the anterior pair with two or three subhyaline patches beneath the stigma; areolet small, quadrate. Legs color of the body; the four anterior coxæ except a spot beneath, all the trochanters, tips of the middle tibiæ, the four posterior tarsi, tips of the posterior femora, their tibiæ, except a more or less distinct annulus towards the base, black. Abdomen subcompressed, smooth and polished, the dorsal surface of the three basal segments somewhat flattened, the lateral margins of the first and second segments acutely carinated, the first segment narrowed at base with a small prominence on each side near the base, second segment depressed or somewhat excavated on each side, leaving the lateral margins sharp and prominent; ovipositor longer than the abdomen, orange-yellow, valves black, shining. Length 3—4½ lines; expanse of wings 6—8¼ lines.

Twenty-seven specimens.

2. *Agathis media*, n. sp.

Yellowish-red; vertex, sides and tip of rostrum, antennæ, breast, tegulæ, metathorax, four anterior coxæ, trochanters, and posterior tibiæ and tarsi, black; wings fuliginous.

Male.—Yellowish-red, sometimes bright orange-yellow or honey-yellow, smooth and polished, sculptured like *A. vulgaris*, but more slender in form; vertex, occiput, tip and sides of rostrum and the palpi, black; antennæ about as long as the body, entirely black; prothorax above in front, pectus entirely, the pleura beneath, tip of scutellum,

the spaces on each side, postscutellum, metathorax except an oval spot on each side, and the tegulae, black; metathorax sculptured similar to *A. vulgaris*, except that the elevated lines are better defined. Wings as in *vulgaris*. Legs color of the body; the four anterior coxae, all the trochanters, tips of the middle tibiae and their tarsi entirely, tips of the posterior coxae, of their femora, and their tibiae and tarsi entirely, black; sometimes the posterior tibiae has a more or less distinct yellowish-red annulus as in *vulgaris*. Abdomen as in *vulgaris* but more slender and scarcely subcompressed at tip. Length $3\frac{1}{4}$ — $3\frac{3}{4}$ lines; expanse of wings $6\frac{1}{2}$ —7 lines.

Sixteen specimens. This may be the male of *A. vulgaris*, as the sculpture is very similar but most of the head and metathorax are black.

3. *Agathis atripes*, n. sp.

Rufous; head, antennae, tegulae, breast, disk of metathorax and the legs, black; wings fuliginous; basal segment of abdomen deeply sulcate.

Male.—Pale rufous, shining, slightly pubescent; head smooth and polished, entirely black, the rostrum not much prolonged, truncate at tip; antennae about as long as the body, entirely black, very slender. Thorax smooth and polished, mesothorax distinctly trilobed, the middle lobe convex, without any central groove; pectus entirely, and the pleura beneath, black; scutellum subconcave, the excavation in front very deep, divided in the middle by a single carina, the spaces on each side black; metathorax indistinctly sculptured, the upper surface almost entirely black, the dorsal middle with an elongate enclosed space which has a central longitudinal carina; tegula black. Wings uniform fuliginous, with two or three subhyaline patches beneath the stigma; areolet subtriangular; posterior wings slightly iridescent. Legs, including the coxae, entirely black. Abdomen elongate-ovate, subdepressed, entirely pale rufous, polished; first segment twice broader at tip than at base, deeply sulcate above especially at base, with a sharply defined longitudinal carina on each side, the sulcus obsoletely aciculate; incisure between the first and second segments excavated on each side; second segment with a well impressed transverse line before the middle and another just before the base, these lines are faintly crenulated; remaining segments smooth and polished, the apex obtuse. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Two specimens.

4. *Agathis nigripes*. n. sp.

Yellowish-rufous; head, antennæ, tegulæ, breast, disk of metathorax and legs, black; wings fuscous; metathorax without impressed lines; basal segment of abdomen convex, incisure between first and second segments deeply excavated on each side; ovipositor longer than the body.

Female.—Colored exactly like *A. atripes*, except that the anterior femora are yellowish at tips; the mesothorax is convex, without any trace of impressed lines, and sometimes has a black mark in front; the metathorax is sculptured the same and is sometimes entirely black; the wings are paler, being uniformly fuscous, the areolet is small and triangular; the basal segment of the abdomen is convex except at the extreme base where it is rather deeply excavated and carinated on each side; the incisure between the first and second segments has a deep fovea on each side, the latter segment has two transverse impressed lines as in *atripes* but less distinct; the third and following segments are convex, smooth and polished; the apex is rounded; the ovipositor is longer than the body, ferruginous, the valves black. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

Three specimens.

Genus **MICRODUS**, Nees.1. *Microdus fulvescens*, n. sp.

Honey-yellow, abdomen orange-yellow; antennæ, tips of mandibles, and four anterior trochanters, black; wings uniform fuliginous, with a large hyaline spot beneath the stigma; ovipositor scarcely exerted.

Female.—Uniform pale honey-yellow, shining, finely pubescent; head slightly broader than the thorax; clypeus prominent, broadly rounded in front, with a deep fovea on each side at base; middle of the face rather prominent and obsoletely aciculate; mandibles projecting, subacute, fringed with long pubescence and black at tips; labrum exerted, subquadrate, filling up the space between the clypeus and mandibles; palpi dusky, annulated with pale testaceous; antennæ nearly as long as the body, brown-black, the basal joint robust and shining black. Thorax polished, sparsely and indistinctly punctured; mesothorax tribolate, the middle lobe slightly grooved, and behind it a very deep, subtriangular excavation; prothorax smooth and polished; pleura with an oblique excavated line on each side; the excavation in front of the scutellum deep and crenulated; metathorax rugose; tegulæ honey-yellow. Wings ample, uniform fuliginous, with a large hyaline patch beneath the stigma; nervures black; areolet minute, subtriangular and petiolated. Legs color of the body, punctured, slightly pubescent; the four anterior trochanters and tips of their tarsi, the posterior trochanters at tip above, and tips of their tibiæ and most of their tarsi, black

or blackish. Abdomen rather short, broad and subcompressed towards the apex, orange-yellow, smooth and polished; two basal segments depressed above, the first excavated at base with a stout tubercle on each side; the incisure between the first and second segments with a deep fovea on each side; venter tinged with pale yellowish, apex gapping, ovipositor scarcely exerted. Length $3\frac{3}{4}$ lines; expanse of wings 7 lines.

One specimen.

2. *Microdus medius*, n. sp.

Yellowish-red; head, antennae, pectus, pleura, scutellum, metathorax and base of legs, black; wings uniform fuliginous, with a large hyaline patch beneath the stigma.

Male.—Yellowish-red, polished, slightly pubescent; head entirely black; antennae two-thirds the length of the body, entirely black. Thorax impunctured, the sutures finely crenulated; mesothorax prominently trilobed, behind the middle lobe, a deep excavation; pectus, pleura, except a spot beneath the tegulae, scutellum and metathorax, black, the latter densely and finely rugose; tegulae honey-yellow. Wings ample, uniform dark fuliginous, with a large hyaline patch beneath the stigma; nervures black; areolet minute, petiolated and slightly oblique. Legs honey-yellow; all the coxae and trochanters and base of the femora, tips of the four anterior tarsi, tips of the posterior tibiae, and their tarsi entirely, black or blackish. Abdomen sessile, oblong-ovate, much depressed, smooth and polished, much narrowed at base; first segment excavated at base with a stout tubercle on each side; second segment broadly excavated on each side at base; venter paler. Length $3\frac{1}{2}$ lines; expanse of wings $7\frac{1}{2}$ lines.

One specimen. This species bears a close resemblance in form and color to *Agathis media* described above.

3. *Microdus terminatus*, n. sp.

Honey-yellow; antennae, and apex of abdomen, black; abdomen nearly sessile; wings uniform fuliginous.

Male.—Honey-yellow, polished; head small, mouth blackish; antennae nearly as long as the body, entirely piceous-black. Thorax: mesothorax trilobed, the middle lobe broad in front, with two subobsolete medial grooves; postscutellum and the space on each side, blackish, as well as the pleura beneath between the four anterior legs; metathorax finely rugose, dusky ferruginous, the disk with a coarsely rugose, blackish, longitudinal space; tegulae honey-yellow. Wings uniform fuliginous, with two subhyaline spots beneath the stigma; nervures black; areolet minute, triangular, petiolated. Legs color of the body; four anterior coxae, all the trochanters and tarsi, extreme tips of the

four posterior femora, and their tibiæ, except a pale annulus on the posterior pair, black or blackish. Abdomen nearly sessile, of almost equal breadth to near the tip which is slightly incurved and pointed; dorsal surface subdepressed, smooth and polished, except the basal segment which is minutely aciculate; incisure between the first and second segments with a deep fovea on each side; fourth and following segments black, highly polished; venter paler. Length 3 lines; expanse of wings $5\frac{1}{2}$ lines.

One specimen.

4. *Microdus* ? *longipalpus*. n. sp.

Black; legs and abdomen above except base and apex, orange-yellow; wings fuliginous; maxillary palpi more than half the length of the body; ovipositor one-fourth longer than the body.

Female.—Slender, black, polished; face a little prolonged, truncate at tip; maxillary palpi longer than the head and thorax, very slender, testaceous, two basal joints, extreme tips of the third and fourth and the terminal joint entirely blackish, basal joint short, second joint four times as long as the first, third one-fourth longer than the second, fourth joint about as long as the second, terminal joint very slender, about half the length of the fourth; labial palpi very slender, about one-third the length of the maxillary palpi, blackish; antennæ as long as the body, slender, entirely black. Thorax polished, with the dorsal lines not well-defined; metathorax subopaque, finely rugulose, with two well-defined, central, longitudinal carinæ; tegulæ black. Wings narrow, uniform fuliginous, slightly iridescent; nervures and stigma black; areolet minute, triangular and subpetiolated. Legs, long and slender, and, including the coxæ, orange-yellow; tips of the four posterior tibiæ and their tarsi entirely, blackish. Abdomen elongate, broadly subcompressed and obliquely truncate at tip, smooth and polished; black, with the apex of the first and the second and third segments entirely, orange-yellow; first segment excavated at base, finely rugose; venter dusky, the ventral valve prominent, projecting and tinged with testaceous; ovipositor one-fourth longer than the body, orange-yellow, valves blackish. Length $2\frac{1}{2}$ lines; expanse of wings $4\frac{1}{2}$ lines.

One specimen.

Genus **BRACON**, Fabr.

1. *Bracon montivagus*. n. sp.

Black, polished; disk of thorax more or less, and the abdomen entirely, rufous; wings blackish, ovipositor longer than the body.

Female.—Black, highly polished; face pubescent, the orbits and mouth sometimes tinged with rufo-piceous; antennæ nearly as long as

the body, entirely black. Thorax smooth and polished, thinly pubescent; mesothorax bright rufous, sometimes more or less obscure, with an ovate black spot on each side above the tegulae; scutellum and metathorax smooth, the latter rounded behind, pubescent and often with an obscure reddish spot on its disk; tegulae black. Wings long, blackish, rather darker towards the base, with a subhyaline dash and spot beneath the stigma; nervures black. Legs entirely black, polished, sometimes tinged with piceous, the posterior trochanters sometimes reddish at tips. Abdomen elongate-ovate, yellowish-red, sometimes more or less obscure; first segment with a deep crenulated furrow on each side, leaving the lateral margins carinate and the disk with a large, ovate, slightly elevated, polished space, which is slightly depressed on the middle; second segment broad, uneven, being longitudinally excavated on each side, and on the basal middle there is a yellowish lanceolate elevation prolonged and acute at tip and pointing posteriorly; basal incisure of the third segment deep and striated or crenulated; remaining segments smooth and polished; ventral valve sometimes more or less blackish; ovipositor longer than the body, ferruginous, valves black. Length 4—5½ lines; expanse of wings 8—11 lines.

Male.—Resembles the female, but is smaller, the antennae longer, the trochanters reddish at tips, the thorax sometimes entirely black and the abdomen shorter, with the second segment often roughly sculptured at base. Length 3½—4½ lines; expanse of wings 6½—8½ lines.

Eight ♀, three ♂ specimens.

2. *Bracon disputabilis*, n. sp.

Black; abdomen yellowish-red; wings blackish.

Female.—Differs from *B. montivagus* ♀ only by having the thorax entirely black, the abdomen more or less pubescent, less shining, more roughly, although similarly, sculptured, with the third and fourth segments sculptured somewhat like the second, but not so distinct; the wings much paler about the apical margins and somewhat iridescent; the ovipositor about as long as the body. Length 4 lines; expanse of wings 7½ lines.

Two specimens.

3. *Bracon dissitus*, n. sp.

Black; abdomen rufous; wings long blackish; ovipositor as long as the body.

Female.—Slender, black, smooth and polished, thinly clothed with whitish pubescence; antennae piceous-black, as long as the body; wings long uniform dark fuliginous, faintly iridescent, a subhyaline dash be-

neath the stigma; nervures black; legs entirely black; abdomen sanguineous, much narrowed at base, polished; the two basal segments sculptured much like those of *B. montivagus*, but not so rough; ovipositor as long as the body. Length 3 lines; expanse of wings 7 lines.

One specimen. Closely allied to the two preceding species, but smaller, the wings longer in proportion to the length of the body, the second submarginal cell longer, and the abdomen less roughly sculptured.

4. *Bracon palliventris*. n. sp.

Black; abdomen broad-ovate, yellowish-red above, yellow beneath, the sutures and impressed lines striated; wings fuliginous; ovipositor very short.

Female.—Black, polished, thinly clothed with whitish pubescence; antennae as long as the body, black; wings uniform fuliginous, with several indistinct subhyaline nervures beneath the stigma; second submarginal cell very long; legs entirely black; abdomen short, broad-ovate, yellowish-red, shining; basal segment excavated at base, deeply channelled on each lateral margin which is carinate, and prominent on the middle; second segment with a broad sublanceolate space on the basal middle, enclosed by an impressed striated line which continues, somewhat obliquely, on each side almost to the lateral margin enclosing a smaller space on each side at base; base of the third, fourth and fifth segments deeply excised and striated; the apical segment and the venter yellowish; ovipositor less than half the length of the abdomen, ferruginous, valves black. Length $2\frac{3}{4}$ lines; expanse of wings 6 lines.

Two specimens. Readily recognized by the impressed lines of the abdomen being striated.

5. *Bracon croceiventris*. n. sp.

Black; abdomen bright orange-yellow; wings fuliginous.

Male.—Slender, black, polished, thinly clothed with whitish pubescence; antennae longer than the body, entirely black; metathorax subobsoletely striated behind; wings long, uniform dark fuliginous, without subhyaline spots beneath the stigma, somewhat iridescent; nervures blackish, stigma fuscous, the costal margin black; legs entirely black, with a piceous tinge; abdomen elongate-subovate, shining, uniform bright orange-yellow, pubescent; first segment with a conical elevated space on the middle enclosed by a deep, slightly crenulated suture, which is confluent with a similar suture on the second segment at base, enclosing an obconic elevated space, the two elevations together forming an elongate fusiform elevation, divided in the middle by the suture between the first and second segment; apex obtusely pointed, and faintly tinged with dusky. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

One specimen. Easily recognized by the small slender form, and the bright orange-colored abdomen and its sculpture.

6. **Bracon uniformis**, n. sp.

Uniform honey-yellow, polished; antennæ, mouth, wings, base of legs, and posterior tibiæ and tarsi, black; ovipositor longer than the body.

Female.—Uniform honey-yellow, smooth and polished, rather thickly clothed with a pale pubescence; head small, subtransverse; tips of mandibles, labrum, palpi and antennæ, black; mesothorax distinctly trilobed; scutellum and metathorax smooth and polished, the latter broadly rounded behind. Wings dark fuliginous, with a subhyaline dash beneath the stigma, slightly iridescent; nervures and stigma black; second submarginal cell twice longer than broad, the terminal nervure hyaline on each side. Legs honey-yellow; most of the four anterior coxæ, tips of their femora, most of the trochanters, and the posterior tibiæ and tarsi, black. Abdomen robust, convex, elongate-subovate, arcuated; basal segment broad, depressed, with a large, rounded, elevated space on the middle; second segment with a rather large, flattened, broadly sublanceolate space on the basal middle, enclosed by a finely striated, impressed line which continues obliquely on each side to the lateral margin; basal incisure of the third segment finely striated, with a slight swelling on each basal corner; remaining segments smooth and highly polished; ovipositor half again as long as the body, rufopiceous, valves black. Length 4 lines; expanse of wings 7 lines.

One specimen.

7. **Bracon croceus**, n. sp.

Pale honey-yellow; antennæ, breast and legs, black; wings fuliginous; ovipositor longer than the body.

Female.—Uniform pale honey-yellow, smooth and polished, thinly pubescent; face tinged with yellowish; mouth, tips of mandibles, palpi, spot enclosing ocelli, and the antennæ, black; mesothorax distinctly trilobed, the middle lobe broad and somewhat depressed in front; pleura beneath, between the four anterior legs, black. Wings uniform fuliginous, with an obsolete subhyaline dash beneath the stigma. Legs, including the coxæ, black; tips of anterior femora, their tibiæ and tarsi, base of posterior coxæ, and extreme tips of four posterior tibiæ, honey-yellow. Abdomen sometimes orange-yellow, especially at tip and beneath, sculptured like that of *B. uniformis*, except that the swelling on the first segment is ovate, and the third segment has a deeply impressed, oblique line on each side, making the swelling on each basal corner much more prominent; ovipositor longer than the body, honey

or orange-yellow, valves black. Length $2\frac{3}{4}$ — $3\frac{1}{2}$ lines; expanse of wings 5—5 lines.

Five specimens. Closely allied to the preceding species. The color of the legs sometimes varies to entirely black; in one specimen the posterior femora is strongly tinged with rufous, and in another specimen all the femora, except tips, are honey-yellow. They may, however, prove to be varieties of *uniformis*.

8. *Bracon xanthostigma*, n. sp.

Honey-yellow; abdomen ochreous-yellow, broad-ovate; antennæ, pleura beneath, metathorax, tarsi and spot on base of abdomen, black; wings fuscous, pale at tips, stigma large, ochreous-yellow.

Female.—Head and thorax honey-yellow, shining, pubescent; face yellowish; tips of mandibles and the palpi dusky; antennæ nearly as long as the body, entirely blackish. Thorax smooth and polished; the pleura beneath, between the four anterior legs, black; space on each side of postscutellum and the metathorax above, black; tegulæ honey-yellow. Wings rather ample, deep yellowish-fuscous, the apical third subhyaline, with a faint violet reflection; nervures pale fuscous, stigma large and ochreous-yellow. Legs honey-yellow; all the tarsi and tips of the posterior tibiæ, blackish. Abdomen broad-ovate, opaque ochreous-yellow, minutely sculptured; first segment excavated and subrugose, with a large blackish spot or circle on the disk; ovipositor rather longer than the body, honey-yellow, valves black. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

Four specimens. Readily distinguished by the short, robust form, the coloration of the wings and the yellow stigma.

Fam. CHALCIDIDÆ.

Genus *PERILAMPUS*, Latr.

Perilampus platigaster, Say.

Perilampus platigaster, Say, Bost. Jour. Nat. Hist. i, p. 274.

Two specimens.

Fam. CHRYSIDIDÆ.

Genus *OMALUS*, Panz.

Omalus læviventris, n. sp.

Green, with a blue and purple reflection; head and thorax with large punctures, disk of prothorax and mesothorax smooth; abdomen smooth and polished; wings fusco-hyaline, hyaline at base.

Dark green, changing to brilliant blue and purple; head with rather large close punctures, indistinct on the occiput, which is strongly tinged with blue and purple; tips of mandibles piceous; antennæ dull brown-black, basal joint green. Thorax with large, rather deep and close

punctures, larger on the scutellum and metathorax; most of the prothorax and mesothorax above smooth and polished, and strongly tinged with blue and purple; metathorax convex, the posterior angles prominent and subacute; tegulae bronze-green. Wings subhyaline, the apical half pale fuscous; nervures fuscous. Legs green, tarsi rufo-testaceous, claws with two teeth between the base and apex. Abdomen ovate, convex, smooth and polished, blue-green with a brilliant purplish reflection; a deep, rounded excavation at extreme base; apical segment faintly subcompressed, very minutely punctured, finely pubescent, and deeply and obtusely notched at tip; venter deeply concave, brilliant green, margined at base and on the sides with bronze. Length $2\frac{1}{2}$ lines; expanse of wings $4\frac{1}{2}$ lines.

Two specimens.

Genus **HOLOPYGA**, Dahlb.

Holopyga compacta, n. sp.

Green, changing to blue; thorax deeply and coarsely punctured, abdomen more finely and closely punctured, short and compact; wings fuliginous, subhyaline at base.

Brilliant green, slightly pubescent; head deeply and rather coarsely punctured, interspersed with fine punctures, occiput deeply tinged with bluish-purple; face concave, golden-green, transversely aciculate; mandibles piceous, green at base; antennae black, opaque, basal joint green. Thorax robust, broad and truncate behind, slightly narrowed and rounded in front, slightly tinged with bluish in certain lights; pro- and mesothorax with rather deep and coarse punctures, interspersed with fine punctures; pleura, scutellum and metathorax with large discoidal punctures, much larger than those on the mesothorax; posterior angles of the metathorax somewhat flattened, rather prominent and obtuse; tegulae bronze-black. Wings fuliginous, subhyaline at base; nervures fuscous. Legs green, tinged with bluish behind, clothed with white pubescence; tarsi blackish, claws pectinated, or with three or four short teeth between the base and apex. Abdomen short, rather broad, compact, quadrate, incurved, green, with a conspicuous deep blue reflection, deeply and closely punctured, and interspersed with fine punctures, the punctures on the apical segment coarse; first segment short and very transverse, the extreme base abrupt, somewhat concave, smooth and polished; second segment about twice as long as the first, convex; third segment longer than the second, bent downwards, finely pubescent, broadly rounded at tip which is finely margined and very faintly emarginate in the middle; venter concave, piceous and shining. Length $3\frac{3}{4}$ lines; expanse of wings 6 lines.

One specimen.

Genus **HEDYCHRUM**. Latr.1. **Hedychrum Wiltii**. n. sp.

Green, with a deep bluish-purple reflection, very brilliant on the abdomen, which is polished and closely punctured: head and thorax with dense coarse punctures: legs purple, tarsi obscure testaceous; wings fuscous, apical margins much darker.

Head bluish-purple, strongly tinged with green on the face and vertex, deeply and closely punctured, clothed with short black pubescence; face concave, finely and transversely striated; mandibles and palpi piceous-brown; antennæ black, basal joint tinged with purple. Thorax uniformly, densely and roughly punctured, deep green, strongly tinged with bluish-purple in certain lights, especially beneath, thinly clothed with short black pubescence; posterior angles of metathorax prominent, flattened and subacute, strongly tinged with deep blue, deeply excavated beneath and finely aciculate; tegulae brassy-black. Wings fuscous, much darker on the apical margins; nervures black. Legs brilliant deep violet, tinged with green in front; the four anterior tibiae and all the tarsi beneath, obscure rufo-testaceous and sericeous; posterior femora short, dilated, pale brownish-sericeous in front, deep violet behind; tarsal claws cleft at tip. Abdomen short, broad, convex, broadly rounded behind, polished, rather closely and deeply punctured, the punctures fine at base, becoming larger and deeper towards the apex, brilliant bluish-purple, with a deep green reflection, clothed on the sides and behind with short black pubescence; third segment about three-fourths the length of the second, the apical margin broadly rounded, entire, except a slight sinus on each extreme side; venter concave, bronze-black, shining. Length 6 lines; expanse of wings 10 lines.

One specimen. It gives me pleasure to dedicate this superb species to my friend, Mr. Charles Wilt of Philadelphia, to whom the Society is indebted for the specimen from which the above description was taken. Mr. Wilt has two specimens of this species in his collection; he received all of them from Colorado Territory.

2. **Hedychrum cupricolle**. n. sp.

Green: thorax above bright coppery-red, densely and rather deeply punctured; head and abdomen more finely punctured, apical segment of the latter broadly rounded and entire: wings dark fuscous, paler at base.

Brilliant green, somewhat golden, clothed with short black pubescence; head closely punctured, slightly bluish on the occiput; antennæ dull black, basal joint green. Thorax densely and deeply punctured; the prothorax above, mesothorax, scutellum and disk of metathorax, bright coppery-red; scutellum and metathorax with larger and coarser

punctures, the sides of the latter blue-green, the posterior angles prominent, long and acute; thorax beneath dark green; tegulae black. Wings fuliginous, subhyaline at base; nervures fuscous. Legs blue-green, pubescent; posterior femora short and robust, sericeous, blackish in front, greenish behind; tarsi blackish-brown, sericeous beneath, claws cleft at tip. Abdomen short, broad, rather convex, broadly rounded behind, brilliant green, somewhat golden, changing to blue in certain lights, shining, very closely and finely punctured, the punctures becoming coarser towards the apex; third segment shorter than the second, apical margin entire; venter dull blue-green. Length 4 lines; expanse of wings 7 lines.

Two specimens. This elegant species may be at once recognized by the brilliant green color, with the entire thorax above bright coppery-red.

3. *Hedychrum viride*, n. sp.

Green, densely punctured; abdomen very finely punctured, polished, with a beautiful bluish reflection; wings subhyaline, pale fuliginous at tips; apex of abdomen entire but not broadly rounded.

Green, sometimes tinged with golden, slightly pubescent; head and thorax very densely and rather coarsely punctured, the interstices between the punctures finely punctured; face concave, finely rugose, and when viewed from above covered with a short, dense, subappressed, white pubescence; this is, however, obsolete in one specimen; antennae dull black, basal joint green. Thorax with a slight bluish tinge in certain lights, the sculpture is very dense; metathorax tinged with golden, the posterior angles prominent and rather obtuse; tegulae golden-green, with a few scattered punctures. Wings subhyaline, slightly tinged with fuliginous about the apical half. Legs green, somewhat tinged with bluish, thinly pubescent, subsericeous; tarsi rufo-testaceous, claws with a short acute tooth between the base and apex. Abdomen short, rather broad, convex, polished, closely and finely punctured, brilliant green, with a beautiful blue reflection in certain lights; apical segment shorter than the second, more densely punctured, finely pubescent, the apical margin entire, obtusely rounded and fringed with long whitish pubescence; venter bronze-black, green on the middle. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{3}{4}$ lines.

Two specimens.

Genus **CHRYISIS**, Linn.

I.—*Apical margin of third abdominal segment entire.*

1. *Chrysis integra*, n. sp.

Green, changing to blue, densely punctured; apex of abdomen subtruncate, entire; wings subhyaline.

Female.—Elongate, subparallel, green changing to blue in certain lights, especially on the abdomen; head and thorax clothed with rather long black pubescence, deeply and very closely punctured; face not excavated behind the antennæ; eyes smaller than usual and nearly circular; antennæ green, blackish towards the tips; dorsal lines of the mesothorax well impressed; posterior angles of metathorax prominent, divergent and subacute; tegulæ green, minutely punctured. Wings subhyaline, faintly tinged with fuscous; nervures fuscous. Legs green, with a beautiful violaceous reflection behind; femora clothed with long black pubescence; tarsi more or less blackish, clothed beneath with a very fine pale sericeous pile. Abdomen shining, with a beautiful blue reflection in certain lights, clothed with short black pubescence, very closely punctured, the punctures rather finer than those of the head and thorax; dorsal middle of the first and second segments with a central, longitudinal ridge, not very well defined; apical margin of the third segment subtruncate, entire, obtusely rounded on the sides, the margin flattened and slightly recurved, with a transverse row of small blue punctures before the tip; venter flattened, green changing to blue. Length 5 lines; expanse of wings 8 lines.

One specimen.

II.—*Apical margin of third abdominal segment notched in the middle.*

2. *Chrysis densa*, n. sp.

Elongate, subparallel, dark green, covered with very dense deep punctures; posterior angles of metathorax prominent, subacute and somewhat hooked; wings subhyaline; apical margin of abdomen notched in the middle and slightly sinuate on the sides.

Female.—Dull dark green, very densely and rather deeply punctured, subopaque, clothed with pale pubescence, which is very short and sparse on the abdomen, face excavated behind the antennæ, finely sculptured, and sometimes bluish; eyes rather large, ovate; antennæ black, basal joint green. Thorax sometimes with a deep blue tinge; dorsal lines of mesothorax not well defined; disk of metathorax slightly sulcate, the posterior angles very prominent, depressed, acute or subacute and somewhat hooked or claw-shaped; tegulæ green, finely punctured. Wings nearly hyaline, having a faint tinge of fuscous, especially in the marginal cell; nervures fuscous. Legs green, changing to blue in certain lights; tibiæ and tarsi clothed beneath with a fine pale sericeous pile; tarsi blackish above. Abdomen covered with very dense, rather fine punctures, somewhat granulate, the punctures on the basal segment larger than on the other segments and nearly as coarse as those on the thorax; dorsal middle, especially of the second segment,

with a central longitudinal carina, tolerably well defined; second and third segments with a more or less blue reflection, the latter rather broadly margined at tip, deeply emarginate in the middle and slightly sinuate on the sides, before the apex a transverse row of twelve deep punctures; venter concave, strongly tinged with blue. Length 4—5½ lines; expanse of wings 6½—8½ lines.

Four specimens. Readily distinguished by the dull green color and the very dense sculpture.

3. *Chrysis perpulchra*, n. sp.

Green; abdomen with a strong deep blue reflection; wings hyaline, tinged with fuscous about the middle; apex of abdomen deeply foveolated.

Female.—Rather short, robust, brilliant green, with a slight tinge of blue, very closely and rather roughly punctured, thinly clothed with pale pubescence; face, behind the antennae, concave, transversely aciculate and tinged with golden, a subquadrate space immediately beneath the anterior ocellus, enclosed by an ill-defined carina; eyes rather large, ovate; antennae blackish, subsericeous, the scape and two basal joints of the flagellum above, green. Thorax: anterior margin of the prothorax transversely depressed with a longitudinal sulcus on the disk; dorsal lines of mesothorax distinct, the space between them tinged with purplish; posterior angles of metathorax prominent, flattened, strongly divergent, and somewhat claw-shaped; tegulae bright green, punctured. Wings fusco-hyaline, the apical margins and most of the posterior pair, hyaline; nervures black. Legs green, changing to blue in certain lights, pubescent; tarsi blackish, sericeous beneath. Abdomen rather short, robust, convex above, clothed with a very short, appressed, pale sericeous pubescence, very closely punctured, the punctures uniform and rather smaller than those of the thorax, brilliant green, the basal middle of the second segment and all of the third, deep blue, tinged with purple; dorsal middle with an ill-defined longitudinal carina; apical margin of the third segment not broadly rounded, deeply but obtusely emarginate in the middle, and before the apex a transverse row of deep foveae, the two central ones larger and deeper than the rest; venter blue-green, polished. Length 3½ lines; expanse of wings 6½ lines.

One specimen. Easily recognized by the clouded wings and the conspicuously blue abdomen.

III.—*Apical margin of third abdominal segment with two teeth.*

4. *Chrysis scitula*, n. sp.

Golden-green, changing to blue in certain lights, closely punctured, shining; abdomen ovate, the apex produced in the middle and emarginate, sinuate on each side.

Female.—Elongate, rather narrow, brilliant green, somewhat golden, with a blue reflection in certain lights, shining, closely punctured, the punctures rather coarse on the head and thorax, much finer on the abdomen, thinly clothed with pale pubescence; head a little broader than the thorax, the face behind the antennæ depressed and rugulose; eyes large, ovate; antennæ blackish, the scape golden-green. Thorax rather strongly tinged with blue; dorsal lines of mesothorax distinct; posterior angles of metathorax prominent, flattened, divergent and subacute; tegulæ green. Wings pale fusco-hyaline, nervures blackish. Legs green, with a slight tinge of blue, pubescent; tarsi piceous. Abdomen oblong-ovate, polished, convex, closely and rather finely punctured, the intervals between the larger punctures covered with minute punctures; basal segment golden-green, the remainder with a rather strong blue reflection, gradually narrowed to the tip which is produced in the middle and obtusely emarginate, the angles subacute, the margin on each side of the middle strongly sinuate or scolloped, giving the apical margin of the segment somewhat the appearance of having four projections, the two central ones prominent and subacute and the lateral ones very obtuse and ill-defined; before the apex there is a transverse row of deep punctures; venter bright golden-green. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

One specimen.

IV.—*Apical margin of third abdominal segment with three teeth.*

5. *Chrysis virens*. n. sp.

Green, abdomen blue-green; densely and deeply punctured; metathorax produced behind; wings subhyaline; apex of abdomen truncate, flattened, with a tooth in the middle and one on each side.

Female.—Elongate, parallel, brilliant green, sometimes obscure; head and thorax densely and coarsely punctured; face much depressed, golden-green, pubescent, and bounded above by a well-defined, transverse, undulating carina; cheeks acutely carinated; mandibles piceous, green at base; eyes large, nearly round; antennæ black, the scape and two or three basal joints of the flagellum above, green; prothorax sulcate on the dorsal middle; dorsal lines of mesothorax deeply impressed; dorsal middle of the metathorax obtusely produced behind with a deep bluish fovea at base; the posterior angles flattened, large, divergent and acute; tegulæ bluish. Wings faintly tinged with fuliginous, with a very slight violet gloss; nervures blackish. Legs green, changing to golden and bluish; tarsi blackish, pale sericeous beneath. Abdomen elongate, slightly narrowed towards the apex, convex above, closely and deeply punctured, the punctures not so coarse as those of the tho-

rax; green, with a deep blue reflection in certain lights; basal margin of the third segment broadly black, the apical margin truncate, broadly depressed, smooth and polished, margined anteriorly with a transverse row of deep punctures, with an acute carina down the middle, projecting over the apical margin and forming a short acute tooth, the extreme lateral angles small and acute; venter deeply concave and green. Length 4—5 lines; expanse of wings $6\frac{1}{2}$ — $7\frac{1}{2}$ lines.

Three specimens.

V.—*Apical margin of third abdominal segment with four teeth.*

6. *Chrysis lauta*, n. sp.

Golden-green, densely punctured, thickly pubescent; wings hyaline; apex of abdomen with four subacute teeth, and before the apex a transverse row of subquadrate deep punctures.

Female.—Large, robust, elongate and subparallel, golden-green, densely and coarsely punctured, rather thickly clothed with short pale pubescence; eyes very large, rounded, face narrow, depressed behind the antennæ; a smooth shining space on each side of the posterior ocelli; mandibles black, green at base; antennæ dull-black, sericeous, scape green. Thorax bright golden, somewhat tinged with coppery on the sides; disk of prothorax sulcate; anterior margin of mesothorax transversely excavated on each side, the dorsal lines distinct; metathorax obtusely produced behind, with a smooth puncture on the disk, the posterior angles prominent, flattened, divergent, subacute and somewhat claw-shaped; tegulæ golden-green. Wings nearly hyaline, having merely a faint tinge of fuliginous about the middle; nervures very distinct and black. Legs golden-green, pubescent; tarsi blackish. Abdomen elongate, convex, sides parallel, densely punctured, the punctures much finer than those of the head and thorax; base of the segments with a beautiful changeable blue-green reflection, the remainder golden-green, the extreme basal margins of the second and third segments black; apex of the third segment with four prominent equidistant, subacute teeth, and before the apex a transverse row of deep, transversely subquadrate punctures; venter blue-green. Length $5\frac{1}{2}$ lines; expanse of wings $8\frac{1}{2}$ lines.

One specimen. Before this large and elegant species was taken out of alcohol, most of the thorax, and the first and most of second abdominal segments, had a beautiful coppery-red reflection which vanished as soon as the specimen had been dried.

7. *Chrysis prasinus*, n. sp.

Green, abdomen with a beautiful blue reflection; closely punctured; mesothorax with a central black stripe; wings nearly hyaline; apex of abdomen with four obtuse teeth and a row of very deep punctures before the apex.

Female.—Subelongate and parallel, brilliant green, densely and rather coarsely punctured, clothed with a rather thick and short, pale pubescence; antennæ dull black, the scape green. Thorax: disk of prothorax sulcate; dorsal lines of mesothorax well-defined and strongly diverging anteriorly, the space between them tinged with blue, with a rather broad black stripe down the middle; posterior angles of metathorax much depressed, prominent, divergent, subacute, and somewhat claw-shaped; tegulae green. Wings nearly hyaline, having only a faint fuscous tinge; nervures fuscous. Legs green, pubescent, blue behind, posterior pair blue-black behind; tarsi blackish above, testaceous beneath. Abdomen brilliant green, with a beautiful blue reflection in certain lights, especially on the base of the second and third segments, very closely punctured, the punctures finer than those of the thorax; apical margin of the third segment with four not prominent, equidistant, obtuse teeth, and before the apex a transverse row of very deep punctures; venter concave, blue-green. Length $4\frac{1}{2}$ lines; expanse of wings 7 lines.

One specimen.

8. *Chrysis pulcherrima*, n. sp.

Green, very densely punctured, apex of abdomen azure-blue, the apical margin with four very obtuse teeth; wings hyaline; face densely pilose.

Male.—Elongate, subparallel, brilliant green, somewhat golden, clothed with whitish pubescence; head broader than the thorax; eyes very large and rounded; face narrow, depressed and densely clothed with appressed white pubescence; clypeus tinged with blue; mandibles piceous, green at base; abdomen dull black, scape green. Thorax very densely and rather coarsely punctured; disk of prothorax sulcate; dorsal lines of mesothorax distinct, scarcely diverging in front; posterior angles of metathorax prominent, divergent and obtuse; tegulae golden-green. Wings hyaline, nervures black. Legs blue-green, pubescent; tarsi blackish, sericeous beneath. Abdomen very densely punctured, the punctures finer than those of the thorax; basal segment brilliant green; second segment blue-green, with a faint central longitudinal ridge; third segment deep azure-blue, the extreme basal margin purplish-black, the apical margin broadly rounded and armed with four very obtuse teeth, the two middle ones more approximate; immediately before the apex a transverse row of shallow punctures; venter green. Length $4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

One specimen.

9. *Chrysis venusta*, n. sp.

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.

Male.—Golden-green, densely and rather coarsely punctured, slightly pubescent; head not wider than the thorax; eyes rather large, ovate; face behind the antennæ flattened, 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 space between them tinged behind with bluish; 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 segment deepest; basal segment golden-green, sulcate on the basal middle; second and third segments 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; expanse of wings $6\frac{1}{2}$ lines.

One specimen.

10. *Chrysis bella*, n. sp.

Blue-green, abdomen azure-blue; wings fusco-hyaline, with a slight violet reflection; apex of abdomen with four long subacute teeth.

Female.—Elongate, rather slender, pubescent; head broader than the thorax, closely and deeply punctured, green, vertex, occiput and cheeks tinged with bluish; face, behind the antennæ, much depressed, rugulose, and bounded above by a slightly arcuated, sharply defined carina; antennæ dull black, the two basal joints green. Thorax closely and rather coarsely punctured; obscure green strongly tinged with blue and purple or azure-blue; prothorax narrow, dilated on the sides, with a shallow excavation on the dorsal middle; dorsal lines of the mesothorax deeply impressed; posterior angles of metathorax prominent and subacute; tegulæ azure-blue. Wings fusco-hyaline, with a slight violaceous reflection; posterior pair nearly hyaline; nervures black. Legs green, reflecting blue and purple; tarsi blackish, sericeous. Abdomen elongate, broader about the middle than at base, convex, very closely punctured, deep azure-blue, changing to green in certain lights, especially so on the sides; second segment with a well-defined, central, longitudinal carina; near the apex of the third segment, a transverse, very deeply impressed line which has a few deep

punctures, the apical margin armed with four prominent, equidistant, acute teeth; venter deeply concave. bronze blue-black. Length 4 lines; expanse of wings 7 lines.

One specimen. This beautiful species may be readily recognized by the elongate slender form, by the deep bluish color and by the abdomen being narrowed at base.

VI.—*Apical margin of third abdominal segment with six teeth.*

11. *Chrysis clara*. n. sp.

Green, densely punctured, the head and thorax coarsely and the abdomen finely; wings subhyaline; apex of abdomen armed with six acute teeth.

Female.—Elongate, subparallel, rather robust, brilliant-green, somewhat tinged with golden, the abdomen with a slight blue reflection; 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 claw-shaped; tegulæ green. Wing 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, equidistant, 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 $4\frac{1}{2}$ lines; expanse of wings $7\frac{1}{4}$ lines.

One specimen.

Description of a new species of Cuban LEPIDOPTERA.

BY CHARLES A. BLAKE.

Papilio Grotei, nov. sp.

Pap. Columbus, Gundlach. Herr.-Sch. Corr. Blatt. Zool. Min. Vereins, xvi, p. 141. (1862).

Not *Pap. Columbus*, Hewitson, Trans. Ent. Soc. Lond. new ser. i, p. 98. (1851.)

Female.—Anterior wings black, with a curved, broad, iridescent green band, extending from near the internal angle to the subcostal nervure, broadest in the middle and tapering towards the internal margin; three patches of the same color in the terminal interspaces be-