PROCEEDINGS

OF THE

ENTOMOLOGICAL SOCIETY

OF PHILADELPHIA.

ON THE HYMENOPTERA OF CUBA.

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(Communicated November 14, 1864.)

The materials used in the preparation of this paper are derived principally from the fine original collection of Prof. Felipe Poey of Havana, Cuba, procured and most generously presented by Dr. Thos. B. Wilson to the Entomological Society of Philadelphia; also from the uniques in the collection of Dr. John Gundlach of Cuba, who has kindly loaned them to me, and who possesses, probably, the most complete collections extant of all orders of Cuban Insects.

To Prof. Poey and Dr. Gundlach, I am greatly indebted for valuable notes upon the habits, &c., of many species.

Most of the Chalcididæ, the Proctotrupidæ and the Formicidæ, have been reserved for future papers, as the minute size of many of them require careful study, and specimens in good condition, before reliable descriptions can be made. The collection before me contains, of Chalcididæ and Proctotrupidæ about 80 species, and of Formicidæ about 90 species; of the latter many have been described by Roger and Mayr. Of the other families, including the larger Chalcididæ, over 300 species are enumerated below, of which number about 250 seem to be new.

Fam. TENTHREDINIDÆ.

Genus **LOPHYRUS**, Latr.

Lophyrus insularis, n. sp.

♂, black, wings hyaline, legs whitish; ♀, head, thorax and tip of abdomen ferruginous, dorsal segments of abdomen black, their sides and ventral segments whitish, wings subhyaline.

Male.—Shining black; the clypeus, mandibles and palpi, pale testaceous; antennæ black, shorter than the thorax, lanceolate, with 17 rays

on each side and a simple terminal joint, the basal joint beneath testaceous. Wings hyaline, iridescent; nervures and base of stigma dusky, the former pale at base; posterior wings slightly dusky. Legs whitish, tarsal claws blackish. Abdomen ovate, depressed; the extreme apex, above and beneath, ferruginous. Length $3\frac{1}{4}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Female.—Robust, depressed, shining; head and thorax ferruginous; antennæ nearly as long as the thorax, black. Wings tinged with fuliginous, slightly iridescent; nervures black. Legs whitish; middle of femora, apical half of tibiæ and most of the tarsi, black. Abdomen broad, ovate, depressed; dorsal segments black, their sides whitish; the two apical segments ferruginous; ventral segments pale, varied on each side with blackish. Length $4\frac{1}{4}$ lines; expanse of wings $9\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. 3 ♂ and 3 ♀ specimens.

This species feeds on the leaves of the Pine. The cocoons are oblong-oval, of a pale cinnamon color; those of the ♀ being 5 lines long by $2\frac{1}{2}$ broad, those of the ♂ 4 by 2.

Fam. UROCERIDÆ.

Genus **TREMEX**, Jurine.

Tremex cubensis, n. sp.

Yellowish; mesothorax, scutellums, pleura, anterior portion of metathorax, femora, and several uneven bands on abdomen, brown or blackish; apical segment of abdomen dull ferruginous; wings deep yellowish-hyaline, dusky at tips.

Female.—Head roughly punctured, slightly pubescent, yellow, tips of mandibles black; antennæ yellow (broken off beyond the 3rd joint). Prothorax large, covered with small, brownish tubercles, yellow, somewhat shining, with a deep brown puncture on the middle, lateral anterior angles rounded and prominent; collar brownish; mesothorax small, flat, very densely and confluently punctured or finely scabrous, brown-black, with a light brownish stain; scutellum and side pieces sculptured and colored like the mesothorax; whole under surface of the thorax bronze-black, pubescent, densely punctured, shining; basal portion of the metathorax blackish-brown, margined posteriorly with light brown, posterior portion yellow, the dorsal suture blackish. Wings deep yellowish-hyaline, the apex dusky; nervures pale ferruginous. Legs bright yellow, flattened, especially the basal joint of the posterior tarsi, which is dilated, lobed at tip and as long as the femora and tibiæ together; femora rugose, bronze-black, their base and the coxæ tinged with rufous. Abdomen robust, velvety, pale yellowish, tinged with fulvous; basal segment, apical margins of the 2nd, 5th, 6th and 7th segments

more or less broadly black, that on the 6th segment broad and strongly sinuate anteriorly, that on the 7th segment broadly and deeply indented in the middle; apical margins of the 3rd and 4th segments slightly dusky; apical segment large, dull ferruginous, broadly concave on the disk above, the tip pointed and rugose, and the extreme sides blackish; ovipositor not exserted, sheaths dull testaceous. Length 10 lines; expanse of wings 16 lines.

Collection.—Ent. Soc. Philad. One specimen.

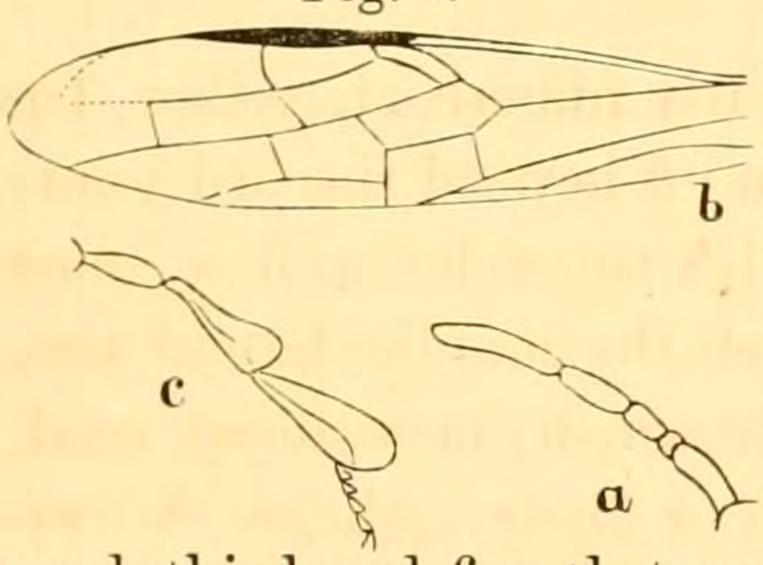
The neuration of the anterior wing of this fine species is similar to that of the following, but the right wing has two submarginal cells of which the 2nd is one-third shorter, and the 2nd discoidal cell is shorter and more quadrate than in that species; while the left wing has but one long submarginal cell, as in the typical *Tremex*, the dividing nervure being entirely obliterated. Both this and the following species seem to be intermediate between *Urocerus* and *Tremex*, the neuration of the wings differing from both genera.

Tremex latitarsus, n. sp.

♂. Head, thorax and legs blue-black; abdomen ferruginous; wings fusco-hyaline; hind legs broad and flat.

Male.—Head roughly punctured, blue-black, clothed with an erect pale yellowish pubescence, much longer on the cheeks beneath; the vertex, posterior margin of the cheeks and the mouth, tinged with dull rufous; eyes oval and pale yellowish; antennæ a little longer than the head, 5-jointed,* (Fig. 1, *a*) the first joint rather long and slightly curved, second joint very small, about as long as broad, third rather more than twice as long as the second, fourth joint about same length as the first and rather longer than the second and third together, the apical joint as long as the second, third and fourth together, very slightly curved and flat and somewhat twisted on the inside, the joints have a slight pubescence, especially at the incisures. Thorax thinly clothed with an erect pale

Fig. 1.



*Or possibly 6-jointed, as the apical joint, examined under a powerful lens, has, exteriorly, a very faint indication of a suture about the middle, but on the inside there is no appearance whatever of a suture; in other individuals, this indication of a suture may be more distinct, but I care not to be positive of there being more than 5 joints, although Westwood mentions that in the case of *Urocerus gigas*, the two apical joints of the antennæ are "closely soldered together." (*Intr.* II, p 114, note ‡.) It seems very remarkable, however, that there should be *only* 5, or even 6, joints in the antennæ, as Westwood, speaking of the whole family Uroceridæ, limits the number of joints from 10 to 25 (*ibid.* p. 114).

pubescence, blue-black, slightly blue-green above, the mesothorax scabrous and tinged with dull rufous as well as the scutellum; anterior dorsal part of the metathorax blue-black, the posterior part ferruginous, the longitudinal impression down the middle blackish; pleura finely punctured and shining; tegulæ dull rufous. Wings (Fig. 1, *b*) fusco-hyaline, the apical margins and the posterior wings more deeply and uniformly fuscous; nervures and stigma also fuscous. Legs: the two anterior pairs rather slender, somewhat flattened and rufo-piceous, tinged with steel-blue; posterior legs deep blue, their tibiæ and basal joint of their tarsi very broad and flat, the latter broadly lobed behind (Fig. 1, *c*), remaining joints of the tarsi rufous and hairy, the 2nd, 3rd and 4th very short, the claws bifid. Abdomen ferruginous, opaque above, except the apical margins of the segments which are shining; the apical and lateral margins and broad line down the middle of the basal segment, and the apical margins of the 3rd and 8th segments above, black or blue-black, the extreme lateral margins of the dorsal segments spotted with blue-black; ventral segments ferruginous, shining with a purple gloss. Length $8\frac{1}{2}$ lines; expanse of wings $12\frac{1}{2}$ lines.

Collection.—Ent Soc. Philad. Two specimens examined, one of which was kindly loaned me by Dr. Gundlach.

This remarkable species differs from the typical species of *Tremex* by the different structure of the antennæ and hind legs, and the somewhat different veining of the anterior wings; otherwise I see no difference, and prefer, for the present, to describe it under that genus. The narrow wings and short antennæ distinguishes it at once from *Urocerus*.

Fam. CYNIPIDÆ.

Gen. **CYNIPS**, Linn.

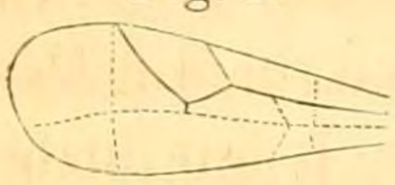
Cynips? armatus, n. sp.

Head and antennæ black; thorax reddish-brown; legs and abdomen rufous; wings fuscous, the base and apical third hyaline; scutellum armed with an acute spine.

Female.—Head black, polished; mandibles rufous; antennæ as long as the head and thorax, black, the five basal joints piceous, 13-jointed, the joints very distinct, 2nd joint short and globose, 3rd joint longest, narrowed towards the base, longer than the 1st and 2nd together, the 4th and two following joints subequal, each about half the length of the 3rd, remaining joints subequal, each about same length as the 4th, becoming gradually wider towards the tip, flattened, and minutely striated longitudinally, terminal joint about one-fourth longer than the penultimate, incisures of the joints pubescent, the pubescence becoming longer

towards the tip. Thorax smooth and polished, reddish-brown, convex above, and having on the extreme front a transverse, compressed, deeply emarginate elevation; lateral sutures of the mesothorax dark brown; tegulæ dull rufous; scutellum produced, reddish-brown, its dorsal surface broadly and very deeply excavated, leaving the sides thin and sharp, its posterior face subquadrate, broadly concave, with the four corners tuberculate, and from the middle of the anterior margin proceeds a rather long, acute spine, broad at base, suddenly constricted about the middle, and then gradually tapering to the tip, which is acute; metathorax pubescent, with two longitudinal, sinuate ridges down the middle, between which the surface is rather deeply excavated. Wings hyaline, with a very broad fuscous band down the middle of both wings, occupying more than one-half the length of the wing; principal veins dark brown; radial area broad and rather short, closed; areolet obsolete, or merely indicated by a brown dot. Legs, including the coxæ, rufous. Abdomen convex, smooth and polished, rufous, viewed laterally nearly as wide as long, the 2nd segment occupying about half its surface; basal segment annular, and clothed with a dense pale yellowish pubescence; ovipositor stout, projecting above the ventral valve. Length $1\frac{3}{4}$ line.

Fig. 2.



Collection.—Ent. Soc. Philad. Two specimens.

Belongs to the true Cynipidæ, but on account of the remarkable sculpture of the scutellum and the veining of the wings, I am uncertain to what genus it belongs, and therefore I place it, for the present, under the head of *Cynips*. The two transverse dotted lines in the figure of the wing indicate the width of the fuscous band; the other dotted lines indicate subobsolete nervures.

Genus **EUCOILA**, Westw.

Eucoila? basalis, n. sp.

Black; antennæ, legs and base of abdomen rufous; wings hyaline; scutellum with a deep, broad excavation at base and an oval, slightly elevated space near the tip.

Female.—Black, polished, mouth rufous; antennæ half the length of the body, rufous, thickened and blackish towards the tips, pubescent, 13-jointed, basal joint short and thick, narrow at base, 2nd joint short and globose, 3rd joint longest, 4th shorter than the 3rd and equal with the three following joints, remaining joints submoniliform, gradually thickened, terminal joint one-half longer than the penultimate. Thorax above convex, smooth and polished; collare with a patch of yellowish pubescence on each side; tegulæ honey-yellow; scutellum somewhat produced, with a broad, transverse, very deep excavation at base, behind

which the surface is rugose, with an ovate space, slightly elevated, its anterior portion extending down into the excavation in front of it, this space is margined with yellowish, slightly sulcate and has a lateral row of punctures close to the margin, and its tip excavated; metathorax with two longitudinal carinæ down its middle. Wings hyaline, nervures pale yellowish, indistinct; radial area short and broad, closed; areolet obsolete. Legs, with the coxæ, dull rufous. Abdomen ovate, subcompressed, smooth and polished; basal segment annular, pale rufous, finely aciculate; second segment occupying nearly the entire dorsal surface, on each side at the extreme base there is a row of deep punctures; ventral valve tipped with yellowish; ovipositor yellowish, slightly exserted. Length $1\frac{1}{2}$ line.

Collection.—Dr. J. Gundlach. One specimen.

This and the next species seems to belong either to *Eucoila* Westw. or *Kleidotoma* Westw., but I am not sure to which genus they properly belong. The sculpture of the scutellum is very much like that of *Eucoila melanoptera* Hartig (Europe), but otherwise there is but little similarity. I refer them, therefore, doubtfully, to *Eucoila*.

Eucoila? carinata, n sp.

Black; antennæ brown; legs honey-yellow; mesothorax with 4 longitudinal carinæ; wings hyaline.

Female?—Black; antennæ as long as the body, brown, 13-jointed, the joints distinct, two basal joints short, 3rd and 4th equal, each as long as the 1st and 2nd together, the following joints submoniliform, longer than wide, each a little shorter than the 4th joint, finely striated, terminal joint slightly longer than the penultimate. Thorax somewhat shining; mesothorax with four longitudinal well defined carinæ extending from the collare to the base of scutellum, the two middle ones approximate; tegulæ rufous; scutellum and metathorax sculptured as in the preceding species. Wings hyaline, basal third yellowish-fuscous, nervures very pale yellowish, indistinct; radial area short and subtriangular, closed; areolet obsolete. Legs honey-yellow, coxæ rufous. Abdomen, short, convex, smooth and polished; basal segment annular, pale rufous; 2nd segment very large and concealing the apical segment. Length $\frac{3}{4}$ line.

Collection.—Dr. J. Gundlach. One specimen.

Genus **ASPICERA**, Dahlbom.

Aspicera rufipes, n. sp.

Black; antennæ and legs rufous; wings hyaline; scutellar spine rather long and acute.

Male.—Black; head opaque; antennæ rather longer than the body,

dull rufous, 14-jointed, the joints very distinct, the basal joint rather short, blackish, 2nd joint very short and globose, remaining joints equal, each being as long as the 1st and 2nd together, flattened, terminal joint scarcely longer than the penultimate. Thorax somewhat shining; mesothorax with two deeply impressed lines, broader posteriorly, converging on the scutellum, and between them and immediately in front of the scutellum a triangular impressed space, the elevations and depressions having the appearance of a W; scutellum produced, uneven, with two very deep, approximate excavations at base, and bearing posteriorly a rather long and acute spine, before the base of which there is a deep oblong excavation with the sides carinate, base of the spine dilated, gradually acuminate towards the tip; posterior portion of the scutellum, under the spine, longitudinally striated; metathorax opaque, pubescent, with two much elevated, obtuse, longitudinal carinæ down the middle. Wings hyaline, the nervures yellowish; radial area short, broad, subtriangular, closed in front, open behind, by the nervure between it and the costal cell being obsolete; areolet obsolete. Legs, with the coxæ, rufous. Abdomen short, convex, smooth and polished, black, its extreme base and sides tinged with rufous; basal segment annular and aciculate; the suture between the second and third segments connate, the third segment twice as long as the second, and concealing the apical and ventral segments. Length $1\frac{3}{4}$ line.

Collection.—Dr. J. Gundlach. One specimen.

I have referred this and the next species to *Aspicera*, as the sculpture of the scutellum and the neuration of the wings seem to coincide with those of that genus, a figure of which is given by Dr. Reinhard in Berl. Entom. Zeits. 1860, pl. 4, fig. 7. The structure of the antennæ is, however, different.

Aspicera bifoveolata, n. sp.

Black; antennæ and legs honey-yellow; wings hyaline; scutellar spine acute.

Female.—Black, polished, head and thorax slightly pubescent; antennæ as long as the head and thorax, pubescent, honey-yellow, the basal joint piceous, 13-jointed, the joints very distinct, first joint moderately long, narrowed at base, 2nd joint about half the length of the 1st, a little longer than broad, the three following joints equal, each one-half longer than the 2nd, the 6th to 12th joints submoniliform, about equal in length and breadth, each being about the same length as 3rd joint but broader and finely aciculate, terminal joint twice as long as the penultimate. Thorax polished; mesothorax and scutellum sculptured exactly as in the preceding species, except that the excavation between the striæ in front of the scutellum is scarcely perceivable; and

the oblong excavation at the base of the spine on the scutellum is not so deep. Wings hyaline, the nervures very pale yellowish, almost hyaline, the radial area closed, shaped as in the preceding species; areolet obsolete. Legs, with the coxæ, honey-yellow, pubescent. Abdomen ovate, convex, smooth and polished, the extreme base of the 2nd segment and the ventral valve tinged with rufous; basal segment annular and aciculate; 3rd segment twice the length of the second, the suture between them connate; 3rd segment not concealing the apical ones; ovipositor slightly exserted, yellowish. Length 1 line.

Collection.—Dr. J. Gundlach. One specimen.

Closely resembles the preceding species, but is much smaller and less robust; the antennæ has one more joint and is differently shaped, and the legs differently colored.

Fam. EVANIIDÆ.

Gen. **EVANIA**, Fabr.

Evania lævigata, Oliv.

Evania lævigata Oliv. Encyl. Méth. vi. p. 453. Guér. Icon. Rég. Anim. iii, p. 405; LaSagra, Hist. Cuba Ins. p. 751. Westw. Trans. Ent. Soc. Lond. new ser. i. p. 213.

Evania Cubæ, Guér. Icon. Rég. Anim. iii, p. 405; tab. 65, fig. 1.

Collection.—Ent. Soc. Philad. 17 ♂ and ♀ specimens.

This species devours the eggs of *Blatta americana*

Evania semirubra, n. sp.

Rufous; antennæ, four posterior legs, except coxæ, and the abdomen, black; wings hyaline.

♂ ♀.—Head rufous; antennæ as long as the body, entirely black. Thorax entirely rufous; metathorax transversely rugose; tegulæ rufous. Wings hyaline; nervures and stigma black. Legs black; all the coxæ and the anterior legs, somewhat obfuscated exteriorly, rufous. Abdomen ovate ♂, securiform ♀, very much compressed, shining, black; petiole slender, as long as the rest of the abdomen. Length 4 lines; expanse of wings 8 lines.

Collection.—Ent. Soc. Philad. ♂; Dr. J. Gundlach ♀.

Evania (Hyptiam) Poeyi, Guér.

Evania (Hyptiam) *Poeyi*, Guér. Rev. Zool. 1843, p. 335; LaSagra, Hist. Cuba Ins. p. 752, pl. 18, fig. 3. Westw. Trans. Ent. Soc. Lond. new ser. i, p. 214.

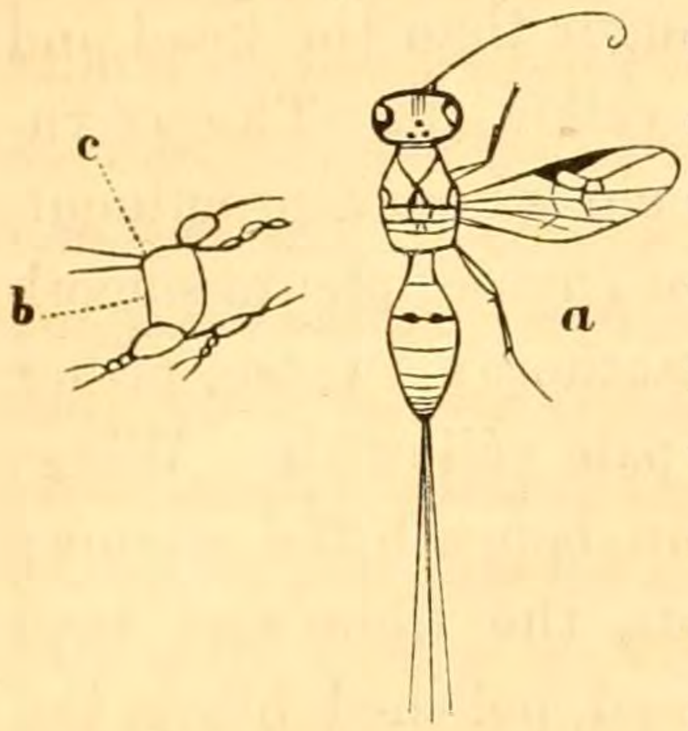
Collection.—Ent. Soc. Philad. Two specimens.

AULACODES, nov. gen. (Fig. 3, *a*.)

Head very large, transverse or slightly subglobose; eyes small and round; *antennæ* moderate, setaceous, inserted on the middle of the face,

composed of about 24 joints, basal joint long and cylindric, 2nd short, 3rd as long as the first, remaining joints gradually shorter; immediately behind the base of the antennæ a deep longitudinal excavation, with the lateral margins carinated, and also with a carina down its middle; ocelli arranged in a triangle on the vertex and at the head of the frontal excavation, in which the lower ocellus is situated; mandibles small, palpi slender. *Thorax* short and thick, collar not elongate; mesothorax slightly gibbous, abrupt in front, the lobes prominent; scutellum convex; metathorax (Fig. 3, *b*) short, very abruptly truncate behind, the abdomen, which is short, ovate and depressed, is inserted near the base just on the top of the declivity (Fig. 3, *c*), making the distance between the insertion of the abdomen and the posterior coxæ greater than in *Aulacus*. *Wings* moderate, stigma rather large and triangular, emarginate beneath near the base; marginal cell long and lanceolate; three submarginal cells, the second much smaller than the first, subquadrate, the third extending to the tip of the wing, the single recurrent nervure received at the junction between the first and second submarginal cells, *Legs* moderate, the posterior pair longest and stoutest, the coxæ robust, the posterior pair not elongate; femora moderately stout; four posterior tibiæ each with two short, stout, subequal apical spurs; tarsal claws apparently simple, with large pulvilli. Ovipositor longer than the body.

Fig. 3.



This remarkable genus resembles, at first sight, a small species of *Aulacus*, with a large head, but on a closer examination the characters are found to be very dissimilar. It seems to form a very close connecting link between the *Ichneumones adsciti* and the *Evaniidæ;* from the former it differs by the mode of the insertion of the abdomen, and from the latter by the multiarticulate antennæ; it, therefore, does not belong strictly to either family, but on account of the peduncle of the abdomen being inserted at a considerable elevation upon the metathorax,—a character which seems to be confined to *Evaniidæ*,—I place it, for the present, in that family. To *Capitonius* Brullé, it seems closely allied, in having the third discoidal cell not closed, and in the general shape of the body, but the prothorax does not form a long neck, and the antennæ have double the number of joints.

Aulacodes nigriventris, n. sp.

Rufous, shining; abdomen black, the extreme base pale yellowish; antennæ and legs, except base, dusky; wings hyaline.

Female.—Head very large, broader than the thorax, rufous, shining; face broad, slightly pubescent, feebly punctured; mandibles dusky towards the tips; palpi dusky; antennæ rather longer than the head and thorax, curled at tips, blackish, the basal joint yellowish. Thorax rufous, shining, slightly pubescent; lobes of the mesothorax prominent, uneven, and roughly punctured; pectus somewhat rugose; pleura smooth and polished; scutellum convex, polished; metathorax rugose, rather densely clothed with pale pubescence; tegulæ pale yellowish. Wings hyaline, faintly iridescent, a slight fuscous stain beneath the stigma; nervures and stigma black. Legs rufo-fuscous, the tibiæ and tarsi blackish. Abdomen rather short, ovate, depressed, polished, black, the first segment rapidly narrowed to the base, grooved along the lateral margins, with the basal half pale yellowish; on the incisure between the 1st and 2nd segments, a rather large and deep fovea on each side of the middle, with a pale spot between the foveæ; ovipositor longer than the body, rufous, valves black. Length 3 lines; expanse of wings $4\frac{1}{4}$ lines.

Collection.—Dr. J. Gundlach. Two specimens.

Genus **TRIGONALYS**, Westwood.

Trigonalys Gundlachii, n. sp.

Black; most of head, collar, front of mesothorax, both scutellums, two spots on metathorax, legs and the apical margins of the abdominal segments, yellow; wings with the costal half fuscous, the rest hyaline.

Male.—Black, slightly pubescent; head densely and somewhat confluently punctured, shining; broad frontal orbits, the cheeks, a spot above the base of each antenna slightly confluent with the orbits, clypeus, except its lateral margin which is black and slightly emarginate, and a large spot on each mandible, yellow; palpi pale dusky, blackish at base; antennæ as long as the head and thorax, 25-jointed, the basal joint very robust and bright yellow, the 13 or 14 following joints fulvous, remainder blackish, the apex very slender. Thorax rugosely punctured, opaque; mesothorax with two deeply impressed longitudinal furrows, slightly converging on the scutellum; collar, a large bilobed mark on each side of the prothorax bordering on the mesothorax and covering the tubercles, two rather large subtriangular spots on the mesothorax anteriorly, slightly converging behind, each spot bordering on one of the longitudinal dorsal furrows, a minute spot on each extreme anterior corner of the mesothorax, and a small spot on each side of the pleura beneath the wings, all yellow; scutellum yellow, the space on each side black with a triangular yellow spot near the base of the wings; the postscutellum and its sidepieces also yellow; metathorax black,

shining, finely punctured, with a rather large subquadrate yellow spot on each side posteriorly, above which there are several elevated longitudinal ridges, and on the extreme sides at base a well developed obtuse tubercle; tegulæ dull honey-yellow. Wings: the anterior pair mostly fusco-hyaline, especially the costal half, the apical posterior half and the posterior pair entirely hyaline, the whole with a brassy, subiridescent gloss; nervures fuscous, costa ferruginous; second submarginal cell elongate, twice as long as wide, and connected with the first discoidal cell by a short petiole, third submarginal subquadrate, slightly longer than wide and receiving the second recurrent nervure beyond the middle. Legs, with their coxæ, yellow; the tarsi, especially the posterior pair, dusky. Abdomen polished, punctured; at the tip of the first segment a transverse, subinterrupted, yellow line, and close to the apical margins of the four following segments a broad, transverse, yellow band, broadest on the second segment and slightly produced anteriorly on each extreme side, that on the third, fourth and fifth segments slightly produced and emarginate on the disk; venter polished black, the second segment with a conical, transverse yellow spot on each side posteriorly, tip of this segment somewhat acutely produced and deeply emarginate. Length 5 lines; expanse of wings 9 lines.

Collection.—Dr. J. Gundlach. One specimen.

The general structure of this very interesting species is the same as given by Shuckard under the genus *Lycogaster* (Entomologist, p. 123 and figure), except that this species has the antennæ 25-jointed, the mesothorax with only *two* longitudinal furrows, and the neuration of the anterior wings is somewhat different. The structure of the abdomen is the same (and well represented in the figure in profile) except that the tip of the second ventral is differently constructed, being bifid, and not spinose. The specimen before me is apparently a male, and Westwood seems to think that the different structure of the ventral segments in the *Lycogaster pullatus* Shuckard, is a mere sexual difference, it being nothing more than a "male of another species of *Trigonalys*." (Trans. Ent. Soc. Lond. iii, p. 274, note.)

It gives me much pleasure to dedicate this elegant species to Dr. J. Gundlach, to whom I am greatly indebted for the valuable assistance he has rendered me in the study of the Hymenoptera of Cuba, by the loan of the uniques of his collection.

Fam. ICHNEUMONIDÆ.

Subfam. ICHNEUMONIDES.

Genus **ICHNEUMON**, Linn.

Ichneumon breviventris, n. sp.

Black; antennæ with a white annulus; palpi, legs and apex of abdomen, yellowish; wings hyaline; abdomen not longer than the thorax.

Male.—Black, slightly pubescent; palpi pale yellowish; antennæ two-thirds the length of the body, black, the 13th to 18th joints entirely white, the 12th and 19th to 21st joints with a white spot above and beneath. Thorax shining, rather sparsely and deeply punctured above, more densely so beneath; scutellum rather convex and longitudinally rugose; metathorax irregularly rugose, the elevated lines and central area obsolete; tegulæ rufo-piceous. Wings hyaline, faintly dusky at tips; nervures and stigma black; areolet 5-angular, almost quadrate, 2nd recurrent nervure slightly angular in the middle, and received by the areolet very near its tip. Legs dull yellowish, the coxæ and the apical half of the posterior femora and tibiæ black, the posterior pair of legs very long. Abdomen short, ovate, not longer than the thorax, very densely and confluently punctured or somewhat longitudinally rugose, opaque black; basal segment with a short peduncle, the tips of the segment broadly and rather suddenly dilated, longitudinally aciculate and with two carinæ down the middle, the extreme apical margin depressed; second segment with the basal foveæ deeply impressed, the incisures between the first, second and third segments strongly constricted; remaining segments dull yellowish, rather suddenly narrowed towards the tip, retractile, being capable of being drawn within the third segment; beneath, the segments are dull yellowish. Length 6 lines; expanse of wings 11 lines.

Collection.—Dr. J. Gundlach. One specimen.

This species is remarkable for its short abdomen, the fourth and following segments of which are rather suddenly constricted and retractile.

Ichneumon meridionalis, n. sp.

Black; antennæ with a white annulus; wings fuscous; abdomen, except first segment, rufous; central area of metathorax large, subquadrate, indistinct.

Female.—Black, slightly pubescent, densely punctured; antennæ about half as long as the body, black, the 9th to 16th joints white above, spotted with black beneath. Thorax very densely punctured, the mesothorax granulate; tegulæ piceous, polished; scutellum slightly convex, rugose; metathorax rugose, shining, the elevated lines subobsolete, the central area large, subquadrate and indistinct. Wings fuscous, with a brassy gloss; nervures and stigma blackish; areolet large,

5-angular or subquadrate, the lower apical side very short, the other sides subequal. Legs blackish-piceous, the anterior tibiæ and tarsi yellowish in front. Abdomen elongate, subcylindric, densely punctured; basal segment bilineated, deeply punctured, black; remaining segments rufous, shining towards the apex. Length 5½ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Ichneumon cubensis, n. sp.

Reddish-brown; antennæ tricolored—ferruginous, yellowish and black; wings hyaline; central area of metathorax subquadrate; base of the 2nd and 3rd abdominal segments blackish.

Female.—Robust, reddish-brown, opaque; clypeus and mouth pale ferruginous; antennæ stout, involute, the eight basal joints ferruginous, the eleven or twelve following joints pale yellowish, remainder blackish, tinged with rufous beneath. Thorax with the dorsal lines well impressed in front, obsolete behind; collar tinged with yellowish; scutellum flat; metathorax finely rugose, the elevated lines tolerably well defined, the central area moderate, subquadrate; tegulæ honey-yellow. Wings hyaline, with a faint yellowish tinge; nervures fuscous, ferruginous at base and towards the tip; stigma ferruginous; areolet subtriangular. Legs reddish-brown, the two anterior pairs paler, the posterior tibiæ and tarsi golden sericeous. Abdomen stout, elongate-ovate, the basal segment strongly arcuated, with a rather long, stout peduncle, the tip moderately dilated, finely punctured and slightly bilineated; basal margins of the second and third segments blackish, and that of the fourth indistinctly so; ovipositor not exserted. Length 7 lines; expanse of wings 11½ lines.

Collection.—Dr. J. Gundlach. One specimen.

Ichneumon serricornis, n. sp.

Black; face, annulus on antennæ, two lines on mesothorax, large spot on pleura, scutellum, three marks on metathorax, coxæ and apex of abdomen whitish; legs and abdomen ferruginous; wings yellowish-hyaline; antennæ subserrate.

Male.—Head black; the face, orbits, cheeks, clypeus, except a black stripe down its middle, mandibles and palpi, whitish; antennæ porrect, two-thirds as long as the body, subserrate, black, the 13th to 19th joints white, the basal joint beneath also white. Thorax black; mesothorax tinged with brown and having two approximate longitudinal, subobsolete whitish lines on the disk, and a small subobsolete pale spot on each side over the tegulæ; collar, tegulæ, a sutural line before the wings, a short line beneath the fore-wing and a large spot occupying almost the whole side of the pleura, whitish; the space beneath between the four

anterior coxæ, ferruginous; scutellum, a spot on each side anteriorly and another behind, whitish; metathorax finely rugose, black, rufous at base, an inverted V-shaped mark on the posterior face and a large rounded spot on each extreme side, whitish, the elevated lines not well defined, the central area large, rounded in front and open behind. Wings yellowish-hyaline, the nervures and stigma blackish; areolet subtriangular. Legs ferruginous, the four anterior coxæ beneath and the posterior pair above whitish; posterior tarsi blackish. Abdomen elongate, subdepressed, opaque ferruginous, the apical lateral margins of the 3rd and three following segments and the apical segment entirely, whitish; basal foveæ of the second segment deep and transverse. Length $5\frac{1}{2}$ lines; expanse of wings $8\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Ichneumon albipectus, Brullé.

Ichneumon albipectus, Brullé, Hym. p. 306.

Collection.—Ent. Soc. Philad. Two ♂ specimens.

Somewhat resembles the preceding, but is smaller ($3\frac{1}{2}$ lines long), darker in color, the antennæ without a white annulus, and the apex of the abdomen not white. In addition to the characters given by Brullé, I would add that the metathorax has the appearance of having two pale spots on the posterior part, and the apical margin of the first abdominal segment is whitish.

Ichneumon burrus, n. sp.

Dull reddish-brown; orbits, annulus on antennæ, lateral margins of mesothorax and the scutellum, whitish; wings subhyaline.

Female.—Dull reddish-brown, shining; orbits, cheeks and palpi, whitish; antennæ stout, involute, blackish, the 10th to 17th joints white, the basal joint beneath reddish. Thorax: mesothorax tinged with blackish; collar, lateral and posterior margins of mesothorax and a short line beneath the fore-wings, whitish; scutellum flat, whitish, smooth and polished; metathorax rugose, the elevated lines not well defined, the central area elongate-subquadrate. Wings slightly tinged with fuscous, the posterior pair hyaline; nervures and stigma fuscous; areolet 5-angular. Legs entirely dull reddish-brown. Abdomen short, ovate, polished, apical segments somewhat pale. Length 4 lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. One specimen.

This may be the female of *Ich. albipectus* Brullé.

Ichneumon flavovarius, n. sp.

Yellow; antennæ, mesothorax, except two yellow lines, and tip of abdomen, brown; middle of metathorax, most of the 1st and base of 2nd and 3rd abdominal segments, black; wings yellowish-hyaline.

Male.—Head yellow, a spot behind antennæ and a broad transverse band on the occiput, brown; eyes black; antennæ three-fourths the length of the body, brown, paler beneath, basal joint beneath yellow. Thorax yellow, shining; mesothorax brown, with two longitudinal, dorsal, yellow lines, slightly converging on the scutellum; an elongate spot on each side of the pectus towards the mesothorax, a disconnected line and a spot on the pectus under the wings, blackish; scutellum and postscutellum, as well as the posterior margin of the mesothorax, yellow, the space on each side brown; metathorax finely rugose, yellow, with the base, a broad stripe down the middle, a large spot on each side at base and the lateral sutures, black, the elevated lines not well defined, the central area moderate, subovate. Wings pale yellowish-hyaline; nervures fuscous, stigma ferruginous; areolet 5-angular. Legs yellow, the posterior pair tinged with fulvous, their tibiæ and tarsi slightly obfuscated. Abdomen elongate, depressed; first segment with a long, slender peduncle, the tip suddenly and squarely dilated, with two elevated ridges on the disk; basal foveæ of the second segment oblique and well impressed; basal segment black, extreme tip yellow; second segment black, the apical third yellow; third segment yellow, the basal third black; remaining segments brown, tinged with ferruginous. Length 7 lines; expanse of wings 12 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **MESOLEPTUS**, Grav.

Mesoleptus insularis, n. sp.

Black; spot on mandibles, palpi, tegulæ, legs, and middle of abdomen obscurely, yellowish or testaceous; wings hyaline, iridescent.

♂ ♀.—Black, opaque, slightly pubescent, more obvious on the face; spot on each mandible, and the palpi, yellowish; antennæ nearly as long as the body, rufo-piceous; tegulæ yellow; metathorax finely sculptured, slightly rugose, the elevated lines ill-defined. Wings hyaline, iridescent; nervures and stigma pale fuscous; areolet minute, oblique and petiolated. Legs testaceous, the coxæ black, the trochanters pale yellowish, the posterior tibiæ and tarsi dusky, the former with an indistinct pale annulus. Abdomen elongate, very slender at base, gradually broader and subcompressed towards the tip, black, tinged with fuscous; sides of 2nd, 3rd and sometimes the 4th segments obscurely testaceous; ovipositor of ♀ exserted about half a line. Length $1\frac{1}{2}$ line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. 2 (♂ ♀) specimens.

Genus **TRYPHON**, Grav.

Tryphon cinctus, n. sp.

Black; face, orbits, annulus an antennæ, collar, two stripes on mesothorax, most of pleura, scutellum, sides, tip and two spots at base of metathorax, and bands on abdomen, white; legs fulvous, hind tarsi black with a white annulus; wings hyaline.

Male.—Black, densely and uniformly punctured; face, except a black spot just behind the antennæ, orbits, clypeus, mandibles, except tips, and the palpi, white; antennæ rather longer than the body, attenuated towards the tips, which are very slender, black, with a white annulus slightly beyond the middle, basal joint beneath white. Thorax: mesothorax with two broad longitudinal whitish stripes, triangularly dilated in front, and attenuated in the middle; the collar, tegulæ, a small spot before and a larger one beneath the anterior wings, a spot behind the posterior wings, and the pleura, except the sutures dividing it from the pectus and metathorax, white; scutellum rather large and transverse, entirely white, as well as a transverse line on the postscutellum; metathorax densely and confluently punctured, black, a large spot occupying the extreme sides, a transverse band near the insertion of the abdomen, and a spot on each side at base, white. Wings hyaline, slightly iridescent; nervures and stigma black; areolet minute, petiolated, oblique. Legs long and rather slender, pale fulvous, all the coxæ white, the posterior pair with an exterior black longitudinal line; posterior tarsi black, the 2nd and 3rd joints white, tips of the other tarsi blackish. Abdomen sessile, subcylindrical, about as long as the head and thorax, densely punctured, black, the base of the first and the apical margins of all the segments, broadly white; upper surface of the basal segment uneven, with a small blunt tubercle on each side of the middle. Length $4\frac{1}{4}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Tryphon? exiguus, n. sp.

Piceous; face, legs, and middle of abdomen, yellowish; meso- and metathorax stained with brown; wings hyaline, iridescent, areolet incomplete; abdomen sessile.

Female.—Head black, face slightly protuberant, yellow, as well as the clypeus, mandibles, except tips, and the palpi; antennæ rather slender, more than half the length of the body, fuscous, yellow at base. Thorax piceous, polished; mesothorax brown, as well as the scutellum and dorsal surface of the metathorax; scutellum rather convex; metathorax polished, the elevated lines obsolete on the disk, distinct on the sides; tegulæ yellowish. Wings hyaline, iridescent; nervures and stigma pale fuscous, the latter rather large; areolet small, incomplete, the outer nervure wanting, the marginal cell short and subtriangular.

Legs moderate, yellow, including their coxæ; the posterior tarsi dusky. Abdomen blackish-piceous, sessile, subcompressed at tip; apical margin of the 2nd and the basal half of the 3rd segment yellowish, the rest more or less tinged with piceous; ovipositor scarcely exserted. Length $1\frac{1}{2}$ line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Tryphon? claviventris, n. sp.

Blackish; mouth, antennæ, sides of mesothorax, tegulæ, scutellum, most of metathorax and legs, and two bands on abdomen, yellow; wings fusco-hyaline, areolet wanting; legs short and thick; abdomen strongly clavate.

Male.—Blackish, shining, thinly clothed with a short pale pubescence; head small, eyes large and prominent; anterior margin of the clypeus, mandibles and the palpi, yellow; antennæ three-fourths the length of the body, stout, dusky yellow, brownish above especially towards the apex, basal joint beneath yellow. Thorax smooth and polished; collar, tegulæ, lateral margins of the mesothorax, dilated anteriorly and extending posteriorly to the scutellum, the broad anterior and upper margins of the pectus bordering on the mesothorax, and a line beneath the wings, yellow; pectus polished and broadly excavated to receive the fore-legs in repose; the pleura has posteriorly a similar excavation for the middle legs; scutellum rather large and yellow, as well as the space on each side and the postscutellum; metathorax not prominent, subconvex, smooth and polished, yellow, except its base and extreme sides. Wings ample, fusco-hyaline, tinged with yellowish and having a slight brassy gloss, the apical margins especially about the tip of the marginal cell more deeply tinged with fuscous; nervures pale fuscous, the stigma and costa fulvous; areolet wanting. Legs short and thick, especially the femora, yellow; the anterior femora with a large round black spot behind, the middle femora blackish with the base and apex yellow, posterior coxæ black, yellow behind, their trochanters yellow, their femora blackish, piceous above and at base and apex, basal half of their tibiæ yellow, the apical half and the tarsi brownish. Abdomen elongate, strongly clavate, slender at base, subpetiolated, subdepressed, reddish-brown, the basal segment black with a yellow band across the tip, as well as another on the second segment occupying its apical half. Length 5 lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

This species looks very much like an *Exochus*, but the face is flat; it probably does not belong to *Tryphon*, but in the absence of a more allied genus, as far as known to me, I refer it for the present to that genus.

Genus **EXOCHUS**, Grav.

Exochus validus, n. sp.

Reddish-brown, varied with yellow; wings yellowish-hyaline, areolet wanting; abdomen subsessile, with three yellow bands.

Male.—Head yellow, the occiput reddish-brown; antennæ two-thirds the length of the body, pale honey-yellow, slightly blackish at extreme tips. Thorax flattened above, clothed with a thin, short, pale pubescence; mesothorax yellowish, with a broad black stripe down the middle and a narrow abbreviated one on each side; the broad upper margins of the pectus bordering on the mesothorax, two large tubercles in front of the anterior coxæ, and the tegulæ, yellow; on each side of the pleura, immediately beneath the fore-wings, there is a large prominent yellow swelling; scutellum and post-scutellum, as well as the space on each side more obscurely, yellow; metathorax yellow, with a blackish impressed line down the middle. Wings ample, yellowish-hyaline, with a slight cloud at the tip of the marginal cell; nervures and stigma pale ferruginous; areolet wanting. Legs yellow, the four anterior femora honey-yellow, the posterior pair reddish-brown. Abdomen subsessile, subclavate, shining, reddish-brown, with a rather broad yellowish band across the tip of the three basal segments above, that on the second and third occupying their apical half. Length $4\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. Two ♂ specimens.

Genus **TROGUS**, Grav.

Trogus thoracicus, n. sp.

Yellowish-ferruginous; three broad lines on the mesothorax and a large stain on each side of the pleura, blackish; wings yellowish-hyaline, glossy; abdomen depressed.

Male.—Yellowish-ferruginous, rather densely punctured, clothed with a short pale pubescence; orbits of the eyes obscure whitish, and just beneath the antennæ the face has a brownish spot; antennæ more than half the length of the body, pale ferruginous. Thorax shining; mesothorax with two dorsal grooves converging on the scutellum, between the grooves a broad longitudinal blackish stripe, pointed behind and not reaching the scutellum, on each side over the base of the wings another broad blackish stripe which extends to the posterior margin; middle of the pectus, a large irregular stain on the pleura, the surface beneath between the four anterior legs, and a spot on the extreme anterior lateral corner of the metathorax, blackish; scutellum obtusely elevated, shining; metathorax prominent, transverse, convex at the base, immediately beneath the scutellum there is a blackish transverse incisure. Wings yellowish-hyaline, the extreme apical margins dusky;

nervures fuscous, stigma fulvous; areolet subtriangular, slightly oblique. Legs same color as the body, the posterior coxæ beneath and their femora and tibiæ more or less obfuscated. Abdomen opaque, depressed, deeply incised between the segments; basal segment squarely dilated at tip, with a prominent tubercle on each side of the posterior third, the peduncle slender; down the centre of each segment there is a slight elevation. Length $6\frac{1}{2}$ lines; expanse of wings 13 lines.

Collection.—Dr. J. Gundlach. One specimen.

Trogus pusillus, n. sp.

Black; face, orbits, annulus on antennæ, collar, two lines on mesothorax, pleura beneath, sides of scutellum and most of metathorax, white; legs and abdomen honey-yellow; wings hyaline; scutellum acutely elevated.

Male.—Head rather large, black; the face, orbits, clypeus, mandibles, except tips, and the palpi, whitish; the outer orbits cover the cheeks on the lower half, but narrow as they approach the summit, and instead of curving around to meet the frontal orbits, they continue straight on the vertex and almost meet on the disk behind the ocelli; antennæ nearly as long as the body, slender, porrect, black, with a broad white annulus slightly beyond the middle. Thorax black, shining; mesothorax with two longitudinal white lines not reaching the scutellum, in front the space between these two lines is tinged with rufous; the collar, tegulæ, a broad line before and a large spot beneath the wings, connected with another very large spot which covers the entire under surface of the pleura, all white; scutellum elevated into a subacute spine, black, its sides broadly white, as well as the carina on each side anteriorly with which it is connected; postscutellum black; metathorax obscure whitish, with a large subtriangular black spot on each side, the surface is densely punctured and somewhat abruptly truncate behind. Wings obscurely hyaline; nervures and stigma blackish, paler at base; areolet 5-angular. Legs rather slender, honey-yellow; the four anterior coxæ, white. Abdomen elongate, depressed, smooth and shining, honey-yellow; first segment with a prominent tubercle on each side of the posterior third, the peduncle rather slender; basal foveæ of the second segment deep and transverse. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

This looks very much like an *Ichneumon*, and I would have described it under that genus, were it not for the elevated scutellum.

Trogus tricinctus, n. sp.

Yellow, varied with brown and ferrüginous; mesothorax with three brown stripes; metathorax with two large triangular yellowish spots; abdomen with three yellow bands; wings yellowish-hyaline.

Female.—Head yellow, face whitish; a broad transverse stripe on the occiput and a spot just behind the antennæ, brownish; eyes whitish; antennæ ferruginous (apical half wanting), basal joint beneath yellow. Thorax yellow; mesothorax with three broad, longitudinal, brown stripes; suture between the pectus and pleura, as well as a short oblique stripe on the pleura, brown; scutellum elevated into an obtuse tubercle, yellow, with a brown, triangular spot behind; postscutellum brown, yellow on each side; metathorax smooth and shining, slightly pubescent, brown, with two large, elongate subtriangular, yellow spots above, slightly confluent at the base, and on each extreme side another large yellow spot; tegulæ brownish. Wings yellowish-hyaline, nervures fuscous, stigma fulvous; areolet small, subtriangular, slightly petiolated. Legs pale yellowish, somewhat tinged with ferruginous; posterior coxæ with a blackish spot at tip, their femora rufous, and the apical half of their tibiæ and their tarsi, except basal joint, brown. Abdomen flattened, the dorsal surface finely and longitudinally aciculate from the second segment almost to the tip; two basal segments brown, remainder ferruginous, and at the tip of the first three segments a broad yellow band, slightly narrowed in the middle on the second and third segments; ovipositor scarcely exserted. Length 6 lines; expanse of wings $11\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Trogus albovarius, n. sp.

Black, varied with white; antennæ black, with a white annulus; legs fulvous; wings hyaline; abdomen short, black, banded with white.

Female.—Head large, black; face, orbits, cheeks, clypeus, mandibles, except tips, and the palpi, white; antennæ black, with a white annulus about the middle. Thorax polished, black; collar, tegulæ, a line before the wings, two lines on disk of mesothorax, and two spots at its base on each side of scutellum, and the whole of the pectus, white; scutellum elevated into an obtuse tubercle, white, with a black line down the middle; postscutellum with a white transverse line; metathorax punctured, white, with a transverse black band near the base, from which proceeds on each side a longitudinal black stripe. Wings hyaline; nervures and stigma black; areolet 5-angular or subtriangular. Legs rather stout, pale fulvous; the four anterior coxæ and most of the posterior pair, white; apical joints of the posterior tarsi also white. Abdomen short, ovate, subdepressed, polished, peduncle long and very slender, tip of first segment broadly dilated, basal foveæ of the second segment rather deep and very transverse; first segment white, with a broad black band near the tip; second segment black, with a broad

white apical margin, and a white line on each side in front of the basal foveæ; remaining segments white, more or less black at the base, ovipositor black, subexserted. Length $4\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **CRYPTUS**, Fab.

Cryptus cubensis, n. sp.

Yellowish, shaded with dusky; sides of mesothorax, base of metathorax, hind legs in part and the three basal segments of abdomen, black; wings yellowish-hyaline.

Female.—Dull yellowish, opaque; antennæ rather stout, more than half the length of the body, dusky above, with a broad dull yellowish annulus about the middle. Thorax: sides of mesothorax rather broadly black, the disk with an elongate dusky stain anteriorly; pleura varied with yellowish and black; metathorax with a transverse carina near the base, on each side there is a longitudinal impressed line, and the posterior face is somewhat concave, with a slight tubercle on each side; basal half black, the rest yellowish. Wings yellowish-hyaline, the apical margins slightly dusky; nervures and stigma ferruginous; areolet 5-angular, or subquadrangular. Legs long and slender, especially the posterior pair, yellow; the posterior coxæ black, with a yellow hook-like mark above and a line beneath of the same color, their trochanters black, their femora with a broad black band near the tip, and their tibiæ and tarsi black at tips. Abdomen elongate, subcompressed, and fusiform, long, slender at base; the first segment linear and convex, with a slight tubercle on each side a little behind the middle, black, its tip yellow; second and third segments black at base, dusky in the middle and yellow at tip; remaining segments dusky, yellow at tip; ovipositor piceous, exserted about half the length of the abdomen. Length 6—$7\frac{1}{2}$ lines; expanse of wings 10—13 lines.

Male.—Resembles the female, except that the abdomen is more slender and the base of the fourth and fifth segments are narrowly blackish. Length $8\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. 2 ♂, 2 ♀ specimens.

This species is parasitic upon the larva of *Pelopœus lunatus* Fab.

Cryptus fascipennis, Brullé.

Cryptus fascipennis, Brullé, Hym. p. 191.

Collection.—Ent. Soc. Philad. 2 ♂, 2 ♀ specimens.

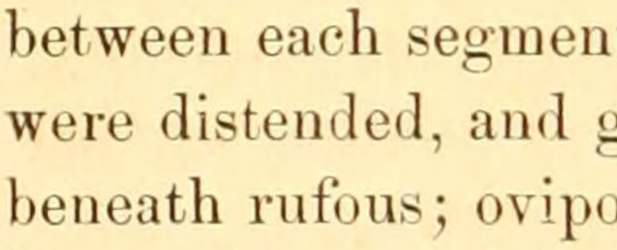
Cryptus? ornatipennis, n. sp.

Dark rufous; antennæ black; orbits, collar, spots on pleura, spot on scutellum, and another on each side of metathorax, white; abdomen rufous at base and apex, black in the middle; wings hyaline, banded with fuscous.

Female.—Dark rufous, opaque; orbits white, tips of mandibles black,

eyes large and prominent; antennæ rather longer than the body, slender, black, the basal joint beneath rufous. Thorax with the dorsal lines well impressed; the collar, tegulæ, a cuneiform spot before and a spot beneath the fore-wings, an elongate spot beneath the hind-wings and another immediately beneath it, white; scutellum black, with a broad white band near the tip; metathorax large, rather long, rufous, with a fine, transverse, slightly arcuated carina near the base and an elongate, white spot on each extreme side. Wings long, hyaline, with three fuscous bands towards the apex, the two apical ones confluent below; nervures and stigma black; marginal cell long and narrow; areolet large, subtriangular and very transverse (see Fig. 4). Legs long and rather slender, rufous, the anterior coxæ white, the four posterior pair with a white spot above. Abdomen elongate, fusiform, subpetiolated, strongly arcuated, shining; the two basal and two apical segments dark rufous, remaining segments black above, rufous laterally, between each segment there is a whitish membrane as if the segments were distended, and giving the appearance of whitish marginal bands; beneath rufous; ovipositor rufous, nearly as long as the abdomen, valves black. Length 5 lines; expanse of wings $9\frac{1}{2}$ lines.

Fig. 4.



Collection.—Ent. Soc. Philad. One specimen.

This species has much the general appearance of a *Cryptus*, but the wings are differently veined, and the abdomen is subpetiolated, though strongly arcuated. The veining of the wings is different from that of any genus known to me.

Genus **HEMITELES**, Grav.

Hemiteles incertus, n. sp.

Rufous; antennæ and abdomen black, the latter banded with white; metathorax with two long acute white spines; wings clouded, iridescent.

Female.—Dull rufous, opaque; eyes large and prominent; orbits and mandibles whitish; palpi dusky; antennæ as long as the body, black, the basal joint beneath rufous. Thorax: mesothorax with the dorsal lines deeply impressed; a line on the collar, tegulæ, a line beneath the anterior wing, a spot behind the posterior wing, an oblique line on the pleura and a spot before and a little above each middle coxa, all white; metathorax finely rugose, smoother at base, the elevated lines not well defined; on each side posteriorly a rather large white spot, from each of which proceeds a long, porrect, acute spine. Wings: anterior pair fuscous, with a beautiful golden gloss; posterior pair hyaline, iridescent, their apical margins faintly clouded; nervures and stigma black; on the anterior pair there is a subhyaline ray in the first submarginal cell

proceeding from the base of the stigma. Legs rufous, the four anterior coxæ with a white spot. Abdomen stout, subovate, very slender at base, and strongly arcuated, shining; basal segment rufous, sometimes blackish, with a white band at tip; remaining segments black, broadly margined at tip with white, the apical segments not so broadly margined as the others; ovipositor black, exserted two-thirds the length of the abdomen. Length $4\frac{1}{2}$ lines; expanse of wings 8 lines.

Male —Smaller, and much more slender than the female, and differs in color as follows:—the superior wings are hyaline, with the apical third fuscous, as well as a spot at the lower base of the first submarginal cell; the scutellum has a white spot, as well as one on the postscutellum; the metathorax is not spinose, the white spots being scarcely elevated, and the four anterior coxæ are entirely white. Length 3—4 lines; expanse of wings 5—7 lines.

Collection.—Ent. Soc. Philad. 2 ♂, 1 ♀, specimens.

This species answers in some respects to the description given of *H. fuscipennis* Brullé, from Hayti, but I am uncertain of their identity. It may be only a variety of that species. Prof. Poey informs me that this species devours the chrysalis of his *Pyralis flegialis*.

Hemiteles amœnus, n. sp.

Rufous; antennæ and abdomen black, banded with white; face, orbits, two spots behind the wings, two spots on the metathorax and the legs in part, whitish; wings hyaline

Female.—Rufous, opaque; face, orbits and mouth, white; antennæ as long as the body, black, with a broad white annulus beyond the middle. Thorax with the dorsal lines well impressed; on each side behind the posterior wings, a rather large, rounded, white spot; metathorax with a slight, transverse carina near the base, and on each side posteriorly a small white spot, elevated into a subacute tubercle. Wings hyaline, slightly dusky towards the tip, iridescent; nervures and stigma fuscous. Legs slender, dusky, whitish beneath; coxæ whitish, the posterior pair with a black line on the outside and a spot at tip on the inside; the four posterior tarsi black, with a broad white band on the middle; posterior tibiæ brownish. Abdomen subovate, slender at base, shining; basal segment rufous, white at tip; second segment black, tinged with piceous at base; third segment white, blackish on the middle at base; fourth and two following segments black, the fourth white on each side at base; remaining segments white; ovipositor rufous, scarcely half the length of the abdomen. Length $3\frac{1}{4}$ lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

Hemiteles bicinctus, n. sp.

Rufous; abdomen black, rufous at tip, two first segments banded with white; orbits, collar, line on pleura and four anterior coxæ, white; metathorax with two white tubercles; wings fusco-hyaline.

Female.—Rufous, opaque; orbits and mouth whitish; antennæ nearly as long as the body, black, basal joint beneath rufous. Thorax: collar, and an oblique line on each side of the pleura, white; metathorax with a slight, transverse carina near the base, and on each side posteriorly a white, obtuse tubercle, well developed. Wings fusco-hyaline, with a bright golden gloss; posterior pair hyaline; nervures and stigma black. Legs rufous, the four anterior coxæ white. Abdomen stout, subovate, shining, very slender at base, strongly arcuated; first and second segments black, with a broad white band at the tip of each; third segment also black, margined at tip with rufous; remaining segments rufous; ovipositor rufous, more than half the length of the abdomen. Length $2\frac{1}{4}$ lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

Hemiteles thoracicus, n. sp.

Brown; head and thorax clay-yellow; abdomen with a purple iridescence; wings banded with fuscous.

Female.—Head rather large, clay-yellow; antennæ slender, as long as the body, pale testaceous. Thorax: mesothorax clay-yellow, the dorsal lines deeply impressed; collar and tegulæ clay-yellow; pleura, scutellum and metathorax brown, the latter with a slight white pubescence, and two subobsolete pale spots at base. Wings hyaline, with a broad fuscous band towards the tip, covering the stigma, and a narrower one at the base of the first submarginal cell; nervures and stigma fuscous, the latter large. Legs brown, the four anterior pair paler; posterior tibiæ whitish at base. Abdomen ovate, rather stout, arcuated, brown, polished, with a slight purplish iridescence; apical margins of the segments somewhat pale; ovipositor brown, scarcely half the length of the abdomen. Length 2 lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

Hemiteles subflavescens, n. sp.

Pale honey-yellow; abdomen black, banded with white; orbits, spots on thorax, two spots on metathorax, and the four anterior coxæ, white; wings hyaline, iridescent.

Male.—Pale honey-yellow, shining; orbits, clypeus and palpi, whitish; antennæ two-thirds the length of the body, black, yellowish at base. Thorax: collar, tegulæ, a line beneath the anterior wings, a spot behind the posterior wings, and a spot on the pleura, white; scutellum with a white spot, as well as another on the postscutellum; metathorax with a

rather large white spot on each side behind. Wings hyaline, beautifully iridescent; nervures and stigma fuscous. Legs pale honey-yellow, the four anterior coxæ white. Abdomen elongate, slender, black or brown-black, base of the first segment yellowish, and the apical margins of all the segments white. Length $2\frac{1}{4}$ lines; expanse of wings $4\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **ISCHNOCERUS**. Grav.

Ischnocerus abdominalis, n. sp.

Black: orbits, spot on clypeus, annulus on antennæ, collar, tegulæ and scutellum, white; abdomen and legs rufous; wings hyaline.

Female.—Black; the orbits and a spot on the clypeus, white; antennæ two-thirds the length of the body, black, the 7th to 11th joints white. Thorax with two well impressed dorsal lines; collar, two short lines on the disk of the mesothorax, tegulæ, a sutural line before and a short line beneath the wings, white; scutellum polished, white; metathorax finely sculptured, the elevated lines scarcely defined. Wings hyaline, faintly clouded at the apex; nervures and stigma blackish; areolet wanting, or subobsoletely incomplete, the 2nd recurrent nervure very straight. Legs, with their coxæ, rufous; the posterior tibiæ and tarsi blackish; tibial spurs whitish. Abdomen robust, elongate-subovate, convex, petiolated, arcuated, shining, rufous; first segment square towards the tip; base of the second and third segments obfuscated; ovipositor rufous, rather more than half the length of the abdomen. Length 5 lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **MESOSTENUS**, Grav.

Mesostenus robustus, n. sp.

Black; antennæ with a white annulus; face, orbits, collar, spot on disk of mesothorax, tegulæ, line before and beneath the wings, most of pleura, scutellum, 4 lines on metathorax, legs and apical margins of abdominal segments, pale yellowish; wings hyaline; mesothorax with two stout, subacute spines.

Female.—Very robust, opaque; head black, face, orbits, cheeks, and palpi, dirty whitish; an obtuse tubercle on the middle of the face, the clypeus, labrum and a spot at base of mandibles, more whitish; lateral sutures of the clypeus and the apical half of the mandibles, black; antennæ as long as the body, slightly thickened near the tip, black, with a broad white annulus beyond the middle, basal joint beneath with a white line. Thorax black; mesothorax punctured, the dorsal lines deeply impressed, middle lobe with a large yellowish spot at tip, the lateral margins also narrowly yellowish for half their length towards the front, lateral pieces margined laterally with yellowish; the carinæ leading to the scutellum also yellowish; the collar, upper mar-

gins of the pectus bordering on the mesothorax, a large oblique stripe on the pleura connected behind with a large spot in front of each middle coxa, all pale yellowish; pleura and pectus finely aciculate; scutellum and postscutellum, yellowish, the space on each side black, margined posterior with yellowish; metathorax rugosely punctured, its posteriorly face transversely aciculate, with a stout, rather long, somewhat flattened, subobtuse, white spine on each side; black, with a broad longitudinal stripe on each extreme side, and on the posterior face two longitudinal stripes, curved inward at tip and running down inside of the spines to the base and covering the spines, white; on each side just behind the posterior wings a large yellow spot. Wings hyaline, nervures and stigma blackish, the latter with a pale dot near the base. Legs yellow, the femora tinged with honey-yellow; posterior coxæ with a black stripe on the outside. Abdomen robust, the base strongly arcuated; first segment smooth and polished, yellowish, with the sides and a large spot near the tip, black; second segment whitish, with a broad black band at base, the basal and apical margins honey-yellow; remaining segments whitish, more or less black at base; none of the black bands touch the lateral margins of the segments; ovipositor piceous-black, two-thirds the length of the abdomen. Length $6\frac{1}{2}$ lines; expanse of wings 12 lines.

Collection.—Dr. J. Gundlach. One specimen.

Mesostenus strenuus, n. sp.

Black; middle of face, orbits, annulus on antennæ, collar, spot on mesothorax, spot on pleura, scutellum, two lines and two spots on metathorax, legs, and bands on the abdomen, white or yellowish; wings hyaline; metathorax with two spines.

Male.—Head black; middle of the face, orbits, clypeus, mandibles, except tips, and the palpi, whitish; antennæ as long as the body, black, with a white annulus beyond the middle. Thorax black, shining; mesothorax sparsely and deeply punctured, the dorsal lines deeply impressed, at the tip of the middle lobe a round white spot, and on the inner margin of the side-pieces near the front a short whitish line; pectus and pleura longitudinally striated; the collar, tegulæ, a line before and a spot beneath the anterior wings, a large spot on the pleura, and another behind the posterior wings, all whitish; scutellum white, black at base, the carinæ in front connecting with the mesothorax, as well as the postscutellum, white, the space on each side black, margined posteriorly with white; metathorax black, transversely rugose, with a well defined transverse carina near the base, and on each side behind a rather long, well developed, somewhat flattened, subacute spine, on

the middle of the posterior face two longitudinal whitish lines commencing at the transverse carina, their anterior half narrow, their posterior half suddenly dilated and covering the spines, and on each extreme side posteriorly a whitish spot. Wings hyaline, slightly smoky at extreme tips, nervures and stigma blackish. Legs long, rather slender, pale honey-yellow, including the coxæ; posterior femora at tip above, apical two-thirds of their tibiæ, and the tips of all the tarsi, black; the coxæ and femora more deeply colored than the remainder of the legs. Abdomen rather short, fusiform, slightly compressed at tip, polished; basal segment longer than the second, white, with a broad black band near the tip; remaining segments black, rather broadly margined at tip with white. Length $6\frac{1}{2}$ lines; expanse of wings $11\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

This may be the male of *M. robustus;* the hind legs are, however, differently colored and the thorax somewhat differently marked.

Mesostenus tarsatus, n. sp.

Black; mesothorax brown; face, orbits, annulus on antennæ, spot on mesothorax, most of pectus and pleura, scutellum, posterior face and sides of metathorax, four anterior coxæ, and apical margins of abdominal segments, white; legs fulvous, hind tarsi black with a broad white annulus; wings hyaline, iridescent; metathorax not spinose.

Female.—Head white; a broad brownish, longitudinal band extending posteriorly, from the base of the antennæ, covering the ocelli and spreading on the occiput; most of mandibles and a spot above their base, black; eyes large and prominent, brown; antennæ slender, as long as the body, black, with a broad white annulus beyond the middle, and the basal joint beneath with a white line. Thorax: mesothorax minutely punctured, reddish-brown, with a rounded white spot on the disk, the dorsal lines well impressed; pectus dark brown, with a large white spot above each anterior coxa; pleura very finely aciculate, white on the sides and beneath, the anterior and posterior margins blackish; tegulæ, a line before and a spot beneath the anterior wing and a large spot behind the posterior wing, white; scutellum and postscutellum white, the space on each side black; metathorax without spines, brownish or reddish-brown, its posterior face entirely and its sides, white, on the middle a well defined, transverse carina, and just behind it on the declivity another transverse carina which is slightly prominent on each side where the spines are generally situated, between these two carinæ, the surface is longitudinally aciculate, the remainder of the posterior face is transversely aciculate, in front of the first carina the surface is finely punctured and almost smooth. Wings hyaline, iridescent, faintly

tinged with dusky; nervures blackish, stigma brown. Legs fulvous or bright yellow; the four anterior coxæ and a spot above at the base of the posterior coxæ, white; posterior tarsi black, with a broad white annulus near the tip; tips of the other tarsi also black. Abdomen stout, oblong-ovate, black, the apical margins of all the segments more or less broadly white; ovipositor piceous-black, as long as the abdomen, valves black. Length $5\frac{3}{4}$ lines; expanse of wings $10\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens examined.

Easily distinguished from the other species of this genus by the annulated hind tarsi.

Mesostenus lituratus, Brullé.

Mesostenus lituratus, Brullé, Hym. p. 208.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

This species is distinguished by the metathorax having two white spots at base, caused by having its basal margin black as well as a central longitudinal and a central transverse line, thus dividing the dorsal surface into four white spots, of which the basal ones are rounded and the posterior ones elongate, covering the spines, which are long and subacute; the second abdominal segment has also a white spot on each side.

Mesostenus zonatus, n. sp.

Black; face, orbits, broad annulus on antennæ, lines on mesothorax, most of pleura and metathorax, scutellum, and bands on abdomen, white; legs fulvous, posterior tarsi white, black at base; wings hyaline; metathorax not spinose.

Female.—Head black; the face, orbits, very broad on the cheeks, clypeus, mandibles and palpi, whitish; antennæ slender, as long as the body, black, with a very broad white annulus beyond the middle, the basal joint beneath also white. Thorax black; mesothorax smooth, with two dorsal, longitudinal lines, becoming confluent on the disk and forming a large spot, white; pectus and pleura whitish, the suture between them broadly black, and somewhat striated, the suture between the pleura and metathorax, also black; the scutellum, the carina on each side anteriorly, tegulæ, and the space immediately in front of the metathorax, broad behind the wings, whitish; metathorax whitish, the base in front of the transverse carina; a longitudinal line on each side extending posteriorly, curving outwardly at tip and ending in a spot, and a rather large, rounded spot just above the insertion of abdomen, black, posterior face transversely aciculate. Wings hyaline, slightly iridescent; nervures fuscous, stigma brown, with a pale spot at base. Legs pale fulvous; the anterior coxæ whitish, the posterior pair with a black stripe exteriorly; posterior tarsi white, the basal third black.

Abdomen elongate, subfusiform, slender at base, shining; basal segment white with a broad, median, black band; remaining segments black, their apical half white; ovipositor black, exserted half the length of the abdomen. Length 4½ lines; expanse of wings 8 lines.

Collection.—Ent. Soc. Philad. One specimen.

Mesostenus tricolor, Brullé.

Mesostenus tricolor, Brullé, Hym. p. 209.

Collection.—Ent. Soc. Philad. One specimen.

This species has the metathorax whitish, with its base broadly black, as well as a central and two lateral longitudinal lines, the central one is dilated in the middle and carinated; on the anterior third there is a transverse carina, and on the disk in front of this carina there are two short longitudinal carinæ which are approximate until near the base, where they diverge towards the scutellum; instead of a spine on each side posteriorly, there is a transverse, semicircular, acute carina; the surface is irregularly striated; the second abdominal segment is whitish on each side at base; the legs are entirely fulvous, except the tips of the tarsi, which are blackish. The single specimen before me is 4½ lines long; expanse of wings 7 lines.

Mesostenus subtenuis, n. sp.

Black; face, orbits, broad annulus on antennæ, two lines on mesothorax, most of pleura and metathorax, and bands on abdomen, white; legs pale fulvous; wings hyaline; metathorax and basal segment of abdomen spinose.

Male.—Head black; face, orbits, very broad on the cheeks, clypeus, and spot on mandibles, white; palpi yellowish; antennæ slender, rather longer than the body, black, with a very broad white annulus near the tip. Thorax black, shining, slightly pubescent; mesothorax with two, abbreviated, longitudinal, white lines on the disk, the dorsal lines deeply impressed; the collar, tegulæ, a sutural line before and a spot beneath the anterior wing, a spot beneath and a large space behind the posterior wing, the pleura, scutellum, and the carinæ in front and on each side, and the postscutellum, all whitish; the suture between the pectus and pleura, black; metathorax pubescent, polished, armed with a stout subobtuse spine on each side posteriorly, base black, with a broad central longitudinal black line and a narrow one on each side also black, rest of the surface yellowish, deeper on the sides. Wings hyaline, slightly iridescent; nervures and stigma pale fuscous; areolet much larger than usual. Legs long and slender, pale fulvous; the tarsi, especially the posterior pair, whitish, dusky at extreme tips. Abdomen elongate, subcompressed, shining, slender at base; first segment dilated on each side about the middle into a large, stout tubercle; remaining

segments clothed especially on the sides with short, blackish pubescence; basal segment white, with a central blackish stripe; second segment also white, with a broad central black band not touching the lateral margins, and a black line on each side at base confluent with the basal margin which is also black; remaining segments white, more or less black at base, but this color not touching the lateral margins. Length $3\frac{3}{4}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Easily recognized by the large tubercle on each side of the basal segment of the abdomen.

Mesostenus semialbus, n. sp.

Black; face, orbits, annulus on antennæ, two lines on mesothorax, most of pleura, metathorax and abdomen, white; legs fulvous; wings hyaline; metathorax with two long acute spines.

Female.—Head black; face, orbits, broad on the cheeks, clypeus, spot on mandibles, and palpi, white; antennæ about as long as the body, slender, black, with a broad white annulus a little beyond the middle, basal joint beneath with a pale spot. Thorax: mesothorax black, with two short lines on the disk, the dorsal lines deeply impressed; pectus black, aciculate, its upper margin bordering on the mesothorax, and a spot over each anterior coxa, white; tegulæ, a spot beneath the anterior wings and the pleura, sides and beneath except the lateral sutures, whitish; scutellum black, with a large white spot at tip, the carina on each side in front, the postscutellum, as well as the lateral carinæ leading to the base of the wings, also whitish; metathorax elongate, slightly pubescent, armed posteriorly with two long acute spines, whitish, a broad, central longitudinal stripe, broadly dilated at base, a narrow stripe on each side just outside of the spines, commencing in a spot near the base, and a small spot on each extreme side posteriorly, black; the dorsal surface just above the spines, and the sides are aciculate. Wings hyaline, slightly dusky at tips; nervures and stigma fuscous; areolet larger than usual. Legs long and slender, pale fulvous, the tarsi dusky at tips; coxæ whitish, each with an exterior black longitudinal line. Abdomen elongate, subfusiform, slender at base and subcompressed at tip, shining; basal segment black, with the tip and lateral margins white; second segment white, with a large triangular mark near the tip, and a short line on each side at base, confluent with the basal margin, black; third segment white, with its basal margin and a broad transverse mark confluent with the base, black; remaining segments white, with their basal margins narrowly black; ovipositor

black, two-thirds the length of the abdomen. Length $6\frac{1}{2}$ lines; expanse of wings $10\frac{1}{2}$ lines.

Male.—Resembles the female, except that the basal joint of the antennæ beneath is dull yellowish, and the spines on the metathorax more obtuse; the abdomen is not so distinctly marked on the 2nd and 3rd segments as in the female, and the 2nd segment is rufous instead of black, which may be owing to immaturity; the apical segments are more broadly black at base than in the female. Length $6\frac{1}{4}$ lines; expanse of wings $9\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two (♂ ♀) specimens.

Mesostenus flavescens, n. sp.

Yellowish; face orbits, annulus on antennæ, lines on mesothorax, and scutellum, whitish; wings hyaline; metathorax with two obtuse spines.

Female.—Pale honey-yellow, shining; vertex blackish; the face, broad orbits and clypeus, whitish; antennæ two-thirds the length of the body, black, with a whitish annulus beyond the middle, basal joint beneath pale; mesothorax honey-yellow, the dorsal lines well impressed, blackish, on the middle two longitudinal whitish lines interrupted by the blackish dorsal lines; tegulæ, a line before and a spot beneath the anterior wings, a space behind the posterior wings, the scutellum and postscutellum, and the carinæ in front of the scutellum, whitish; the space on each side of the scutellum, blackish; metathorax honey-yellow, finely sculptured and with two short, obtuse, whitish spines behind, the elevated lines well defined, the anterior transverse carina sinuate. Wings hyaline, slightly iridescent; nervures fuscous; areolet minute. Legs entirely pale yellowish. Abdomen elongate, subdepressed, shining, basal segment short, broad at tip, the peduncle short and robust; apical margins of all the segments obscurely whitish, more obvious on the first segment; ovipositor blackish, scarcely exserted. Length 3 lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

Mesostenus pusillus, n. sp.

Yellow; spot behind antennæ, occiput, mesothorax, except two central lines, most of pleura, and base of metathorax, blackish; hind legs and abdomen honey-yellow; wings hyaline, iridescent.

Female.—Head yellowish; a broad black stripe commencing behind the base of antennæ and extending back to the occiput, covering the ocelli, and becoming confluent with the black color which occupies nearly the whole of the occiput; face slightly dusky; antennæ slender, more than half the length of the body, pale honey-yellow. Thorax shining; mesothorax black, polished, the dorsal lines rather deeply

impressed and margined exteriorly with pale testaceous; pectus pale yellowish; pleura piceous, tinged with reddish beneath, a large spot beneath the hind-wing and a small one beneath the fore-wing, pale yellowish; scutellum and postscutellum pale yellowish, the space on each side, blackish; tegulæ and a large spot behind the posterior wing, pale yellowish; metathorax finely rugose, obliquely depressed behind, black above, with a large obcordate mark on the posterior face, pale yellowish, as well as the sides entirely. Wings whitish hyaline, iridescent; nervures and stigma pale fuscous; areolet minutely quadrate, the outer nervure obsolete. Legs long and slender, yellow; the posterior pair honey-yellow, their coxæ with a large blackish spot on both sides, confluent with the base. Abdomen elongate, very slender at base, subclavate, strongly arcuated, honey-yellow; 1st segment about one-third the length of the abdomen, linear, slightly broader at tip with a slight tubercle on each side near the apical third, basal half pale yellowish, the rest honey-yellow, darkest towards the middle; 2nd segment about same length as the 1st, gradually dilated towards the tip which is broad, the extreme base blackish; apex broad, truncate and faintly compressed; ovipositor slightly exserted, yellowish. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **EPIMECIS**, Brullé.

Epimecis ferruginosa, n. sp.

Bright honey-yellow, abdomen bright ferruginous; wings yellowish-hyaline; antennæ brown.

Female.—Head bright ferruginous, tips of mandibles blackish; eyes large and very prominent; antennæ slender, two-thirds the length of the body, blackish, the two basal joints ferruginous. Thorax bright honey-yellow, smooth and polished, neck elongate; mesothorax pointed in front, distinctly trilobed; scutellum obtusely elevated, yellowish; metathorax convex, smooth and polished, slightly pubescent, bright honey-yellow. Wings ample, deep yellowish-hyaline, the apex tinged with fuliginous; nervures pale ferruginous, stigma yellow; the costal vein for a short distance behind the stigma and the transverse vein dividing the costal cell from the first submarginal cell, blackish. Legs long and rather slender, bright honey-yellow, posterior pair ferruginous, with the extreme tips of their femora, tibiæ, and of all the tarsi, brown; apex of tarsi with a very large pulvilli, which is deeply emarginate at tip. Abdomen elongate, more than twice the length of the head and thorax, cylindrical, almost sessile, bright rufo-ferruginous, smooth and polished, slightly pubescent, especially towards the apex;

segments about twice as long as broad, somewhat flattened on the disk, deeply depressed on each side at base, leaving the middle of the base prominent, so as to form a broad rounded obtuse tubercle, at the apical fourth of each segment there is another lateral transverse depression; second segment very deeply impressed on each side at base; the three apical segments have a dusky streak down their middle; ovipositor nearly half the length of the abdomen, rufous, very acute, slightly thickened about the middle and finely grooved, valves black and pubescent. Length $7\frac{1}{2}$—$10\frac{1}{2}$ lines; expanse of wings $13\frac{1}{2}$—16 lines.

Collection.—Ent. Soc. Philad. Three ♀ specimens.

Epimecis fascipennis, n. sp.

Honey-yellow; head and antennæ blackish; wings pale yellowish, with a transverse band across the middle and the apical fourth, fuscous.

Female.—Honey-yellow, apex of abdomen paler, shining, slightly pubescent; head blackish, face obscure rufous; antennæ piceous (broken off beyond the 4th joint). Mesothorax dull honey-yellow, not so much pointed in front and not so distinctly trilobed as in *C. ferruginosa*. Wings ample, pale yellowish-hyaline, with a fuscous band, commencing narrowly at the base of stigma and gradually dilating to the posterior margin of the wing, covering nearly the basal half of the first submarginal cell, the apical fourth also fuscous; nervures and stigma pale yellowish, the costal vein for a short distance behind the stigma, the nervure dividing the costal cell from the first submarginal cell, and the cubital nervure at the base of the latter, blackish. Legs honey-yellow, the posterior tibiæ, their tarsi and tips of the other tarsi, brownish; pulvilli as in *ferruginosa*. Abdomen sculptured as in *ferruginosa*, with the incisures and sides of the segments more deeply depressed; ovipositor about one-third the length of the abdomen, rufous, valves black and pubescent. Length 5 lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Epimecis fuscipennis, n. sp.

Rufous; head, antennæ and legs, except base of femora and the coxæ, black; wings ample, fuscous.

Male.—Sculptured as in the preceding species; rufous, polished; head black, palpi rufous; antennæ nearly as long as the body, slender, black, piceous towards the tips. Legs rufous, the four anterior femora except base, the posterior femora entirely, all the tibiæ, and the four posterior tarsi, more or less blackish. Wings ample, fuscous, with a bronze reflection; nervures and stigma ferruginous. Abdomen elongate, subcylindric, rather more deeply sculptured than in the preceding species; entirely rufous. Length 5 lines; expanse of wings 9 lines.

Collection.—Dr. J. Gundlach. One specimen.

Epimecis atriceps, n. sp.

Honey-yellow; head and antennæ black, mouth yellow; abdomen dull ferruginous; wings hyaline, iridescent.

Female.—Head black; frontal orbits beneath antennæ obscurely rufous; clypeus, mandibles and palpi, yellow; antennæ slender, as long as the body, black, the basal joint beneath, dull rufous. Thorax entirely pale honey-yellow, smooth and polished. Wings rather short and narrow, hyaline, iridescent; nervures and stigma fuscous. Legs moderate, pale honey-yellow, posterior tibiæ and tarsi dusky, tips of all the tarsi brown, with pulvilli as in the preceding species. Abdomen about twice the length of the head and thorax, dull ferruginous, the segments deeply depressed at base and a little before the apex; ovipositor about one-third the length of the abdomen, blackish. Length 4 lines; expanse of wings $6\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Readily distinguishable from the other species by the smaller and hyaline wings.

Genus **CLISTOPYGA**, Grav.

Clistopyga? lateralis, n. sp.

Honey-yellow; face and orbits white; antennæ brown; abdomen ferruginous, with five black spots on each side; wings hyaline, areolet triangular, slightly oblique.

Female.—Honey-yellow, shining; face, orbits, clypeus, mandibles and palpi, white; eyes moderate, oval, slightly emarginate, black; antennæ slender, about as long as the body, entirely pale fuscous. Thorax smooth and polished; mesothorax dull honey-yellow, somewhat flattened; scutellum small and flattened; metathorax finely punctured, sides and posterior face rather suddenly depressed, on each side of the insertion of the abdomen a small black spot. Wings rather short and narrow, hyaline, iridescent, nervures and stigma pale fuscous; areolet small, triangular, and slightly oblique. Legs rather short and slender, yellow, pulvilli moderate and pubescent. Abdomen sessile, rather more than twice the length of the head and thorax, sides parallel; rufo-ferruginous, the 2nd and four following segments with a small black spot on each side at tip; segments slightly longer than wide, rather deeply depressed at base and apex, and the second segment obliquely depressed on each side at base; last ventral segment entire; ovipositor blackish, about one-third the length of the abdomen. Length $4\frac{1}{2}$ lines; expanse of wings 6 lines.

Male.—Resembles the female. Length $3\frac{1}{2}$ lines; expanse 5 lines.

Collection.—Dr. J. Gundlach. Two (♂ ♀) specimens.

I have placed this species in the genus *Clistopyga* with doubt, on

account of the distinct areolet of the wings; otherwise, it seems to belong to that genus. It seems also allied to *Glypta*, but the segments of the abdomen are not obliquely grooved.

Genus **PIMPLA**, Fabr.

Pimpla marginella, Brullé.

Pimpla marginella, Brullé, Hym. p. 107.

Collection.—Ent. Soc. Philad. 2 ♂, 1 ♀, specimens.

Pimpla rufoniger, n. sp.

Dull rufous; head, antennæ and abdomen, black, the apical margins of the latter obscurely pale; wings subhyaline, with a brassy gloss.

Female.—Head black, clothed, especially on the face, with short, white pubescence; middle of the face, clypeus and base of mandibles, rufous; labrum and palpi yellowish; antennæ very slender, rather longer than the body, piceous-black, the basal joint beneath rufous. Thorax above and beneath dull rufous, opaque; tegulæ and scutellum rufous; metathorax dull rufous, blackish at base above, sides of the dorsal surface transversely wrinkled, the disk smooth and shining, on the middle there is a transverse carina from which the surface slopes rather abruptly behind, sides rather abrupt, finely aciculate and slightly pubescent. Wings subhyaline, tinged with fuscous, and with a rather strong brassy gloss; nervures and stigma black, the latter with a pale dot near the base; areolet small, subtriangular, slightly oblique and subpetiolated. Legs, with the coxæ, rufous, the tarsi slightly obfuscated. Abdomen stout, strongly arcuated at base, smooth and shining, black, the apical margins of all the segments obscurely pale testaceous, sides of the apical segments and the whole of the ultimate one, rufous; ovipositor black, nearly two-thirds the length of the abdomen. Length $5\frac{1}{2}$ lines; expanse of wings $11\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

Closely allied to *P. marginella* Brullé, but is larger, more robust, and much darker in color; the antennæ are much longer and the metathorax differently sculptured, that of *marginella* being uniformly punctured, opaque, and entirely rufous.

Pimpla cubensis, n. sp.

Yellow; three stripes on mesothorax, sutures of pleura, and base of abdominal segments, black; wings yellowish-hyaline; 3rd joint of antennæ longer than the 4th.

Female.—Yellow, shining; spot enclosing the ocelli, pointed before, and tips of the mandibles, blackish; eyes also blackish; antennæ as long as the body, blackish above, brownish beneath, yellowish at base, 3rd joint one-third longer than the 4th, which is as long as the 1st and 2nd joints together. Thorax: mesothorax with a broad blackish stripe

down the middle, and another on each side over the base of the wings; tegulæ with a large blackish spot; sutures of the pleura, blackish; metathorax smooth and polished, sides abruptly truncate, extreme base, and the tip at the insertion of the abdomen, blackish. Wings ample, yellowish-hyaline; nervures and stigma fuscous; areolet small, subtriangular. Legs rather stout, yellow, the posterior trochanters and femora rufous, tips of the four anterior tarsi, blackish. Abdomen polished, dorsal surface of the three basal segments uneven, that of the basal segment grooved on each side and elevated in the middle which has also a shallow groove, yellow; the base of all the segments broadly black, those on the apical segments shading into brown; ovipositor stout, black, exserted about $1\frac{1}{2}$ line. Length $6\frac{1}{2}$ lines; expanse of wings 12 lines.

Collection.—Ent. Soc. Philad. One specimen.

Pimpla obscurata, n. sp.

Yellowish; antennæ yellowish-brown, 3rd joint longer than the 4th; mesothorax with three brown stripes; abdomen stained with dusky; wings yellowish-hyaline; legs bright yellow.

Female.—Yellowish, shining; antennæ as long as the body, yellowish-brown, the basal joint yellow, the 3rd joint one-third longer than the 4th as in *cubensis*. Thorax: mesothorax with three broad brown longitudinal stripes; the sutures between the pectus and pleura and between the pleura and metathorax, blackish; base of metathorax also blackish. Wings yellowish-hyaline, the apical margins dusky; nervures and stigma pale ferruginous; areolet small, subtriangular. Legs bright yellow, tips of the tarsi slightly dusky. Abdomen shining, obscure yellowish, the base of the segments blackish, the third and three following segments almost entirely dusky, with a slight purplish iridescence in certain lights, these segments are densely and rather deeply punctured; basal segment sculptured as in *cubensis;* ovipositor stout, black, exserted about $1\frac{1}{2}$ line. Length $5\frac{1}{2}$ lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

Closely allied to *P. cubensis*, but the abdomen is not so regularly colored and the segments are distinctly and deeply punctured, while those of *cubensis* are smooth and impunctured.

Pimpla terminalis, n. sp.

Yellow; antennæ black, 3rd joint as long as the 1st and 2nd together; mesothorax with a dorsal brown stripe; base of metathorax and of all the abdominal segments, black; wings yellowish-hyaline, with a fuscous spot at tip.

Female.—Yellow, shining; face pale yellow, tips of mandibles black; antennæ as long as the body, black, rufous at base, basal joint beneath yellow, 3rd joint as long as the 1st and 2nd joints together, the 4th joint about two-thirds the length of the 3rd, and equal with the follow-

ing joints. Thorax: mesothorax with a broad brown stripe down the middle; base of scutellum and of metathorax black, the latter has a well defined transverse subarcuated carina. Wings yellowish-hyaline, with a fuscous spot at tip; nervures fuscous, stigma fulvous; areolet small, subtriangular, oblique. Legs bright yellow, the two apical joints of the posterior tarsi black. Abdomen polished, smooth, yellow, the base of the first five segments rather broadly black; apex tinged with fulvous; ovipositor slender, rufous, exserted two-thirds the length of the abdomen. Length 5 lines; expanse of wings 10 lines.

Collection.—Ent. Soc. Philad. Two specimens.

Very closely allied to *P. cubensis*, but is smaller and easily distinguished by the fuscous spot at the tip of the wings; the joints of the antennæ, beyond the second, are shorter, and the ovipositor longer and slenderer.

Pimpla consimilis, n. sp.

Yellow; antennæ blackish, 3rd joint as long as the 1st and 2nd together; mesothorax with three brown stripes; base of the first five abdominal segments, and the hind tarsi, black; wings yellowish-hyaline, fuscous at tip.

Female.—Yellow, shining; antennæ as long as the body, blackish, rufous at base above, yellowish at base beneath, 3rd joint as long as the 1st and 2nd together, as in *terminalis*. Thorax: mesothorax with three longitudinal brown stripes; extreme base of metathorax black, sculptured as in *terminalis*. Wings deep yellowish-hyaline, with the apical margin, especially at the tip of the marginal cell, fuscous; nervures fuscous, stigma fulvous; areolet small, subtriangular or obliquely subquadrate. Legs yellow, the posterior tarsi black. Abdomen shining, the base of the first five segments black, very narrow on the fifth segment; ovipositor rufous, slender, scarcely half as long as the abdomen. Length $4\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Closely allied to *P. terminalis*, but the thorax is trilineated, the wings darker, and the hind tarsi entirely black. It may, however, be a variety of that species.

Pimpla tricincta, n. sp.

Yellow; antennæ, hind femora and apical half of abdomen, rufous; three stripes on mesothorax, and basal half of the three first abdominal segments, brown; wings yellowish-hyaline.

Female.—Yellow, shining; tips of mandibles black; occiput rufous; antennæ as long as the body, rufous, paler at the base beneath, the joints as in *cubensis*. Thorax: mesothorax with three broad, longitudinal, brown stripes; the sutures between the pectus, pleura and metathorax, the base of the scutellum and of the metathorax, blackish, the

latter smooth, without any transverse carina. Wings yellowish-hyaline, slightly dusky at tips; nervures fuscous, stigma fulvous; areolet small, subtriangular. Legs yellow; the posterior femora, apical half of their tibiæ and their tarsi, rufous. Abdomen robust, somewhat shining, densely and finely punctured, the three first segments yellow, with their base broadly dark brown; terminal segment also yellow; remaining segments rufous, the 4th and 5th somewhat brownish at base; basal segment grooved on each side and elevated in the middle which is also grooved; ovipositor stout, black, exserted about $1\frac{1}{2}$ line. Length 6 lines; expanse of wings 12 lines.

Collection.—Dr. J. Gundlach. One specimen.

Pimpla bicincta, n. sp.

Yellow; antennæ brown-black; mesothorax with three brown stripes; hind legs and apical half of abdomen reddish-brown; two basal segments of abdomen blackish, banded with yellow; wings yellowish-hyaline.

Female.—Yellow; on the vertex on each side of the ocelli, a brown spot; tips of the mandibles black; antennæ as long as the body, rather stout, brown-black above, apical joint and beneath reddish-brown, basal joint beneath yellowish, the joints as in *terminalis*. Thorax: mesothorax with three longitudinal, brown stripes; the sutures between the pectus, pleura and metathorax, and the extreme base of the latter, black; metathorax sculptured as in *terminalis*. Wings ample, yellowish-hyaline, with a fuscous spot at the tip of the marginal cell; nervures fuscous, stigma fulvous; areolet subtriangular, or obliquely subquadrate. Legs yellow; the posterior pair, with their coxæ, reddish-brown, the two apical joints of the their tarsi black, the claws of the remaining tarsi also black. Abdomen polished, reddish-brown, the two basal segments blackish, each with a broad yellow band at tip; ovipositor slender, rufous, as long as the abdomen, valves yellowish, tipped with blackish. Length 4 lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **EPHIALTES**, Gray.

Ephialtes rufescens, n. sp.

Rufous, shining; antennæ blackish; wings fuscous; ovipositor blackish, longer than the body.

Female.—Rufous, shining; head with the vertex and tips of mandibles black; antennæ nearly as long as the body, entirely black. Thorax with the dorsal lines well impressed, the middle lobe prominent; metathorax smooth and polished. Wings dark fusco-hyaline, slightly pale on the apical margin; nervures and stigma black, areolet triangular, subpetiolated. Legs rufous, the tarsi, especially the posterior pair,

dusky. Abdomen shining, the base and apex of the segments rather strongly contracted and the disk somewhat flattened, making the sides of the segments prominent, or subtuberculate; on each side of the second segment at tip, a transverse black spot; apical segments tinged with yellowish; ovipositor one-fourth longer than the body, piceous; valves black. Length 8 lines; expanse of wings 14 lines.

Collection.—Ent. Soc. Philad. One specimen.

EPIRHYSSA, nov. gen.

This genus differs from *Rhyssa* only in the shorter and stouter antennæ, in the absence of the areolet of the wings, and in the somewhat shorter segments of the abdomen; the mesothorax is also more gibbous and rather more deeply striated; otherwise the structure is the same. The males have the abdomen not longer than twice the length of the head and thorax, subcylindric, and sometimes subclavate; the antennæ are longer than those of the female, but never so slender as those of *Rhyssa*.

Epirhyssa speciosa, n. sp.

Yellow; antennæ blackish, with a yellowish annulus; mesothorax brown, with two yellow stripes; sutures of the pleura and base of the three first segments of abdomen, brown; apex of abdomen rufo-fulvous; wings yellowish-hyaline; ovipositor black, valves honey-yellow.

Female.—Slightly pubescent. Head yellow, shining; tips of mandibles, a band across the vertex covering the ocelli and the upper part of the occiput, blackish or brown; antennæ about two-thirds the length of the body, brown-black, the basal joints beneath yellowish, and slightly beyond the middle, a broad yellowish annulus. Thorax yellow, polished; mesothorax gibbous, transversely striated, the middle lobe rather strongly produced in front, brown, anterior margin yellow, lateral lobes brown, the lateral margins yellow; sutures between the pectus, pleura and metathorax, brown; scutellum yellow, its extreme tip blackish; metathorax yellow, smooth and polished, the sutures at base and apex blackish. Wings ample, yellowish-hyaline, with a splendid golden gloss, apex faintly clouded; nervures and stigma fulvous. Legs yellow, the posterior coxæ and femora tinged with ferruginous; tips of all the tarsi blackish. Abdomen smooth and polished, about twice the length of the head and thorax, gradually thickened towards the tip which is slightly compressed, basal segment slightly longer than wide, apical ones shorter; three first segments yellow, their basal half brown and their extreme apical margins blackish; fourth and following segments yellowish-fulvous, the fourth having on each side near the tip, a large, subtriangular, yellow spot, almost confluent on the disk; ovipositor

rather longer than the body, black, valves honey-yellow, whitish at tip. Length 8 lines; expanse of wings 13 lines.

Male.—Much smaller and slenderer than the female; the colors much brighter; the antennæ as long as the body, with the yellow annulus not so broad; the lateral lobes of the mesothorax more broadly margined with yellow; the abdomen elongate, cylindric, smooth and polished, more distinctly marked than in the ♀, the three first segments being bright yellow with a broad brownish band at base, remaining segments entirely rufo-fulvous. Length $5\frac{1}{2}$ lines; expanse of wings $8\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach ♀; Ent. Soc. Philad. ♂. Two specimens.

Epirhyssa alternata, n. sp.

Bright yellow; line on vertex, antennæ, except a narrow yellow annulus, mesothorax, except two yellow stripes, sutures of thorax, and the basal margins of the abdominal segments, brown; wings yellowish-hyaline; abdomen subclavate.

Male.—Bright yellow, polished, slightly pubescent; tips of mandibles black; a band across the vertex, covering the ocelli and the upper margin of the occiput, brownish. Thorax: mesothorax gibbous, deeply and transversely striated, the middle lobe rather strongly produced in front, brown, margined with yellow; lateral lobes brown, broadly margined with yellow; sutures between the pectus, pleura and metathorax, and at the base and tip of the latter, blackish-brown. Wings yellowish-hyaline, with a beautiful golden gloss, the apex slightly clouded; nervures and stigma pale yellowish. Legs bright yellow, the posterior trochanters tinged with ferruginous; all the tarsi towards the tips blackish. Abdomen about twice as long as the thorax, slightly thickened towards the apex, which is incurved; dorsal surface convex, smooth and polished, yellow, with the base of all the segments more or less broadly brown, becoming subobsolete and paler towards the apex. Length 5 lines; expanse of wings 8 lines.

Collection.—Ent. Soc. Philad. One specimen.

Resembles the ♂ of *E. speciosa*, but the abdomen is shorter, subclavate, and altogether differently colored.

Genus **LAMPRONOTA**, Haliday.

Lampronota rufithorax, n. sp.

Black; face, orbits, legs and large spot on pleura, white; most of thorax, rufous; wings hyaline, areolet wanting; abdomen tinged with fuscous, sessile, cylindrical.

Male.—Head transverse, polished; the face, except a spot beneath the antennæ, orbits, clypeus, mandibles, except tips, and the palpi,

white; eyes large, round and prominent; antennæ very slender, longer than the body, piceous, the basal joint beneath white. Thorax gibbous, smooth and polished, rufous; a line over the collar, tegulæ, a spot before and another beneath the anterior wing, and a large, oblong spot on each side of the pleura, white; mesothorax depressed before the scutellum, highly polished and very smooth; scutellum slightly flattened; metathorax convex, opaque, minutely rugose, without elevated lines, the dorsal surface with a large blackish stain. Wings narrow, hyaline, iridescent; nervures and stigma fuscous; areolet wanting; 2nd discoidal cell long and narrow. Legs whitish, long and slender, the coxæ robust; suture between the trochanters and femora, a subobsolete spot on the outside of the posterior coxæ, tips of their femora and tibiæ, and their tarsi entirely, more or less dusky; tarsal claws apparently simple, dilated at base and slightly curved at tip, the pulvilli large. Abdomen sessile, cylindrical, narrow, longer than the head and thorax, slightly thickened towards the tip; blackish, polished, the 3rd and 4th segments above stained with brownish; 1st segment elongate, linear, with a slight tubercle on each side towards the base; 2nd and 3rd segments subequal, about twice as long as broad, each with a slight tubercle on each side very near the base. Length $2\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Easily recognized by the long slender antennæ, the red polished thorax, and the elongate, slender, cylindrical, sessile abdomen. It may not belong to the genus under which I have placed it, but is more closely allied to it than to any other genus with which I am acquainted.

Genus **CAMPOPLEX**, Grav.

Campoplex tibiator, n. sp.

Dull rufous: head, antennæ, mesothorax and femora, black; base of antennæ, tegulæ, scutellum and all the tibiæ and 4 anterior tarsi, yellow; wings hyaline, apex fuscous, areolet large and subrhomboidal.

Female.—Head black, clothed with short pale pubescence, more obvious on the face; clypeus rufous; most of mandibles and the palpi, yellowish; antennæ two-thirds the length of the body, brown-black, the two basal joints yellow. Thorax clothed with a thin pale pubescence; mesothorax black, opaque; tegulæ yellow; pectus blackish, rufous about the collar; pleura dull rufous, shining, finely punctured; scutellum convex, opaque orange-yellow; postscutellum black, as well as the space on each side of the scutellum; metathorax dull rufous, dusky on the posterior face, clothed with short whitish pubescence, indistinctly sculptured, posterior face depressed and somewhat sulcate. Wings

hyaline, slightly tinged with fuscous, the apex fuscous; nervures ferruginous, the stigma fulvous; areolet large, subrhomboidal, slightly petiolated. Legs: coxæ and four posterior trochanters, rufous; anterior trochanters, tips of the middle femora, all the tibiæ and the four anterior tarsi, yellow; extreme tips of the posterior tibiæ, their spurs, and their tarsi entirely, dull ferruginous. Abdomen dull rufous, shining, slender at base and broad and much compressed towards the apex; second segment with its basal half above blackish, on each extreme side a longitudinal, deeply impressed line extending the whole length of the segment, and above this line at base a shallow, longitudinal fovea; ovipositor blackish, scarcely exserted. Length $6\frac{3}{4}$ lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

Campoplex insularis, n. sp.

Black; mouth, base of antennæ, tegulæ, and 4 anterior legs, yellow; posterior legs and abdomen ferruginous; wings subhyaline, areolet small, subtriangular and petiolated.

Female.—Head black, thinly clothed with short pale pubescence, more obvious on the face; most of the mandibles, and the palpi, yellowish; antennæ three-fourths the length of the body, brown-black, the three basal joints yellowish. Thorax black, slightly pubescent; mesothorax opaque, subobsoletely stained in front with dull rufous; pectus and pleura shining, finely striated longitudinally, with a smooth shining depressed space beneath the hind wings; scutellum rather convex, dull black, pubescent, posterior margin of the space on each side smooth and polished; metathorax dull black, rather densely clothed with appressed yellowish pubescence, the sculpture indistinct. Wings hyaline, faintly tinged with yellowish, the apical margin dusky; nervures and stigma fuscous, paler at base; areolet small, subtriangular and petiolated. Legs: the two anterior pairs with their coxæ and the posterior trochanters, yellow; posterior coxæ, femora, tibiæ and tarsi, ferruginous. Abdomen ferruginous, somewhat shining, slender at base and broad and much compressed towards the apex; base of first segment and the extreme apical margin of the second, black; ovipositor scarcely exserted. Length $5\frac{1}{2}$ lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Campoplex atriceps, n. sp.

Honey-yellow; head and base of 2nd abdominal segment, black; four anterior legs yellow; wings hyaline, apex fuscous, areolet rather large, subrhomboidal and petiolated.

Female.—Pale honey-yellow; head black, face clothed with short yellowish pubescence; clypeus and mandibles rufous; palpi yellowish;

antennæ fulvous, basal joint yellowish. Thorax shining beneath, and minutely punctured; mesothorax opaque, rather convex; tegulæ yellowish; metathorax slightly pubescent, somewhat furrowed down the middle with a longitudinal, slightly angular carina on each side, the space inside of these carinæ is finely and transversely striated, outside of these carinæ there are several transverse carinæ. Wings hyaline, faintly tinged with yellowish, and slightly iridescent, the apex fuscous; nervures and stigma pale testaceous; areolet rather large, subrhomboidal, and petiolated. Legs: all the coxæ and posterior legs, honey-yellow; four anterior legs yellow. Abdomen very slender at base, broad and much compressed towards the apex; basal two-thirds of the 2nd segment above, blackish; ovipositor scarcely exserted. Length 4 lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. One specimen.

Campoplex? pedalis, n. sp.

Black; face silvery; most of mandibles, palpi, tegulæ, a spot before the wings, and the four anterior coxæ and trochanters, white; legs honey-yellow or pale rufous; wings hyaline, iridescent, areolet very minute, petiolated; abdomen long and slender, compressed towards the tip.

Male.—Black, opaque, finely and densely punctured, thinly clothed with a short, fine, pale, glittering pubescence, more obvious and somewhat silvery on the face, cheeks and metathorax; face short, broad; eyes ovate, rather large; most of mandibles, and the palpi, whitish; antennæ three-fourths the length of the body, attenuated towards the tips which are slightly involute, black, the basal joint piceous beneath. Thorax slightly elongate, somewhat depressed above; mesothorax glabrous; a line over the collar, tegulæ and a sutural line before, white; scutellum flattened; metathorax clothed with a silvery pubescence, the elevated lines sharply defined, the central area rather large, rounded in front, and open behind. Wings moderate, hyaline, beautifully iridescent, the apical margins with a brilliant green reflection; nervures and stigma blackish; areolet very minute, almost obsolete, petiolated and oblique. Legs long and tolerably slender, honey-yellow or pale rufous, the anterior pair much paler, the four anterior coxæ and trochanters, white. Abdomen entirely black, about half again as long as the head and thorax, slender, gradually broader and compressed towards the apex, the two basal segments long, subequal, the 1st slightly dilated at tip; the 3rd and following segments rather broad and much compressed. Length 4 lines; expanse of wings 6 lines.

Collection.—Dr. J. Gundlach. One specimen.

Campoplex? bellus, n. sp.

Yellow, abdomen and legs honey-yellow; antennæ, three lines on mesothorax, spot on pleura, another on scutellum, and an inverted U on metathorax, black; antennæ and legs stout; thorax robust, gibbous; abdomen short, ovate, compressed, with a slender petiole; wings moderate, hyaline, dusky at tip, areolet very minute, almost obsolete, petiolated.

Female?—Head very transverse, flat, entirely yellow, except a blackish spot on the vertex enclosing the ocelli; eyes ovate, not prominent; antennæ nearly as long as the body, stout, black, the two basal joints yellowish, the other joints indistinct. Thorax gibbous, short and robust, yellow; mesothorax with three broad, black, longitudinal stripes, the middle one abbreviated behind, the lateral ones abbreviated before and confluent behind by means of a subtriangular spot in the excavation in front of the scutellum; on each side of the pleura a rather large, transverse, black spot; scutellum gibbous, shining, yellow, with a large black spot behind, as well as another on the postscutellum; metathorax not prominent, yellow, with an elongate spot on each side confluent at base with the spot on the postscutellum and forming an inverted U; the elevated lines obsolete. Wings moderate, hyaline, iridescent, the apex dusky; nervures and stigma fuscous; areolet extremely minute, almost obsolete, petiolated, the cubital nervure within the submarginal cell strongly arcuated towards the costa. Legs yellow, short, the posterior pair longer and robust, honey-yellow, their coxæ black at base; tips of four anterior tibiæ with a very long inner spur, and a short outer one on the middle pair, not visible on the anterior pair; the posterior tibiæ each with two long stout spurs, of which the inner one is longest; posterior femora robust and simple. Abdomen short; 1st segment slender, slightly dilated at tip with a subobsolete tubercle on each side near the apex; 2nd and following segments together broadly ovate and much compressed, honey-yellow, dusky on the disk of the 2nd segment; at tip of the 1st segment above a large blackish spot. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

This pretty little species will probably form a new genus, as I cannot reconcile it with any genus at present known to me; the robust thorax, the gibbous scutellum, the stout antennæ and legs, the short, broad, ovate, compressed abdomen, and the long, unequal tibial spurs, are characters not combined in any genus known to me; but having only a single specimen, which, judging from the broad abdomen, is apparently a female, I do not care to form another genus, and for the present refer it to *Campoplex*, to which it seems most closely allied.

Genus **THYREODON**, Brullé.

Thyreodon grandis, n. sp.

Black; antennæ fulvous; wings deep violaceous; metathorax irregularly, but finely striated laterally and posteriorly.

Female.—Deep black, shining, slightly pubescent; head entirely black, the face densely punctured, lateral foveæ of the clypeus very deep; antennæ two-thirds the length of the body, fulvous, the basal joint black, the two following joints rufous, the extreme apical joints dusky. Thorax finely punctured; mesothorax very minutely and indistinctly punctured, with the dorsal furrows rugose, broad, converging on the scutellum and confluent behind the middle, each furrow with a more or less well defined carina down the middle; scutellum convex, densely punctured, deeply excavated in front, with the carina on each side of the excavation sharp and well defined; metathorax opaque black, depressed behind, with a broad, shallow excavation strongly contracted at base, dorsal surface broadly depressed on each side of the disk, sides rather abrupt, surface irregularly, rather finely and longitudinally striated behind, and transversely and more coarsely on the sides. Wings uniform dark fuscous, with a brilliant deep violaceous reflection; nervures and stigma black. Legs entirely black. Abdomen elongate, falcate, shining, impunctured, rather broad and compressed towards the tip; basal segment longest, slender, subcylindric, the tip slightly swollen and convex; 2nd segment one-fourth shorter than the 1st, gradually broader towards the tip, and on each side of the basal half a longitudinal, shallow furrow; 3rd segment shorter than the 2nd and slightly longer than broad, remaining segments broader than long; ovipositor not exserted. Length 15 lines; expanse of wings 21 lines.

Male.—Resembles the female, but the wings are not so dark, the apical margin being subhyaline, and the violaceous reflection is not so deep; the abdomen is longer and not so broad and compressed towards the apex; the 4th, 5th and 6th ventral segments are concealed by the same dorsal segments, which are tightly closed over them; at the extreme apex of the venter there are two elongate processes, obliquely pointed at the tip, and just above these, on each side of the last dorsal segment, there is a straight, acute spine. Length 16 lines; expanse of wings 21 lines.

Collection.—Ent. Soc. Philad. 2 ♀, 1 ♂, specimens.

One of the female specimens has the head, with the exception of a space behind the antennæ covering the ocelli, entirely rufous, as well as a subtriangular spot on each side of the thorax before the tegulæ.

I received this species under the name of *Ophion morio* Fabr., but

it differs so much from our local species, which is generally supposed to be the *morio* of Fabricius, that I cannot consider them as identical, and have therefore described it under another name. The specimens before me of our local species differs from the above species by being smaller ($12\frac{1}{2}$ lines long, 18 lines expanse of wings), the wings have a bronze reflection, the metathorax is strongly rugose, or rather coarsely reticulated, the abdomen in the ♀ is broader and much more compressed towards the apex, and the punctures of the body are more distinct; but none of the specimens before me have the anterior legs testaceous. or the front of the head with yellow spots, as stated by Fabricius and Olivier. Brullé, however, makes no mention, in his description of *morio* Fabr., of the front legs being testaceous, or the head having yellow spots. Although this species and *morio* are closely allied, yet the former may be easily distinguished by the larger size, the deep violaceous wings, and the sculpture of the metathorax, which is not at all strongly rugose and reticulated, as is the case with *morio*, but is rather finely striated on the sides and posterior face.

Thyreodon fulvescens, n sp.

Fulvous or honey-yellow; face and orbits yellow; wings yellow; basal half of 2nd abdominal segment above, black.

Male.—Fulvous or honey-yellow, shining, clothed with a short yellowish pubescence, more obvious when viewed laterally; face, orbits, clypeus, mandibles, except tips which are black, yellow; palpi fulvous; antennæ two-thirds the length of the body, fulvous, the basal joint beneath, yellow. Thorax: mesothorax very finely and indistinctly punctured, the dorsal furrows deep and converging on the scutellum; pleura smooth and polished; scutellum convex, polished, tinged with yellowish; metathorax opaque, rather abruptly sloped behind, indistinctly sculptured above, but rather coarsely reticulated on the sides; tegulæ yellowish. Wings yellowish-hyaline, the apical margins fuliginous; nervures ferruginous. Legs color of the body, the tibiæ and tarsi somewhat paler. Abdomen elongate, rather broad and compressed towards the apex, smooth and polished; basal half of the second segment above, black; anal processes rather thick and obtusely pointed. Length $12\frac{1}{2}$ lines; expanse of wings 17 lines.

Collection.—Ent. Soc. Philad. One specimen.

Thyreodon affinis, n. sp.

Fulvous or honey-yellow; tip of antennæ and base of 2nd abdominal segment blackish; wings fuscous with a violaceous reflection.

Male.—Fulvous or honey-yellow, shining, clothed with a very short, yellowish pubescence, more obvious when viewed laterally; orbits paler,

mandibles tipped with blackish; antennæ two-thirds the length of the body, fulvous, apical joints brown-black. Thorax: mesothorax indistinctly punctured, the dorsal grooves broad and rather deep, with a subobsolete elevated line down the middle of each groove; pleura polished; scutellum convex, deeply excavated in front, with the carina on each side acutely developed; metathorax abruptly sloped behind, with a broad shallow furrow posteriorly, becoming deeper towards the insertion of the abdomen where the surface is longitudinally striated, remainder of the surface indistinctly sculptured. Wings dark fuscous, with a violaceous reflection, more obscure on the apical margins; nervures blackish. Legs, color of the body. Abdomen elongate, falcate, apical segments compressed, but not very broad; basal half of the 2nd segment above, black; anal processes broad, obliquely pointed at tips which are acute. Length 12 lines; expanse of wings 17 lines.

Collection.—Dr. J. Gundlach. One specimen.

Closely allied to *T. fulvescens*, but is at once distinguished by the dark violaceous wings, and the black apical joints of the antennæ; the face is not yellow, the mesothorax is more broadly furrowed, and the abdomen is not so broad towards the apex.

Thyreodon elegans, n. sp.

Bright yellow; three broad stripes on mesothorax, sutures of thorax beneath, posterior face of metathorax, femora, spot near tip of 1st abdominal segment, as well as the basal half of the 2nd, black; abdomen margined with ferruginous above and beneath; wings yellow, apical margins fuliginous.

Female.—Head yellow, shining, a spot behind the base of each antenna, surroundings of the ocelli, tips of mandibles, a dot on middle of the face just beneath the antennæ, and most of the occiput, brown-black; antennæ scarcely half the length of the body, stout, fulvous, the apical joints black, the basal joint beneath tinged with yellow. Thorax shining, slightly pubescent, finely punctured; mesothorax with three broad, black, longitudinal stripes, the middle one extending from the anterior margin almost to the scutellum, the lateral ones abbreviated in front but reaching the posterior margin, dorsal lines obsolete, but the middle is depressed in front and slightly carinated longitudinally, the angles in front, on each side of the depression, are elevated into an obtuse tubercle; pectus blackish, slightly reddish towards the collar which has a yellow line extending down on each side; pleura polished, yellow, with a broad, uneven, longitudinal line on each side bordering on the posterior suture, a transverse line on each side below, and the entire surface beneath between the four anterior coxæ, black; space between the pleura and metathorax blackish, broadly yellow on each

side; scutellum prominent, quadrate, yellow, densely punctured, deeply excavated in front and acutely carinated on each side, the excavation blackish; postscutellum yellow; metathorax prominent, yellow, basal suture strongly contracted, posterior face abruptly sloped, channelled down the centre, brown-black, and as well as the sides, rather coarsely reticulated; tegulæ yellow. Wings rather short, deep yellowish-hyaline, the apical margin broadly fuliginous, nervures honey-yellow; posterior pair with a large fuscous spot near the base. Legs yellow; a large spot at base of posterior coxæ, the anterior femora beneath obscurely, the four posterior femora, except base and apex, and the extreme tips of all the tarsi, blackish. Abdomen elongate, polished, broad and compressed towards the tip; basal segment bright yellow, with a large irregular black mark above near the tip; 2nd segment honey-yellow, the basal half above black; following segments honey-yellow, their sides broadly bright yellow; ovipositor not exserted. Length 9½ lines; expanse of wings 12 lines.

Collection.—Dr. J. Gundlach. One specimen.

This is a beautiful species; the antennæ and wings are much shorter than any of the other species of this genus.

Genus **PORIZON**, Grav.

Porizon fulvescens, n. sp.

Pale honey-yellow; antennæ dusky; base of 1st and disk of 2nd and 3rd abdominal segments blackish; wings hyaline, iridescent.

Female.—Pale honey-yellow, shining; orbits, middle of face, clypeus and mouth paler; antennæ nearly as long as the body, dusky. Thorax: mesothorax with the dorsal lines tolerably well impressed, darker in color than the rest of the thorax; space on each side of the scutellum blackish; metathorax with the elevated lines well defined, the central area large, elongate, angular in front and truncate behind. Wings whitish-hyaline, iridescent; nervures and stigma pale testaceous. Legs yellowish, tinged with honey-yellow. Abdomen very slender at base, gradually broader and much compressed towards the tip which is truncate; honey-yellow, the base of the 1st and the dorsal surface of the 2nd and 3rd segments, more or less blackish; ventral segments yellowish; ovipositor two-thirds the length of the abdomen, piceous, porrect. Length 3 lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

Porizon apicalis, n. sp.

Pale honey-yellow; head, part of thorax, and base of legs, yellow; basal middle of metathorax, base of the 2nd and 3rd, and the two apical segments of abdomen, fuscous; wings hyaline.

Male.—Pale honey-yellow, shining; head yellow, tips of mandibles

black; antennæ dusky, two basal joints yellow. Thorax honey-yellow, the mesothorax, pectus, tegulæ and scutellum stained with yellow; metathorax with the elevated lines well defined, the central area rather large and pentangular, black, the area behind it finely rugose. Wings hyaline, iridescent; nervures and stigma pale testaceous. Legs yellowish, tinged with honey-yellow, the coxæ and trochanters yellow, the posterior tibiæ and tarsi somewhat dusky. Abdomen elongate, very slender at base, gradually broader and much compressed towards the tip; base of the 2nd and 3rd segments above, and the two apical segments entirely, fuscous. Length 3 lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

May possibly be the male of *P. fulvescens*, from which it differs in the sculpture of the metathorax, and in the somewhat different coloration.

Genus **TRACHYNOTUS**, Grav.

Trachynotus cincticornis, n. sp.

Honey-yellow ♀, rufo-ferruginous ♂; antennæ longer than the body, with a broad yellowish annulus near the tip; posterior tarsi with 2nd and 3rd joints whitish; four anterior legs, and apical half of abdomen in ♂, honey-yellow; wings hyaline.

Female.—Honey-yellow, slightly pubescent; face sparsely but deeply punctured; antennæ slender, rather longer than the body, apical two-thirds blackish, with a broad yellowish annulus near the tip, basal third rufous. Thorax shining beneath; mesothorax roughly and confluently punctured, somewhat rugose; most of pectus and a depression on the pleura beneath the wings smooth and polished, rest of pleura sparsely and deeply punctured; scutellum rugose, the excavation in front transversely striated, the spaces on each side deeply excavated, the posterior one striated; metathorax rugose, smoother and shining at base, on each side of which, above, there is a semicircular carina enclosing a small space which is smooth and polished and from which there are several carinæ radiating posteriorly, but soon become lost in the rugosity, the smooth space at base, between the two semicircular spaces, is somewhat depressed, sides of the metathorax clothed with a fine whitish pubescence. Wings obscure hyaline, faintly iridescent; nervures and stigma brown. Legs honey-yellow, the two anterior pairs pale, the apex of the posterior tibiæ and their tarsi, dusky, the 2nd and 3rd joints of the latter whitish. Abdomen: the two basal segments long and slender, cylindrical, polished, rufo-ferruginous, apical segments compressed and pale honey-yellow; ovipositor exserted about

two lines, yellowish, valves black. Length 7 lines; expanse of wings 8 lines.

Male.—Resembles the female, but the general color is rufo-ferruginous, the abdomen is slenderer and not so much compressed beyond 2nd segment.

Collection.—Ent. Soc. Philad. ♀; Dr. J. Gundlach ♂. Two specimens examined.

Trachynotus fuscatus, n. sp.

Fuscous; face and four anterior legs ferruginous, ♀; rufo-ferruginous, orbits yellow, abdomen fuscous, with base of 1st and the 4th, 5th and 6th segments of the latter ferruginous, as well as the 4 anterior legs, ♂; wings obscure hyaline.

Female.—Slightly clothed with a very fine whitish pubescence. Head dull ferruginous, the orbits, base of mandibles and palpi, paler; tips of mandibles blackish; antennæ scarcely longer than the head and thorax, piceous, the basal joint rufous. Thorax fuscous; mesothorax with a dorsal longitudinal carina, on each side of which the surface is transversely striated, near each side in front a longitudinal ferruginous stripe; pectus striated, pleura finely rugose, smoother immediately beneath the wings; scutellum rugose, mostly ferruginous, the spaces on each side deeply excavated and rugose; metathorax fuscous, strongly rugose or densely and coarsely reticulated; tegulæ yellowish. Wings obscure hyaline, slightly dusky at tips; nervures and stigma fuscous. Legs pale ferruginous; the posterior pair, except coxæ, more or less fuscous; the four anterior tarsi and the tibiæ, slightly dusky. Abdomen dark fuscous, base of the 1st and the 4th segments, sometimes obscurely, ferruginous; the three basal segments linear and subcylindric, the 1st segment somewhat swollen at the tip, the remaining segments broader and subcompressed; ovipositor exserted about two lines, yellow or ferruginous, valves fuscous. Length 4 lines; expanse of wings $4\frac{1}{2}$ lines.

Male.—Rufo-ferruginous; the orbits, dilated on each side of the face, and the tegulæ, yellow; mesothorax not so distinctly sculptured as in the ♀, but more irregularly rugose, with the lateral stripes obsolete; legs ferruginous, the two anterior pair tinged with yellowish; posterior trochanters, tips of their femora and tibiæ and the tarsi entirely, fuscous; abdomen blackish-fuscous, the basal half of the 1st and the 4th and 5th segments entirely, pale ferruginous; same size as ♀.

Collection.—Ent. Soc. Philad. 2 ♀, 1 ♂, specimens.

Trachynotus basalis, n. sp.

Black, slightly varied with fuscous; orbits, mouth, two lines on mesothorax,

tegulæ, scutellum, tip of metathorax, 4 anterior legs, and extreme base of abdomen, ferruginous; wings hyaline, iridescent.

Male.—Black, sculptured like the preceding species, but more finely; orbits, clypeus, mandibles and palpi, pale yellowish; antennæ blackish, the basal joint beneath yellowish. Thorax black; a short line on each side of the mesothorax in front, tegulæ, a spot before and another beneath the anterior wing, the scutellum and the tip of the metathorax, ferruginous. Wings hyaline and beautifully iridescent; nervures and stigma fuscous. Legs: the two anterio pairs, with their coxæ, ferruginous, tinged with yellowish in front; posterior pair fuscous, tips of their coxæ ferruginous. Abdomen blackish-fuscous, the middle segments somewhat paler; basal half of the 1st segment yellow. Length 3 lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

This may be a dark ♂ variety of *T. fuscatus.*

Genus **CREMASTUS**, Grav.

Cremastus luctuosus, n. sp.

Black; mouth, tegulæ and four anterior legs, white; apex of abdomen slightly stained with ferruginous; wings hyaline, iridescent.

Male.—Black, clothed with a thin, appressed, very fine, whitish pubescence, more obvious on the face, where it is somewhat silvery; most of mandibles and the palpi, white; antennæ more than half the length of the body, blackish. Thorax very minutely punctured, the mesothorax opaque and glabrous; pleura slightly shining, with a striated space beneath the anterior wings; tegulæ white; scutellum rather large, flattened and pubescent; metathorax pubescent, the elevated lines distinct, enclosing on each side of the middle a large, irregular space, leaving a long, narrow, depressed space on the disk. Wings hyaline, with a purple iridescence; nervures and stigma black. Legs: the two anterior pairs, with their coxæ, white; the middle femora beneath, except at base, black; posterior legs black, the extreme base and apex of their femora whitish. Abdomen elongate, slender, black; beyond the 2nd segment, gradually broader and much compressed; apical third of the 4th and the ventral segments, pale ferruginous. Length 4 lines; expanse of wings $4\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

This species makes an oval cocoon, $2\frac{1}{2}$ lines long and $1\frac{1}{4}$ broad, of a dirty white color, with a narrow, tolerably regular, median, black band, and a spot on each end near which there is a row of large irregular spots, sometimes confluent, also black.

EIPHOSOMA, nov. gen. (Fig. 5.)

Head transverse, wider than the thorax; face flat; clypeus small, slightly prominent, rounded in front; mandibles, moderate, broad; eyes large, ovate, entire; ocelli placed in a triangle on the vertex; front excavated behind the antennæ; palpi long and slender. *Antennæ* moderate, rather slender, longer in the ♂; basal joint short, globose, obliquely truncate exteriorly, receiving the 2nd and 3rd joints, the 3rd minute; 4th joint long, the 5th and 6th subequal, each shorter than the 4th, remaining joints gradually shorter, the terminal joint as long as the two preceding joints, acuminate at tip. *Thorax* gibbous, short and narrow; mesothorax with the middle lobe prominent; scutellum suborbicular, more or less convex; metathorax moderate, its face oblique, with a deep longitudinal central groove. *Wings* moderate; stigma slender; areolet minute, oblique, or wanting. *Legs* slender, the two anterior pairs short; posterior pair very long, their femora slightly thickened, with a short, stout, acute tooth beneath near the tip; all the coxæ short and robust, the trochanters elongate, the four anterior femora long, slender and slightly recurved; tibiæ slender, gradually thickened towards the tips, the spurs long, those at the tips of the four anterior tibiæ unequal, those on the posterior pair equal in length; tarsi slender, the claws very small, apparently simple, pulvilli large. *Abdomen* very long, slender, shaped somewhat like an inverted cimeter; two basal segments long and linear, second rather the longest; remaining segments broad and much compressed; apex obtuse in the ♂, truncate in the ♀, the ovipositor sometimes short and sometimes moderately long, the sheaths pubescent, thickened at tips, sometimes apparently proceeding from the superior portion of the ventral valve, as represented in the figure.

Fig. 5.



This genus may be known by the long, slender, compressed abdomen, shaped somewhat like an inverted cimeter, and the long posterior legs, with their femora toothed beneath near the tips. It seems to be closely allied to *Cremastus* and also to *Angitia* Holmgren, but differs from both genera principally by the toothed posterior femora.

Eiphosoma atrovittata, n. sp.

Yellow; posterior legs and abdomen dull honey-yellow; three lines on mesothorax, three on metathorax and an oblique one on pleura, black; wings hyaline, tips fuscous, areolet minute, oblique and petiolated.

Female.—Head yellow, tips of mandibles and a spot on vertex cover-

ing the ocelli, brown; antennæ more than half the length of the body, blackish, the two basal joints yellowish. Thorax yellow, shining; mesothorax with three broad, longitudinal, black stripes, the central one entire, the lateral ones abbreviated, before and behind where they are somewhat rufous; on each side of the pleura, an oblique, black, depressed line; scutellum yellow, convex and polished; metathorax yellow, with three longitudinal black lines, the central one depressed and broadest, the lateral ones interrupted towards the base. Wings hyaline, slightly iridescent, the extreme tips fuscous; nervures and stigma black; areolet minute, narrow, oblique, petiolated. Legs pale honey-yellow, the four anterior coxæ yellow; the posterior pair dull honey-yellow. Abdomen very long and slender, dull honey-yellow, the 1st segment yellow at base; a line on the disk of the 2nd segment, almost reaching the tip, and a spot at the base of the 3rd segment above, black; sides of the 4th, 5th and 6th segments sometimes stained with fuscous; ovipositor exserted about 2 lines, rufous, valves black. Length 7 lines; expanse of wings $7\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

A ♀ variety in the Collection of Dr. Gundlach is smaller, much paler in color, and the lateral black lines of the metathorax are not interrupted.

Eiphosoma vitticollis, n. sp.

Yellow; antennæ, three lines on mesothorax, a central one on metathorax, base and apex of posterior tibiæ and their tarsi black, their femora fulvous; abdomen slightly tinged with fulvous, the narrow dorsal surface blackish; wings hyaline, areolet minute, oblique, petiolated.

Female.—Head yellow, faintly tinged with fulvous; tips of mandibles, large spot on vertex enclosing ocelli, and two spots on occiput behind the ocelli, blackish; antennæ rather more than half the length of the body, blackish, the two basal joints yellowish. Thorax yellow, shining; mesothorax lobed in front, sparsely punctured, polished, with three broad, longitudinal stripes, the central one entire, broadest in front, the lateral ones abbreviated in front where they are broadest and rounded; pleura entirely yellow; metathorax yellow, polished, with a slight transverse carina near the base, angular before the central longitudinal sulcus which is black and rather deep. Wings hyaline, faintly tinged with fuscous, slightly iridescent; nervures and stigma fuscous; areolet minute, oblique, petiolated. Legs yellow; posterior legs very long, their femora fulvous, dusky near their base, their tibiæ yellow, black at base and apex, as well as their tarsi, tibial spurs yellowish. Abdomen very long and slender, yellowish-fulvous; two basal segments

linear, the 2nd somewhat flattened, the other segments gradually broader and much compressed towards the apex which is truncate; narrow dorsal surface of the second and following segments, black; ovipositor exserted about 3 lines, rufous, valves black. Length 7 lines; expanse of wings 8 lines.

Collection.—Ent. Soc. Philad. 2 ♀, 1 ♂, specimens.

Readily distinguishable from the preceding species by the metathorax having only a central black line, and by the different color of the hind legs.

Eiphosoma annulata, n. sp.

Yellow; vertex, occiput, antennæ, three stripes on mesothorax, sutures of and an oblique line on pleura, three lines on metathorax, spot on posterior coxæ, their trochanters, base of their femora, and their tibiæ and tarsi, black or blackish; abdomen tinged with ferruginous, apical half of the 1st and most of the 2nd segments dusky in ♀, all the segments annulated with blackish in ♂; wings hyaline; areolet minute, petiolated.

Female.—Head yellow; a large spot on the vertex enclosing ocelli and most of the occiput, black; antennæ rather more than half the length of the body, blackish, the two basal joints yellowish. Thorax yellow, sometimes tinged with ferruginous, shining; mesothorax densely and finely punctured, with three broad, longitudinal, black stripes, the central one entire, the lateral ones abbreviated in front; pleura with an oblique, rather broad, black, depressed stripe on each side, confluent with a rather large black spot beneath the wings, which is again confluent with a black stripe extending down on the suture between the pleura and pectus; the suture between the pleura and metathorax also blackish; scutellum convex, polished, yellow, the space around it blackish; metathorax yellow, black at base, rather broadly and deeply excavated on the disk, the excavated space black, as well as a stripe on each side, broad at base, and abbreviated posteriorly; on each side at base there is a semicircular carina, not well defined. Wings purely hyaline, iridescent; nervures and stigma fuscous; areolet minute, petiolated, slightly oblique. Legs yellow; posterior coxæ yellow, with a large exterior black spot, their trochanters black, yellowish at tip, their femora fulvous, blackish at base and near the tip, their tibiæ and tarsi blackish, the former with a pale annulus about the middle. Abdomen very long and slender, honey-yellow; apical half of 1st segment, except extreme tip, the 2nd segment except tip and lateral middle, and disk of the 3rd segment obscurely, dusky; ovipositor about half the length of the abdomen, rufous, valves blackish. Length 5 lines; expanse of wings $5\frac{1}{2}$ lines.

Male.—Colored like the female, except that the 3rd and following segments of the abdomen are broadly annulated at base with blackish.

Collection.—Ent. Soc. Philad. 2 ♀, 1 ♂, specimens.

Prof. Poey informs me that this species is "parasitic upon a larva of *Pyralis*."

Eiphosoma nigrovittata, n. sp.

Bright yellow; abdomen and hind legs honey-yellow; three stripes on mesothorax, an oblique line on pleura and a short one on disk of metathorax, black; wings hyaline, iridescent, areolet wanting.

Female.—Head yellow, slightly tinged with fulvous; extreme tips of mandibles and a spot behind the ocelli, black; antennæ rather more than half the length of the body, brown-black, basal joint beneath yellowish. Thorax bright yellow, smooth and polished; mesothorax with three broad, longitudinal, black stripes, middle one entire, lateral ones abbreviated especially in front where they are dilated and rounded; on each side of the pleura an oblique black stripe; behind the scutellum an irregular black mark which extends, on each side, on the suture between it and the metathorax; scutellum slightly convex and polished; metathorax bright yellow, rather broadly sulcate longitudinally, with a broad, elongate black mark on the disk. Wings hyaline, iridescent, extreme apex fuscous; nervures and stigma black. Legs yellow, tinged with fulvous, the posterior pair honey-yellow, their tarsi slightly obfuscated, their femora somewhat swollen towards the tip, near which beneath there is a small tooth. Abdomen long and slender, honey-yellow, the two basal segments long and linear, the remaining segments broad and much compressed, the apex truncate; the extreme base and a line on the sides of the 1st, a line on the disk of the 2nd not reaching the tip, and a spot at the base of the 3rd segment above, black; sides of some of the apical segments stained with fuscous; ovipositor nearly half the length of the body, honey-yellow, valves black. Length $5\frac{3}{4}$ lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **OPHION**, Fabr.

Ophion thoracicus, n. sp.

Obscure yellowish; mesothorax with blackish stripes; two basal segments of abdomen tinged with ferruginous; wings obscure hyaline, 1st submarginal cell with a spot and two subobsolete lines.

Obscure yellowish, slightly stained with pale fulvous; antennæ slender, about as long as the body, sometimes more or less dusky, especially at base; mesothorax with three broad, more or less distinct, blackish, longitudinal stripes, sometimes obsolete behind; scutellum slightly

tinged with pale yellow; metathorax tinged with piceous, with a well defined, transverse carina near the base and a longitudinal one on each side; before the transverse basal carina the surface is almost smooth, behind, it is somewhat transversely rugose, and slightly excavated down the middle. Wings hyaline, faintly iridescent; nervures and stigma yellowish; first submarginal cell with a rather large, subtriangular, membraneous spot beyond the middle, and towards the tip of the cell two membraneous lines, the middle one is short and longitudinal, and the apical one transverse, rather oblique, pointing inwards, and sometimes subobsoletely curved around to the tip of the large subtriangular spot. Legs obscure yellowish, tips of the tarsi more or less dusky. Abdomen shining, with the two basal segments linear, about equal in length and slightly dilated towards the tip, remaining segments gradually broader and compressed; all the segments more or less stained with dusky. Length 12 lines; expanse of wings 18 lines.

Collection.—Ent. Soc. Philad. Two specimens.

This species is easily distinguished from the three following by its large size, and by the three blackish stripes on the mesothorax.

Ophion concolor, n. sp.

Pale fulvous; the head, pleura, and scutellum, more or less tinged with yellow; wings hyaline, iridescent; 1st submarginal cell with a rather large, subtriangular, membraneous spot, and a little beyond it a minute, subobsolete spot.

Uniform pale fulvous, shining; head sometimes yellowish; antennæ longer than the body, uniform pale fulvous; mesothorax sometimes with faint, narrow, pale, longitudinal lines; pleura sometimes subobsoletely spotted with yellow, and the scutellum always more or less tinged with yellow; metathorax finely rugose, with a well defined transverse carina near the base, between which the surface is smooth and shining. Wings hyaline, iridescent; nervures and stigma pale fulvous; first submarginal cell with two membraneous spots, the inner one rather large and subtriangular, its lower point prolonged, the apical spot very small, sometimes slightly longitudinal, subobsolete. Legs uniformly pale fulvous. Abdomen shining, with the two basal segments linear, about equal in length and slightly dilated towards the tip, the second segment stouter than the first; remaining segments gradually broader and compressed. Length 9 lines; expanse of wings 13 lines.

Collection.—Ent. Soc. Philad. Four specimens.

This is the second largest species, and is distinguished from the others, by being uniformly pale fulvous, and not varied with dusky.

Ophion flavus, Fabr.

Ichneumon flavus, Fabr. Ent. Syst. ii, p. 179.

Ophion flavus, Fabr. Ent. Syst. Suppl. p. 236; Syst. Piez. p. 131. Guér. Genera des Ins. Hyménopt. pl. 3, 2e liv., No. 7; LaSagra, Hist. Cuba, p. 753.

Collection.—Ent. Soc. Philad. Three specimens.

This is smaller than *O. concolor* and may be at once distinguished from that species, by the apical segments of the abdomen being fuscous. It is very closely allied to *O. cubensis*, but slightly smaller, with the abdomen shorter and not so slender, and the membraneous spot nearest the tip of the first submarginal cell is very small and indistinct.

Ophion cubensis, Norton.

Ophion cubensis, Norton, Proc. Ent. Soc. Philad. i, p. 358.

Collection.—Ent. Soc. Philad. One specimen.

This species is closely related to *O. flavus*, but is longer and more slender, and at once distinguished by the two very distinct membraneous spots in the first submarginal cell. For the only specimen that I have seen of this species, the Society is indebted to the kindness of Baron R. Osten Sacken.

Genus **PANISCUS**, Grav.

Paniscus subfuscus, n. sp.

Dull rufo-fuscous, legs and antennæ paler; basal segments of abdomen piceous; wings hyaline.

Female.—Dull rufo-fuscous, opaque; clypeus pale, pubescent; antennæ as long as the body, slender, dull fulvous, slightly dusky at tips. Thorax with the dorsal lines deeply impressed; scutellum prominent, carinated on each side; metathorax minutely sculptured, incised at base, with a small acute tubercle on each side behind. Wings hyaline; nervures fuscous, stigma testaceous; areolet small, subpetiolated, oblique. Legs pale fuscous, the femora slightly dusky. Abdomen stout, arcuated, subcompressed, clothed with a very short, appressed, pale pubescence; 1st segment elongate, slightly broader at tip, with a faint tubercle on each side before the middle; 2nd segment about one-third shorter than the 1st; the three basal segments above, except the extreme base of the 1st, stained with piceous; apical margins of the remaining segments pale; ovipositor about as long as the 1st segment of the abdomen. Length 9 lines; expanse of wings 15 lines.

Collection.—Ent. Soc. Philad. One specimen.

This does not agree with the description of *P. rufus* Brullé, which I have not seen, and which is said to inhabit Cuba.

Subfam. BRACONIDES.

Division ———— ?

RHOPALOSOMA, nov. gen. (Fig. 6.)

Head transverse; face flat; clypeus large, quadrate, truncate in front; mandibles moderately stout, acute at tip; palpi long and slender; eyes rather large, prominent, reniform, deeply emarginate oppo-

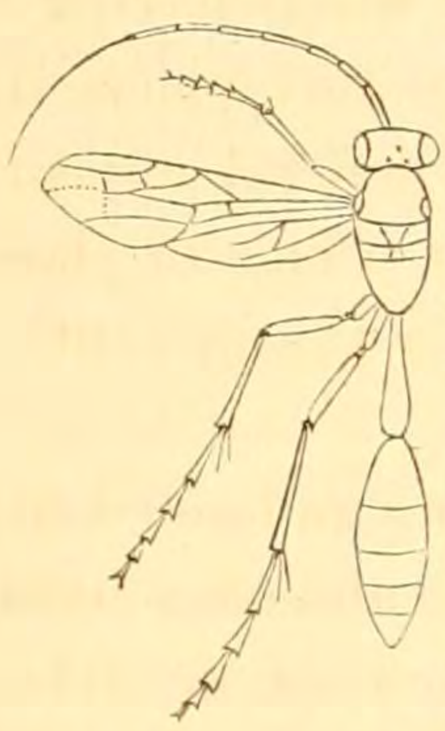


Fig. 6.

site the insertion of the antennæ; ocelli large and prominent, placed in a triangle on the vertex. *Antennæ* inserted on the middle of the face, nearly as long as the body, gradually slenderer towards the tip, 12-jointed in ♀, 13 in ♂, first joint moderate, stout, second very short, third a little longer than first and second together, fourth and five following joints subequal, each longer than the third, remaining joints shorter, subequal. *Thorax* short, rather gibbous, smooth; mesothorax convex; pleura with a deep fovea in each side; scutellum moderate, rather prominent; metathorax moderate, convex, smooth, gradually smaller towards the insertion of the abdomen, around which the margin is prominent and somewhat reflexed. *Wings* rather long, narrow; costal nervure slender; stigma short, very narrow, linear; marginal cell long, narrow, extending to the tip of the wing, sublanceolate; two rather large, subequal, elongate submarginal cells, the second receiving the long, stout and very oblique first recurrent nervure about the middle, and receiving at its tip a very faintly defined, second recurrent nervure; posterior wings with a few irregular nervures. *Legs* simple, long and slender; coxæ robust; posterior trochanters short, 2-jointed; femora slightly thickened in ♀, the anterior pair somewhat curved; tibiæ slender, about as long as the femora, the spurs very long, slender and acute, the two anterior tibiæ apparently with only one spur at tip, the four posterior tibiæ, each with two spurs at tip, the outer one the shortest; tarsi 5-jointed, nearly as long as the femora and tibiæ together, very slender in the ♂, flattened and dilated beyond the first joint in the ♀, pubescent, with a long lobe on each side at tip, and from each lobe proceeds one or two long setæ; tarsal claws, stout and bifid. *Abdomen* elongate, petiolated, smooth, inserted just above the base of the posterior coxæ; first segment nearly as long as the remaining segments together in the ♀, shorter in the ♂, slender at base and gradually swollen beyond the middle, much more strongly so in the ♂; remaining segments together broadly fusiform, slightly incurved at tip in the ♀.

This anomalous genus is readily recognized by the narrow wings, and the elongate fusiformly-clubbed abdomen, the basal segment of which is slender and as long, or nearly as long, as the remaining segments which are broadly fusiform.

I am, at present, unable to define the true position of this remarkable genus. It seems to form a connecting link between the *Ichneumones genuini* and the *adsciti;* from the former it differs by the paucity of the antennal joints, and from the latter by the anterior wings having a faint indication of a second recurrent nervure. Its structure places it, beyond doubt, in the family Ichneumonidæ, while its general appearance, together with the arrangement of the wing-veins, seems to place it among the Adsciti, where I will allow it to remain for the present.

Rhopalosoma Poeyi, n. sp.

♂ ♀.—Entirely of a uniform pale honey-yellow, smooth and polished; tips of the mandibles black; vertex, and the apex of the abdomen more or less dusky, especially in the ♂, and in one ♂ specimen the metathorax and abdomen are almost entirely tinged with dusky; tarsal claws dusky; wings hyaline, slightly iridescent, nervures pale fuscous. Length, ♀ 6 lines, ♂ $4\frac{1}{2}$ lines; expanse of wings, ♀ $8\frac{1}{2}$ lines, ♂ $6\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. and Dr. J. Gundlach. Three ♀, two ♂ specimens.

It gives me much pleasure to dedicate this singular insect to Prof. Felipe Poey, to whom I am greatly indebted for much valuable information regarding the habits of many Cuban Hymenoptera.

CHAONIA, nov. gen.

Head transverse; face flat, broad; eyes large, prominent, rounded; ocelli large and prominent; clypeus moderate, slightly prominent, rounded at base and truncate at tip; mandibles small, bifid and acute at tip; palpi very long and slender. *Antennæ* distant, inserted high up on the front close to the eyes, long and thread-like, multiarticulate, the basal joint moderately long and robust, the second minute, the other joints indistinct and finely pubescent. *Thorax* gibbous, rather short, deep, compressed, narrowed in front; mesothorax with the lobes very prominent; sides of the prothorax with a broad, longitudinal, shallow groove; pleura large, very protuberant beneath between the four anterior coxæ, and divided by a more or less deep longitudinal sulcus; scutellum elongate, rather prominent; metathorax moderate, somewhat rounded above, obtuse behind. *Wings* long and rather narrow; stigma large and sublanceolate; marginal cell large, elongate, broad at base and gradually tapering to the tip of the wing; two submarginal cells,

the first much the largest, irregularly shaped, the second elongate-subquadrate, about one-half the size of the first. *Legs* long and slender; coxæ elongate, robust, the posterior pair much the longest; trochanters nearly as long as the coxæ; femora long and slender, the anterior pair somewhat recurved, the two posterior pair slightly thickened towards the tips; tibiæ slender, gradually thickened towards the tips, the two anterior pairs about as long as their femora, the posterior pair stouter and much longer than their femora; tibial spurs rather long, subequal, robust; tarsi slender, the posterior pair rather stout at base, the first joint as long as the remaining joints taken together, which are gradually shorter towards the tip; claws small, stout at base, suddenly hooked and acute at tip, pulvilli small and pubescent. *Abdomen* elongate, slender at base, and gradually thickened towards the tip, which is broader and subcompressed in the ♀; first segment long and subcylindrical, slightly thickened at tip, with a stout tubercle on each side just before the middle; second and third segments together rather longer than the first, somewhat depressed; remaining segments short, compressed in the ♀, and rather depressed in the ♂; ovipositor of the ♀ long.

This genus belongs to the *Endodontes* of Wesmael, which have the teeth of the mandibles directed inwardly, and the mandibles meeting together when shut; but it cannot be referred to any of the four divisions enumerated by him. It agrees with the *Areolariï* in having the head transverse, the clypeus entire and the vertex emarginate behind, but the second submarginal cell of the anterior wings is moderately large. The neuration of the wings is similar to that of *Bracon*, except that the first submarginal cell is larger, of an irregular pentagonal shape, while the second is smaller and not so long as in the latter genus.

Chaonia xanthostigma, n. sp.

Female.—Elongate, slender, dull honey-yellow; head pale yellowish, shining; clypeus slightly prominent, entire; mandibles fuscous at tips; palpi pale yellowish; antennæ longer than the body, very slender, especially so at tips, dark fuscous, two basal joints dull yellowish. Thorax narrow; prothorax dull yellowish, narrow in front, broader on each side, extending back to the tegulæ; mesothorax dark fuscous, shining, with the lobes very prominent, especially the middle one, the sutures indistinctly crenulated and paler; scutellum dull honey-yellow; pleura large, fuscous, shining; metathorax fuscous above, pale on the sides, covered with irregular transverse striæ; tegulæ yellowish. Wings subhyaline, slightly iridescent, tinged with pale fuscous towards the apex; nervures fuscous, stigma large and orange-yellow; neuration much as in *Bracon*.

Legs long and slender, the posterior pair stouter and much longer than the two anterior pairs, dull yellow, the posterior coxæ and femora tinged with ferruginous, their tibiæ long and subcompressed, their tarsi thickened; all the trochanters very elongate, the basal articulation much the longest. Abdomen dull honey-yellow; basal segment more than one-third the length of the abdomen, linear, subcylindric, slightly thickened at tip, tinged with fuscous above, slightly channelled down the middle and with a robust tubercle on each side before the middle; ovipositor longer than the body, dull rufous, valves dark fuscous. Length of body 6 lines, of ovipositor 7 lines; expanse of wings 10 lines.

Male.—Much smaller than the ♀, and pale honey-yellow; the antennæ, except the two basal joints, dark fuscous as in the ♀; the abdomen more slender, and scarcely broader at tip. Length $4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. Two specimens.

Chaonia pallida, n. sp.

Male.—Entirely and uniformly pale yellowish; metathorax transversely striated; legs very slender; wings purely hyaline, beautifully iridescent, the nervures very pale; abdomen elongate, slender at base, gradually broader and depressed towards the tip, which is rounded. Length 4 lines; expanse of wings 6 lines.

Collection.—Dr. J. Gundlach. One specimen.

Resembles the ♂ of the preceding species in form, but is at once distinguished by the very pale uniform color and the pure hyaline wings.

Division.—*Cryptogastri.*

Genus **CHELONUS**, Jurine.

Chelonus insularis, n. sp.

Black, densely sculptured; legs varied with obscure testaceous; a more or less distinct pale spot on each side of the abdomen near its base; wings hyaline, the apical half faintly dusky.

Opaque black, finely and densely rugose or shagreened, with a very short, fine, whitish, sericeous pile, more obvious on the face and when viewed in certain lights; head transverse, face broad and flat, mouth tinged with piceous; antennæ about as long as the head and thorax, black; tegulæ shining black; postscutellum smooth and polished; metathorax with several ill-defined longitudinal carinæ, the posterior angles rather long and acute. Wings hyaline, the apical half faintly tinged with dusky; nervures fuscous, stigma black, emarginate near the base beneath. Legs black, the femora, tibiæ and tarsi more or less varied with obscure testaceous. Abdomen slightly dilated towards the tip which is broadly rounded, the basal angles rather acute, and on each

side near the base a more or less distinct pale spot, sometimes large and subtriangular. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

Collection.—Ent. Soc. Philad. Four specimens.

Division.—*Areolarii*.

Genus **AGATHIS**, Latr.

Agathis cubensis, n. sp.

Rufous; head, antennæ, four anterior legs, and tips of posterior tibiæ, black; wings dark fuscous, with two hyaline spots beneath the stigma; metathorax coarsely rugose.

Female.—Rufous, polished, slightly pubescent; head black, face prolonged and slightly tinged with rufous; antennæ longer than the head and thorax, stout, black, tinged with piceous towards the tips. Thorax polished; mesothorax with the lobes very prominent, each one with a broad, shallow, longitudinal central groove; the sutures beneath crenulated; metathorax coarsely rugose, with several sharply defined, longitudinal carinæ, pubescent, the extreme sides smooth and polished; tegulæ rufous. Wings uniform dark fuscous, with two small hyaline spots beneath the stigma; nervures black. Legs robust, rufous; the four anterior trochanters, femora and tibiæ, and the tips of the posterior tibiæ, black. Abdomen short, subovate, subcompressed, smooth and polished, sometimes slightly tinged with dusky towards the apex; basal segment depressed on each side about the middle; ovipositor a little shorter than the abdomen, rufous, valves black. Length $4\frac{1}{2}$ lines; expanse of wings 10 lines.

Male.—Resembles the female, with the face more rufous.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

Agathis ferrugator, n. sp.

Pale rufous, shining; antennæ, trochanters, tips of posterior femora and tibiæ, and their tarsi, black; wings fuscous, slightly hyaline beneath the stigma.

Female.—Pale rufous, shining, slightly pubescent; face much prolonged, with an impressed point on each side beneath the eyes; palpi dusky; antennæ nearly as long as the body, involute at tip, black or piceous, the basal joints sometimes rufous. Thorax shining, indistinctly punctured; lobes of the mesothorax distinctly defined, each lobe with a broad groove down its middle, that on the central lobe slightly carinated; metathorax with several sharply defined longitudinal and transverse carinæ, forming several small cells; tegulæ pale rufous. Wings fuscous, with two hyaline spots beneath the stigma; nervures and stigma blackish. Legs rufous, the posterior pair robust; posterior trochanters, extreme tips of their femora, base and apex of their tibiæ and most of their tarsi, more or less blackish. Abdomen oblong, subcom-

pressed, shining, with a slight tubercle on each side near the base of the first segment, which is smooth and slightly convex; second segment somewhat depressed; ovipositor rather longer than the abdomen, rufous, valves blackish. Length 3—4 lines; expanse of wings $5\frac{1}{2}$—$6\frac{1}{2}$ lines.

Male.—Resembles the female, with the face slightly dusky on each side beneath the eyes, the antennæ stouter and entirely black, as well as all the trochanters.

Collection.—Dr. J. Gundlach. Two ♀, one ♂, specimens.

Agathis seminiger, n. sp.

Rufous; head, antennæ, mesothorax, pectus, pleura, scutellum, and four anterior legs, black; wings pale fuscous; metathorax large, carinated, posterior angles produced on each side into a tubercle.

Female.—Head black, with a faint bluish reflection, polished, pubescent; face prolonged; palpi and antennæ black, (the latter broken off beyond the middle). Thorax polished, slightly pubescent, black, with a faint bluish reflection; dorsal lines of mesothorax deeply impressed, the central lobe carinated down its middle; pleura feebly punctured, sides of pectus obscurely tinged with rufous; scutellum black; metathorax large, quadrate, prominent, pale rufous, slightly pubescent, coarsely rugose, with several well defined longitudinal carinæ, the posterior angle produced on each side into a prominent obtuse tubercle; tegulæ piceous, slightly tinged with rufous. Wings uniform pale fuscous, with two hyaline spots beneath the stigma; nervures and stigma blackish. Legs black, tinged with piceous, slightly pubescent; posterior pair robust, pale rufous, their trochanters and tarsi piceous. Abdomen rather short, broadly subcompressed, smooth and polished, pale rufous; first segment with a tubercle on each side towards the base; ovipositor as long as the abdomen, pale rufous. Length $4\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Dr. J. Gundlach. One specimen.

Agathis albitarsis, n. sp.

Deep black, polished; posterior tarsi whitish; wings uniformly dark fuscous; metathorax striated transversely; ovipositor long, rufous, sheaths black.

Female.—Deep black, polished, slightly pubescent, most obvious on the face; eyes very prominent, face prolonged into a beak and tinged with rufous towards the tip; palpi piceous; antennæ nearly as long as the body, curved at tip, brown-black, finely pubescent, the basal joint black, polished. Thorax: mesothorax trilobed, the middle lobe canaliculate, the lateral margins carinated; pectus and pleura polished, the sutures of the latter crenulated, and beneath the wings an oblique row of transverse carinæ; scutellum deeply excavated in front; metathorax

sharply and transversely striated, with two longitudinal approximate carinæ on the disk, and two more distant ones on each side, the extreme sides reticulated. Wings uniformly dark fuscous, with a rather strong bronze reflection, slightly subhyaline in the first submarginal cell and below it; nervures and stigma blackish. Legs black, sometimes tinged with piceous, pubescent; posterior tarsi, except extreme tips, whitish. Abdomen polished, subcompressed; first segment elongate, slightly dilated towards the tip, base deeply excavated, flattened towards the tip with a faint carina down the middle; venter piceous, the tip gaping, the ovipositor rather longer than the abdomen, rufous, the sheaths black. Length $5\frac{1}{2}$ lines; expanse of wings 10 lines.

Male.—Like the female, except that the antennæ are longer than the body, the four anterior legs entirely piceous and the abdomen more slender.

Collection.—Ent. Soc. Philad. Three ♀, one ♂, specimens.

Easily recognized by the deep black color, with the posterior tarsi white.

Genus **MICRODUS**, Nees.

Microdus fascipennis, n. sp.

Yellow, varied with honey-yellow; eyes, vertex, occiput and antennæ, black; wings yellowish-hyaline, with a fuscous band across the middle and the apical fourth.

Female.—Yellow, more or less tinged with honey-yellow, shining, slightly pubescent; eyes rounded, black, as well as the tips of the mandibles, the vertex and the occiput anteriorly; antennæ black, (tips broken off). Thorax yellow, shining, indistinctly punctured; mesothorax pale honey-yellow, the dorsal lines deeply impressed, the middle lobe broadly grooved with a faint longitudinal carina on the middle; pectus and pleura polished; metathorax with sharply defined elevated lines forming several irregular areas, the central one of which is rather small and elongate. Wings long and ample, yellowish-hyaline; a broad band across the middle and the apical fourth, pale fuscous; just below the stigma in the first submarginal cell, a subtriangular hyaline spot, and another one below it near the posterior margin of the wing; nervures yellowish, the stigma and the nervures covered by the fuscous bands, blackish. Legs entirely yellowish, the posterior coxæ honey-yellow, (their femora, tibiæ and tarsi broken off); tarsal claws dusky. Abdomen short, not longer than the thorax, broad and subcompressed towards the apex, polished; first segment gradually dilated, smooth, with faint indications of lateral tubercles near the base; apical segments

slightly obfuscated; ovipositor very short, scarcely exserted. Length $4\frac{1}{2}$ lines; expanse of wings $10\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Microdus stigmaterus, n. sp.

Rufous; head and antennæ black; wings fuscous, stigma yellow, with a hyaline patch beneath it, the base of the anterior wings subhyaline; basal segment of abdomen striated; ovipositor longer than the body.

Female.—Rufous, shining, thinly clothed with a fine whitish pubescence; head transverse, black, face short, not prolonged, tinged with piceous, as well as the mouth; palpi pale; antennæ longer than the head and thorax, rather stout, rufo-piceous. Thorax polished; lobes of the mesothorax prominent, indistinctly punctured; pleura minutely and closely punctured; metathorax rugose, pubescent, with several indistinct longitudinal carinæ; tegulæ rufous. Wings fuscous; base of the anterior pair subhyaline; stigma pale yellow, with a rather large hyaline patch beneath it; nervures fuscous. Legs stout, rufous; the four anterior femora, except tips, apex of the four posterior tibiæ, and most of the tarsi, more or less dusky; posterior coxæ large, their femora thickened. Abdomen elongate, depressed above; basal segment except tip, longitudinally striated; second or third segments incised at base, each with a broad, rather deep, transverse depression across the middle, that on the second segment finely striated, remaining segments smooth and polished; extreme sides of the abdomen, from the base to the tip of the second segment, carinated; venter prominent towards the tip and subcompressed; ovipositor longer than the body, rufo-piceous. Length 5 lines; expanse of wings 8 lines.

Male.—Resembles the female, but is darker in color. and rather larger, with the abdomen more robust.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

Easily recognized by the conspicuous yellow stigma of the anterior wings.

Microdus varipes, n. sp.

Rufous; antennæ, four anterior legs, and posterior trochanters, tibiæ and tarsi, black; middle tarsi of ♂, white; wings fuscous; second abdominal segment incised at base.

Female.—Rufous, polished; head transverse, face short; antennæ as long as the body, piceous-black. Thorax smooth and polished; lobes of the mesothorax well defined, the central lobe with a broad longitudinal groove on its middle; metathorax shining, with several ill-defined, longitudinal carinæ, its extreme sides smooth and polished; tegulæ rufous. Wings uniform dark fuscous, a slightly oblique hyaline streak

or two spots beneath the stigma; nervures and stigma blackish. Legs black, the four anterior coxæ rufous at base; posterior coxæ, femora and tibiæ, except tips, rufous. Abdomen oblong-ovate, subdepressed, smooth and polished, the second segment deeply incised at base; ovipositor about half the length of the abdomen, pale rufous, valves black. Length $3\frac{3}{4}$ lines; expanse of wings $7\frac{1}{2}$ lines.

Male.—Resembles the female, except that the head is slightly dusky; the wings somewhat paler; the middle tarsi white, except tips (the anterior legs wanting), the posterior tibiæ entirely dusky, and the third, fourth and fifth segments of the abdomen also incised at base, although not so deeply as the second segment.

Collection.—Ent. Soc. Philad. ♂, Dr. J. Gundlach ♀. Two specimens examined.

Genus **MICROGASTER**, Latr.

Microgaster mediatus, n. sp.

Pale rufous; antennæ, most of pleura and the metathorax, black; wings fusco-hyaline; metathorax coarsely rugose, carinated; abdomen depressed.

Male.—Pale rufous, shining; antennæ longer than the body, stout and flattened at base, gradually attenuated to the tips, black, basal joint rufous beneath. Thorax polished; mesothorax smooth, without impressed lines; pleura sometimes entirely rufous and sometimes almost entirely black, with a deep excavation on each side beneath; scutellum rufous, convex, the space on each side finely striated; metathorax entirely deep opaque black, sometimes rufous at the base above, coarsely rugose, with several sharply defined, longitudinal carinæ; tegulæ rufous. Wings fusco-hyaline, varied with subhyaline, the apical third uniformly fusco-hyaline; nervures and stigma black, the latter rather large, and more or less pale at base; the inner half of the first submarginal cell subhyaline, or paler than the outer half. Legs pale rufous, sometimes orange-yellow; tips of the posterior femora, and most of their tibiæ and tarsi, blackish. Abdomen ovate, depressed, polished, pale rufous, sometimes orange-yellow; basal segment deeply excavated. Length $2\frac{1}{2}$—3 lines; expanse of wings 5—$5\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

Readily distinguished by the black metathorax, which is very conspicuous in contrast with the rufous color.

Microgaster flaviventris, n. sp.

Blackish; abdomen and legs deep yellow; thorax varied with dull rufous; wings hyaline, iridescent.

Female.—Head black, face tinged with rufo-piceous, palpi whitish; antennæ nearly as long as the body, pale testaceous, tinged with fus-

cous above, the base beneath yellowish. Thorax minutely sculptured, piceous, more or less varied with testaceous, especially on the sides; scutellum piceous, triangular, with the excavation in front and the space on each side, striated; metathorax pale piceous, minutely sculptured, with a central longitudinal carina, and another on each lateral margin; tegulæ yellowish-white. Wings ample, hyaline, iridescent; nervures and stigma pale fuscous, the latter large and subtriangular; marginal cell wanting; one large irregular submarginal cell; areolet incomplete; one large triangular discoidal cell. Legs, including the coxæ, entirely yellow; tips of the posterior femora, tibiæ and tarsi sometimes dusky. Abdomen depressed, rather shining, entirely orange-yellow, not distinctly sculptured; first segment narrowed at base, depressed, angular and carinated on the lateral margins; ovipositor short, fuscous. Length $1\frac{1}{4}$ line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Seventeen ♀ specimens; ♂ not seen.

Microgaster marginiventris, n. sp.

Black; antennæ fuscous; palpi, tegulæ, legs, and lateral margins of abdomen, yellow; wings hyaline, iridescent.

♂ ♀.—Dull black, slightly pubescent; tips of mandibles and the palpi, yellowish; antennæ nearly as long as the body in ♀, longer in ♂, fuscous. Thorax dull black, opaque, densely and minutely punctured; scutellum depressed, triangular, punctured, the excavation in front and the space on each side striated; metathorax rugose, with a central longitudinal carina and one on each lateral margin; tegulæ pale yellowish. Wings hyaline, iridescent, slightly pubescent; nervures and stigma pale testaceous; no marginal cell; a large irregular submarginal cell, more oblique than in *flaviventris;* areolet wanting; a large subtriangular discoidal cell, more strongly petiolated from the costal nervure, than in *flaviventris.* Legs, including the coxæ, yellow, more or less deep in color, the posterior tarsi dusky. Abdomen depressed, dull black, distinctly and roughly sculptured, the lateral margins and the apex more or less dull yellowish; venter stained with yellowish; ovipositor of ♀ very short. Length $1\frac{1}{4}$ line; expanse of wings $2\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Nine ♀, two ♂ specimens.

Microgaster Pinos, n. sp.

Black; antennæ fuscous; palpi white; tegulæ, legs, except posterior tibiæ and tarsi, and middle of abdomen, yellowish; wings hyaline, iridescent.

Female.—Head black; tips of mandibles piceous; palpi white; antennæ fuscous. Thorax dull black, densely and finely punctured, slightly pubescent; scutellum triangular, sparsely punctured, the excavation in front striated, the space on each side flat, smooth and polished, mar-

gined in front by a beautifully striated semicircle; metathorax black, uneven, transversely and irregularly striated; tegulæ yellowish-white. Wings ample, hyaline, beautifully iridescent, slightly pubescent; nervures and stigma pale fuscous. the latter large; the cells shaped much as in *M. marginiventris*, except that the discoidal cell is smaller in proportion to the size of the other cells. Legs, including the coxæ, yellowish; extreme tips of the tarsi, tips of the posterior femora, their tibiæ and tarsi, fuscous. Abdomen depressed, slightly sculptured at base; the first, part of the second and the apical segments, black, the rest yellowish; ovipositor nearly as long as the abdomen, blackish. Length $1\frac{1}{2}$ line; expanse of wings $3\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. One specimen taken on the Isle of Pines.

Microgaster hyalinus, n. sp.

Dull black; palpi, tegulæ, tibiæ and tarsi, pale yellowish; rest of legs fuscous; wings pure hyaline, veins indistinct.

Female.—Dull black, opaque, clothed with short whitish pubescence; palpi whitish; antennæ dark fuscous. Thorax finely and densely punctured; scutellum triangular, polished, the side spaces smooth and polished, the sutures as well as the basal excavation, crenulated; metathorax with several irregular, indistinct elevated lines; tegulæ pale yellowish. Wings ample, pure hyaline, iridescent; nervures and stigma hyaline, indistinct. Legs pale yellowish; the coxæ, trochanters, four posterior femora, tips of posterior tibiæ and most of their tarsi, fuscous. Abdomen short and stout, depressed and very uneven, not distinctly sculptured, entirely dull piceous-black; ovipositor short, thickened at tip. Length 1 line; expanse of wings $2\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Three specimens.

Microgaster iridescens, n. sp.

Yellowish; head, antennæ, metathorax and most of posterior legs, piceous; wings hyaline, strongly iridescent.

♂ ♀.—Yellowish, pubescent; head piceous-black, mandibles testaceous, palpi whitish; antennæ nearly as long as the body in ♀, longer in ♂, fuscous, paler at base beneath. Thorax yellowish, closely and minutely punctured; scutellum triangular, yellow, densely punctured, black at extreme tip; postscutellum and metathorax piceous, the latter with several well defined elevated lines; tegulæ yellowish-white. Wings hyaline, with a strong greenish iridescence, slightly pubescent; nervures and stigma pale fuscous; cells shaped much as in *M. marginiventris*, except that the areolet is minute and nearly complete. Legs, including the coxæ, pale yellowish; tips of the posterior femora, their

tibiæ except base, and their tarsi, dusky. Abdomen depressed, broader and subcompressed at tip, pale yellowish, the dorsal surface more or less stained with pale fuscous; ovipositor of ♀ short, fuscous. Length 1 line; expanse of wings $2\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Four specimens.

Division.—*Cyclostomi.*

Genus **BRACON**, Fabr.

Bracon regnatrix, n. sp.

Large; rufo-ferruginous; head, antennæ and legs, except coxæ, black; wings dark fuscous, with a broad band a little beyond the middle of anterior pair, and a quadrate spot towards the base of posterior pair, hyaline; abdomen elongate, subclavate, smooth; ovipositor longer than the abdomen, black.

♂ ♀.—Rufo-ferruginous, shining; head black, the face rugose, tinged with rufous, as well as the cheeks, a deep puncture just beneath the base of the antennæ; clypeus rufous, fringed with a pale pubescence; mandibles and palpi blackish; antennæ three-fourths the length of the body, black, brownish towards the tips. Thorax smooth and polished, the mesothorax sometimes darker in color than the rest of the thorax; metathorax smooth and convex, with a deep, longitudinal, impressed line on each extreme side. Wings dark fuscous, slightly paler at tips; just beyond the middle of the anterior wing, a broad hyaline band, commencing at the base of the stigma, which has a slight whitish dot, and extending all the way across the wing, occupying almost the whole of the first submarginal cell; this band is somewhat irregular, and the nervures divide it into three spots, of which the lower one is smallest, oblong and slightly oblique; just within the middle of the posterior pair, a large, quadrate, hyaline spot. Legs black, tinged with piceous; their coxæ rufo-ferruginous, their trochanters rufous at tip. Abdomen elongate, convex, subclavate, smooth and polished; first and second segments with a deep longitudinal groove on each side, connecting at tip with a slightly oblique groove on each side of the second segment, running parallel with the sides of the segment; on each side of the third segment a rather deep oblique groove diverging posteriorly; remaining segments smooth, without impressed lines; sometimes the abdomen is pale ferruginous, with the apical margins of the third and following dorsal segments and the apical ventral segments, rufous or sanguineous; ovipositor more than half again as long as the body, piceous, valves black. Length $8\frac{1}{2}$ lines; expanse of wings 16 lines.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

This is a large, elegant species, easily recognized by the hyaline spots on the wings.

Bracon lativentris, n. sp.

Rufous; head. antennæ, legs and ovipositor, black; wings fuscous, with a hyaline dot at tip of first submarginal cell; abdomen short and very broad, rotundate, deeply incised, the second segment with a very deep triangular excavation on each side; ovipositor as long as the body.

Female.—Rufous, polished; head black, densely clothed with pale pubescence; each mandible with a pale spot; palpi blackish; antennæ as long as the body, piceous, basal joint black. Thorax very smooth and polished; mesothorax with the dorsal lines well impressed in front; metathorax smooth and shining, clothed with a pale pubescence, a shallow depression on the middle of the posterior part, and a somewhat deep excavation on each extreme side; tegulæ blackish, margined with rufous. Wings uniform dark fuscous; a subhyaline streak along the inner margin of the first submarginal cell, ending in a hyaline spot just below the tip of the cell; nervures and stigma black. Legs, including the coxæ, black, tinged with piceous, pubescent, the base of coxæ, and tips of trochanters, obscurely rufous; sometimes the anterior tarsi and the four posterior tibiæ and tarsi are somewhat brownish. Abdomen short and very broad, nearly as broad as long, subrotundate, polished; basal segment gradually dilated, convex on the disk and excavated on each side and at base; second segment suddenly dilated, with a very deep triangular excavation on each side at base, and on the disk a shallow excavation with an obtuse longitudinal carina down the middle of it; third segment with an oblique very deep incisure on each side; fourth and fifth segments deeply incised at base; remaining segments much narrowed, the apical one flattened on the disk, tinged with piceous and fringed with a pale pubescence; venter deeply concave; ovipositor as long as the body, rufous, valves black. Length $5\frac{1}{2}$ lines; expanse of wings 11 lines.

Collection.—Ent. Soc. Philad. Two ♀ specimens.

Easily recognized by its large and very broad abdomen.

Bracon crenulatus, n. sp.

Dark rufous, shining; head, antennæ and legs, black; wings blackish fuscous; abdomen broadly ovate, the segments deeply incised and striated at base, second segment deeply excavated on each side and on the middle; ovipositor moderate.

Female.—Dark rufous, polished; head globose, black, clothed with black pubescence, palpi black; antennæ longer than the body, entirely black. Thorax: dorsal lines of mesothorax scarcely defined; pleura and scutellum smooth and polished; metathorax convex, smooth and polished, slightly pubescent; tegulæ rufous, with a large blackish spot. Wings uniformly blackish-fuscous, slightly subhyaline in and below the first submarginal cell; nervures and stigma black. Legs, including

their coxæ, entirely black, slightly pubescent; posterior coxæ slightly rufous at base. Abdomen broadly ovate, polished, depressed; first segment deeply excavated at base and on each side, with a swelling on the middle, on the disk of which there is another excavation divided by a longitudinal carina, the excavation on each side of the swelling has a slight longitudinal carina, the lateral margins are carinated and reflexed, the apical angles being very prominent; second segment deeply and transversely excavated on each side at base, and on the middle a deep rounded excavation slightly striated and divided by a longitudinal carina which proceeds from an elevated polished space on the basal middle, the apical margin of this segment suddenly rounded on each side, behind which the basal angles of the third segment are prominent or tuberculated; third segment deeply incised and striated at base, the incisure passing both before and behind the prominent basal angles; fourth and fifth segments also deeply incised at base, the incisure striated; remaining segments suddenly narrowed, the terminal one pilose; venter concave; ovipositor shorter than the abdomen, rufous, valves black. Length $3\frac{1}{2}$—4 lines; expanse of wings $8\frac{1}{2}$—10 lines.

Collection.—Ent. Soc. Philad. Two ♀ specimens.

Much smaller than *B. lativentris*, with the basal incisure of the third abdominal segment distinctly striated.

Bracon voraginis, n. sp.

Rufous; head, antennæ and legs, black; wings fuscous; abdomen broad, with a deep excavation on each side of the second segment and a smaller one on each side of the third segment; ovipositor longer than the abdomen.

Female.—Rufous, shining; head globose, black, sometimes the sides of the face and the lower part of the cheeks are tinged with rufous; antennæ as long as the body, dark fuscous, tinged with rufous at base. Thorax polished; mesothorax distinctly lobed in front, the dorsal lines well impressed; pleura with a puncture and a deeply impressed, oblique furrow beneath the wings; metathorax small, smooth, polished and convex above, slightly pubescent, on each side a deep, longitudinal impressed line; tegulæ rufous. Wings uniformly dark fuscous, with a large hyaline spot beneath the tip of the first submarginal cell, within which there is a subhyaline streak; nervures and stigma fuscous. Legs black, pubescent; all the tarsi and base of the posterior coxæ tinged with rufous. Abdomen broadly ovate, depressed, shining; first segment excavated on each side, with an acute, longitudinal carina in each excavation; second segment with a very large, deep, subtriangular excavation an each side at base, and an abbreviated carina down the middle of the segment, the apical margin is oblique on each side; third seg-

ment also deeply excavated on each side, but not so largely as the second segment, the extreme basal margin is indistinctly crenulated; the two following segments deeply incised at base; remaining segments abruptly narrowed, the apical segment depressed; venter concave; ovipositor longer than the abdomen, blackish. Length $2\frac{1}{2}$ lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. Two specimens examined.

Bracon plicatus, n. sp.

Sanguineous; head, antennæ, wings and legs, black; abdomen robust, deeply incised, second segment excavated on each side and carinated down the middle, basal margin of third segment striated; ovipositor short.

Female.—Head globose, entirely black, pubescent; palpi blackish; antennæ longer than the body, black. Thorax sanguineous, smooth and polished, narrowed in front; dorsal lines of the mesothorax faintly impressed; pleura with an obliquely impressed line beneath the wings; metathorax smooth, convex, polished, pubescent; tegulæ blackish, tipped with rufous. Wings black, with a faint subhyaline streak in the first submarginal cell, and a hyaline spot beneath its tip; nervures and stigma black. Legs, including the coxæ, black; the posterior coxæ at base, and their trochanters at tip, rufous. Abdomen robust, polished, sanguineous, slightly pubescent; first segment broad at tip, the lateral angle produced into an acute tooth, disk of the segment convex, excavated on each side; second segment deeply excavated on each side at base, and the excavation extending somewhat obliquely inwardly to the basal middle which has a smooth elevated space, behind which there is a shallow rough excavation with an acute carina down its middle, apical margin of the segment obliquely cut off on each side, behind which the basal angles of the third segment are prominent or tuberculated; third segment deeply incised at base, the incisure longitudinally striated, and passing behind the prominent basal angles to the lateral margin, posterior portion of the segment as well as of the two following segments forming a very prominent transverse fold; fourth and fifth segments with their basal half flattened, the incised line at base and before the fold finely crenulated or indistinctly striated; remaining segments suddenly narrowed; venter depressed on each side and rather acutely produced in the middle, the apical segments suddenly acute at tip and gaping; ovipositor short, valves black. Length 4 lines; expanse of wings $8\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Bracon picipes, n. sp.

Rufous, polished; head, antennæ and legs, piceous; wings dark fuscous; abdomen, short, ovate, second segment broadly and obliquely excavated on each side at base, third segment deeply incised at base, remaining segments not incised; ovipositor longer than the body.

Female.—Pale rufous, polished; head globose, piceous, tinged with testaceous on the face; orbits and lower part of cheeks, clothed with pale pubescence; antennæ as long as the body, black, basal joint elongate, slightly thickened at tip. Thorax smooth and polished; lobes of the mesothorax distinct; metathorax smooth and convex, slightly pubescent; tegulæ black. Wings uniformly dark fuscous, with a hyaline streak within the first submarginal cell, ending in a spot below its tip; nervures and stigma black. Legs piceous, the four anterior coxæ rufous at base and beneath. Abdomen short, ovate, polished; first segment excavated at base and on each side, the middle towards the tip is prominent, subconvex and bordered on each side by an acute longitudinal carina, lateral margins reflexed, with the apical angles prominent and acute; second segment obliquely depressed on each side, more deeply so at base, the basal middle prominent and prolonged behind into a well defined carina which extends nearly to the tip of the segment; third segment deeply incised at base, and with an oblique impressed line on each side at base passing behind the basal angle; remaining segments smooth and slightly pubescent; venter concave, the last segment prominent, elongate, acute and slightly curved at tip; ovipositor a little longer than the body, piceous. Length 4 lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Bracon aciculatus, n. sp.

Rufous; antennæ and legs black; wings fuscous; abdomen rough at base, the second, third and fourth segments densely striated longitudinally; head rather transverse; ovipositor shorter than the abdomen.

Female.—Obscure rufous, shining, slightly pubescent; head rather transverse, black, tinged with rufous around the mouth; antennæ two-thirds the length of the body, entirely black. Thorax smooth and shining; dorsal lines of the mesothorax deeply impressed; beneath, just in front of each anterior coxa, an elongate black space; metathorax convex, smooth and polished; tegulæ rufous. Wings uniformly fuscous, with a subhyaline streak in the first submarginal cell and a spot beneath its tip; the outer nervure of the second submarginal cell margined with hyaline; nervures and stigma blackish. Legs, including the coxæ, slightly tinged with piceous; tips of the trochanters tinged with rufous. Abdomen broadly ovate, subdepressed, obscure rufous;

first segment rufous, the disk elevated and the lateral margins acutely carinated; second and two following segments densely and longitudinally striated, the striæ not quite reaching the tips of the third and fourth segments; second segment obliquely and rather deeply impressed on each side, with a triangular polished space on each side at base between the middle and lateral margin, on the basal middle between these spaces an angular carina pointed posteriorly and continued down the centre of the segment in a single carina; third segment with an ill-defined, impressed, arcuated line extending all the way across the segment near its base; fourth segment without a transverse impressed line; fifth and following segments smooth and polished; venter somewhat concave, yellowish; ovipositor shorter than the abdomen, black. Length $3\frac{1}{2}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. Two ♀ specimens.

Readily distinguished by the densely striated abdomen.

Bracon armatus, n. sp.

Rufous, polished; head, antennæ and legs, black; wings fuscous; metathorax deeply punctured; posterior coxæ toothed above; abdomen ovate, disk of second segment with an enclosed ovate space, the segments not incised; ovipositor longer than the abdomen.

Female.—Rufous, polished, slightly pubescent; head globose, black, clothed with long, pale pubescence; face slightly prominent; palpi black; antennæ two-thirds the length of the body, entirely black. Thorax: mesothorax with the dorsal lines deeply impressed, making the middle lobe very prominent; sutures of the pectus and pleura crenulated, on the latter, beneath the wings, an oblique deeply impressed line; metathorax covered above with large deep punctures, with a well defined longitudinal carina on the disk, the posterior angles produced into an obtuse tubercle, extreme sides somewhat rugose; tegulæ black. Wings uniformly dark fuscous; nervures and stigma black. Legs, including the coxæ, black, pubescent; the two anterior pairs tinged with piceous; the tarsi yellowish; posterior coxæ with a stout, acute tooth above. Abdomen ovate, convex, polished; first segment rather broad, flattened, with a longitudinal carina on each side, not reaching the tip; second segment with an ovate, deeply impressed line on the disk at base, enclosing a rather large space, and from each side behind this space the impressed lines runs somewhat obliquely to the lateral margin, remainder of the segment and all the other segments smooth and polished; venter slightly depressed; ovipositor one-fourth longer than the abdomen, valves black. Length $3\frac{3}{4}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Easily recognized by the smooth abdomen, and by the posterior coxæ being toothed above.

Bracon limatus, n. sp.

Rufous, polished; head, antennæ and legs, except posterior coxæ and femora, black; posterior coxæ simple; wings dark fuscous; metathorax smooth, not punctured; abdomen ovate, disk of second segment with an ovate enclosed space, the segments not excised; ovipositor as long as the abdomen.

Female.—Closely allied to *B. armatus*, from which it differs as follows:—The metathorax is smooth, not punctured, the central carinæ subobsolete; the wings are darker; the posterior coxæ are not spinose, and their femora, except tips, are rufous, instead of black; the abdomen is sculptured the same in both species. Length 3 lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. One specimen.

Bracon distinctus, n. sp.

Rufous, polished; head, antennæ and legs, except base of coxæ and hind femora, black; wings dark fuscous; metathorax large, quadrate, flattened; abdomen rather robust, abruptly deflexed behind, viewed laterally, subtriangular, the venter being prominent; ovipositor longer than the abdomen.

Female.—Head black, tinged with rufous on each side and beneath the base of the antennæ, clothed with long pale pubescence, especially on each side of the face, cheeks and clypeus; just beneath the antennæ a square elevation depressed in the middle; on each side and beneath this elevation, the face is transversely striated; vertex, occiput and cheeks polished; antennæ black (tips broken off). Thorax rufous, polished; mesothorax with the middle lobe broad, convex and very prominent, the dorsal lines deeply impressed, confluent behind the middle, forming a rather deep channel in which are two sharply defined, longitudinal carinæ, posterior margin finely striated; collar with a transverse, rather deep furrow above; pleura highly polished, with a deep, longitudinal, impressed line about the middle; scutellum flattened, slightly prominent on the middle, deeply excavated in front, the excavation divided in the middle by a short, acute, longitudinal carina; metathorax large, depressed, quadrate, shining, covered above with numerous unequal, rounded pits, most of them deeply impressed, extreme sides smooth and polished; on each side behind, just above the insertion of the abdomen, a large, rounded, rather smooth depression; tegulæ rufous. Wings uniform dark fuscous, slightly subhyaline about the lower part of the first submarginal cell; nervures and stigma black. Legs black, pubescent; base of all the coxæ and the posterior femora, except extreme base and apex, rufous; tarsi, except base and apex,

tinged with rufo-piceous. Abdomen robust, bright rufous, polished, rather broad at base and gradually dilated to the tip of the second segment behind which the abdomen is suddenly deflexed, the venter being full and subconvex, so that when viewed in profile the abdomen is subtriangular; first segment deeply and smoothly excavated at base with an acute, longitudinal carina on each side not quite reaching the tip, on the outside of these carinæ the surface is longitudinally striated; second segment with the basal two-thirds very uneven, having several elevations like blisters, the apical third smooth and polished, the middle of the basal half is enclosed by a deeply impressed semicircular groove from which proceeds, on each side, a deep transverse groove, on each side behind the semicircular enclosure, there is an abbreviated longitudinal carina, and between these two carinæ there are two rather large blisters; third and fourth segments with two large blisters at base, divided by a faintly defined longitudinal carina which runs down the segments nearly to the tip; the sixth and following segments pubescent; venter large, prominent, polished, somewhat oblique on each side; ovipositor half again as long as the abdomen, rufo-piceous, valves black. Length 5 lines; expanse of wings 11 lines.

Collection.—Dr. J. Gundlach. One specimen.

Easily distinguished by the large quadrate metathorax and the sculpture of the first and second segments of the abdomen. The position of the abdomen in the specimen before me may be unnatural.

Bracon ventralis, n. sp.

Black; abdomen rufous; wings dark fuscous; abdomen broadly ovate, deeply incised.

Female.—Head black, densely clothed with pale pubescence; palpi blackish, pubescent; antennæ as long as the body, black. Thorax black, shining, slightly clothed with pale pubescence, especially on the pleura and metathorax; mesothorax polished, the dorsal lines tolerably well impressed, making the central lobe rather prominent; scutellum shining; metathorax minutely punctured, shining, pubescent on the sides, slightly so on the disk, tinged with rufous about the insertion of the abdomen; tegulæ black. Wings uniform dark fuscous, a streak in the first submarginal cell, and a spot at its tip beneath, subhyaline; nervures and stigma black. Legs, including the coxæ, entirely black. Abdomen short and broadly ovate, rufous, shining; basal segment broad, flattened, gradually dilated towards the tip, convex on the middle, depressed on each side with a longitudinal, ill-defined carina in each depression; second segment flattened, obliquely depressed on each side at

base, making the extreme basal angles prominent or somewhat tuberculated, on the basal middle a slight elevation, apical margin sinuate and very oblique on each side, behind which the basal angles of the third segment are very prominent or tuberculated; third segment with a deep transverse impressed line, slightly oblique on each side and passing just behind the prominent basal lateral angles; the two following segments deeply incised at base; remaining segments suddenly narrowed and slightly pubescent; venter deeply concave; ovipositor nearly as long as the body, rufous, valves black. Length $4\frac{3}{4}$ lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

Readily distinguished from the other species by the abdomen only being rufous.

Bracon striatulus, n. sp.

Rufous; antennæ and legs black; wings dark fuscous; metathorax large and finely sculptured; abdomen elongate, the first and part of second segments depressed and covered with dense longitudinal striæ; ovipositor as long as the body.

Female.—Sanguineous, shining, slightly pubescent; head globose, face covered with very fine transverse striæ; tips of mandibles and the palpi, blackish; antennæ about as long as the body, very slender, entirely black. Thorax long, somewhat depressed above, polished; lobes of the mesothorax prominent, the central one transversely striated on each side anteriorly and on the middle posteriorly all the way to the posterior margin; pectus irregularly striated, and the sutures of the pleura crenulated; scutellum smooth and polished, the depression in front striated; metathorax large, quadrate, finely and irregularly striated, with several acute longitudinal carinæ, the extreme sides transversely striated; tegulæ black. Wings uniform dark fuscous, faintly subhyaline beneath the stigma; nervures and stigma black. Legs black, pubescent; the coxæ, except tips, obscure rufous; tarsi rufo-piceous; posterior legs stout. Abdomen elongate, ovate beyond the first segment, somewhat shining; first segment longer than broad, sides parallel, depressed above and covered with dense longitudinal striæ, which extends on to the basal half of the second segment, which is also depressed, not extending to the lateral margins, but forming a semicircular striated space, remaining segments smooth and somewhat shining; ovipositor as long as the body, piceous, valves black. Length 4 lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Readily distinguished by the elongate form and striated abdomen.

Bracon intimus, n. sp.

Rufous; antennæ and legs black; wings dark fuscous, posterior pair hyaline at base in ♀; abdomen broadly ovate, the segments deeply incised at base, second segment carinated down the middle, with a deep excavation on each side at base; ovipositor longer than the abdomen.

Female.—Rufous, shining; head globose, pubescent; tips of mandibles and palpi blackish; antennæ longer than the body, blackish-piceous. Thorax smooth and polished; mesothorax flattened, the lobes not well defined; scutellum slightly convex; metathorax small, polished, convex and slightly pubescent, sometimes paler in color than the rest of the body; tegulæ rufous. Wings uniformly dark fuscous, the posterior pair hyaline at base, anterior pair with an oblique subhyaline streak beneath the base of the stigma; nervures black. Legs black, pubescent; the posterior coxæ and base of the middle pair rufous. Abdomen short, broadly ovate, polished, depressed; first segment excavated at base and on each side, swelled on the middle towards the tip, with a longitudinal, sharply defined carina on each side, the lateral margins acute and reflexed towards the tip; second segment with a deep excavation on each side at base, and a slight one on the disk divided down the middle by a carina which proceeds from an elevation on the basal middle, apical margins suddenly rounded on each side; third segment deeply incised at base, the incisure slightly striated and extending on each side both before and behind the basal angles which are prominent or tuberculated; the two following segments very deeply incised at base which is more or less concealed; remaining segments suddenly narrowed and pubescent; venter concave, the terminal segment acute; ovipositor slightly longer than the abdomen, rufous, valves piceous. Length 3—3½ lines; expanse of wings 7—8½ lines.

Male.—Like the female, except that the antennæ are longer, the mesothorax more distinctly lobed, the base of posterior wings not hyaline; the tegulæ, disk of metathorax and posterior coxæ slightly tinged with dusky, and the abdomen more elongate and gradually narrowed to the apex, with the basal incisures of the third, fourth, fifth and sixth segments striated, more distinctly so on the third segment. Length 3 lines; expanse of wings 7 lines.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

This seems to be allied to *B. erythræus* Brullé, which is described as a Cuban species, and which I have not been able to identify. That species, according to the description, has the metathorax channelled down the middle and the abdomen differently sculptured from the species above described.

Bracon dejectus, n. sp.

Rufous; abdomen sanguineous; face pale rufous; vertex, antennæ and legs piceous; wings fuscous; abdomen oblong, segments incised, second segment with a semicircular excavation on each side.

Male.—Head globose, pale rufous, vertex and part of occiput, piceous; antennæ one-fourth longer than the body, blackish. Thorax rufous, smooth and polished; metathorax convex, smooth and polished, slightly pubescent; tegulæ yellowish. Wings uniformly pale fuscous, as well as the nervures and stigma. Legs piceous, anterior coxæ and base of the posterior pair, pale rufous. Abdomen oblong, depressed, much angulate at base, shining, sanguineous; second segment with a large semicircular depression at base, remaining segments more or less deeply incised at base, and gradually narrowed towards the tip; venter concave. Length 2 lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

Bracon albifrons, n. sp.

Yellowish-rufous; head except face, antennæ, four posterior coxæ, and posterior pair of legs, black; wings pale fuscous; abdomen elongate and striated, second segment obliquely depressed and rugose, the segments not incised.

Male.—Yellowish-rufous; head transversely subquadrate, black, shining; face, except a blackish spot beneath the antennæ, whitish; antennæ slender, longer than the body, black. Thorax smooth and polished; lobes of the mesothorax prominent; on the pectus beneath, in front of each anterior coxa, an elongate black mark; scutellum and metathorax convex, smooth and polished; tegulæ yellowish-rufous. Wings pale fuscous, the nervures and stigma dark fuscous. Legs color of the body, the middle coxæ, tips of their tarsi and the posterior coxæ and legs, black or piceous; posterior legs robust. Abdomen rather elongate, depressed, opaque, the sides subparallel, gradually narrowed at tip; first segment coarsely rugose, depressed on each side, with the middle prominent and flattened on the disk, the sides are somewhat transversely striated; second segment coarsely striated longitudinally, with an obliquely depressed line on each side from the base to the lateral margin; third and two following segments longitudinally striated, with a more or less distinctly impressed, somewhat oblique line at base, extending from side to side; apical segments slightly dusky; venter concave. Length $2\frac{1}{4}$ lines; expanse of wings 4 lines.

Collection.—Ent. Soc. Philad. One specimen.

Readily distinguished by its small size, pale color and striated abdomen, and especially the pale face, the rest of the head being black.

Bracon rufithorax, n. sp.

Piceous; head, pectus, mesothorax and legs, rufous; wings hyaline; abdomen oblong-ovate, shining, two basal segments aciculate; ovipositor longer than the abdomen.

Female.—Head globose, rufous, slightly pubescent; tips of mandibles blackish; antennæ longer than the body, very slender, piceous, the two basal joints tinged with rufous. Thorax rufous, minutely punctured, slightly pubescent; the dorsal lines of mesothorax deeply impressed, the disk somewhat depressed and rugose; pleura piceous-black, tinged with rufous beneath; scutellum and metathorax also piceous-black, the former shining, the latter rugose, smoother at base, near which there is a transverse, sharply defined, shining carina; tegulæ pale rufous. Wings hyaline, iridescent; nervures and stigma fuscous, the latter rather large. Legs, including the coxæ, pale rufous. Abdomen oblong-ovate, incurved, pointed at tip; basal segment covered with dense longitudinal striæ which extend on to the basal third of the second segment and forming a semicircular space margined with obscure rufous, outside of this space the surface is minutely and irregularly striated, the apical margin smooth and polished, as well as all of the remaining segments, which are faintly stained with pale rufous; ovipositor longer than the abdomen, pale rufous, valves piceous-black. Length 2 lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

Bracon discolor, n. sp.

Pale honey-yellow; antennæ, metathorax and basal segment of abdomen, piceous, legs whitish; wings obscure hyaline; abdomen ovate, the two basal segments striated; ovipositor as long as the abdomen.

Female.—Pale honey-yellow, shining; head globose; antennæ as long as the body, slender, piceous, the basal joint pale honey-yellow. Thorax with the dorsal lines deeply impressed; scutellum depressed, shining; postscutellum and metathorax piceous, the latter rugose, with a large honey-yellow spot on each extreme side; tegulæ yellowish-white. Wings obscure hyaline, slightly iridescent; nervures pale, stigma rather large, fuscous, white at base and tip. Legs, including the coxæ, whitish; tips of the femora beneath and extreme base of the posterior tibiæ, black; all the tibiæ and tarsi more or less dusky. Abdomen ovate, the two basal segments covered with dense longitudinal striæ, less distinct on the second segment, the apical margin of which is smooth and polished, as well as all the remaining segments; basal segment piceous; the rest honey-yellow, paler towards the tip; ovipositor as long as the abdomen, blackish. Length $1\frac{3}{4}$ line; expanse of wings 3 lines.

Collection.—Ent. Soc. Philad. One specimen.

Bracon? cincticornis, n. sp.

Bright ferruginous; head piceous; antennæ and part of legs black, the former with a broad whitish annulus; wings fusco-hyaline; base of abdomen striated.

Female.—Bright orange-ferruginous, robust; head subglobose, piceous, paler in front; antennæ 13-jointed, two-thirds as long as the body, black, joints seven to nine whitish. Thorax ferruginous, tinged on each side with piceous; mesothorax with two longitudinal carinæ on the disk, rounded and confluent behind the middle, lateral margins elevated and piceous; scutellum somewhat convex; metathorax ferruginous, with well defined elevated lines, forming a large subrhomboidal central area. Wings fusco-hyaline, with a strong brassy reflection; nervures indistinct. Legs: the coxæ and four anterior legs black, with the extreme tips of their femora and tibiæ and the whole of the tarsi, whitish; posterior pair pale ferruginous, with the tips of their tibiæ and most of their tarsi, dusky. Abdomen short, rather broad and subovate, depressed, bright orange-ferruginous, opaque; the first and base of second segments covered with fine longitudinal carinæ, the third segment covered with semicircular striæ, running from the base; remaining segments retracted; ovipositor short. Length $\frac{3}{4}$ths of a line; expanse of wings $1\frac{3}{4}$ line.

Collection.—Dr. J. Gundlach. One specimen.

Easily recognized by its minute size and annulated antennæ.

Bracon exiguus, n. sp.

Dull honey-yellow, legs paler; antennæ black; wings subhyaline, iridescent; abdomen broadly ovate, finely and densely punctured; ovipositor longer than the abdomen.

Female.—Dull honey-yellow; head globose; antennæ black. Thorax smooth and polished; metathorax convex, polished, with a rather deep, longitudinal, central furrow; tegulæ honey-yellow. Wings subhyaline, tinged with fuscous, slightly iridescent; nervures pale fuscous, stigma pale testaceous. Legs pale testaceous, tips of tarsi dusky. Abdomen broadly ovate, subdepressed, very densely and finely punctured, opaque honey-yellow; the second and third segments slightly incised at base, the former with a subobsolete carina down its middle; apical segments gradually narrowed to the tip; venter concave, the ventral valve large and prominent; ovipositor longer than the abdomen, honey-yellow, valves black. Length $1\frac{1}{2}$ line; expanse of wings $3\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Bracon pallens, n. sp.

Yellowish; antennæ fuscous; wings subhyaline, iridescent; abdomen ovate, shining, segments not incised, second segment excavated on each side of the basal middle; ovipositor longer than the abdomen.

Female.—Yellowish, tinged with honey-yellow, shining; head subglobose, extreme tips of mandibles and a spot within the ocelli, brownish; antennæ about as long as the body, fuscous. Thorax smooth and polished; lobes of the mesothorax scarcely defined; metathorax convex, smooth and polished, slightly pubescent, faintly depressed on the disk; tegulæ yellowish, with a dusky dot. Wings subhyaline, faintly tinged with dusky, especially at base, iridescent; nervures and stigma pale testaceous. Legs pale yellowish, tips of the four anterior tarsi, and the posterior legs, more or less dusky. Abdomen broadly ovate, depressed, shining; the segments slightly incised at base, the second segment somewhat excavated on each side of the basal middle, the two apical segments excavated on their disk; venter concave; ovipositor one-fourth longer than the abdomen, yellowish, valves fuscous. Length $1\frac{3}{4}$ line; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

Allied to *B. exiguus*, but is a little larger, with longer wings, and the abdomen smooth and not densely punctured as in that species.

Bracon centralis, n. sp.

Yellowish; spot on vertex, antennæ, legs, and a large mark on the disk of abdomen, occupying nearly the whole of the second and following segments, blackish; wings fusco-hyaline.

Female.—Head subglobose, shining, honey-yellow; tips of mandibles and a large spot on the vertex enclosing the ocelli, blackish; antennæ slightly longer than the body, blackish. Thorax honey-yellow, polished; lobes of the mesothorax scarcely defined; metathorax convex, smooth and polished; tegulæ pale honey-yellow. Wings uniformly fusco-hyaline; nervures and stigma fuscous. Legs, including the coxæ, blackish; tips of the trochanters and of the femora, pale. Abdomen broadly ovate, depressed, polished, pale yellowish, second and following segments above blackish except their lateral margins, which are pale yellowish; segments not incised, the second with a few faint depressions; apical segments gradually narrowed; venter concave, yellowish-white; ovipositor one-half longer than the abdomen, black. Length $1\frac{3}{4}$ line; expanse of wings $3\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Easily distinguished from the other species by the large, black, discoidal mark on the abdomen.

Bracon perparvus, n. sp.

Yellowish; antennæ, disk of metathorax, base and apex of abdomen, fuscous; wings hyaline; abdomen ovate, finely punctured, not excavated.

Male.—Pale yellowish, faintly tinged with honey-yellow, slightly

pubescent, shining; head globose; antennæ fuscous. Thorax shining; mesothorax without impressed lines, tinged with fuscous on the disk and also on the posterior margin; pleura with a curved fuscous line on each side; metathorax stained with fuscous, finely and closely punctured, with a faint carina down the middle, basal margin somewhat striated; tegulæ pale testaceous. Wings short, hyaline; nervures and stigma fuscous. Legs pale yellowish, the posterior pair more or less dusky. Abdomen rather short, ovate, finely punctured, subopaque; basal margins of the segments slightly impressed; first segment fuscous, concave, and carinated on each side; second segment not excavated; two apical segments tinged with fuscous. Length $1\frac{1}{4}$ line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Bracon fuscovarius, n. sp.

Pale luteous; lateral margins and two lines on disk of mesothorax, spot on each side of pleura, most of metathorax, posterior femora and dorsal surface of abdomen, blackish or fuscous; wings hyaline; abdomen elongate, ovipositor very short.

Female.—Pale luteous; head transverse; antennæ tinged with honey-yellow (broken); mesothorax with the dorsal lines deeply impressed, not reaching the posterior margin, fuscous, as well as the lateral margins; on each side of pleura a rather large blackish mark; metathorax rugose, with a large blackish mark covering nearly the whole of the dorsal surface; tegulæ pale luteous. Wings hyaline, iridescent; nervures pale luteous varied with fuscous, stigma rather large, fuscous, the base and apex pale luteous. Legs pale luteous, long and slender; a spot on the posterior coxæ and most of their femora, fuscous. Abdomen elongate, depressed, the three basal segments covered with longitudinal striæ; pale fuscous, a spot on each side of the basal segment and stains on the upper surface of second and third segments, fuscous; beneath pale luteous; ovipositor scarcely exserted. Length 3 lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **ROGAS**, Nees.

Rogas flavidus, n. sp.

Yellowish; antennæ, apical half of posterior tibiæ and their tarsi entirely, black; wings pale yellowish-hyaline, apical margins broadly dusky; two basal segments of abdomen with a carina down the middle.

Male.—Yellowish, mostly opaque, slightly pubescent; head dull honey-yellow, the eyes large, blackish, as well as the tips of the mandibles; antennæ as long as the body, blackish. Thorax: mesothorax

opaque, dull honey-yellow, the dorsal lines distant and well impressed; pectus and pleura polished; scutellum elongate-triangular, pointed in front, the space on each side sloping, polished; metathorax opaque, with several subobsolete longitudinal elevated lines, the central one of which is the most distinct, posterior margin produced into a stout subacute tubercle on each side of the insertion of the abdomen. Wings ample, pale yellowish hyaline, the apical margins broadly pale fuscous, posterior pair somewhat iridescent; nervures and stigma yellow. Legs rather long and slender, color of the body, except the apical half of the posterior tibiæ and their tarsi entirely, which are black. Abdomen as long as the head and thorax, flat, opaque yellowish, shining towards the apex; lateral margins of the two basal segments slightly carinated, and also a longitudinal carina down their middle and continued slightly on the base of the third segment; apical middle of the first segment with a small, very obtuse, polished elevation; apical segments slightly tinged with honey-yellow. Length 5 lines; expanse of wings $10\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

One of the specimens before me is much duller in color, being a uniform dull yellowish-brown, and the apex of the wings scarcely dusky; otherwise I see no difference, and therefore I consider it as a variety.

Genus **MEGISCHUS**, Brullé.

Megischus brunneus, n. sp.

Dark brown; knees yellowish; wings subhyaline; first abdominal segment transversely striated; ovipositor brown, valves blue-black.

Female.—Dark chesnut-brown, shining; head coarsely rugose, the vertex transversely and deeply striated, having anteriorly five short, acute tubercles, arranged thus: 2, 2, 1, the latter or foremost one being the largest, and the posterior pair the smallest; cheeks shining, sparsely punctured; antennæ rather more than half the length of the body, fine, thread-like, blackish, the basal joints brown. Thorax coarsely and confluently punctured, the apex of the metathorax transversely rugose. Wings subhyaline, slightly tinged with fuscous; nervures and stigma blackish, the latter with a pale spot at base. Legs brown, the knees yellowish, the posterior femora and tibiæ tinged with blackish exteriorly; posterior femora with two stout spines or teeth beneath, the anterior one largest, between these two teeth are two smaller ones, and behind the last tooth there are four minute serratures; posterior tibiæ with their apical two-thirds much swollen, their basal third rather slender and compressed; posterior pair 3-jointed, the basal joint robust and much dilated; all the tarsi beneath with a dense pale yellowish pube-

scence. Abdomen: the first segment transversely aciculate, remaining segments smooth and shining; ovipositor longer than the body, brownish, valves blue-black. Length of body 7—11 lines, of ovipositor 9—13½ lines; expanse of wings 9½—14½ lines.

Male.—Resembles the female, but is more elongate and slender, the posterior tibiæ are not so much swollen, and the tarsi are 5-jointed and not at all dilated; the posterior femora beneath have the two large teeth of about equal size, and between them and behind the last one there are several minute serratures. Length 9 lines; expanse of wings 9½ lines.

Collection.—Ent. Soc. Philad. Two ♀, two ♂ specimens.

Both ♂ and ♀ of this species were taken by Dr. Gundlach in considerable number, coming out of the same hole in the trunk of a diseased tree called *Jalia* in Spanish.

Genus **STENOPHASMUS**, Smith.

Stenophasmus Gundlachii, n. sp.

Rufo-ferruginous; antennæ piceous; wings fusco-hyaline.

Female.—Uniform rufo-ferruginous, subopaque; face rugose, mandibles dusky; antennæ longer than the body, very slender and setaceous, piceous, the two basal joints dull rufous. Thorax elongate; dorsal lobes of the mesothorax prominent, especially the central one, which is transversely striated, very finely so on the disk and coarsely on the side, behind it there is a large excavation which is also transversely striated; sides of the pectus with a deep longitudinal excavation, which is transversely striated; pleura polished with a longitudinal, deeply impressed line on each side beneath; scutellum polished; metathorax rugose, polished on each side at base. Wings fusco-hyaline, (imperfect). Legs darker in color than the body, polished, slightly pubescent; posterior tibiæ and tarsi somewhat flattened. Abdomen elongate, incurved and much thickened at tip; first segment nearly as long as the remaining segments together, slightly broader at tip, covered with very fine transverse striæ, more obvious on the sides; on each side, between the base and the middle of the segment, a stout tubercle, and on each side at the extreme base a cariniform process truncate behind and forming a subacute angle; second segment opaque, with a longitudinal impressed line on each side of the middle, not reaching beyond the middle; remaining segments somewhat shining, much thickened, incurved, and gradually narrowed to the tip; ovipositor as long as the body, blackish. Length 6½ lines.

Collection.—Dr. J. Gundlach. One specimen.

Stenophasmus cubensis, n. sp.

Dark fuscous, varied with rufo-ferruginous; antennæ blackish; wings fusco-hyaline.

Female.—Dark fuscous, sometimes rufo-ferruginous; sculptured like the preceding species; antennæ longer than the body, entirely black; wings uniform fusco-hyaline, faintly subhyaline beneath the stigma; nervures and stigma black. Legs blackish-fuscous; the coxæ, tibiæ and tarsi sometimes tinged with rufo-ferruginous. Abdomen dark fuscous, more or less varied with rufo-ferruginous, the apex always fuscous; ovipositor as long as the body, black. Length $5\frac{1}{4}$ lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. Two specimens.

Smaller than *S. Gundlachii*, the form and sculpture being the same, but the color is darker, and the legs, even in the palest specimen, are almost black.

This and the preceding species seem to accord sufficiently well with Mr. Smith's description of *Stenophasmus*, a genus founded on ♀ specimens from the East Indies. The males seem to be unknown to him, and I give below descriptions of two species which are, doubtless, the males of that genus.

Stenophasmus megischoides, n. sp.

Black; antennæ very long and slender; abdomen long and sublinear; wings fusco-hyaline.

Male.—Black, with a slight brownish tinge; head globose, face coarsely rugose, the cheeks and occiput smooth and polished; clypeus obscure rufous; antennæ about half as long again as the body, very slender, more so at tips, first joint rather robust, suddenly constricted at base. Thorax elongate, rugose, the collar elevated above in a prominent ridge; mesothorax transversely striated, the lobes distinct; pectus and pleura irregularly striated; scutellum smooth and shining, slightly prominent at tip; metathorax rugose, rather large and quadrate; tegulæ obscure rufous. Wings narrow, fusco-hyaline, faintly subhyaline beneath the stigma, posterior pair subhyaline, clearer than the anterior pair; nervures and stigma blackish. Legs rather slender, slightly pubescent, black, the coxæ mostly obscure rufous. Abdomen twice as long as the thorax, sublinear, depressed; first segment as long as the second, third and fourth together, slightly broader at tip, covered with fine transverse striæ, shining, the extreme base with an expanding cariniform process as in the previous species, while the lateral tubercle on each side between the base and middle is scarcely visible; the suture between the second and third segments is very indistinctly defined,

both segments are equal in length, slightly longer than broad, and opaque; remaining segments shining, gradually narrowed to the tip, the sutures distinct. Length of body 8 lines; of antennæ 11½ lines; of abdomen 5¾ lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

This species bears a remarkable resemblance in its form to that of the males of *Megischus*, but it is not so linear, and the antennæ are almost twice as long; the neuration of the wings is different, and the hind legs are simple. Although the color of this species is much darker than that of the preceding (*S. cubensis*), and the form more elongate, still it may yet prove to be the male of that species, as the color and neuration of the wings are the same and the sculpturing of the body similar.

Stenophasmus pusillus, n. sp.

Ferruginous; legs and tip of abdomen tinged with dusky; antennæ blackish, as long as the body; wings subhyaline.

Male.—Uniform ferruginous; indistinctly sculptured; head rather large, globose, the cheeks and occiput polished; antennæ as long as the body, very slender, piceous, tinged with ferruginous at base; lobes of the mesothorax distinctly defined, the collar rather prominent; metathorax minutely rugose above, smooth on the sides. Wings uniformly pale fusco-hyaline, slightly iridescent; nervures and stigma pale fuscous. Legs fusco-ferruginous, the anterior pair ferruginous. Abdomen about twice as long as the thorax, sublinear, depressed; basal segment long and slightly broader at tip, with two tubercles on each side between the middle and the base, the one near the base prominent, the other one not so distinct; the suture between the second and third segments indistinct as in the preceding species; remaining segments shining, the apex slightly recurved and tinged with fuscous. Length 3¼ lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

Division.—*Exodontes.*

Genus **ALYSIA**, Latr.

Alysia nigriceps, n. sp.

Rufous, polished; head, antennæ and legs, black; wings dark fuscous; abdomen convex.

Male.—Rufous, highly polished; head transverse, black; lower part of the face, clypeus, mandibles and palpi, piceous; antennæ nearly one-half longer than the body, black. Thorax smooth and polished; lobes of the mesothorax distinct; metathorax slightly carinated down the middle and on each side; tegulæ rufous. Wings uniformly blackish-

fuscous; nervures and stigma black. Legs black, the anterior coxæ and the base of the two posterior pairs, rufous. Abdomen subovate, convex, smooth and polished; first segment excavated at base, swelled on the disk towards the tip, and depressed and carinated on each side; the incision between the first and second segments rather deep; apex truncate. Length $3\frac{1}{4}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Alysia ruficoxalis, n. sp.

Pale rufous, polished; face, antennæ and legs, except coxæ, piceous; wings fuscous; abdomen convex.

Male.—Pale rufous, polished; head transverse; the face, tips of mandibles and the palpi, piceous; antennæ one-half longer than the body, black. Thorax smooth and polished; lobes of the mesothorax distinct; scutellum flat, with a pale fuscous streak down its middle; metathorax carinated down the middle; tegulæ rufous. Wings uniformly dark fuscous; nervures and stigma black. Legs black; the coxæ rufous; tips of the trochanters as well as the anterior tarsi, tinged with rufous. Abdomen subovate, convex, smooth and polished; first segment excavated at base, swelled on the disk towards the tip, and carinated on each side, the incision between it and the second segment rather deep; apex truncate, the last ventral segment with an elongate process on each side posteriorly. Length 4 lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Differs from *A. nigriceps* principally by the head being red, instead of black.

Alysia analis, n. sp.

Honey-yellow; head, antennæ, legs and apical half of abdomen, black or piceous; wings fusco-hyaline; abdomen flattened.

Male.—Head transverse, black, polished; face piceous, its lower margin, as well as the clypeus and mandibles, rufous; antennæ longer than the body, black, the basal joint piceous. Thorax honey-yellow, polished; dorsal lines of the mesothorax deeply impressed; metathorax with a sharp carina down the middle and another on each side; tegulæ pale honey-yellow. Wings uniformly pale fuscous; nervures and stigma fuscous. Legs fuscous, the tarsi paler; coxæ honey-yellow. Abdomen elongate, flat, sides parallel, tip truncate; the first, second and basal margin of the third segment, pale honey-yellow; remaining segments fuscous, their apical margins sometimes pale. Length $2\frac{1}{2}$ lines; expanse of wings $4\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. Two specimens.

Division.—*Flexiliventres.*

Genus **TRIOXYS**, Haliday.

Trioxys fuscatus, n. sp.

Fuscous; face, tegulæ, thorax beneath, and the legs, pale testaceous; wings hyaline.

Fuscous, smooth and polished; face, clypeus, mouth and cheeks, pale testaceous; head large, broader than the thorax, vertex convex, eyes round and rather prominent; antennæ 13-jointed, nearly as long as the body, pale testaceous. Thorax smooth and convex above; a deep transverse excavation in front of the scutellum, which is convex; metathorax smooth, rather convex and pale testaceous posteriorly; the pleura is sometimes testaceous, as well as the tegulæ. Wings hyaline, iridescent, slightly pubescent; nervures pale, stigma large, triangular; the radial and cubital cells imperfect, a complete long, sublanceolate basal costal cell. Legs long and slender, especially the posterior pair, and including their coxæ, pale testaceous, the posterior pair sometimes tinged with dusky. Abdomen elongate, slender at base and gradually broader and subcompressed towards the tip, which is more or less tinged with dusky, while the base is pale testaceous. Length $\frac{3}{4}$ line; expanse of wings $1\frac{1}{4}$ line.

Collection.—Ent. Soc. Philad. Four specimens.

Genus **APHIDIUS**, Nees.

Aphidius fuscoventris, n. sp.

Black, polished; tegulæ and legs pale; abdomen, except first segment, pale fuscous; wings hyaline, iridescent; basal segment of abdomen striated.

Black, polished; head transverse; clypeus and mandibles honey-yellow; palpi whitish; antennæ longer than the body, slender, black, pubescent, the two basal joints honey-yellow; mesothorax without dorsal impressed lines, but on each side of the anterior margin there is a rather deep excavation, the lateral margins are slightly grooved, and on the disk posteriorly, just in front of the scutellum, there is a deep fovea; pleura slightly pubescent; scutellum smooth and polished, with a deep transverse excavation in front; metathorax rugose; tegulæ whitish. Wings ample, hyaline, iridescent; nervures and stigma fuscous; posterior wings with a fringe of pale hairs behind towards the base. Legs, including the coxæ, pale honey-yellow; the tarsi and most of the posterior tibiæ fuscous. Abdomen short, ovate, polished; basal segment black; longitudinally striated; remaining segments pale fuscous, margined behind with dark fuscous. Length 1 line; expanse of wings 3 lines.

Collection.—Dr. J. Gundlach. One specimen.

Aphidius longicornis, n. sp.

Piceous; base of antennæ, tegulæ, metathorax, legs, and base of abdomen, pale yellowish; antennæ longer than the body; wings long, hyaline, iridescent.

Head large, broader than the thorax, piceous-black, shining; antennæ longer than the body, slender, fuscous, the two basal joints pale yellowish. Thorax piceous-black, convex above; scutellum with a deep, transverse excavation in front; metathorax yellowish, with a central carina furcate behind; tegulæ pale yellowish. Wings long, hyaline, iridescent, slightly pubescent; nervures and stigma pale testaceous, the latter very slender; a large, complete, subovate, radial cell; two complete submarginal cells, the first large and directed obliquely inwards, the second longitudinal, elongate and narrowed towards the tip. Legs long and slender, and including the coxæ, pale yellowish-white; the tibiæ slightly swollen, and pubescent at extreme tips, the tarsi longer than the tibiæ, very slender, the extreme tips dusky. Abdomen elongate, subsessile, depressed, shining, piceous, the basal segment yellowish. Length 1 line; expanse of wings $1\frac{1}{2}$ line.

Collection.—Dr. J. Gundlach. One specimen.

Aphidius? pallipes, n. sp.

Black; head rufo-piceous; antennæ and legs pale yellowish; wings hyaline; base of abdomen striated.

Head subglobose, rufo-piceous, polished, face opaque, palpi whitish; antennæ nearly as long as the body, yellowish. Thorax piceous-black; mesothorax with two deeply impressed lines confluent on the disk in a sculptured depression; scutellum with a large, deep, transverse, sculptured excavation in front; pleura uneven; metathorax blackish, rugose, or reticulated with numerous elevated lines; tegulæ pale yellowish. Wings hyaline, slightly iridescent; nervures testaceous, stigma large and fuscous; a complete, very large, subovate radial cell; a large, irregular submarginal cell, with the short dividing nervures, beneath the base of the radial cell, subobsolete; discoidal cell large, subtriangular and complete. Legs, including the coxæ, entirely pale yellowish-white. Abdomen subovate, depressed, piceous-black, the two basal segments above covered with fine longitudinal striæ. Length 1 line; expanse of wings 2 lines.

Collection.—Dr. J. Gundlach. One specimen.

Aphidius? fulvus, n. sp.

Uniform pale fulvous, polished, robust; head tinged with fuscous; antennæ, except base, blackish; wings hyaline.

Robust, uniform pale fulvous, polished; head transverse, rather broader than the thorax, tinged with fuscous; antennæ longer than the

body, piceous-black, several basal joints honey-yellow; mesothorax convex, smooth and polished, slightly indented on each side in front; scutellum smooth and polished, transversely excavated in front; metathorax rugose; tegulæ pale fulvous. Wings hyaline, iridescent; nervures and stigma fuscous. Legs paler fulvous than the body, tips of the tarsi dusky. Abdomen rather broadly ovate, smooth and polished, except the basal segment which is carinated and gradually narrowed to the base. Length 1 line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Fam. CHALCIDIDÆ.

Gen. **LEUCOSPIS**, Fabr.

Leucospis Poeyi, Guér.

Leucospis Poeyi, Guér., Icon. Rég. An. iii, p. 414; LaSagra's Hist. Cuba, pl. 18, f. 4.

Collection.—Ent. Soc. Philad. Two (♂ ♀) specimens.

This species is parasitic upon *Megachile Poeyi* Guér.

Genus **SMIERA**, Spin.

Smiera Lanieri, Guér.

Chalcis Lasnierii, Guér., Icon. Rég. Anim. iii, p. 412, pl. 67, f. 4.

Chalcis Lanieri, Guér., LaSagra's Hist. Cuba. Ins. p. 753.

Collection.—Ent. Soc. Philad. Two specimens.

Smiera coccinea, n. sp.

Bright scarlet; vertex, occiput, most of antennæ, tegulæ, and four anterior legs, black; wings dark fuscous; scutellum transversely rugose.

Bright scarlet, shining, pubescent; head black, the face, lower part of the cheeks, clypeus and mandibles, scarlet; antennæ brown-black, inserted on the middle of the face, paler towards the tips which are testaceous, flagellum thickened at base. Thorax: prothorax and pleura roughly punctured; mesothorax rather feebly and indistinctly punctured; scutellum transversely rugose; metathorax coarsely rugose; tegulæ black, shining. Wings ample, dark fuscous, costa black. Legs scarlet, pubescent; the four anterior tibiæ, all the tarsi, and the posterior trochanters beneath, black; the hind coxæ very elongate, their femora much swollen and armed beneath with a row of small subacute teeth, tipped with black, their tibiæ curved and acute at tips. Abdomen small, subconical, smooth and polished, obtusely pointed at tip, scarcely compressed; petiole about one-third the length of the remainder of the abdomen. Length 3 lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Allied to *S. Lanieri*, but is at once distinguished by the thorax, and the posterior coxæ, femora and tibiæ being entirely red, and the four anterior legs black.

Smiera intermedia, n. sp.

Yellowish-ferruginous; abdomen scarlet; vertex, occiput, cheeks, antennæ, tegulæ, four anterior legs, posterior coxæ above, and their tibiæ and tarsi, black; wings fusco-hyaline.

Yellowish-ferruginous, closely and deeply punctured, pubescent; head black, the face, inner orbits, clypeus and mandibles, pale ferruginous; antennæ inserted on the middle of the face, stout, dull fuscous, scape shining black. Thorax closely and coarsely punctured; the dorsal lines of the mesothorax deeply impressed; scutellum roughly punctured, with their posterior margin carinated; metathorax coarsely rugose, with an acute spine on each side; tegulæ piceous, shining. Wings uniformly pale fusco-hyaline, slightly iridescent; nervures blackish. Legs bright yellowish-ferruginous, tinged with scarlet, pubescent; the four anterior femora and tibiæ piceous, pale at tips; posterior coxæ very elongate, with a broad exterior black stripe, their femora much swollen, stained on the outside with bright scarlet, and armed beneath with a row of small teeth tipped with black; their tibiæ and tarsi entirely black, the former curved and acute at tip. Abdomen small, ovate, convex, smooth and polished, scarcely compressed, bright scarlet; petiole nearly one-half the length of the remainder of the abdomen. Length 3 lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Smiera ignea, n. sp.

Reddish-orange; flagellum, central stripe on mesothorax, a small spot on each side of it, as well as the anterior and posterior margins, a central spot on metathorax, a round spot on posterior coxæ above, and the extreme tip of abdomen, black; wings hyaline; abdomen elongate, acuminate and pointed.

Uniformly bright reddish-orange; antennæ inserted on the middle of the face, scape long and slender, flagellum dull black, long and of uniform thickness. Thorax closely and rather deeply punctured; the anterior and posterior margin of the mesothorax, as well as a central longitudinal stripe and a short line on each lateral lobe, black, the line on the anterior margin is somewhat thickened on each side of the middle; scutellum with a central longitudinal black line; metathorax coarsely rugose, with a large black spot on the disk. Wings hyaline, or with a very faint dusky tinge, slightly iridescent. Legs color of the body, smooth and shining; the posterior coxæ elongate, robust at base, with a rather large round black spot above; their femora much swollen and armed beneath with a row of about fifteen obtuse blackish teeth, the basal one rather large, the others minute; their tibiæ curved, very acute at tips and margined within with black; the tarsi orange-yellow. Abdomen elongate, fusiform, acute at tip, smooth and polished, black

at the extreme tip; petiole short and stout. Length 2½ lines; expanse of wings 4 lines.

Collection.—Ent. Soc. Philad. One specimen.

Smiera Gundlachii, n. sp.

Luteous-yellow; antennæ, spot on vertex, apical half of posterior coxæ, and their tibiæ except base, black; wings subhyaline, costa fuscous; scutellum armed behind with two acute teeth.

Luteous-yellow, slightly pubescent; a black spot on the vertex, covering the ocelli, behind which it spreads across to the summit of the eyes; antennæ inserted on the middle of the front, stout, of uniform thickness, dull black, the scape yellow. Thorax discolored with brownish; prothorax obliquely striated; mesothorax covered with fine transverse striæ, somewhat oblique posteriorly; pleura coarsely punctured, slightly varied with yellow; scutellum large and prominent, coarsely rugose, with an obtuse tubercle on the disk and two subacute flattened teeth on the posterior margin which is somewhat carinate; metathorax coarsely rugose, with a large obtuse projection on each extreme side immediately beneath the hind-wings; tegulæ dull luteous. Wings large, ample, subhyaline, varied with hyaline, the costa deeply stained with fuscous. Legs luteous-yellow, smooth and polished; posterior coxæ very elongate, the apical half beneath and the apical two-thirds above, as well as the trochanters, black, with a short, stout tooth above near the tip; posterior femora much swollen, and armed beneath with a row of small obtuse teeth, the basal one the largest; their tibiæ curved, acute at tip, black except the base Abdomen short and subglobose, smooth and shining, apical margins of the segments stained with pale ferruginous, with a large blackish stain above near the tip of the third segment; remaining segments retracted; petiole nearly as long as the rest of the abdomen. Length 4 lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

A fine large species; the brown color of the thorax is probably occasioned by an accidental discoloration, as one of the middle legs is brownish, while the other is entirely bright yellow.

Smiera Eubule, Poey, MSS.

Luteous; vertex, antennæ, spot on each side of thorax, most of mesothorax, large triangular spot on scutellum, posterior half of posterior coxæ, and spots on their femora, dull ferruginous; scutellum and metathorax each with two acute spines; posterior femora armed beneath with four large teeth, the basal one very stout; wings subhyaline.

Luteous-yellow, slightly pubescent; the space behind the antennæ, vertex and occiput, brownish; face sparsely punctured; antennæ inserted on the middle of the front, ferruginous-brown, stout, the flagel-

lum subfusiform, the scape yellowish beneath. Thorax roughly and densely punctured, somewhat rugose; prothorax rugose, yellowish, with a transverse brownish spot on each side above; mesothorax brownish, with a longitudinal line on each side of the disk, converging on the scutellum, and a broad line over the tegulæ, yellowish; pleura rather coarsely punctured, yellowish, with the suture between it and the pectus and a broad, deeply impressed, oblique, somewhat crenulated line beneath the wings, brownish; scutellum large and produced, yellowish, with a large triangular brownish mark on the disk, the posterior margin truncate with a stout acute tooth on each side; metathorax roughly rugose, brown at base, very much produced on each extreme side and armed behind by two diverging, rather long, acute teeth; tegulæ yellowish. Wings subhyaline, slightly tinged with fuscous, especially towards the tips. Legs luteous-yellow, smooth and shining, slightly pubescent; posterior coxæ very elongate, their apical half and the trochanters rufous; posterior femora much swollen, armed beneath with four large teeth, the basal one much the largest and stoutest, the two middle ones more slender and acute, and directed backwards, the apical one broad at base and acute at tip; a large rufous stain on the upper surface, another over the large basal tooth and running along the lower margin and covering all the teeth, which are tipped with blackish; posterior tibiæ curved, acute at tip, the base stained with brownish-ferruginous and the inner margin blackish; extreme tips of the tarsi, dusky. Abdomen short, subcompressed at tip, smooth and polished, pale luteous-yellow, more or less tinged with pale ferruginous, the second segment flattened in its anterior face with a narrow transverse, sometimes subobsolete, dorsal blackish band towards the tip, and the remaining segments sometimes indistinctly banded with fuscous; petiole almost half the length of the rest of the abdomen. Length 4 lines; expanse of wings 7 lines.

Collection.—Ent. Soc. Philad. Four specimens.

This species destroys the larva of *Callidryas Eubule;* it sometimes varies by having the prothorax above, the mesothorax and scutellum almost entirely brownish, and the posterior coxæ rufous except the extreme base.

Smiera pulchra, n. sp.

Yellow; antennæ ferruginous-brown; spot on vertex, occiput, disk of prothorax, large mark on mesothorax enclosing three or four yellow spots, most of pleura and metathorax, tips of posterior coxæ, three spots on their femora, base of their tibiæ and bands on tip of abdomen, black; wings subhyaline; scutel-

lum, metathorax, tip of posterior coxæ above and their femora beneath, acutely toothed, the latter with four teeth.

Bright yellow, pubescent; spot on vertex, covering the ocelli and nearly the whole of the occiput, black; antennæ inserted on the middle of the front, stout, ferruginous-brown, the flagellum of uniform thickness, scape yellowish beneath. Thorax closely and rather roughly punctured; spot on the disk of prothorax, a very large mark covering nearly the whole of the mesothorax and enclosing three yellow spots, and nearly the whole of the pleura, black; scutellum produced, entirely yellow, armed behind with two stout subacute teeth; metathorax blackish, roughly sculptured, the lateral projections yellow, the posterior teeth rather long, acute and strongly divergent; tegulæ yellow. Wings subhyaline, slightly iridescent. Legs bright yellow, shining; posterior coxæ elongate, black at tips with an acute tooth above; their femora much swollen, armed beneath with four large acute black teeth, the two middle ones the longest and directed backwards, a large spot on the lower margin over the two basal teeth, a smaller round spot on the upper margin, opposite the preceding and another spot at the tip, all black; posterior tibiæ curved, acute at tip, black at extreme base; tarsi dusky at tips. Abdomen short, subglobose, slightly compressed, smooth and shining, the third and following segments more or less stained or banded with blackish, mostly interrupted on the disk; petiole more than half the length of the rest of the abdomen. Length $2\frac{1}{2}$–3 lines; expanse of wings 4—5 lines.

Collection.—Ent. Soc. Philad. Four specimens.

Smiera nigropicta, n. sp.

Yellow; antennæ, anterior and posterior margin of, and three longitudinal marks on the mesothorax, anterior suture of pleura, spot on scutellum, base of metathorax, large spot on posterior coxæ, tip of their femora and base of their tibiæ, and dorsal bands on the abdomen, black; wings hyaline, iridescent; posterior femora armed beneath with a row of numerous small black teeth.

Bright yellow, sometimes with an orange tinge, slightly pubescent; extreme posterior margin of the head black; antennæ inserted on the middle of the face, stout, the flagellum of uniform thickness, blackish above, fulvous or yellowish beneath, as well as the scape which is long and cylindrical. Thorax closely and deeply punctured; a small black spot on the anterior face of the prothorax, more distinct when the head is bent downwards; the anterior and posterior margins of the mesothorax black, as well as a longitudinal black stripe on each lobe, the central one narrowed at each extremity and dilated in the middle, the black on the anterior margin is also dilated on each side of the middle, and

that on the posterior margin dilated on each side; anterior suture of the pleura black; scutellum large, produced, deeply punctured, with an elongate black mark on the disk, pointed before, the posterior margin slightly carinated; metathorax reticulated with acute carinæ, with a transverse basal black spot, the lateral teeth not distinct; tegulæ yellowish. Wings hyaline, iridescent; nervures fuscous. Legs yellowish, smooth and shining; posterior coxæ elongate, with a large black spot near the base above and a small acute tooth near the tip; their femora much swollen, armed beneath with a row of about thirteen black teeth, very small and obtuse at tip and becoming gradually larger and more acute towards the base, the basal one quite large, stout and acute, near the tip and beneath it on each side a small black spot; their tibiæ curved, black at base and acute at tip; extreme tips of the tarsi blackish. Abdomen short and subglobose in the ♂, and long and acuminate in the ♀; smooth and shining, generally more or less black at the tip and banded with blackish on the disk of the second and following segments, sometimes very indistinctly so; petiole about one-fourth as long as the rest of the abdomen in the ♂, much shorter in the ♀, the apical segments of which are acuminate and pointed. Length ♀, 3—3¼ lines; ♂, 2½ lines; expanse of wings 4—6 lines.

Collection.—Ent. Soc. Philad. Three ♀, three ♂ specimens.

Smiera palens, n. sp.

Pale yellow; flagellum of antennæ, a central stripe and a spot on each side of mesothorax, as well as its anterior and posterior margins, spot on scutellum, tip of metathorax, and stain on tip of abdomen, dusky or black; legs immaculate, the posterior femora with a row of numerous small dusky teeth; wings hyaline, iridescent.

Pale clay-yellow, slightly pubescent; the extreme posterior margin of the head, and the ocelli, blackish; antennæ inserted on the middle of the face, the scape slender, long, pale yellow, the flagellum fulvous or dusky, stout, but of uniform thickness. Thorax closely and rather finely punctured; mesothorax with its anterior and posterior margin narrowly blackish, with a central longitudinal stripe dilated in the middle and a spot on each lateral lobe, also blackish; scutellum carinate behind, with a wedge-shaped blackish spot on the disk, pointed before, and on each extreme side a blackish oblique mark; extreme lateral margin of the postscutellum slightly dusky; metathorax rugose, its apex blackish; tegulæ pale yellowish. Wings hyaline, iridescent. Legs entirely pale clay-yellow, immaculate; posterior coxæ elongate, stout, with a small blackish tubercle above near the tip; their femora much swollen, and armed beneath with a row of about thirteen or four-

teen very small obtuse blackish teeth, the basal one not larger than the others; their tibiæ curved and acute at tip. Abdomen short, ovate, smooth and shining, more or less marked or stained with dusky towards the tip; petiole nearly one-half as long as the rest of the abdomen. Length $1\frac{1}{4}$—$1\frac{3}{4}$ line; expanse of wings $2\frac{1}{4}$—$3\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Four specimens.

The smallest specimen varies by having the blackish marks of the mesothorax and scutellum nearly obsolete.

Smiera immaculata, n. sp.

Entirely pale yellowish; antennæ slightly dusky at tips; wings hyaline, iridescent; posterior femora armed beneath with numerous small dusky teeth, the tarsi blackish at tips; abdomen tinged with fulvous, petiole as long as the rest of the abdomen.

Uniformly pale yellowish, slightly pubescent; antennæ inserted on the middle of the face, the scape long and slender, the flagellum more or less dusky above and towards the tip, Thorax immaculate, indistinctly punctured, the lobes of the mesothorax well defined. Wings hyaline, iridescent. Legs pale yellowish, tips of the tarsi blackish; posterior coxæ very elongate; their femora swollen and armed beneath with a row of about thirteen or fourteen small teeth tipped with black, the basal one the largest; their tibiæ curved, acute at tip. Abdomen small, subovate, tinged with fulvous, smooth and shining; petiole elongate, slender, as long as the rest of the abdomen. Length $1\frac{1}{4}$ line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

Distinguished from the preceding species by the absence of dusky spots and by the longer petiole of the abdomen, which is nearly twice as long in this species.

Smiera petiolata, n. sp.

Dull ferruginous, varied with black and yellowish; four anterior legs yellow; wings hyaline, iridescent; petiole of abdomen very long and slender, twice as long as the remainder of abdomen.

Head yellowish, paler on the face, the sides of which are discolored with leaden; a black spot on each side of the front behind the antennæ and before the ocelli; occiput black, margined in front with ferruginous; antennæ inserted on the middle of the front, dusky-ferruginous, the scape short and tinged with yellowish beneath. Thorax finely and closely punctured, ferruginous, spotted with yellowish; mesothorax black, lateral margins of the central lobe ferruginous varied with yellowish, the outer half of the lateral lobes also ferruginous; prothorax ferruginous, with a yellowish line on the middle; pleura dull ferrugi-

nous, with a deeply excavated oblique blackish line and a blackish spot on the anterior suture; scutellum yellowish-ferruginous, with a large dorsal blackish mark; metathorax yellowish-ferruginous, blackish on each side at base; tegulæ pale yellowish. Legs: the two anterior pairs, including their coxæ, pale yellowish; posterior pair dull ferruginous, their coxæ very elongate, swollen at base and gradually attenuated to the tips which are slender and toothed above, and stained within and towards the tip with blackish; their femora much swollen and armed beneath with a row of about twelve small blackish teeth, the basal one the largest; the upper and inner side are blackish, the former with a pale yellowish streak, and the outer side with a spot towards the tip and another over the basal tooth, of the same color; their tibiæ curved, acute, stained on the middle and at tip with pale yellowish; their tarsi pale yellowish, dusky at tips. Abdomen small and globose, smooth and shining, more or less marked above with blackish; petiole very long and slender, twice as long as the rest of the abdomen, covered with fine transverse striæ, black, pale yellowish at both extremities. Length $1\frac{3}{4}$ line; expanse of wings $2\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Easily recognized by the very long and slender petiole of the abdomen.

Smiera scutellaris, n. sp.

Dull ferruginous; antennæ, most of pleura, large spot on posterior coxæ, part of the femora and tibiæ, and most of the abdomen, black; sides of the face, whole of scutellum, tips of posterior coxæ, spots on their femora and tibiæ, and a spot on each side of abdomen above, pale yellowish; wings subhyaline.

Head ferruginous, closely punctured; the orbits, face, except a central black spot, clypeus and mandibles, yellowish-white; antennæ inserted on the middle of the face, entirely black, scape long and slender, flagellum rather stout, of uniform thickness. Thorax very densely and roughly punctured, dull ferruginous; prothorax margined with pale yellowish, with a black spot on the lateral truncation; pleura blackish, with a pale spot beneath the wings; scutellum large, somewhat depressed, entirely clay-yellow, its posterior margin subcarinate, and the spaces on each side ferruginous, margined behind with black and striated; postscutellum pale clay-yellow on the middle, blackish and striated on the sides; metathorax coarsely rugose, black, stained with rufous, the prominent sides dull ferruginous, blackish about the insertion of the posterior coxæ; tegulæ luteous. Wings almost hyaline, very faintly tinged with fuscous, slightly iridescent, the costal nervure fuscous. Legs dull ferruginous; the four anterior coxæ whitish; the femora,

tibiæ and tarsi, pale yellowish, the two former lined without and within with blackish; posterior coxæ elongate, stout, with a large black spot above, the tips pale, with an acute tooth above; their femora much swollen, rufo-ferruginous, stained above and on the inside with blackish, a spot above at the tip, another on each side of the lower margin below the tip, and another one over the basal tooth, all whitish, the one on the inside below the tip is surrounded by blackish, lower margin armed with a row of fourteen or sixteen minute black teeth, the basal one the largest; their tibiæ curved and acute at tip, black, interrupted near the base and tips with whitish; tarsi pale yellowish, dusky at extreme tips. Abdomen ovate, slightly compressed, pointed at tip, smooth and shining, black, piceous above, rufous beneath; on each side of the third segment a whitish transverse spot; petiole stout, about one-third as long as the rest of the abdomen, pale yellowish-white. Length $2\frac{3}{4}$ lines; expanse of wings $4\frac{1}{4}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Smiera flavopicta, n. sp.

Black, varied with pale yellowish spots and marks; wings subhyaline; abdomen elongate, acuminate and pointed at tip; hind femora armed beneath with a row of numerous small teeth.

Black, slightly pubescent; the orbits, a large spot between the antennæ, another above the base of each mandible, and the mandibles except tips, yellowish-white; antennæ inserted on the middle of the face, long and black, whitish at the extreme base, flagellum stout, of uniform thickness, piceous, slightly paler at tips. Thorax opaque black, minutely and densely shagreened; prothorax margined on the sides and behind with ferruginous, with six yellow spots on the anterior margin, two approximate ones on the disk and two more distant ones on each side; mesothorax with an interrupted longitudinal line on each side of the disk and two spots over the tegulæ, yellow or yellowish-ferruginous; pleura entirely black, irregularly striated; scutellum broadly margined on each side with pale yellowish, which color is deeply indented with black on each side behind; postscutellum stained with yellowish-ferruginous on the disk; metathorax entirely black, coarsely rugose, more finely and somewhat reticulated on the prominent sides; tegulæ pale yellowish. Wings very faintly tinged with fuscous, slightly iridescent; costa blackish. Legs black; tips of the four anterior femora, their tibiæ, except the middle, and their tarsi, pale yellowish; posterior coxæ elongate, robust, black, yellowish at extreme tips, which have an acute tooth above; their femora much swollen, with three irregular, pale yellowish marks above near the tip, surrounded by ferruginous,

another elongate, irregular mark of the same color on the lower margin beneath the tip, a spot beneath over the basal tooth, and on the middle a small spot near the tip, yellowish, lower margin armed with a row of sixteen or seventeen minute obtuse teeth, the basal one much the largest; their tibiæ curved, acute at tip, piceous, with a spot near the base and another near the tip, both yellowish-white; all the tarsi yellowish, dusky at tips. Abdomen elongate, acuminate and pointed at tip, shining black; petiole short and stout; the third and three following segments with a transverse basal yellowish fascia on each side of the middle, with a yellowish spot on each extreme side, obsolete on the third segment; seventh segment with a round yellowish-white spot on each side; apical segments pubescent; beneath black, immaculate. Length $1\frac{3}{4}$—3 lines; expanse of wings $2\frac{1}{2}$—4 lines.

Collection.—Ent. Soc. Philad., and Dr. J. Gundlach. Two specimens.

The small specimen varies by having two pale ferruginous spots on the vertex behind the ocelli, and a line of the same color on each side of the anterior ocellus; the lateral margins of the scutellum are ferruginous, with a large whitish spot on each side near the tip; the abdomen is pale piceous, the yellowish-white markings similar and more distinct, with the addition of two spots of the same color on the disk of the second segment; otherwise the color and markings are the same as in the large specimen.

Genus **EPITRANUS**, Walker.

Epitranus castaneus, n. sp.

Entirely pale chestnut-brown, the thorax and abdomen above darker; abdomen smooth and polished, petiole long and striated; antennæ inserted close to the mouth; wings hyaline, apparently veinless.

Pale chestnut-brown; head flattened behind the ocelli, making the vertex somewhat prominent; eyes small, rounded; face rather broad and flattened; antennæ inserted very close to the mouth, pale ferruginous, the scape long and slender, flagellum stouter and uniform in thickness. Thorax covered with uniform, close and rather deep punctures, very slightly pubescent; scutellum rather prominent; metathorax flattened, with coarse longitudinal rugæ, disk blackish and finely rugose, the tip narrowed to the insertion of the abdomen, extreme sides prominent and rugose. Wings pure hyaline, slightly iridescent, the nervures indistinct. Legs: the two anterior pairs pale ferruginous; posterior pair darker, their coxæ robust and subelongate, finely rugose; their femora swollen and armed beneath with eight small black obtuse teeth and a large basal one tipped with black; their tibiæ curved, acute at tips, somewhat carinate and forming a prominent ridge near

the base. Abdomen subglobose or subovate, faintly compressed, smooth and polished, stained with piceous above; petiole elongate, stout, longitudinally striated, sometimes nearly as long as the rest of the abdomen and inserted to the latter on a line with its dorsal surface. Length $1\frac{1}{4}$—2 lines; expanse of wings $2\frac{1}{4}$—$3\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Four specimens.

Sometimes varies from dark-brown to very pale chestnut-brown.

Genus **CHALCIS**, Fabr.

Chalcis robusta, n. sp.

Black, very robust; face golden-sericeous; tegulæ and legs, except the coxæ and the posterior femora within and a large black spot on the outside, bright yellow; wings nearly hyaline; abdomen subsessile, ovate and shining.

Black, clothed with a short golden-yellow pubescence; head broader than the prothorax, the face, cheeks and occiput densely clothed with golden pubescence; antennæ inserted on the middle of the face, black, scape polished, flagellum robust, of uniform thickness and opaque. Thorax closely and rather deeply punctured, opaque; scutellum somewhat produced behind, carinate at tip which is densely clothed with golden pubescence, as well as the extreme sides near the base; metathorax roughly rugose; tegulæ bright yellow. Wings faintly tinged with pale fuscous. Legs, excepting the coxæ, bright yellow; posterior coxæ robust, polished; their femora much swollen, black within except near the tip above and on the outside a large oblique black spot not reaching the upper margin, but confluent beneath with the black of the inside; in one specimen this spot is entire and not confluent beneath with the black of the inside, and the apical third within is yellow; lower margin armed with a row of nine or ten small obtuse black teeth, and a large obtuse one near the base; their tibiæ curved, acute at tips; tarsi black at tips. Abdomen subsessile, robust, convex, ovate, sometimes faintly compressed and pointed at tip, smooth and polished, and the posterior margins of the apical segments more or less fringed with yellowish pubescence. Length $2\frac{3}{4}$—$3\frac{1}{2}$ lines; expanse of wings 5—6 lines.

Collection.—Ent. Soc. Philad. Four specimens.

Chalcis incerta, n. sp.

Very closely allied to the preceding species, but differs as follows:—The pubescence is more silvery instead of golden; the tegulæ are yellowish-white; the tibiæ and tarsi are yellowish-white, the four anterior femora are black with their tips and sometimes their apical one-half or one-third yellowish-white, and the posterior femora are entirely black

except a large yellowish-white spot on the outside at tip; the posterior tibiæ are black at base, with a black band on the middle, broader within, and sometimes indistinct on the outside; and the apical third of the posterior tarsi is black. Length 2—3 lines; expanse of wings $3\frac{1}{2}$—5 lines.

Collection.—Ent. Soc. Philad. Four specimens.

One specimen in the collection of Dr. Gundlach, varies from the other four specimens by the tegulæ, the four anterior legs, except their coxæ and trochanters, the apical spot on the posterior femora, their tibiæ except base, and their tarsi, all bright yellow, as in *robusta*.

Genus **PHASGONOPHORA**, Westw.

Phasgonophora insularis, n. sp.

Black; prothorax, scutellum and legs, rufous; wings hyaline, apical two-thirds stained with pale fuscous.

Female.—Head black, coarsely punctured, clothed with short, pale, glittering pubescence, and when viewed in front, the pubescence is more densely arranged in five longitudinal lines, viz: one between the insertion of the antennæ, one on outside of the insertion of each antenna, and one on each inner orbit of the eyes; mouth dull piceous; antennæ about as long as the thorax, dull black or piceous-black. Thorax deeply and coarsely punctured or rugose; prothorax gibbous, very coarsely punctured, rugose above, rufous, the anterior face depressed, transversely striated, blackish and clothed with pale glittering pubescence, as well as the posterior margin; mesothorax coarsely rugose, black, the posterior margin and the sutures between the middle and lateral lobes, margined with dense, short, pale, glittering pubescence; pleura black, sometimes obscurely tinged with piceous, clothed with pale, glittering pubescence, and on each side a broad, deep, oblique, polished groove, with a few transverse striæ about the middle; scutellum rather strongly produced behind, rufous, coarsely rugose, its tip obtusely emarginate; metathorax black, depressed above, with a few well defined longitudinal polished carinæ on the disk, interlaced by several transverse ones; at the base, immediately beneath the scutellum, a transverse carina enclosing a narrow space which is beautifully crenulated or covered with short, well-defined carinæ; on each side, just behind the posterior wings, a lateral, acute spine, beneath this spine the sides of the metathorax are densely and coarsely punctured, and covered with short, pale, glittering pubescence, as well as the sides of the upper surface; tegulæ piceous, polished, margined without with obscure testaceous. Wings hyaline, the apical two-thirds stained with pale fus-

cous; the costal nerve and the stigma blackish-fuscous; in some specimens there is a faint iridescent reflection. Legs, including the coxæ, rufous, slightly pubescent; posterior legs shaped as in *Smiera*, their femora with a large blackish stain on the outside near the base, their tibiæ more or less varied with blackish, sometimes entirely piceous-black. Abdomen fusiform, black or piceous-black, smooth, shining, apex produced and attenuated; the sixth segment has a few large, deep punctures; the sheath of the ovipositor is nearly as long as the abdomen, slightly compressed, broad at base, and gradually tapering to a point at tip; the base on each side has a few scattering punctures, becoming very dense beneath, and on each side of the groove beneath, which receives the ovipositor, there is a row of deep punctures, continued to almost the tip; dorsal segments have a beautiful violet reflection in certain lights, more obvious in some specimens than in others, and in certain lights the disk is tinged with obscure rufous; sides of the segments clothed with short glittering pubescence, more sparse on the first and second segments; beneath, the segments are more or less tinged with rufous. Length, including sheath of ovipositor, $4\frac{1}{2}$—5 lines; expanse of wings 6—$6\frac{1}{2}$ lines.

Male.—Resembles the female, except that the prothorax is obscurely rufous, the scutellum not so strongly produced and piceous, and the abdomen is almost entirely rufo-piceous, the apical margins of the apical segments are punctured, and their sides with a band of pale glittering pubescence at tip; the apical segment is obtuse and deeply punctured. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Collection.—Ent. Soc. Philad. Three ♀, one ♂, specimens.

Fam. CHRYSIDIDÆ.

Genus **ELAMPUS**, Spin.

Elampus viridis, n. sp.

Bright metallic green, the head and abdomen with a blue reflection; grossly punctured, the abdomen, except apex, smooth; scutellum armed behind with a broad, flattened, obtuse process; tarsi fulvous; wings subhyaline.

Male ?—Head bright metallic green, with a deep bluish reflection, especially on the face, which is broadly excavated; the punctures deep and rather close, except in the excavation of the face which is finely rugulose; mandibles pubescent, fulvous, deep blue at base; antennæ piceous, the basal joint blue-green. Thorax deeply and closely punctured, bright metallic green, the collar tinged with deep blue, the mesothorax tinged with golden; pleura, scutellum and metathorax much more closely punctured than the rest of the thorax; scutellum large,

armed behind with a long, broad, flattened and obtuse process; posterior angles of the metathorax strong and acute; tegulæ piceous, slightly tinged with green. Wings subhyaline, tinged with pale fuscous; nervures fuscous. Legs blue-green, the tarsi and the extreme tips of the tibiæ, fulvous. Abdomen short and broadly ovate, convex, bright metallic green with a beautiful deep blue reflection in certain lights, the two basal segments smooth and polished, minutely and sparsely punctured under a strong lens, the apical segments strongly but not closely punctured; basal segment slightly excavated on the middle; extreme apex of the abdomen truncate, the upper margins reflexed, the end somewhat circular and concave, rufo-piceous; beneath blue-green. Length 2 lines; expanse of wings $3\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad.

Genus **HOLOPYGA**, Dahlb.

Holopyga Dohrni, Dahlb.

Holopyga Dohrni, Dahlb. Hymen. Europ. ii, p. 48, pl. 3, fig. 56*a*.

Collection.—Ent. Soc. Philad. Two ♁ specimens.

Genus **HEDYCHRUM**, Latr.

Hedychrum vernale, n. sp.

Bright metallic green; disk of the mesothorax and of the abdomen blue; antennæ blackish; apical third of wings fuliginous.

Male.—Head bright metallic green, with a faint bluish tinge about the front, the excavation to receive the antennæ very minutely striated transversely, rest of the head deeply and very closely punctured; mandibles black, pubescent; antennæ black, the two basal joints green. Thorax metallic green, deeply and very closely punctured; disk of the mesothorax more coarsely punctured, tinged with blue, extreme sides deeply concave and finely striated, the posterior angles long, acute and divergent; tegulæ blue-green. Wings subhyaline, the apical third fuliginous, base of posterior wings hyaline; nervures black. Legs green, blackish in certain lights, slightly pubescent. Abdomen short and broad, subconvex, deeply and closely punctured, more sparse and less deep on the disk; green, with a deep blue reflection, the dorsal surface deep blue; apical margin of third segment faintly sinuate, pubescent; venter concave, bright metallic green, the basal margins of the segments more or less black. Length $3\frac{1}{2}$ lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. One specimen.

Hedychrum cyaniventre, n. sp.

Head and thorax green; mesothorax and abdomen dark blue; antennæ black; wings fusco-hyaline.

Male.—Head metallic green, with a bluish reflection on the front,

deeply and very closely punctured, more finely below the front; mandibles fuscous, green at base, pubescent; antennæ blackish, the basal joint blue-green. Thorax deeply and closely punctured, green, pubescent, the mesothorax with a strong deep blue reflection; metathorax rugose, deeply concave on each side beneath the posterior angles, which are rather short, acute and divergent; tegulæ green. Wings uniformly pale fuscous, the posterior wings hyaline at base; nervures fuscous. Legs green with a strong deep blue reflection, pubescent, the tarsi and the posterior femora blackish in certain lights. Abdomen short and broad, convex, slightly pubescent, deep brilliant blue, with a beautiful purple reflection especially on the disk of the second segment; punctures deep and close, less deep on the disk of the second segment; third segment slightly tinged with green, the apical margin slightly undulate; venter concave, polished, brilliant blue-green. Length $3\frac{1}{4}$ lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **CHRYSIS**, Linn.

♀. Apical margin of third abdominal segment entire.

Chrysis divergens, n. sp.

Metallic green: the mesothorax and abdomen, especially the second segment, blue; antennæ, except base, black; third segment of abdomen with a deep transverse excavated line before the apical margin, interrupted on the middle; wings subhyaline.

Female.—Head green, tinged with blue on the front, deeply and very closely punctured, slightly pubescent; on the front a transverse, sinuate carina, from which proceeds two equidistant, abbreviated carinæ towards the ocelli; antennal cavity pubescent and minutely rugose; antennæ black, the two basal joints blue-green. Thorax deeply, coarsely and closely punctured, slightly pubescent, green, with a more or less deep blue reflection, especially on the mesothorax, which has two well impressed longitudinal lines on the disk; sides of the pectus deeply excavated, golden-green, as well as the pleura, which is more grossly punctured than the rest of the thorax; metathorax with the posterior angles stout, long, subacute and strongly divergent, the excavation on each side very deep and golden-green; tegulæ blue-green. Wings almost hyaline, with a very faint fuscous tinge; nervures blackish. Legs blue-green, slightly pubescent; tarsi blackish. Abdomen oblong, scarcely broader than the thorax, deeply and rather closely punctured, green, deep purplish-blue on the disk of the second segment and on the apex of the third segment, which has a deep, transverse, foveate excavation just before the apical margin, and interrupted on the middle by

an elevated ridge; apical margin entire; venter deeply concave, blue-green, polished. Length 3 lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

??. Apical margin of third abdominal segment armed with four teeth.

Chrysis oblonga, n. sp.

Elongate, green, abdomen deep blue; wings subhyaline; third abdominal segment with a transverse fold before the apex, and behind the fold a row of deep punctures, apical margin with four acute teeth.

Female.—Head grossly punctured, bright metallic green, slightly bluish on the vertex, across which there is a sharply defined carina which continues down the orbits, on each side of the face, to the base of the mandibles; the excavation behind the antennæ transversely striated; clypeus golden-green, depressed, the apical margin emarginate and coppery; cheeks carinate; mandibles long, acute, bronze-black, carinate and green at base; antennæ black, with a slight purplish-blue reflection, the two basal joints blue-green. Thorax elongate, narrowed in front, grossly punctured, slightly pubescent, bright metallic green; disk of mesothorax with two well impressed longitudinal lines, between which the surface is more or less blue; pleura golden-green; metathorax deep blue on the dorsal surface, the posterior angles large, divergent and acute; tegulæ blue-green. Wings subhyaline, tinged with pale fuscous, especially towards the base, the nervures stout, very distinct and blackish. Legs blue-green, pubescent. Abdomen oblong, convex, deeply, uniformly and closely punctured, of a brilliant deep azure-blue, tinged with purple at base and greenish on the sides; third segment more sparsely punctured at base, with a large transverse fold on the apical third, behind which, on each side, there is a row of deep punctures; the apical margin armed with four teeth, one on each extreme side, and two, more approximate and acute, on the middle; venter deeply concave, brilliant blue-green, polished. Length 4—4½ lines; expanse of wings 6—7 lines.

Collection.—Ent. Soc. Philad. Two specimens.

Readily recognized by the narrow elongate form, and the brilliant deep azure-blue abdomen.

Chrysis superba, n. sp.

Large, robust, bright metallic green; disk of mesothorax and the abdomen azure-blue, the latter very large and deeply tinged with purple at the base of the segments; wings subhyaline, with fulvous spots and lines in the cells.

Male.—Robust; head bright metallic green, faintly tinged with blue on the vertex across which there is a sharp carina, slightly pubescent, closely punctured; the excavation behind the antennæ finely punctured,

tinged with blue; mandibles blackish, golden-green at base; cheeks carinate; antennæ blackish, the two basal segments green. Thorax narrowed in front, broad behind, deeply and closely punctured, slightly pubescent, bright metallic green, the mesothorax more or less tinged with deep blue, especially on the disk between the two longitudinal impressed lines, where the color is of a deep purplish hue; scutellum more grossly punctured, with a bluish tinge; pleura and pectus golden-green, the latter deeply excavated on each side; metathorax with a deep bluish reflection, on each side of the middle a small, ovate, oblique excavation and with two deep, approximate punctures at their tip, posterior angles large, broad, flattened, subacute and sparsely punctured; tegulæ blue-green. Wings almost hyaline, faintly tinged with fuscous, with fulvous spots or lines in the marginal, submarginal and discoidal cells; nervures and stigma stout and blackish. Legs bright metallic green, slightly tinged with blue, pubescent. Abdomen very large, broader than thorax, convex, deeply, closely and uniformly punctured, brilliant deep azure-blue, conspicuously purple on the dorsal base of the segments, especially of the second segment, and the sides slightly tinged with green; third segment with a slight transverse fold on the apical third, behind which there is a row of deep punctures; apical margin with four equidistant, rather long, acute teeth; venter concave, brilliant blue-green, highly polished. Length $5\frac{1}{2}$ lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

A large, broad and superb species, with the colors of the abdomen remarkably brilliant.

Chrysis purpuriventris, n. sp.

Blue-green; mesothorax and abdomen brilliant purple-blue; antennæ, except base, and the tarsi, blackish; wings fusco-hyaline.

Male.—Head green, strongly tinged with blue, roughly and deeply punctured; vertex with a sharply defined, transverse carina, which continues down the orbits on each side of the face, the excavation behind the antennæ finely and closely punctured or somewhat rugulose; mandibles, except base, blackish; antennæ blackish, the two basal joints green. Thorax not narrowed in front, deeply, coarsely and closely punctured, dark green more or less deeply tinged with blue, except the pectus and pleura which are bright green; mesothorax deep azure-blue, tinged with purple, with two tolerably distinct, longitudinal, impressed lines on the disk; scutellum and metathorax dark green, more or less tinged with blue, especially the latter, the posterior angles of which are

large, stout, divergent and subacute; tegulæ green. Wings subhyaline, tinged with fuscous, especially towards the base, clearer at tips; nervures distinct and fuscous. Legs blue-green, the tarsi blackish. Abdomen rather longer than the head and thorax and slightly broader, deeply, closely and uniformly punctured, of a brilliant deep azure-blue, strongly tinged with purple; before the apex of the third segment a transverse row of deep punctures, the apical margin armed with four short, acute, equidistant teeth; venter concave, green at base, and purplish-blue towards the apex. Length $3\frac{1}{4}$ lines; expanse of wings $4\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Readily recognized by the brilliant purplish-blue abdomen.

♀♀♀. Apical margin of third abdominal segment armed with six teeth.

Chrysis insularis, Guér.

Chrysis insularis, Guér. Revue. Zool. 1842, p. 148; LaSagra's Hist. Cuba. Ins. p. 755, pl. 18, fig. 5, 5*a*.

Collection.—Dr. J. Gundlach. One ♁ specimen.

It is impossible to say whether the specimen which I have placed under this name, or the one described below (*C. dubia*), is the true *insularis*, as both seem to answer to the descriptions given by Guérin. The specimen which I here consider as *insularis*, differs from the following species by the mesothorax being more bluish, and the punctures of the abdomen not so dense, while in *dubia* they become very fine and dense towards the apical margins of the segments, and the spaces between the punctures are distinctly punctured, thereby giving the abdomen a much rougher appearance than in *insularis*, although the interstices between the punctures of the latter are also punctured, but not so distinctly. The third segment of *dubia* is almost entirely green, while in *insularis* the apical margin only is green, and the six teeth on the apical margin in the latter species, are rather longer and more acute; otherwise there is scarcely any difference between the two species.

Chrysis dubia, n. sp.

Robust, green, dorsal surface of the second and third abdominal segments deep azure-blue; the face, pectus and pleura, golden-green; wings subhyaline.

Female.—Head broad, pubescent, green, faintly tinged with blue on the vertex across which, below the ocelli, there is a twice angular carina throwing upon each side towards the ocelli a short carina; the excavation behind the antennæ finely rugulose and brilliant golden-green, the punctures of the vertex and occiput are dense and coarse; mandibles piceous, green at base; cheeks carinate; antennæ blackish,

the long basal joint green, the second and third joints green above. Thorax very slightly narrowed in front; closely, uniformly and coarsely punctured, dark green above slightly tinged with bluish, the sides brighter green, the prothorax with a slight longitudinal impression on the disk; mesothorax slightly tinged with dark obscure blue, the disk with two well impressed longitudinal lines; metathorax azure-blue at the extreme tip, the posterior angles large, flattened, divergent, and acute at tip; tegulæ bright green. Wings subhyaline, slightly tinged with fuscous especially towards the base, with a slight purple iridescence; nervures blackish. Legs green, pubescent, tarsi blackish. Abdomen broad and robust, densely and deeply punctured, the punctures becoming finer towards the sides and apex of the segments, and the interstices between the punctures finely but distinctly punctured; dorsal surface of the first and second segments brilliant azure-blue, shading into metallic green on the sides, and in certain lights the apical margins are slightly greenish; third segment less coarsely punctured, almost entirely bright metallic-green, tinged with blue at the base, more conspicuous in certain lights; before the apex of this segment there is a transverse row of deep punctures, the apical margin pubescent, with six short, acute, equidistant teeth, the lateral ones not so acute as the others; venter bright metallic green, polished. Length 5 lines; expanse of wings $6\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Closely allied to *C. insularis*, but besides the differences enumerated above, the form is more robust, the excavation behind the antennæ is bright golden-green, and the face about the insertion of the antennæ is not densely pilose as in *insularis;* the second and third joints of the antennæ are tinged with green, while in *insularis* they are entirely blackish. It may be easily distinguished by the much denser punctation of the abdomen, which in *insularis* has a smoother appearance.

Chrysis subviridis, n. sp.

Obscure green, brighter beneath; mesothorax obscure; abdomen deep blue, strongly tinged with purple, the apical margins and sides of the segments tinged with green; apical margin of third segment with six long acute teeth; wings fusco-hyaline.

Male.—Head obscure green, grossly punctured, slightly pubescent; a twice angular transverse carina on the front below the ocelli; the excavation behind the antennæ finely rugose and bright metallic-green; sides of the face pilose; mandibles, except base, blackish, the long basal joint green. Thorax obscure green above, brighter on the sides and beneath, densely and coarsely punctured; mesothorax obscure dusky,

especially in front, the two impressed dorsal lines distinct; metathorax tinged with blue behind, the posterior angles large, acute, slightly divergent; tegulæ green. Wings fusco-hyaline, paler at tips, with a faint purplish iridescence; nervures fuscous. Legs bright green, slightly pubescent, tarsi piceous. Abdomen as wide as the metathorax and rather longer than the head and thorax, convex, sides parallel; deeply and uniformly punctured, more dense on the sides and towards the apex; deep azure-blue, strongly tinged with purple towards the base of the segments, the base of the third segment entirely purple, the apex of the segments and on the sides more or less greenish; the purple base of the third segment finely and sparsely punctured, the remainder roughly punctured; before the apex a transverse row of deep punctures, the apical margin armed with six long, acute, equidistant teeth; venter deeply concave, polished blue-green. Length 4 lines; expanse of wings 6 lines.

Collection.—Dr. J. Gundlach. One specimen.

Chrysis consimilis, n. sp.

The description of *C. oblonga*, given above, will answer for this species, except that the mesothorax is purplish-blue, the wings have a beautiful purple iridescence, and the apex of the abdomen is armed with six teeth instead of four.

Collection.—Ent. Soc. Philad. One ♀ specimen.

Fam. MUTILLIDÆ.

Gen. **MUTILLA**, Linn.

Mutilla senex, Guér.

Mutilla senex, Guér. Icon. Règ. Anim. iii, p. 429, pl. 69, fig. 4; LaSagra's Hist. Cuba, Ins. p. 758.

Collection.—Ent. Soc. Philad. Three specimens.

Mutilla nigriceps, n. sp.

Rufous; head, antennæ, base and apex of abdomen, black, the latter with a broad pale yellowish band before the tip.

Female.—Head black, clothed with dense black pubescence, that about the mouth, as well as the mandibles and palpi, piceous; antennæ piceous, basal joint long and slightly curved, second small and subglobose, third three times as long as the second and widened at tip, the nine following joints subequal, each shorter than the third, slightly involute, compressed and widened in the middle and narrowed towards the tip, which is pointed. Thorax broader in front, rufous, covered with large, deep, rough, confluent punctures, and clothed with long, erect, ochraceous pubescence, that on the anterior margin black and rather dense;

on each side behind the middle two rather large, obtuse tubercles, the posterior ones placed on the lateral base of the metathorax, which is narrowed towards the tip, convex and gradually sloped behind, the sides abrupt and densely pubescent. Legs piceous-black, densely clothed with ochraceous pubescence, very long on the femora; the tibiæ with a row of long acute black spines. Abdomen ovate, convex; first segment small, companulate, black, densely clothed with long and short ochraceous pubescence; second segment large, rufous, roughly and confluently punctured, the basal half above with a large black mark, densely clothed with black pubescence, with the posterior margin lobed on the middle, rest of the segment clothed with short ochraceous pubescence, and on the apical margin a band of dense ochraceous pubescence, sometimes with a transverse patch of black pubescence on each side of the middle; third segment densely clothed with ochraceous pubescence, with a slight mixture of black on the basal middle; remaining segments densely clothed with black pubescence. Length 6—7 lines.

Collection.—Ent. Soc. Philad. Three specimens.

Mutilla rubriceps, n. sp.

Dull rufous; thorax and three large spots on apex of second abdominal segment, black; apex of metathorax, legs, the first, sides of the second and all of the remaining segments of abdomen, densely clothed with ochraceous pubescence.

Female.—Head dull rufous, densely punctured, and clothed with pale ochraceous pubescence; mandibles, palpi and antennæ piceous or rufo-piceous, the latter proportioned as in the preceding species. Thorax deeply and coarsely punctured, especially on the sides, convex above, deep black, clothed with short, dense, black pubescence; on each side before the middle a small, flattened tubercle, and behind the middle a large obtuse, rufous tubercle tipped with black; the pleura beneath and the metathorax behind densely clothed with a short, fine, appressed, pale ochraceous, sericeous pubescence. Legs piceous, densely clothed with pale ochraceous pubescence; tibiæ with a row of stout, acute spines. Abdomen ovate, convex above; basal segment small, quadrate, punctured, clothed with dense, pale ochraceous, silky pubescence; second segment large, dull rufous, tinged with brown, densely, deeply and confluently punctured, clothed with ochraceous pubescence, especially on the extreme sides and on the sides of the apical margin where it is very dense and appressed; on the apical middle of this segment a large black spot, clothed with black pubescence, and on each extreme side another blackish spot, bordered behind with the ochraceous margin; remaining segments piceous or rufo-piceous, densely clothed,

especially at tip, with a short, appressed, pale ochraceous pubescence. Length 6 lines.

Collection.—Dr. J. Gundlach. One specimen.

Mutilla palliceps, n. sp.

Rufo-ferruginous; antennæ, legs and thorax above, brownish; head, apical margins of the first and second, and sides of the remaining segments of abdomen, ochraceous; abdomen with several black spots on the middle.

Female.—Head densely clothed with pale ochraceous pubescence; mouth and antennæ rufo-piceous, the latter blackish towards the tips. Thorax densely and roughly punctured, blackish-brown above, clothed with reddish pubescence, beneath and behind rufo-piceous, sides without distinct tubercles; pleura concave; metathorax subquadrate, scarcely narrowed behind, the posterior face rather abrupt, the lateral margins dentate. Legs rufo-piceous, clothed with ochraceous pubescence; the tibiæ with a row of long acute spines. Abdomen subovate, much narrowed towards the tip, convex above, closely punctured; basal segment small, somewhat companulate, black, with the posterior margin densely clothed with ochraceous pubescence, the base with a stout obtuse tubercle on each side; second segment large, rufo-ferruginous, thinly clothed with ochraceous pubescence, on the basal middle a subquadrate black patch, slightly margined on each side with ochraceous, the apical margin densely clothed with ochraceous pubescence, margined before with black, which is deeply crenulated behind, especially on the middle; remaining segments densely clothed with ochraceous pubescence, with a large patch of black pubescence on the disk of the third, fourth and fifth segments, largest on the third segment; beneath ferruginous, the apical margins of the segments fringed with ochraceous pubescence. Length $4\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Mutilla Wilsoni, n. sp.

Black; head, prothorax, pleura, base of metathorax, base of second and the third and fourth segments of abdomen, clothed with silvery white pubescence; wings hyaline, the anterior pair with the apex and a median band, fuscous.

Male.—Deep shining black; head small, subglobose, rather densely clothed with silvery-cinereous pubescence; eyes small, rounded, prominent and olive-green; antennæ black. Thorax closely punctured, the prothorax broad and rather densely clothed with silvery-white pubescence, as well as the pleura; mesothorax deeply punctured, clothed with short black pubescence; scutellum clothed with long cinereous pubescence, with its anterior margin flattened, smooth and shining, and armed on each extreme side with a stout tooth, obtusely bifid or constricted

at tip; postscutellum silvery on the middle and sides; metathorax covered with numerous interlacing, well-defined carinæ, forming many small, irregular cells, the base is broadly clothed with appressed, silvery-white pubescence; tegulæ black, polished. Wings hyaline; the anterior pair with a median transverse band, and the apical fourth dark fuscous; nervures blackish; marginal cell short, truncate at tip; two complete submarginal cells, the second largest and receiving the first recurrent nervure near the base; posterior wings hyaline, slightly dusky at tips. Legs slender, black, clothed with whitish pubescence; apical spurs of the four posterior tibiæ long and whitish. Abdomen black, the first segment small, narrow at base and swollen at tip, roughly punctured, with a small tubercle on each side of the base and middle, apical margin densely clothed with silvery-white pubescence; second segment large, convex, shining black, finely punctured, clothed with black pubescence, the basal third with silvery-white pubescence; third and fourth segments densely clothed with silvery-white pubescence, the remaining segments with dense black pubescence. Length $4\frac{3}{4}$ lines; expanse of wings $8\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

It gives me pleasure to dedicate this elegant species to Dr. Thomas B. Wilson, to whom this Society is indebted for placing in its possession one of the finest collections of Cuban Hymenoptera extant.

Genus **METHOCA**, Latr.

Methoca Poeyi, Guér.

Methoca Poeyi, Guér., Icon. Règ. Anim. Ins. p. 430 ♂ ♀; LaSagra's Hist. Cuba, Ins. p. 758, pl. 18, fig. 8, ♂ ♀.

I have not seen any specimens of this insect, but Prof. Poey informs me that he collected, about twenty years since, both ♂ and ♀, and sent them to Mr. Guérin, who has described and figured them. Prof. Poey says: "I have seen the ♀ come out of a hole pierced in an earthy wall; the ♂ has taken the ♀ upon the margin of the hole; I have seen the coitus from the commencement to the end."

Fam. SCOLIADÆ.

Gen. **MYZINE**, Latr.

Myzine nitida, Smith.

Myzine nitida, Smith, Brit. Mus. Cat. Hym. iii, p. 77, ♂.

Collection.—Ent. Soc. Philad. Two ♂ specimens.

The three specimens before me answer exactly to Mr. Smith's description of *M. nitida* (from Jamaica), except that the abdomen is beautifully iridescent, and the length is $7\frac{1}{2}$—8 lines, instead of 5—$5\frac{1}{2}$

lines. One specimen (Coll. Dr. Gundlach), is more robust than the other two, and the yellow markings are more strongly developed; otherwise there seems to be no difference.

Myzine albopicta, n. sp.

♂. Black; inner orbits, clypeus, mandibles, spot on each side of prothorax, its posterior margin, two spots on pleura, spot on postscutellum, spot on anterior and posterior coxæ, line on outside of four anterior tibiæ, spot on posterior femora beneath, and spots or lines on the apical margins of abdominal segments, all whitish; wings hyaline, dusky at tips.

Male.—Black, clothed with a thin pale pubescence; head finely punctured; face prominent between the antennæ, with a short, deep, longitudinal groove on the middle, not reaching the ocelli; the clypeus, mandibles, except tips, and the narrow inner orbits, extending from the lower half of the sinus to the clypeus, whitish; palpi pale; antennæ longer than the head and thorax, thickened, dull black. Thorax shining black, minutely punctured; narrow posterior margin of the prothorax, and an elongate spot on each side anteriorly, white; mesothorax with two abbreviated, longitudinal, well impressed lines on the disk; pleura densely and finely punctured, an elongate, subcuneiform spot on each side anteriorly, and a rounded spot on each side posteriorly, white; scutellum entirely black, minutely punctured; postscutellum with a transverse, subquadrate white spot on its disk; metathorax rounded above and behind, densely and finely punctured; tegulæ shining black. Wings long and ample, hyaline, beautifully iridescent, slightly dusky at tips; nervures black. Legs black, more or less tinged with piceous; the anterior coxæ with a rounded white spot beneath, the middle coxal plates margined with whitish, and the posterior coxæ with a white spot above and a line beneath of the same color; the four anterior tibiæ exteriorly, the whole of the anterior tarsi, and a spot or line on the posterior femora at tip beneath, white; tibial spurs also white; tips of all the tarsi tinged with ferruginous. Abdomen black, polished, with a faint bluish reflection and a few scattered punctures; a transverse spot on each side of the first segment at tip above, a very narrow, sinuous, more or less interrupted line on the apical margins of the second, third and fourth segments above, and a spot on each extreme side beneath, white; apical segment depressed above, deeply notched at tip, receiving the long, recurved, acute, apical tooth. Length 5 lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Closely allied to *M. nitida*, but is smaller, differently marked, and the legs black instead of rufous.

Myzine lateralis, n. sp.

♀. Black; two spots above base of antennæ, spot beneath wings, postscutellum, and a spot on each side of the four basal segments of abdomen, deeply emarginate within, yellow; wings tinged with fuscous.

Female.—Black, shining, sparsely clothed with whitish hairs; head deeply and closely punctured between the ocelli and antennæ, feebly and very sparsely so on the cheeks and behind the ocelli; just above the insertion of each antenna, a yellowish spot; antennæ black, the basal joint clothed beneath with long pale hairs. Thorax shining; prothorax sparsely punctured, deeper on the sides, finer and closer on the disk, and on each side on the anterior margin an obscure dull ferruginous spot, sometimes obsolete; mesothorax very sparsely and feebly punctured, with two deep approximate striæ on each side opposite the tegulæ, and not reaching the anterior margin; on each side behind the outer stria a small yellowish or ferruginous spot, and on the disk between the two inner striæ a large ferruginous mark, deeply notched in front, and sometimes obsolete; extreme sides of the prothorax finely striated; pleura deeply punctured, with a large yellow spot on the anterior margin beneath the wings; scutellum with a few scattered punctures; postscutellum with a transverse yellow or ferruginous line; metathorax pruinose, on the verge of the truncation several transverse acute slightly undulating carinæ, and the sides finely, densely and somewhat obliquely striated; tegulæ piceous, edged with testaceous. Wings subhyaline, tinged with fuscous, especially the apical half; nervures testaceous. Legs shining, black, rather densely clothed with pale glittering hairs; tarsi rufo-piceous. Abdomen black, polished, very sparsely and feebly punctured; on each side of the apex of the four basal segments a large yellow spot deeply emarginate within, so that the yellow continues inwardly for a short distance along the apical margin in a narrow line slightly thickened at tip, the spot on each side of the basal segment is sublunular and not so deeply emarginate as those on the second and third segments, that on the second is largest, and that on the fourth segment smallest and sometimes reduced to a mere line; apical segment depressed, densely and finely rugose, pitted with deep punctures and clothed with brownish subdepressed hairs, the apical and lateral margins are broad and reflexed; beneath piceous, polished, the apical half of the segments deeply and closely punctured and clothed with pale pubescence. Length 8 lines; expanse of wings 12 lines.

Collection.—Ent. Soc. Philad. Two specimens.

Myzine striata, n. sp.

♀. Black; two spots above base of antennæ, two spots on prothorax, two spots on each side of pleura, spots on postscutellum, a large bifid mark on each side of metathorax, yellowish; abdomen marked much as in *lateralis;* metathorax deeply striated; wings subhyaline.

Female.—Black; clothed with pale glittering pubescence, longer and more dense on the under surface; head closely, deeply and uniformly punctured, the cheeks beneath clothed with long pubescence; immediately above the insertion of the antennæ are two confluent, yellowish-ferruginous spots; clypeus depressed, finely punctured; mandibles piceous, shining, fringed beneath with long yellowish pubescence; antennæ tinged with dull ferruginous, the basal joint black, shining and pubescent. Thorax dull black, finely and closely punctured; prothorax opaque, very finely punctured, interspersed with larger punctures, densely clothed with very short pale sericeous pubescence, on each side anteriorly a transverse, obscure yellowish mark or line, the extreme sides covered with fine longitudinal striæ; mesothorax depressed, shining, with deep scattered punctures, stained on the disk with obscure rufous, on each side of the disk two impressed lines, the inner one the deepest, and not reaching the anterior margin which is smooth and impunctured; scutellum opaque, closely punctured, the postscutellum with a transverse yellowish spot; pleura prominent laterally, closely and deeply, punctured densely clothed with short, pale, glittering pubescence, two large obscure yellowish spots on each side, one anteriorly and the other posteriorly; metathorax dull black, covered at extreme base, with deep transverse striæ or acute carinæ, the posterior face is abrupt, flattened and covered with finer striæ, diverging from the tip in a semicircular direction towards the sides; on each side a large obscure yellowish mark, deeply indented with black on the angulation. Legs piceous or piceous-black, shining, clothed with pale pubescence; tibial spurs white; the four posterior tibiæ densely covered on the outside with short spines. Abdomen shaped and marked as in *M. lateralis*, except that the mark on each side of the second segment above is larger, scarcely emarginate, and has just above it a small yellowish spot; beneath black, polished, and clothed with long pale pubescence. Length 7 lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

Very similar to *M. lateralis*, but is at once distinguished by the different sculpture of the metathorax.

Myzine apicalis, n. sp.

♂. Black; clypeus, mandibles, scape of antennæ beneath, collar, anterior margin of mesothorax and spot on its disk, two spots on pleura, lines on scutellums, lunate spot on each side of metathorax, legs and apical margins of abdominal segments, yellow or ferruginous; apex of abdomen and venter ferruginous; wings hyaline, slightly dusky at tips.

Male.—Black, shining, slightly iridescent, thinly clothed with pale pubescence; clypeus prominent, densely and finely punctured, ferruginous; labrum yellow; mandibles ferruginous at base, yellow in the middle and black or piceous at tips; narrow lower, inner and outer orbits obscure ferruginous; palpi pale; antennæ rufo-piceous, extreme apex fulvous, the basal joint beneath yellow. Thorax finely and closely punctured; line over the collar dilated on the sides, anterior margin of mesothorax, a spot on its disk, a large spot on the pleura anteriorly and another posteriorly, and a transverse curved line on the scutellum, ferruginous or yellowish-ferruginous; a transverse spot on postscutellum and a deeply emarginate spot on each side of the metathorax, yellow; tegulæ ferruginous margined within with yellow. Wings hyaline, glossy, slightly fuscous at tips; nervures testaceous. Legs ferruginous, the anterior tibiæ and all the tarsi, yellowish; posterior coxæ piceous, margined with yellowish-ferruginous. Abdomen black or piceous-black, shining; the five basal segments each with an apical yellow fascia more or less sinuate anteriorly, those on the third, fourth and fifth segments indented on each side anteriorly, the last one very narrow; two terminal segments ferruginous, the apical segment deeply notched at tip, receiving the long recurved apical tooth which is blackish towards the tip; beneath ferruginous, the basal segment black with two yellow spots on the middle, the four following segments with a lateral yellow spot, minute on the fifth segment. Length $5\frac{3}{4}$ lines; expanse of wings $8\frac{3}{4}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **TIPHIA**, Fabr.

Tiphia argentipes, n. sp.

Black, polished; sides of abdomen and the legs clothed with silvery pubescence; wings subhyaline.

Female.—Black, polished, thinly clothed with pale glittering pubescence; head covered with rather deep and close punctures; the face and cheeks with silvery-sericeous pubescence; mandibles black, polished, pubescent beneath; antennæ piceous, the scape black and pubescent. Thorax: prothorax deeply and rather densely punctured, its posterior margin smooth and polished, the lower half of the sides finely

striated; mesothorax with scattered deep punctures, and a short, deep, longitudinal stria on each side opposite the tegulæ; scutellum margined behind by a row of deep punctures; metathorax with a few scattered feeble punctures, bounded on the sides and behind by an acute carina, the disk with three approximate carinæ, the central one sometimes not reaching the posterior carina, lateral truncation polished, obliquely striated, posterior truncation finely rugose on the sides; tegulæ black, smooth and polished. Wings subhyaline, slightly stained with fuscous; nervures fuscous. Legs black, shining, the tibiæ and tarsi densely clothed with a glittering silvery pubescence. Abdomen black, polished; first and second segments with a few scattered punctures, more dense on the apical margin of the latter; third, fourth and fifth segments more closely and deeply punctured, the apical margins, especially on the sides, fringed with long, pale glittering pubescence; apical segment depressed, rugose and pubescent, the apical margins reflexed; beneath rather densely punctured, the apical margins fringed with pale glittering pubescence. Length 5—5½ lines; expanse of wings 7½—8 lines.

Male.—Resembles the female, but more slender and hairy; the punctures of the mesothorax and abdomen deeper and closer, especially towards the apex of the latter, and the wings are hyaline, with a slight fuscous tinge about the tip, especially in the marginal cell, which is, as usual, closed, and the stigma large and black. Length 4 lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. Two ♀, two ♂ specimens.

Genus **SCOLIA**, Fabr.

Scolia (**Elis**) **atrata**, Fabr.

Scolia atrata, Fabr., Ent. Syst. ii, p. 228; Syst. Piez. p. 239. Burm. Abh. Nat. Ges. Halle, i, p. 23.

Colpa atrata, St. Farg. Hym. iii, p. 535.

Scolia micans, Guér., Voy. Cog. Zool. ii, pt. 2, p. 251. Beauv. Ins. Afriq. et Amér. p. 258, pl. 10, fig. 3 ♀.

Collection.—Ent. Soc. Philad. Numerous ♂ and ♀ specimens.

Scolia (**Elis**) **trifasciata**, Fabr.

Tiphia trifasciata, Fabr., Ent. Syst. ii, p. 246 ♂; Syst. Piez. p. 235.

Scolia trifasciata, Klug, Weber & Mohr, Beitr. i, p. 32. Sauss. Ann. Soc. Ent. Fr. 3e sér. vi, p. 245.

Collection.—Ent. Soc. Philad. Seven ♀, eight ♂ specimens.

The females of this species vary much in size and markings. The normal variety is entirely black, except the large yellow or yellowish-ferruginous marks or bands on the three first dorsal segments of the abdomen, and the lateral transverse spot on each side of the second and

third ventral segments; of this variety I have before me five specimens, three of which are $10\frac{1}{2}$ lines long, while the other two are 9 and $6\frac{1}{2}$ lines long. Another specimen (7 lines long) varies in having a transverse yellow line on the postscutellum, and another on the apical margin of the fourth dorsal segment of the abdomen; the second and third ventral segments have each a broad apical yellow band, more or less interrupted on the middle; the prothorax has also an obscure yellowish spot on each side anteriorly. Another specimen (also 7 lines long), varies considerably from the others, and may possibly be a distinct species; it is not quite so robust; both the scutellum and postscutellum have a broad transverse yellow line, as in the males, while the bands on the three first dorsal segments of the abdomen are much narrower than in the other specimens, and instead of being broadly and deeply emarginate in the middle anteriorly, they are merely obtusely emarginate on each side; the apical margin of the fourth dorsal segment is narrowly yellowish, as is also those of the second and third ventral segments, but more widely interrupted in the middle than in the preceding species otherwise there seems to be no difference.

The males vary in length from $4\frac{1}{2}$ to $8\frac{1}{2}$ lines; all have four yellowish (mostly lemon-yellow) bands on the dorsal surface of the abdomen (segments 1—4), very much as in the males of *S. plumipes*, while the clypeus, anterior margin of the thorax, scutellum and postscutellum, and a line on all the femora and tibiæ, are yellow in all the specimens before me.

Scolia (Elis) fulvohirta, n. sp.

Black, densely clothed with rufo-fulvous pubescence; tibiæ and tarsi rufo-ferruginous; wings subhyaline, orange-yellow along the costa, with a dark cloud near the tip; ♀ with a large spot on each side of prothorax, and one on each side of the four basal segments of abdomen, dull yellow; ♂ with clypeus, two spots on scutellum, line on postscutellum, and apical margins of the three or four basal segments of abdomen yellowish, the apical segment above silvery.

Female.—Black; head shining, clothed with rather long rufo-fulvous pubescence, dense on the face and occiput; vertex smooth and polished, rest of the head with a few scattered punctures; mandibles piceous; antennæ black. Thorax above densely clothed with rather long rufo-fulvous pubescence; collar with a pale yellowish spot on each side; prothorax grossly punctured, with a large yellow spot on each side; mesothorax grossly and closely punctured, a smooth shining space on the disk, divided in the middle by a broad punctured line; scutellum and postscutellum smooth and shining, with a few deep scattered punctures; pleura and metathorax densely clothed with long, pale, golden-

yellow pubescence, the lateral and posterior truncations of the latter shining, with a short, appressed, pale silky pubescence; tegulæ rufo-ferruginous. Wings pale yellowish hyaline, with a beautiful violet iridescence, the costa broadly orange-yellow, with a dark fuscous cloud near the tips; nervures fuscous. Legs black; the coxæ, trochanters and femora clothed beneath with long pale yellowish pubescence; apical margin of the femora, and the tibiæ and tarsi entirely rufo-ferruginous, densely clothed with long rufo-fulvous pubescence, very long and bristly on the tarsi. Abdomen velvety-black, silvery-sericeous when viewed in certain lights, clothed with a thin, long, pale pubescence; on each side of the basal segment a large, transverse, apical, deep yellowish spot, almost meeting on the disk; second segment with a large, subtriangular, apical, deep yellow spot on each side, and the third segment with a transverse mark along the apical margin, slightly dilated at the tip; remaining segments shining black, deeply punctured towards the apex and densely fringed with rather long rufo-fulvous pubescence; apical segment depressed, rugose and densely clothed with short, appressed, rufo-fulvous pubescence; beneath shining, black, the second, third and fourth segments each with an apical yellowish band interrupted on the disk and densely fringed with long yellowish pubescence, the apical segments with rufo-fulvous pubescence. Length 10 lines; expanse of wings 16 lines.

Male.—Black, with a bluish iridescent reflection, clothed with a short golden-yellow pubescence, finely and closely punctured; the pubescence of the head long, dense on the face; clypeus and base of mandibles yellow, the former with a blackish spot or stain on the disk; antennæ entirely dull black, longer than the head and thorax. Thorax: on each side of the prothorax a large yellow spot, connected by a transverse yellow line in front of the mesothorax; in one specimen the whole of the prothorax is yellowish; the mesothorax immaculate, except a small spot on each extreme side just behind the tegulæ; scutellum smooth and polished, with two yellow spots near the base, sometimes confluent and forming a broad band, the postscutellum with a broad transverse yellow line; pleura and metathorax clothed with a dense fine silvery or golden-sericeous pile; tegulæ ferruginous, with a yellow spot in front. Wings subhyaline, with a brilliant golden gloss, and slightly iridescent in certain lights, the costa is broadly tinged with yellowish-fuscous, becoming dusky near the tips; nervures fuscous. Legs slightly pubescent; coxæ and trochanters black, silvery-sericeous beneath; femora also black, with a yellow line beneath; tibiæ and

tarsi rufo-fulvous, with pubescence of the same color. Abdomen shining black, with a beautiful iridescent reflection, clothed with a deep yellowish pubescence, which becomes deep-fulvous at the apex, the punctures distinct and closer towards the tip; basal segment with a broad, apical, deep yellow band, sometimes occupying the apical half of the segment, and emarginate in front; second and third segments each with a narrow, apical, sinuate, deep yellow band, continued beneath and emarginate on the middle both above and beneath; in one specimen the bands are broader and somewhat similar to the markings on the female; apical margin of the fourth segment, and the remaining segments obscure rufo-fulvous; apical segment above silvery-sericeous; in one specimen the second ventral segment is almost entirely yellowish, and the apical margins of the remaining segments are obscure yellowish. Length $8\frac{1}{2}$ lines; expanse of wings $14\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two ♀, two ♂ specimens.

Fam. POMPILIDÆ.

Genus **POMPILUS**, Fabr.

Sec. 1.—*Wings mostly ferruginous or yellowish.*

* *Body black or blue.*

Pompilus ignipennis, n. sp.

Black; abdomen tinged with blue; antennæ orange-yellow; wings bright ferruginous, the apex more or less ferruginous; legs spinose.

Female.—Dull black, slightly tinged with bluish, clothed with scattering black pubescence; face and clypeus somewhat purplish in certain lights, the latter prominent; antennæ orange-yellow, involute, the basal segment slightly dusky. Thorax dull black, with a slight blue or violet reflection; metathorax abruptly rounded behind, with coarse, deep, transverse striæ, especially on the sides and behind, obsolete at the base, these striæ are less distinct in the smaller specimens, the middle with a shallow longitudinal furrow. Wings bright ferruginous, more or less fuliginous at the base and apex. Legs black, tinged with bluish, all the tarsi spinose; the intermediate tibiæ with a double row of short spines, the posterior pair serrate, also with a double row of short spines; the inner apical spine of the posterior tibiæ densely ciliated near the base. Abdomen smooth, with a changeable obscure bluish, greenish and purplish reflection, the apex clothed with rather long fuscous pubescence. Length $6\frac{1}{2}$—9 lines; expanse of wings 10—15 lines.

Male.—Resembles the female, but is much smaller and slenderer, the antennæ longer and not involute, the wings more deeply and broadly fuliginous at tips, the legs slenderer and less spinose, and the metatho-

rax not transversely striated. In two of the smaller specimens the antennæ and most of the wings are pale yellowish, and the legs piceous. Length 3½—6 lines; expanse of wings 6½—10 lines.

Collection.—Ent. Soc. Philad. Three ♀, four ♂ specimens.

This seems to belong to the subgenus *Priocnemis*, Schiödte, and may possibly be identical with *P. flammipennis*, Smith.

** *Body fuscous or ferruginous.*

Pompilus Gundlachii, n. sp.

Fusco-ferruginous; apical half of antennæ black, the basal half and the legs fulvous and spinose; wings deep yellowish, the apical margins fuliginous.

Female.—Fusco-ferruginous, strongly sericeous, thinly clothed with pale pubescence; the orbits and clypeus paler than the vertex; the clypeus large, broad, and truncate at tip; mandibles large, black at tips; antennæ not involute, the five basal joints fulvous, the remainder black, first joint short and robust, third joint very long. Thorax rounded in front; prothorax margined behind with yellow, broadly so on the middle; lateral margins of the mesothorax obscure yellowish; pleura with an obscure yellowish stain above the middle coxæ; scutellum slightly prominent; postscutellum yellow; metathorax strongly sericeous, yellow at extreme tip, short, its upper surface gently sloped to the tip; tegulæ deep yellowish. Wings large, deep yellowish-hyaline, the apical margins fuliginous. Legs fulvo-ferruginous, sericeous; anterior tarsi ciliated with long, slender spines, the intermediate and posterior tibiæ and tarsi covered with rather long, scattered spines. Abdomen oblong-ovate, subdepressed, smooth, dull fusco-ferruginous, sericeous; a spot on each basal side of the second segment, and the basal half of the third segment narrower in the middle, obscure yellowish; apical segments thinly clothed with long, black pubescence. Length 9½ lines; expanse of wings 16 lines.

Collection.—Dr. J. Gundlach. One specimen.

Pompilus concinnus, n. sp.

Fusco-ferruginous, variegated with bright yellow; wings yellowish-hyaline, the costal two-thirds of the anterior pair fuscous; legs yellow and black, spinose.

Female.—Head bright yellow, minutely and beautifully sculptured, slightly pubescent, face flat; a spot on the vertex covering the ocelli, and extending each side in a narrow line to the summit of the eyes, two approximate, parallel lines on the middle of the front, from the ocelli to the base of the antennæ, and dilated in the middle, and most of the occiput, fuscous or blackish; clypeus broad, large, its anterior margin slightly sinuate, its basal middle with an elongate subquadrate

space margined with fuscous, this is sometimes obsolete; mandibles black at tips; antennæ bright yellow, involute, the second and third joints more or less fuscous. Thorax fuscous, sericeous; collar with a yellow spot on the disk and one on each side; prothorax broadly margined behind with bright yellow, and irregularly so on the lateral margins; mesothorax with two central longitudinal lines confluent behind, and forming a large quadrate spot; pleura fuscous and black, with two large yellow spots, the lower one the largest; scutellum fuscous, with a large bright yellow spot on each side, and its apical margin obscure ferruginous; postscutellum entirely bright yellow; metathorax short, gradually and gently sloped behind, fuscous, with a subtriangular, bright yellow spot on each extreme basal corner, and a large obscure, yellowish transverse mark occupies the apical half, the prominent apical margin bright yellow; tegulæ dull yellowish. Wings yellowish-hyaline, the costal two-thirds of the superior pair fuscous, sometimes yellowish-fuscous, darker at the tip, and slightly violaceous. Legs bright yellow. base of the middle coxæ, the hind coxæ except tips, the trochanters, base of the anterior femora, the four posterior femora except tips, and the apex of the posterior tibiæ, black; all the tibiæ and tarsi rather thickly spinose; incisures of the tarsal joints, and the claws, dusky; Abdomen fusco-ferruginous, sericeous, subdepressed; basal margins of the second, third and fourth segments, broader on the sides, yellowish, sometimes obscure; apex slightly pubescent. Length 7 lines; expanse of wings 13 lines.

Male.—Resembles the female, but much smaller, the antennæ porrect, thickened, compressed, subcrenulate beneath, fulvous, with the six apical joints black; the markings sometimes lemon-yellow; the two blackish frontal lines of the head are broader; the metathorax almost entirely yellowish; the wings subhyaline, not yellowish, the broad fuscous costal streak on the fore-wings very distinct, and extends down on the apical margins of both wings; the legs not so thickly spinose, the apical half of the posterior tibiæ pale fuscous; and the bands on the abdomen more or less distinct. Length 4—5 lines; expanse of wings $8\frac{1}{2}$—10 lines.

Collection.—Ent. Soc. Philad., and Dr. J. Gundlach. Two ♀, three ♂ specimens.

Pompilus nubeculatus, n. sp.

Fusco-ferruginous; antennæ, except tips, legs, and tip of abdomen, fulvous; wings yellowish-hyaline, with the apex and a cloud between the middle and apex, fuscous; legs scarcely spinose, the posterior tibiæ serrate.

Female.—Head ferruginous, the vertex and occiput fusco-ferrugi-

nous, clothed with long pale pubescence, as well as the cheeks; clypeus large, broad, truncate in front, clothed with appressed golden-yellow pubescence; mandibles blackish at tips; antennæ fulvous, involute, the five apical joints black. Thorax dull fusco-ferruginous, faintly tinged with obscure purple, with a thin, long, pale pubescence, more dense on the pleura and metathorax; prothorax dull ferruginous, and, as well as the mesothorax, clothed with dense, short yellowish pubescence; metathorax short, gently rounded behind, and covered, especially on each side behind, with dense hoary pile; tegulæ fulvous. Wings large, pale yellowish-hyaline, a slight cloud on the middle, the extreme apex, and a moderate sized cloud between the middle and apex, fuscous; nervures fuscous; posterior wings paler, with the apex faintly dusky. Legs fulvo-ferruginous, the coxæ darker, with a slight hoary pile; the intermediate tibiæ with a double row of very short spines; the posterior pair serrate; tips of the tarsi dusky. Abdomen rather short, ovate, convex, smooth and shining, fusco-ferruginous, with an obscure purple reflection, the tip and beneath clothed with long pale pubescence, the apical segment above with dense appressed bright fulvous pubescence. Length $7\frac{1}{2}$ lines; expanse of wings $14\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Belongs to the subgenus *Priocnemis.*

Sec. 2.—*Wings hyaline or subhyaline.*

* *Body blue.*

Pompilus bellus, n. sp.

Blue, shining; antennæ black; wings hyaline; wings neither spinose or serrated.

Female.—Entirely bright blue or violet-blue, slightly tinged with greenish on the thorax; clothed with a slight pale pubescence; face, clypeus and cheeks, clothed with pale sericeous pile; antennæ entirely black, involute. Thorax densely and minutely punctured, more distinct on the mesothorax; pleura and metathorax with a beautiful violet reflection in certain lights, the latter short, rather abruptly rounded behind, minutely sculptured at base, and rugose towards the tip, especially on each side; tegulæ black. Wings ample, hyaline, faintly tinged with fuliginous towards the apex; nervures black. Legs deep blue, more or less tinged with violet; tibiæ and tarsi without spines or teeth. Abdomen rather short, ovate, convex, subpetiolated, polished, entirely bright blue. Length 4—$4\frac{1}{2}$ lines; expanse of wings $7\frac{1}{2}$—$8\frac{1}{2}$ lines.

Male.—Resembles the female, but more slender and pubescent, and not so bright in color; the antennæ porrect, the legs more or less tinged with piceous, the wings clearer and iridescent, the abdomen slenderer

at base, obscure bluish, and the apical segment above with a large whitish spot. Length 3—3½ lines; expanse of wings 6—6½ lines.

Collection.—Ent. Soc. Philad. Two ♀, three ♂ specimens.

Prof. Poey informs me that this species makes its nest of earth, of a subtrefoil shape, under stones, and fills them flies. Belongs to the subgenus *Agenia* Schiödte.

*** Body fusco-ferruginous.*

Pompilus uniformis, n. sp.

Fusco-ferruginous, antennæ darker at tips; metathorax abrupt and depressed behind; wings subhyaline; legs spinose.

Female.—Uniform pale fusco-ferruginous, covered with a very fine short, hoary-sericeous pile; face long and rather narrow; clypeus rather large, with its anterior margin obtusely emarginate in the middle; labrum large and distinct; mandibles large, acutely bifid and blackish at tips; antennæ long, subporrect, dull ferruginous, blackish towards the tips. Thorax: prothorax with a small excavation on each posterior corner, and the posterior lateral margins strongly sinuate; incisures of the pleura and metathorax black; scutellum prominent on the middle, depressed on each side; metathorax abrupt and depressed or somewhat excavated behind, with a slight central groove on the disk above, the basal incisure black; tegulæ ferruginous. Wings subhyaline, with a slight metallic gloss, the extreme tips dusky; nervures fuscous. Legs long, dull ferruginous; the tarsi spinose, the anterior pair ciliated beneath with a few long spines; the intermediate and posterior tibiæ with a few short, scattered spines. Abdomen subsessile, convex, shining, the extreme base black, some of the remaining segments with an indistinct dark stain; apex slightly pubescent. Length 7 lines; expanse of wings 13 lines.

Male.—Rather paler in color than the female, with the antennæ shorter and thicker. Length 4½—6 lines; expanse of wings 8½—10 lines.

Collection.—Ent. Soc. Philad. One ♀, three ♂ specimens.

Easily recognized by the uniform dull ferruginous color and the subhyaline wings.

**** Body ferruginous and black.*

Pompilus macer, n. sp.

Black; basal half of abdomen ferruginous; wings subhyaline; legs without spines or teeth.

Male.—Slender, black, opaque, slightly pruinose; antennæ fuscous; thorax very minutely and closely punctured; metathorax gradually rounded behind, clothed with a fine hoary pile; tegulæ dull testaceous.

Wings subhyaline, tinged with pale fuscous, especially towards the tips, beautifully iridescent; nervures fuscous; second and third submarginal cells of equal size, subquadrate. Legs long and slender, piceous-black, clothed at base with a fine hoary pile; tibiæ and tarsi without spines or teeth. Abdomen elongate, slender, shining, the basal half, except extreme base, ferruginous; remainder black. Length $2\frac{3}{4}$ lines; expanse of wings $4\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Belongs to the subgenus *Agenia.*

Sec. 3.—*Wings hyaline, banded with fuscous.*

Pompilus pulchellus, n. sp.

Ferruginous; head, antennæ and disk of metathorax black; wings hyaline, with two broad fusco-violaceous bands; legs slightly spinose, the posterior tibiæ serrate.

Female.—Head black; the face, cheeks and clypeus covered with a dense whitish pile; face broad and flat; clypeus, mandibles and palpi, ferruginous; antennæ nearly as long as the body, subporrect, slender, fuscous, ferruginous at base. Thorax ferruginous, covered with a very fine whitish-sericeous pile, dense and glittering on the metathorax; postscutellum and disk of metathorax blackish, the latter gradually rounded behind and somewhat silvery on the sides. Wings hyaline, witht wo broad fuscous bands on the anterior pair which have a beautiful purple reflection, the one nearest the tip the broadest; posterior wings hyaline, the tips faintly dusky; nervures fuscous. Legs moderate, entirely ferruginous; the intermediate tibiæ with a few small spines, the posterior pair serrate. Abdomen ovate, convex, entirely ferruginous, smooth and shining; sides of the segments covered with a very fine silvery-white sericeous pubescence; the apical segments, as well as the venter, clothed with long pale pubescence. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

A beautiful little species, easily recognized by its handsomely ornated wings. It belongs to the subgenus *Priocnemis.*

Pompilus elegans, n. sp.

Ferruginous; head, antennæ, legs and broad band near base of abdomen, blackish; metathorax, legs and base of apex of abdomen, densely covered with cinereous pile; wings whitish-hyaline, with a very large fuliginous spot near the tip, as well as a small spot at base and middle.

Female.—Head flat, wider than the thorax, black, with an obscure purplish-brown shade; face broad and short; antennæ short, piceous-black, slightly involute. Thorax long and rather narrow, ferruginous;

prothorax large, rounded in front, with a black stain on the anterior margin; mesothorax smaller than the prothorax; pleura and metathorax covered with a dense fine cinereous pile, the latter abrupt on the sides and behind; tegulæ pale ferruginous. Wings whitish-hyaline, the anterior pair with a large, broad fuliginous spot or band beyond the middle, also a small band on the transverso-medial nervure, and the extreme base, of the same color; posterior wings hyaline, slightly dusky at tips; nervures blackish, the stigma distinct. Legs piceous-black, covered with a very dense cinereous pile; the four posterior tibiæ with a few short scattered spines, the tarsi slightly spinose; the inner spur of the posterior tibiæ ciliated near the base. Abdomen elongate, sessile, convex, pointed at tip; basal segment, except the dorsal middle, a small spot on each side at the base of the second segment, extreme sides of the third, the apical margin of the fourth, and the whole of the remaining segments, as well as the venter, covered with a dense, short, appressed, cinereous pile, somewhat sericeous; disk of the first, the second, and the middle of the fourth segments, dark fuscous; the third and the basal margin of the fourth segments, ferruginous. Length 5 lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Sec. 4.—*Wings more or less fuscous.*

* *Body ferruginous and black.*

Pompilus compressiventris, n. sp.

Long and narrow, ferruginous; antennæ, sides of mesothorax, the whole of the thorax beneath, and the legs, black; wings fuscous; abdomen elongate, compressed beneath and at tip.

Female.—Head a little broader than the thorax, ferruginous, with most of the occiput and cheeks, a stain on the front, and the mandibles except tips, black; clypeus and labrum large, shining, the anterior margin of the former slightly and obtusely emarginate; palpi pale ferruginous; antennæ longer than the head and thorax, slightly involute, blackish-fuscous. Thorax long and narrow, ferruginous above, blackish-fuscous on the sides and beneath; sides of the mesothorax broadly dark fuscous; metathorax long and compressed, ferruginous above, with a slight longitudinal channel down the middle, the extreme apex abrupt; tegulæ dull ferruginous. Wings uniformly fuscous, with a strong brassy reflection; nervures fuscous; third submarginal cell nearly one-half longer than the second, truncate at tip and suddenly narrowed towards the marginal. Legs entirely blackish-fuscous, long and stout, the coxæ large and robust; tibiæ and tarsi very slightly spinose, the

tibial spurs long and acute, especially the innermost one. Abdomen sessile, smooth and somewhat shining, convex above, compressed beneath, especially so at tip, which is somewhat edged; entirely ferruginous, with a slight pale sericeous reflection. Length 7 lines; expanse of wings 11 lines.

Collection.—Dr. J. Gundlach. One specimen.

Easily recognized by the elongate, narrow form, and the compressed venter and apex of abdomen.

Pompilus coruscus, Smith.

Pompilus coruscus, Smith, Brit. Mus. Cat. Hym. iii, p. 156.

Collection.—Ent. Soc. Philad. Three specimens.

One specimen ($6\frac{1}{2}$ lines long) agrees with Mr. Smith's description, and has the third submarginal cell petiolated. The other two specimens (5—$5\frac{1}{2}$ lines) varies by the prothorax being mostly bright ferruginous, the third submarginal cell triangular or nearly so, and the two apical segments of the abdomen entirely fuscous. Should this variety prove to be a distinct species, it may be named *insignis.*

Pompilus juxtus, n. sp.

Black; three basal segments of abdomen ferruginous; wings fusco-hyaline; legs spinose.

Female.—Black, with an obscure fusco-sericeous reflection; lower part of face and the clypeus with a slight cinereous pile; antennæ black, involute. Thorax slightly narrowed about the middle, dull black; metathorax rounded behind. Wings fusco-hyaline, darker at tips, with a faint opaline reflection; third submarginal cell triangular. Legs black; the four posterior tibiæ and tarsi spinose. Abdomen convex, pointed at tip, the three basal segments ferruginous, except the extreme base of the first and the apical margin of the third, which, as well as the apical segments, are black. Length $4\frac{1}{2}$ lines; expanse of wings $7\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Closely resembles *P. coruscus* Smith, and may be a variety of it.

Pompilus terminatus, n. sp.

Black; three basal segments of abdomen ferruginous; wings fuscous; legs not spinose, the posterior tibiæ serrate.

Female.—Deep black, opaque; mandibles and antennæ piceous, the latter long and slightly involute. Thorax narrow; metathorax rounded behind. Wings fuscous, slightly iridescent, the third submarginal cell large, subquadrate. Legs piceous, the posterior tibiæ serrate. Abdo-

men ovate, convex, bright ferruginous, the three apical segments blackish-fuscous. Length $3\frac{1}{4}$ lines; expanse of wings 5 lines.

Collection.—Ent. Soc. Philad. One specimen.

Belongs to the subgenus *Priocnemis*.

Pompilus subargenteus, n. sp.

Black; covered with a silvery-sericeous pile; posterior margin of prothorax whitish; wings fuscous, third submarginal cell petiolated; abdomen with a broad ferruginous band near the base; legs spinose.

Male.—Deep black, opaque, covered with a fine silvery-sericeous pile, more distinct in certain lights, especially on the face and posterior margin of the metathorax; antennæ porrect, thickened; posterior margin of the prothorax narrowly obscure whitish; metathorax rounded behind; tegulæ piceous. Wings fuscous, darker at tips; nervures blackish; third submarginal cell subpetiolated or triangular. Legs black, with a fusco-sericeous reflection; the coxæ silvery-sericeous; the four posterior tibiæ and tarsi spinose, the inner tibial spurs very long. Abdomen elongate, narrow, sessile, subconvex; apical margin of the first, the second entirely and the basal half of the third segment bright ferruginous; apical segment silvery. Length $4\frac{1}{2}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Pompilus violaceipes, n. sp.

Black; thorax and abdomen above ferruginous, the latter strongly tinged with beautiful violet; legs deep violet, very slightly spinose; wings fuscous, the anterior pair with a strong brassy gloss, the tip violet; posterior pair subhyaline.

Female.—Head rather large, opaque black, the clypeus broad and large, faintly tinged with purple; antennæ black, involute. Thorax black; disk of prothorax ferruginous, the sides black tinged with violet; mesothorax with its middle obscure ferruginous, black on each side; scutellums dull ferruginous; pleura entirely opaque black; metathorax subelongate, gradually rounded behind, covered with a beautiful silvery-sericeous pile, the dorsal middle broadly ferruginous, the sides opaque black, with a few ill-defined transverse striæ; tegulæ black. Wings long, uniformly fuscous, with a very strong brassy gloss, the tips violaceous; nervures black; third submarginal cell half again as large as the second; posterior pair subhyaline, iridescent, clear at base. Legs long, black, with a beautiful deep violet reflection, very slightly spinose; inner spur of the posterior tibiæ ciliated above near the base. Abdomen subpetiolated, convex, subovate, ferruginous above, with a strong and beautiful violet or purple reflection, less obvious at base, deeper

and stronger towards the tip; venter black-violaceous. Length 5½ lines; expanse of wings 11 lines.

Collection.—Ent. Soc. Philad. One specimen.

This elegant species belongs to the subgenus *Agenia*.

Sec. 5.— *Wings blackish-violaceous.*

Pompilus purpuripennis, n. sp.

Deep blue; wings deep violaceous-purple; metathorax abrupt behind, deeply grooved down the middle, roughly and transversely striated; legs slightly spinose.

Female.—Black, with a strong, beautiful deep blue reflection, and in certain lights shaded with deep purple; antennæ short and black, slightly involute; prothorax larger than the mesothorax, rounded in front; metathorax rough, abruptly truncate and excavated behind, with a deep central longitudinal channel, wider behind, and on each side of it the surface is deeply, roughly and transversely striated, on the verge of the lateral truncation there is a longitudinal fold over which the transverse striæ run. Wings ample, dark fuscous, with a very strong violaceous-purple reflection; nervures thick and black, the third submarginal cell rather smaller than the second, both cells receiving the recurrent nervures about the middle. Legs bluish-purple; the four posterior tibiæ with a few short scattered spines, the tibiæ more thickly spinose. Abdomen subsessile, narrower than the thorax, pointed at tip, convex above, black, with a strong blue-purple reflection, the venter slightly greenish. Length 8 lines; expanse of wings 15 lines.

Collection.—Ent. Soc. Philad. One specimen.

This species or even *P. fulgidus*, described below, may be the *P. amethystinus* Fab., but it is impossible to say that they are identical, unless by comparison with typical specimens.

Pompilus anceps, n. sp.

Obscure greenish-blue; face silvery; wings violaceous; metathorax smooth and rounded behind; legs spinose.

Male.—Black, with a greenish-blue sericeous shade; the face silvery-sericeous in certain lights; antennæ black, pale sericeous; metathorax smooth, rounded and tinged behind with obscure purplish. Wings ample, dark fuscous, with a strong violaceous reflection; nervures black; third submarginal cell subtriangular, very much narrowed towards the marginal. Legs black, strongly shaded with bluish-purple, the four posterior tibiæ and tarsi with a few scattered spines. Abdomen nearly sessile, subconvex, black, with a strong greenish-blue sericeous reflection; apex pubescent. Length 6—6½ lines; expanse of wings 11--12 lines.

Collection.—Ent. Soc. Philad. Two specimens.

May possibly be the male of *P. purpuripennis*, but the color is entirely different, being more of a greenish hue, the third submarginal cell of the anterior wings is larger and much more narrowed towards the marginal cell, and the legs are rather more strongly spinose. The metathorax is smooth and rounded behind.

Pompilus fulgidus, n. sp.

Deep blue, the abdomen brilliant blue and purple; antennæ black; wings fuscous, the anterior pair with a purple reflection; legs slightly spinose.

Female.—Deep violet-blue; antennæ black, involute; the pro- and mesothorax and pleura with a faint tinge of green; metathorax smooth and rounded behind. Wings fuscous, the anterior pair with a rather strongly purple reflection; posterior pair paler; third submarginal cell subtriangular. Legs black, tinged with violet-blue; the four posterior tibiæ and tarsi slightly spinose. Abdomen subsessile, convex, polished, with a brilliant blue and violet reflection; apex pubescent. Length $5\frac{3}{4}$ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. One specimen.

Easily recognized by the brilliant blue and violet polished abdomen.

Pompilus orbitalis, n. sp.

Velvety-black; orbits and a central line down the front, golden; prothorax with a transverse ferruginous line; wings deep violet-blue; abdomen with the four dorsal segments mostly dull ferruginous; legs spinose.

Female.—Deep velvety-black; orbits, sides of clypeus, and a line down the middle of the front, bright golden; antennæ black, involute. Thorax: prothorax with a transverse, bright ferruginous line near the posterior margin, slightly interrupted on the middle, and gradually narrowed on each side; metathorax uneven, rather abrupt behind, with an obtuse prominence or tubercle on each side. Wings dark fuscous, with a very strong deep violet-blue reflection; nervures black; third submarginal cell somewhat semicircular, smaller than the second. Legs velvety-black, robust, beautifully sericeous; all the tibiæ and tarsi strongly spinose. Abdomen sessile, elongate, convex, shining black; the first four dorsal segments purplish-ferruginous, stained more or less on the middle and apex with fuscous, so that the ferruginous color forms a large ill-defined spot on each side of the segments; apical segments pubescent. Length 8 lines; expanse of wings 12 lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **PLANICEPS**, Latr.

Planiceps collaris, n. sp.

Black; anterior and posterior margin of prothorax, and the abdomen, ferruginous; wings fusco-hyaline, the anterior pair with a strong golden reflection.

Female.—Brownish-black, opaque, sericeous; face broad and flat, the lower part slightly silvery-sericeous; antennæ short, black, slightly involute. Thorax somewhat flattened above; prothorax very large, with a transverse, subquadrate mark in front and the posterior margin entirely, bright ferruginous; metathorax rather large, abrupt behind, covered with a dense cinereo-sericeous pile. Wings fusco-hyaline, with a strong golden reflection, the posterior pair subhyaline, darker at tips; two submarginal cells, the second about one-half the length of the first, receiving the first recurrent nervure between the middle and base, the second recurrent nervure is received beyond the tip of the second submarginal cell. Legs brownish-sericeous, stout, the anterior femora very robust; tibiæ and tarsi spinose; tibial spurs very long. Abdomen subsessile, elongate, subcompressed, accuminate at the tip, entirely ferruginous. Length $5\frac{1}{2}$ lines; expanse of wings 7 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **CEROPALES**, Latr.

Ceropales cubensis, n. sp.

Black; face, orbits, posterior margin and a spot on each side of prothorax, spot on scutellum, postscutellum, and spots and bands on abdomen, yellowish; wings hyaline; legs ferruginous.

Female.—Black; the face, clypeus, cheeks, pleura, metathorax and legs, covered with a very fine silvery-sericeous pile; orbits, very broad in front, not reaching the vertex, face beneath the antennæ, a spot behind them, the clypeus and labrum, pale yellowish, more or less silvery; antennæ longer than the head and thorax, porrect, black, covered with a yellowish-sericeous pile; the two basal joints pale yellowish beneath, sometimes obscurely so. Thorax: prothorax with a spot on each side and its entire posterior margin, pale yellowish; mesothorax depressed behind, with a patch of close deep punctures on each side of the disk; pleura silvery; scutellum with a central pale yellowish spot, and the postscutellum with a transverse spot of the same color; metathorax short, abrupt behind, silvery on the sides and behind; tegulæ testaceous. Wings hyaline, slightly dusky at tips; nervures fuscous. Legs long, especially the posterior pair; ferruginous; the four anterior coxæ black, more or less yellowish beneath, silvery; posterior tarsi very long, fuscous. Abdomen stout, black; basal segment with a sublunate pale yellowish apical spot on each side; remaining segments each with an

apical pale yellowish fascia, very broad on each extreme side, deeply emarginate anteriorly on each side of the middle, and more or less dilated on the disk, that on the second segment interrupted on the disk, the lateral emarginations sometimes so deep as to interrupt the fascia into three spots. Length $3\frac{1}{2}$—4 lines; expanse of wings $6\frac{1}{2}$—8 lines.

Collection.—Dr. J. Gundlach. Two specimens.

Ceropales clypeatus, n. sp.

Black; most of clypeus, palpi, posterior margin of prothorax, and the tegulæ, yellowish-white; legs ferruginous; wings whitish-hyaline, with a pale fuscous cloud near the apex.

Female.—Black, opaque; face silvery in certain lights: clypeus yellowish-white, with a square black spot on the basal middle; palpi whitish; antennæ blackish, the basal joint beneath dull ferruginous. Thorax: posterior margin of the prothorax entirely yellowish-white; metathorax black, rather shining, rounded behind; tegulæ yellowish-white. Wings whitish-hyaline, slightly iridescent, with a small pale fuscous cloud covering the marginal and the second and third submarginal cells; nervures black. Legs long, especially the posterior pair, and including their coxæ, ferruginous, the posterior tarsi fuscous, tibial spurs white. Abdomen oblong-ovate, piceous-black, immaculate, the basal segment tinged with obscure ferruginous. Length 3 lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **PEPSIS**, Latr.

Sec. 1.—*Wings mostly ferruginous.*

Pepsis marginata, Beauv.

Pepsis marginata, Beauv. Ins. Afriq. et Amér. p. 94, pl. 2. fig. 2 ♀, 3 ♂. St. Farg. et Serv. Ency. Méth. x, p. 64. St. Farg. Hym. iii, p. 470. Guér. LaSagra's Hist. Cuba, Ins. p. 761.

Collection.—Ent. Soc. Philad. Five ♀, three ♂ specimens.

The cocoon of this fine species is elongate-ovate, $2\frac{5}{8}$ inches long by $1\frac{1}{8}$ inch wide about the middle, gradually tapering at one end, constructed of a rather thin, hard, woody substance, of a yellowish-brown color, more or less mottled or stained with blackish. The imago makes its exit at the smallest end by means of a circular incision made about one-fourth from the tip, which forms a cap or lid, somewhat similar to that of the cocoons of certain minute Ichneumonidæ.

Sec. 2.—*Wings blackish, margined at tip with hyaline.*

Pepsis ornata, St. Farg.

Pepsis ornata, St. Farg. Hym. iii, p. 486. Guér. LaSagra's Hist. Cuba, Ins. p. 761.

Collection.—Ent. Soc. Philad. Four ♀, three ♂ specimens.

Sec. 3.—*Wings entirely blackish-violaceous.*

Pepsis ruficornis, Fabr.

Sphex ruficornis, Fabr. Ent. Syst. ii, p. 219.

Pepsis ruficornis, Fabr. Syst. Piez. p. 215. Beauv. Ins. Afriq. et Amér. p. 94, pl. 2, fig. 1. St. Farg. et Serv. Ency. Méth. x, p. 64. Dahlb. Hym. Europ. i, p. 119. St. Farg. Hym. iii, p. 480.

Collection.—Ent. Soc. Philad. Six ♀, seven ♂ specimens.

Sec. 4.—*Wings blackish, with a large ferruginous mark.*

Pepsis ignicornis, n. sp.

Black; abdomen with a purple-blue reflection; antennæ except extreme base, fulvo-ferruginous; wings blackish-violaceous, with a large, irregular ferruginous mark about the costal middle.

Male.—Deep black, slightly pubescent; clypeus, labrum and mandibles, shining black; antennæ two-thirds the length of the body, thickened, bright ferruginous, the two basal joints black. Thorax velvety-black, with a very faint bluish reflection in certain lights; metathorax narrow, elongate, transversely striated, especially towards the tip, the dorsal middle with a shallow longitudinal furrow. Wings large, uniformly dark fuscous, with a very strong violet reflection; near the costal middle a large, irregular, bright ferruginous stain; nervures black. Legs black, with a beautiful bluish reflection. Abdomen black, with a strong, beautiful purplish-blue reflection. Length $9\frac{1}{2}$ lines; expanse of wings 20 lines.

Collection.—Ent. Soc. Philad. One specimen.

Closely allied to *P. ruficornis,* but is readily distinguished from that species by the bright ferruginous stain on the anterior wings. It may, however, be only a variety.

Fam. SPHEGIDÆ.

Genus **AMMOPHILA,** Kirby.

Ammophila apicalis, Guér.

Ammophila apicalis, Guér. Icon. Reg. Anim. iii, p. 435, pl. 70, fig. 3; LaSagra's Hist. Cuba, Ins. p. 763.

Collection.—Ent. Soc. Philad. Six specimens.

Genus **PELOPŒUS,** Latr.

Pelopœus cementarius, Drury.

Sphex cementaria, Drury, Ins. i, p. 105, pl. 44, fig. 6—8.

Sphex flavipunctata, Christ. Hymn. p. 301, pl. 30, fig. 1.

Sphex flavomaculata, DeGeer, Mém. Ins. iii, p. 588, pl. 30, fig. 4.

Sphex lunata, Fabr. Ent. Syst. ii, p. 203.

Pelopœus lunatus, Fabr. Syst. Piez. p. 203. Beauv. Ins. Afriq. et Amér. p. 50, pl. 7, fig. 4. Guér. Icon. Règ. Anim. p. 436, pl. 70, fig. 5; LaSagra's Hist. Cuba, Ins. p. 763. Dahlb. Hym. Europ. i, p. 23. St. Farg. et Serv. Encyl. Méth. x, p. 35. St. Farg. Hym. iii, p. 312.

Pelopœus cementarius, Smith, Brit. Mus. Cat. Hym. iv, p. 234.

Collection.—Ent. Soc. Philad. Twelve specimens.

Prof. Poey informs me that this species "makes its nest of moist earth, about twenty cells approximated and covered by a general layer. The ♀ deposits an egg in each cell, which she fills afterwards with spiders, after having pricked them with her sting. The effect of the wound is to paralyze the legs of the spider, which preserves, for about thirty days, its flexibility and its colors. The nest is made under roofs."

Pelopœus annulatus, Klug. MSS.

Black; face golden; base of antennæ, prothorax, tegulæ, spot beneath anterior wings, scutellums, spot behind posterior wings, large lunate mark at tip of metathorax, legs in part, the petiole beneath and the first segment of abdomen, yellow; rest of abdomen brownish, the apical margins of the segments testaceous; wings fusco-hyaline.

Female.—Head black, clothed with pale yellowish pubescence, more dense on the cheeks; the face and clypeus golden; antennæ black, the basal joint yellow, the two following joints more or less tinged with ferruginous. Thorax black, opaque, slightly pubescent; the prothorax, tegulæ, a large spot just beneath the anterior wings, the scutellum and postscutellum, a large, sublunular mark on the tip of the metathorax, and an elongate spot on each side at extreme base behind the posterior wings, yellowish; metathorax covered with dense, minute, transverse striæ, the dorsal middle prominent. Wings uniformly tinged with yellowish-fuscous, the nervures pale ferruginous. Legs black; the four anterior femora, except extreme base, their tibiæ and tarsi entirely, the posterior trochanters, their femora at base, the basal half of their tibiæ and tarsi, yellowish; apical half of their tarsi fuscous. Abdomen fuscous, the petiole black above, yellowish on the sides and beneath, the first segment entirely yellowish, except a pale fuscous stain at the base, apical margins of the remaining segments narrowly pale testaceous. Length $9\frac{1}{2}$ lines; expanse of wings 13 lines.

Male.—Colored like the female, except that the abdomen beyond the first segment, is fusco-ferruginous, with the apical margins of the segments faintly paler. Length 9 lines; expanse of wings 12 lines.

Collection.—Ent. Soc. Philad. One ♀, two ♂ specimens.

Very closely allied to *P. cementarius*, but is readily distinguished by the different coloration of the wings, legs and abdomen. The name adopted above for this species was communicated to me by Prof. Poey.

Pelopœus argentifrons, n. sp.

Black; face silvery; two spots on prothorax above, a spot beneath anterior wings, another behind posterior wings, scutellum, a small line on postscutellum, two spots at tip of metathorax, and posterior margin of first segment of abdomen, yellow; wings hyaline, dusky at tips.

Female.—Deep opaque black, the head and thorax clothed with a rather long whitish pubescence, more dense beneath; face and clypeus bright silvery, the latter emarginate at tip, the anterior margin depressed and shining; antennæ entirely black, subsericeous. Thorax closely and finely punctured, and when examined under a powerful lens, the surface is covered with fine irregular longitudinal striæ, interspersed with deep punctures, and the interstices densely and minutely punctured; two small transverse lines on the prothorax above, an elongate spot on each side of the pleura anteriorly connected with a small spot between it and the tegulæ, a large transverse spot on the scutellum, a narrow, nearly obsolete, transverse line on the postscutellum, a round spot on each side at the base of the metathorax, and two others at the extreme tip, all yellow; scutellum smooth and shining on the disk; metathorax covered with dense, minute, transverse striæ, and with a fine, dense, whitish, sericeous pile, glittering in certain lights, the dorsal middle is prominent, with a broad, longitudinal, central channel; tegulæ black, highly polished. Wings hyaline, the tip, as well as the costal half of the marginal cell, fuliginous; nervures black. Legs entirely black, covered with a very fine glittering pile. Abdomen shining black, the first segment with the apical margins obscure yellowish, dilated on the extreme sides, narrow and slightly interrupted on the dorsal middle. Length 10 lines; expanse of wings 15 lines.

Collection.—Ent. Soc. Philad. One specimen.

This may be the *P. assimilis* of Dahlbom, but his description is too meagre to decide.

Genus **PODIUM**, Fabr.

Podium fulvipes, n. sp.

Black, opaque; mandibles, tegulæ and legs, fulvous; abdomen polished; wings hyaline, their apical fourth fuliginous.

Female.—Black, opaque or subopaque, thinly clothed with rather long, fine, pale pubescence; face slightly silvery; mandibles long, slender, acute, fulvous or rufo-fulvous, shining, the extreme tips blackish; palpi pale fulvous; antennæ rather slender, black or piceous-black. Thorax black, with a faint tinge of blue, and finely punctured; scutellum flat, shining; metathorax elongate, very densely punctured, with a deep, central, longitudinal furrow, which is covered, as well as the narrow basal and apical margins, with bright glittering pile; tegulæ

shining, fulvous. Wings hyaline, the apical fourth fuliginous, the nervures yellowish. Legs entirely fulvous, except their coxæ and trochanters, which are black; the tarsal tips are slightly dusky. Abdomen black, smooth and polished; the petiole about one-half as long as the rest of the abdomen, and clothed with long pale pubescence; first segment with a shallow excavation in front. Length 8½ lines; expanse of wings 12 lines.

Collection.—Ent. Soc. Philad. Two specimens.

Genus **SPHEX**, Fabr.

Sphex Lanieri, Guér.

Sphex Lanieri, Guér. Icon. Règ. Anim. iii, p. 433; LaSagra's Hist. Cuba, Ins. p. 760.

Sphex aurulenta, Guér. Icon. Règ. Anim. pl. 70, fig. 2.

Collection.—Ent. Soc. Philad. Six specimens.

Sphex aurifluus, Perty.

Sphex aurifluus, Perty, Del. An. Art. p. 142, pl. 27, fig. 19.

Sphex ornata, St. Farg. Hym. iii, p. 344.

Collection.—Ent. Soc. Philad. Fifteen specimens.

Genus **PRIONONYX**, Dahlb.

Prionony x Thomæ, Fabr.

Sphex Thomæ, Fabr. Ent. Syst. ii, p. 199.

Pepsis Thomæ, Fabr. Syst. Piez. p. 209.

Prionony x Thomæ, Dahlb. Hym. Europ. i, p. 28.

Collection.—Ent. Soc. Philad. Eight specimens.

Fam. LARRIDÆ.

Genus **LARRADA**, Smith.

Larrada fulviventris, Guér.

Lyrops fulviventris, Guér. Icon. Règ. Anim. p. 440; LaSagra's Hist. Cuba, Ins. p. 766, pl. 18, fig. 9.

Larrada fulviventris, Smith, Brit. Mus. Cat. Hym. iv, p. 286.

Collection.—Ent. Soc. Philad. Six specimens.

Larrada ignipennis, Smith.

Larrada ignipennis, Smith, Brit. Mus. Cat. Hym. iv, p. 288.

Collection.—Ent. Soc. Philad. Two specimens.

The two specimens before me seem to answer to Mr. Smith's description of this species, except that instead of the basal three-fourths of the wings being "bright ferruginous," they are orange-yellow.

? Larrada fuliginosa, Dahlb.

Larra fuliginosa, Dahlb. Hym. Europ. i, pp. 138 and 472.

Larrada fuliginosa, Smith, Brit. Mus. Cat. Hym. iv, p. 288.

Opaque black; head clothed with a short, cinereous pubescence, very dense and somewhat silvery-sericeous on the face and cheeks; clypeus

shining, the apical margin slightly emarginate in the middle; palpi brownish; antennæ black, basal joint long. Thorax opaque black, very thinly clothed with short, cinereous pubescence, more dense on the metathorax, punctures not distinct; disk of mesothorax depressed; scutellum shining; metathorax opaque black, with a deep longitudinal central channel, a deep transverse striæ, much finer on the sides, the truncation depressed, irregularly striated; tegulæ polished. Wings fusco-hyaline, sometimes dark fuscous; in certain lights there is a beautiful opaline reflection, a more or less deep purple or violaceous gloss. Legs black, with a fine, sparse, cinereous pile; the tibiæ and tarsi spinose. Abdomen black, somewhat silky, the apical margins of the three basal segments silvery-sericeous, obsolete when viewed from the front, and more or less brilliant when viewed from behind; apical segment brownish, depressed, and covered above with minute, subdepressed spines. Length $6\frac{1}{2}$—8 lines; expanse of wings $11\frac{1}{2}$—14 lines.

Collection.—Ent. Soc. Philad. Three specimens.

Not being altogether certain of the identity of the specimen before me with Dahlbom's *fuliginosa*, I add a description; should they prove to be distinct, the species above may be called *Larrada Dahlbomi.*

Larrada trifasciata, Smith.

Larrada trifasciata, Smith, Brit. Mus. Cat. Hym. iv, p. 290.

Collection.—Ent. Soc. Philad. Three specimens.

Larrada vinulenta, n. sp.

Black; face, cheeks, collar, lateral margins of mesothorax, and apical margins of abdominal segments, silvery-sericeous; wings subhyaline, apex darker.

Opaque black; face, clypeus, base of mandibles and the cheeks, bright silvery; antennæ black, the scape silvery in front. Thorax not distinctly punctured, somewhat silky; mesothorax depressed on the middle, more or less silvery in certain lights; the collar, lateral margins of mesothorax, and the pleura, silvery; scutellum shining; metathorax opaque black, indistinctly striated, slightly silvery on the verge of the lateral truncation, and densely and brilliantly so on the posterior truncation; tegulæ and legs black, the latter more or less clothed with bright silvery pile. Wings subhyaline, the apical margins tinged with fuscous; nervures fuscous. Abdomen short, ovate, black, silky, the apical margins of the four or five basal segments, and the apical segment entirely, bright silvery-sericeous when viewed from behind, subobsolete when viewed from the front. Length $3\frac{1}{2}$—$4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$—$7\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Four specimens.

Closely resembles *L. trifasciata*, but is smaller and has more silvery bands on the abdomen.

Genus **TACHYTES**, Panz.

Tachytes cubensis, n. sp.

Blackish; face, cheeks, collar, margins of mesothorax, pleura, postscutellum, sides of metathorax and apical margins of first three abdominal segments, bright golden; tegulæ and legs fulvous; wings yellowish-hyaline.

Female.—Head black; vertex clothed with cinereous pubescence, the face, clypeus and cheeks with dense golden pubescence; palpi and mandibles fulvous, the latter with their apical half black, and their base golden; eyes large, approximate on the vertex; antennæ black, the basal joint clothed with yellowish pubescence. Thorax opaque brown-black; a line over the collar, broad lateral and posterior margins of the mesothorax, broader before the tegulæ, and sides of the pleura of dense golden pubescence, the front of the mesothorax is also more or less golden; scutellum blackish, the extreme sides golden, as well as the whole of the postscutellum; metathorax brown-black, opaque, clothed with a rather long whitish pubescence, and on each side a large longitudinal mark of dense, bright golden pubescence, just above the truncation a small central excavation, upper part of the truncation with a deep central impressed line; tegulæ fulvous. Wings ample, yellowish-hyaline, slightly dusky at extreme tips; nervures honey-yellow. Legs stout, fulvous, with a dense bright golden pile, more conspicuous on the tibiæ and tarsi, which are spinose; coxæ and trochanters brown-black, as well as the tarsal claws. Abdomen brown-black, with a fine changeable golden-sericeous pile; the three basal segments with a broad golden apical band, those on the second and third segments strongly emarginate before on the disk; basal segment clothed with whitish pubescence; apical segment narrow, flattened, carinated on each side, obtuse at tip, golden at base and ferruginous at tip. Length $8\frac{1}{4}$ lines; expanse of wings $13\frac{1}{2}$ lines.

Male.—Resembles the female, but is much smaller, more densely pubescent, darker in color, the wings clearer, the abdomen is blacker, making the three bands very distinct and brilliant, and the apical segment is bright silvery, truncate at tip and armed with a small obtuse tooth on each side of the tip. Length $5\frac{1}{2}$ lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. Two specimens.

This may prove to be the *Tachytes* 3-*cincta* of Dahlbom, from St. Thomas, but the meagre description given of that species makes it uncertain, and I therefore describe it under another name. It cannot be

the *Liris 3-cincta* of Fabricius, as he describes the pubescence as being entirely "cinereous," and does not mention the bright golden pubescence which is very dense on certain parts, and also the brilliant golden reflections of the abdomen.

Tachytes insularis, n. sp.

Black; face, line over tegulæ, pleura, sides of metathorax, legs, and apical margins of abdominal segments, silvery; wings hyaline; apex of abdomen ♀ fuscous, ♂ silvery.

Female.—Dull black, the head and thorax rather densely clothed with cinereous pubescence; face, clypeus, base of mandibles and the cheeks, clothed with dense, bright silvery pubescence; antennæ black, the scape silvery in front. Thorax very minutely and closely punctured; a line over the collar, another over the tegulæ, most of the pleura, and each side of the metathorax behind, clothed with bright silvery pubescence; metathorax clothed with long cinereous pubescence, the truncation deeply channelled down the middle; tegulæ dull fulvous. Wings very faintly tinged with fuscous; nervures blackish. Legs black, clothed with bright silvery pile, especially the femora behind. Abdomen oblong-ovate, black, shining, slightly iridescent; the four basal segments each with an apical fascia of silvery-sericeous pubescence, interrupted on the disk; apical segment depressed, densely clothed with fuscous pubescence. Length 6 lines; expanse of wings 9 lines.

Male.—Resembles the female, with the last dorsal segment of the abdomen densely clothed with bright silvery pubescence, and the wings pure hyaline. Length 4—4½ lines; expanse of wings 6—7 lines.

Collection.—Ent. Soc. Philad. One ♀, three ♂ specimens.

Genus **ASTATA**, Latr.

Astata insularis, n. sp.

Black, shining; abdomen rufous, black at tip; wings fusco-hyaline, with a violaceous reflection; metathorax covered with dense oblique striæ.

Female.—Black, shining; clothed with cinereous pubescence, longer, dense and glittering on the face, cheeks and pleura; head shining, finely punctured; antennæ and mandibles black; palpi piceous. Thorax feebly punctured, polished; pleura closely punctured and densely clothed with cinereous pubescence; scutellum sparsely punctured; metathorax densely covered with oblique striæ, with a longitudinal central carina; tegulæ piceous, shining. Wings fusco-hyaline, darker at tips, with a rather strong violaceous reflection; nervures black. Legs black, shining, pubescent; tibiæ and tarsi thickly spinose exteriorly. Abdomen rufous, impunctured, smooth and polished, the three apical

segments more or less piceous or black. Length $5\frac{1}{2}$ lines; expanse of wings $8\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. Two specimens.

Fam. BEMBECIDÆ.

Genus **BEMBEX**, Fabr.

Bembex argentifrons, n. sp.

Black; face bright silvery; clypeus, labrum, mandibles, collar, tegulæ, tubercles, two spots on scutellum, postscutellum, curved line on disk and spot on each side of metathorax, most of legs, and broad indented bands on abdomen. yellowish; wings hyaline.

Female.—Black, clothed with a short, fine hoary pile, most dense on the head and thorax; face bright silvery in certain lights; clypeus, labrum, mandibles, and scape of antennæ beneath, yellowish. Thorax pruinose, the collar and pleura silvery in certain lights; collar, two short lines on mesothorax, line over the tegulæ, margins of pectus, tubercles, tegulæ, a large mark on the pleura beneath the fore-wings, incised behind, a large quadrate spot on each side of the scutellum, postscutellum, a large transverse lunular mark on the posterior part of the metathorax, and a rather large spot on each side behind densely clothed with hoary pubescence, all yellow. Wings pure hyaline, nervures fuscous. Legs yellow, slightly hoary; the coxæ, except a spot beneath, sometimes obsolete, trochanters, basal half or two-thirds of the femora, a line on the tibiæ within, a short sinuate line on the anterior tibiæ at tip exteriorly, and extreme tips of the tarsi, black; anterior tarsi broadly dilated, with a long fringe of stout blackish setæ. Abdomen shining, slightly hoary at base, each segment with a very broad bright lemon-yellow apical band, more or less deeply and squarely emarginate before on each side of the middle, that on the basal segment deeply and squarely emarginate in the middle and sinuate on each side; beneath yellowish, the base black, and at the apex of each segment two black central spots, becoming larger and sometimes confluent towards the tip, last segment black at tip. Length $5\frac{1}{2}$—6 lines; expanse of wings $8\frac{1}{2}$—$9\frac{1}{2}$ lines.

Male.—Resembles the female, except that the markings are all bright lemon-yellow, the antennæ entirely black, the two short lines on mesothorax obsolete, the mark beneath the fore-wings interrupted, the anterior tarsi not dilated, and the bands of the abdomen broader, covering nearly the whole surface, those on the three basal segments stained with dark green, and the second ventral segment has a strong, compressed, curved tooth on the middle. Length $5\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

Bembex armata, n. sp.

Black; face golden; clypeus, labrum, line over collar, tubercles, two short lines on mesothorax, line over tegulæ, large spot on pleura, sides of scutellum, postscutellum, a curved line or two spots on metathorax, most of legs, and a band on each abdominal segment, all yellowish; wings hyaline; second ventral segment of ♂ with a long, acute, curved tooth.

Female.—Black, clothed with a short, fine hoary pile; the face, clypeus and cheeks bright silvery, the former somewhat tinged with golden towards the vertex; clypeus produced, dull ferruginous; labrum and mandibles yellowish, the former dull ferruginous at base and the latter black at tips; antennæ black, the scape except its base behind, yellow. Thorax dull black, densely and finely punctured, clothed above with a very short golden pubescence; a line over the collar extending on each side and covering the tubercles, two short lines on the mesothorax, a line over the tegulæ, a large mark on the pleura, tegulæ, sides of the scutellum, postscutellum, a transverse arcuated line on the metathorax, as well as a spot on each side behind, yellow; the pleura and metathorax clothed with a fine bright silvery-sericeous pubescence, very dense on the posterior sides of the latter. Wings hyaline, nervures fuscous. Legs yellow; base of the coxæ, trochanters, basal two-thirds of the femora, and the tibiæ within, black; tarsi tinged with ferruginous, the anterior pair dilated and fringed with long dusky setæ. Abdomen black, shining, the apical margins of all the segments broadly pale greenish-yellow, the anterior margins undulate and indented on the middle, that on the apical segment divided by a central black line; base of first segment silvery-sericeous; beneath, the apical margins of the segments are narrowly yellowish, with a large lateral pale yellowish spot. Length 5½ lines; expanse of wings 9 lines.

Male.—Rather stouter than the female; the face bright golden; the clypeus and labrum bright yellow; the mandibles piceous, with an exterior basal streak of yellowish; the antennæ entirely black, except the tips of the scape beneath, which are dull-yellowish; two small linear spots on each side of the pleura instead of a large mark; the line on the postscutellum interrupted in the middle, forming two oblique marks which are accuminate and pointed towards the disk, the yellow spots on each side behind are obsolete; the wings faintly tinged with fuscous; the bands of the abdomen are bright yellow, the apical segment black with a yellow spot on each side at tip; beneath, the second segment has a large, long, subcompressed, curved, acute, claw-like tooth, very conspicuous. Length 6 lines; expanse of wings 10 lines.

Collection.—Ent. Soc. Philad. Two (♂ ♀) specimens.

Genus **MONEDULA**, Latr.

Monedula signata, Linn.

Vespa signata, Linn. Syst. Nat. i, p. 952.
Apis vespiformis, DeGeer, Ins. iii, p. 570; pl. 28, fig. 3.
Bembex signata, Fabr. Syst. Ent. p. 361; Syst. Piez. p. 223; Oliv. Ency. Méth. iv, p. 290.
Monedula signata, Latr. Gen. Cr. et Ins. iv, p. 100; St. Farg. & Serv. Ency. Méth x, p. 498; St. Farg. Hym. iii, p. 283; Dahlb. Hym. Europ. i, p. 185; Guér. LaSagra's Hist. Cuba, Ins. p. 764.

Collection.—Ent. Soc. Philad. Eight (♂ ♀) specimens.

Monedula insularis, Dahlb.

Monedula insularis, Dahlb. Hym. Europ. i, p. 186. ♀.

Female.—Black, clothed with cinereous pubescence, more dense on the head and metathorax; the face, orbits, mandibles, and scape of antennæ beneath, yellow; clypeus and labrum pale greenish-yellow; flagellum of the antennæ with a yellowish line beneath; the collar, two short lines on the mesothorax, a line over the tegulæ, pectus, except a black spot in front of the tubercles, continued to the collar in a narrow undulating line, tegulæ, tubercles, a large subtriangular spot on each side of the pleura beneath the fore-wings, an elongate spot beneath the hind wings, lateral margins of the scutellum, a semicircular line on the metathorax interrupted on the truncation by a round black spot, a large spot on each side behind, and a minute spot on each side near the base, all yellow. Wings hyaline. Legs yellow, sometimes tinged with ferruginous; the trochanters, the intermediate coxæ, except a triangular yellow spot beneath, the posterior coxæ, except an exterior yellow line, a line on the anterior femora behind, base of the posterior femora, and the tarsal claws, black. Abdomen black, shining, somewhat iridescent; first segment with a transverse pale greenish-yellow mark on each side about the middle, broad on each side, continued beneath, much narrowed towards the middle above, and nearly meeting on the disk; four following segments each with a transverse pale greenish-yellow fascia, broad on each side and suddenly narrowed by a deep square emargination in front and on each side of the middle, and very slightly interrupted on the disk, the emargination on the fourth and fifth segments not so deep; sixth segment entirely black; beneath, the apical margins of second to fifth segments are very narrowly pale yellowish, with a large pale yellowish spot on each side. Length 7½ lines; expanse of wings 12 lines.

Var. ♀.—Short lines on mesothorax obsolete, the lines over the tegulæ narrow and interrupted, only a spot on each side of the scutellum, semicircular line on the metathorax obsolete except a narrow line on

each side at base, and the fasciæ on the second and three following segments of the abdomen obtusely emarginate in front.

Male.—Resembles the female, with the short lines on mesothorax obsolete, the line over the tegulæ interrupted, the black spot on each side of the pectus much enlarged, the spot beneath the fore-wings divided by a black line, the semicircular line on the metathorax obsolete, the posterior lateral spot sometimes very small, and the fasciæ on the second and three following segments of the abdomen very obtusely emarginate; beneath, the second segment has a compressed, curved, acute tooth on the middle, and the sixth segment is rounded at apex, with a central tooth like that on the second segment, but not curved at the apex.

Collection.—Ent. Soc. Philad. Twenty-six (♂ ♀) specimens.

The yellowish markings of the head and thorax, as well as the legs, are sometimes tinged with ferruginous.

This is doubtless the *insularis* of Dahlbom, although his short diagnosis would as well apply to other species as to this, and therefore, to prevent further confusion, I add a more detailed description of the species.

It has some resemblance to *M. signata*, but is smaller, the clypeus is immaculate, the lines on the mesothorax are very short, the fasciæ on the abdomen are altogether of a different shape; the apical segment of the male of *signata* is emarginate at tip and has an acute tooth on each side, and the second and last ventral segments are without a central tooth.

? Monedula dissecta, Dahlb.

Monedula dissecta, Dahlb. Hym. Europ. i, p. 186. ♀.

Female.—Black, with a slight iridescence; head and thorax clothed with a fine, short, cinereous pile; sides of the face silvery in certain lights; clypeus semicircular, yellowish, covered with a very fine, silvery-sericeous pile, with its anterior margin and two spots on the anterior middle, dusky; labrum dull yellowish, silvery-sericeous as well as the base of the mandibles, which are piceous; antennæ black, the scape beneath yellow. Thorax subopaque, very minutely and closely punctured; the collar, two spots on the mesothorax in front, broad line on each side extending over the tegulæ to the scutellum, tubercles, a large spot on each side of the scutellum, a transverse line on postscutellum, a narrow, semicircular line on the metathorax, interrupted on the disk behind, and the large posterior angles, all deep yellow; metathorax very broadly excavated behind, making the posterior angles large, com-

pressed and sharp; tegulæ dull ferruginous. Wings fusco-hyaline, the nervures fuscous. Legs deep yellow, more or less silvery-sericeous; coxæ, trochanters, most of the femora, and a line on the posterior tibiæ behind, black or piceous. Abdomen shining black, iridescent, the four basal segments with a deep yellow, sinuate fascia, interrupted on the disk, the interruption gradually wider towards the apex; on each side of the fifth segment an ovate deep yellow spot; apical segment entirely black; beneath, the second and three following segments with a large triangular lateral yellowish spot, gradually smaller towards the tip. Length 7 lines; expanse of wings 11 lines.

Male.—Like the female, with a yellow spot on each side of the pleura beneath the fore-wings, the fifth segment of the abdomen banded like the fourth, and the sixth segment with an ovate spot on each side like the fifth segment of the female, the first ventral segment has a well developed, acute, central carina at the extreme base, and the last segment has a small acute tooth on each side. Length 6—7 lines; expanse of wings $9\frac{1}{2}$—11 lines.

Collection.—Ent. Soc. Philad. One ♀, two ♂ specimens.

I have referred the specimens from which the above description was taken to *M. dissecta* of Dahlbom, with doubt, as the short diagnosis given of that species, although answering to the species in some respects, is too meagre to render their identity certain.

Fam. NYSSONIDÆ.

Genus **STIZUS**, Latr.

Stizus Hogardii, Latr.

Stizus Hogardii, Latr. Gen. Crust. et Ins. iv, p. 100, pl. 13, fig. 12, ♀. St. Farg. & Serv. Encycl. Méth. x, p. 496. Smith, Brit. Mus. Cat. Hym. iv, pl. viii, fig. 4.

Hogardia rufescens, St. Farg. Hym. iii, p. 289, pl. 28, fig. 5; Guér. LaSagra's Hist. Cuba, Ins. p. 765.

Collection.—Ent. Soc. Philad. Two ♀, two ♂ specimens.

Genus **NYSSON**, Latr.

Nysson armatus, n. sp.

Black, clothed with a very fine, appressed, sericeous pubescence, very dense and silvery on the face and golden on the metathorax, the latter armed on each side behind with a long acute spine; a transverse spot on each side of the three basal segments of the abdomen and the extreme apical margins of all the segments above, pale testaceous; wings fusco-hyaline; legs dull rufous.

Female.—Black, opaque, distinctly and closely punctured, densely pubescent; the vertex and cheeks clothed with fine golden pubescence, the face and clypeus with dense bright silvery pubescence; antennæ stout, piceous. Thorax densely and rather roughly punctured; ante-

rior lateral angles of the collar prominent and subacute; the central impressed line of the mesothorax, the suture in front, the lateral and posterior margins, the tubercles and pleura, clothed with golden pile; scutellum black, rugose, channelled down the middle, depressed and golden at base; postscutellum golden on each side, with two short, obtuse, flattened, slightly recurved mucro on the disk; metathorax rugose, the posterior angles large, and produced on each side into a long, stout, acute, strongly divergent spine, densely golden and broadly tipped with yellowish-white, the large basal triangular enclosed space irregularly channelled down the middle, and slightly golden; tegulæ rufous, pubescent. Wings subhyaline, darker in the marginal cell and on the apical margins; nervures blackish. Legs dull rufous, thinly clothed with golden pubescence; coxæ black, rufous at tips, densely clothed with silvery pubescence. Abdomen rather closely punctured, somewhat coarser at base, becoming finer and indistinct towards the apex, somewhat shining, the extreme base silvery, the extreme apical margins of the segments bright golden; on each side of the three basal segments posteriorly a rather large transverse pale testaceous spot, larger and ovate on the basal segment, and smallest on the third segment; apical segment flattened on the disk, carinate on each side and obtuse at tip; venter rather deeply punctured, shining, somewhat silvery. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Male.—Resembles the female, with the antennæ entirely piceous, the fourth segment of the abdomen has a small obscure testaceous spot on each side behind, and the apical segment is armed at tip with two small, distant, obtuse, flattened teeth. Length 4 lines; expanse of wings 7 lines.

Collection.—Ent. Soc. Philad. Two specimens.

Genus **HARPACTUS**, Jur.

Harpactus insularis, n. sp.

Black; inner orbits, clypeus, base of antennæ, line on prothorax above, tubercles, transverse line beneath wings, scutellum, most of legs, and apical bands on the first, second and fourth segments of abdomen, yellow; metathorax golden-sericeous; wings subhyaline, with a large fuliginous spot on the costa near the tip.

Female.—Black, shining, covered with a very fine subargenteous pile, more obvious on the under surface; inner orbits, not reaching the vertex, and the clypeus, yellowish, covered with a fine silvery pile, bright in certain lights; mandibles piceous; palpi paler; antennæ blackish-piceous, shading into pale rufous towards the base, basal joint yellow. Thorax finely, but not closely punctured; the prothorax above,

tubercles, an elongate mark behind the tubercles and immediately beneath the anterior wings, a spot on the tegulæ, and the scutellum, bright yellow; pleura densely covered with subargenteous pile, the metathorax with dense golden-sericeous pile; the latter rounded above and behind, with a few longitudinal striæ at base, just behind the postscutellum; mesothorax broad, immaculate. Wings subhyaline, the anterior pair slightly tinged with fuscous, and with a large dark fuliginous patch covering the marginal, second submarginal, and nearly the whole of the third submarginal cells; nervures fusco-ferruginous, the costa and stigma fulvous. Legs fusco-ferruginous; the four anterior femora beneath, a line on their tibiæ and tarsi, the posterior femora beneath at tips, and their tibiæ exteriorly except tips, yellow; anterior tarsi ciliated with long pale setæ, the middle and posterior tibiæ covered exteriorly with numerous short spines. Abdomen shining, finely and densely punctured, somewhat sericeous, the apex acuminate and slightly incurved; the first, second and fourth dorsal segments each with a more or less broad, apical, yellow band, sinuate anteriorly, that on the first segment emarginate on the anterior middle; two apical segments faintly tinged with piceous; beneath rufo-piceous, the second segment with an apical band as on the dorsal segment. Length 5 lines; expanse of wings $9\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Harpactus scitulus, n. sp.

Black; inner orbits, clypeus, mandibles and tegulæ, piceous; base of antennæ, prothorax above, tubercles, spot behind tegulæ, a spot beneath the wings, scutellum, spot on each side of metathorax, legs in part, and bands on the first, second and fourth segments of abdomen, yellow; wings hyaline, fuscous on the costo-apical half.

Female.—Black, shining; inner orbits, not reaching the vertex, clypeus, mandibles and palpi, dull rufo-piceous, more or less clothed with a very fine silvery pile; antennæ piceous, paler towards the base, the two basal joints yellow. Thorax smooth, shining, and apparently impunctured; the prothorax above, tubercles, a large transverse spot beneath and a small spot behind the tegulæ, scutellum, and a large ovate spot on each side of the metathorax, bright yellow; the latter smooth and shining, the triangular basal space striated at base; tegulæ dull piceous. Wings subhyaline, the costo-apical half, except extreme tips, fuscous, darker about the marginal and second and third submarginal cells; costa and stigma pale yellowish. Legs piceous, black, shining; a spot on the coxæ beneath, the four anterior femora, except base, their tibiæ, a spot on the posterior femora beneath at tips, and their tibiæ

except tips, yellow; most of the tarsi fusco-ferruginous, the two anterior pairs yellowish at base; anterior tarsi not ciliated. Abdomen shining, very minutely punctured, except the two apical segments, which are rather deeply punctured; the first, second and fourth segments with apical yellow bands as in the preceding species, as well as the band on the second ventral segment; venter black, shining. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{4}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Very similar to the preceding species, but is readily distinguished by the much smaller size and by the large yellow spots on the metathorax.

Genus **ALYSON**, Jurine.

Alyson aculeatus, n. sp.

Black; face silvery; antennæ, most of legs and abdomen, piceous, the two basal segments of the latter rufous, the apical segment armed with two very long and slender, sting-like spines; wings hyaline, iridescent, with a faint cloud across the apical third.

Male.—Black, shining, thickly clothed with a fine whitish pile; face silvery; mandibles pubescent, pale testaceous, piceous at tips; antennæ piceous, the apical joints beneath subferruginous, basal joint beneath with a pale testaceous line. Thorax smooth above, very minutely and densely punctured beneath; metathorax elongate, subquadrate, rugose, the dorsal base with an elongate subtriangular space enclosed by a rather sharp carina, striated at base, and carinated down the middle, posterior angles small and subacute; tegulæ rufo-piceous. Wings hyaline, iridescent, with a faint fuscous cloud across the apical third, and occupying the whole of the marginal cell; nervures fuscous, stigma pale; second submarginal cell petiolated. Legs piceous-black, slightly pubescent; tips of the femora, the tibiæ and tarsi rufo-piceous; posterior femora terminating beneath in a stout acute tooth. Abdomen smooth and polished, slightly pubescent, piceous-black, the two basal segments rufous, except the disk of the first and a large spot on the apex of the second segments, which are piceous; terminal segment truncate at tip, with two very long, slender, acute, sting-like, pale ferruginous, spines, diverging posteriorly. Length $3\frac{1}{2}$ lines; expanse of wings $4\frac{3}{4}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Fam. CRABRONIDÆ.

Genus **TRYPOXYLON**, Latr.

Trypoxylon excavatum, Smith.

Trypoxylon excavatum, Smith, Brit. Mus. Cat. Hym. iv, p. 380.

Collection.—Ent. Soc. Philad. Four specimens.

Trypoxylon succinctum, n. sp.

Black; metathorax and the three basal segments of abdomen, except a large black spot above, honey-yellow; wings hyaline, beautifully iridescent; face and pleura silvery.

Female.—Black; face densely clothed with brilliant silvery pubescence, filling up the deep emarginations of the eyes; cheeks silvery; antennæ piceous above, ferruginous beneath. Thorax minutely punctured, shining; a transverse line in front of the mesothorax, a line over the tegulæ, and a patch on each side of the scutellum, of silvery pubescence; pleura rather densely clothed with silvery pubescence; metathorax honey-yellow, blackish at the base above, which is finely and obliquely striated, the posterior face rather deeply channelled, and clothed with a bright silvery pubescence, more dense towards the tip; tegulæ pale testaceous. Wings hyaline, beautifully iridescent; nervures blackish. Legs, including the coxæ, honey-yellow; tips of the intermediate tibiæ and their tarsi, tips of the posterior femora and their tibiæ and tarsi entirely, more or less dusky. Abdomen shining, clothed with a very fine, thin, glittering pubescence, more obvious towards the tip; the three basal segments honey-yellow, each with a large transverse black spot on their dorsal surface, that on the first segment on its apical third; apical segments black, except the basal margin of the fourth segment, which is honey-yellow. Length $3\frac{1}{2}$ lines; expanse of wings $4\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **OXYBELUS**, Latr.

Oxybelus analis, n. sp.

Black; mandibles, tegulæ and apex of abdomen, fulvous; face silvery; line on collar, tubercles, sides of scutellum, and a transverse line on each side of the four basal segments of abdomen, whitish; wings hyaline; metathorax armed at base with a long bifid mucro.

Female.—Black, finely punctured, slightly pubescent, the face covered with a silvery down, very bright when viewed from above; mandibles yellowish at base, fulvous in the middle and piceous at tips; eyes large, brown; antennæ black, the middle broadly ferruginous, tip of the scape yellowish. Thorax finely and closely punctured, slightly pubescent; mesothorax faintly tinged with bronze; an interrupted line on the collar, tubercles, a small spot on each of the scutellum at base, and the squama on the posterior margin of the scutellum, whitish, the latter with an acute central longitudinal carina; metathorax truncate behind, shining, irregularly striated, with acute elevated lines and a deep excavation beneath the mucro, which is rather long, dilated towards the apex, hollowed above and deeply emarginate at tip; tegulæ rufo-

fulvous. Wings hyaline, very faintly tinged with fuscous, slightly iridescent; nervures blackish. Legs black, thinly clothed with a pale glittering pubescence; the anterior femora at tips beneath and their tibiæ exteriorly, more or less yellowish-white; tibiæ tinged with piceous, spurs yellowish; tarsi ferruginous at tips. Abdomen black, finely and closely punctured, the four basal segments with a narrow, transverse, yellowish-white line on each side of the apical third, rather broadly margined behind with silvery-white pubescence, more conspicuous when viewed in certain lights; the two apical segments rufo-fulvous, the terminal one carinated on each side, the carina converging towards the apex. Length $2\frac{1}{2}$—$2\frac{3}{4}$ lines; expanse of wings 4—$4\frac{3}{4}$ lines.

Male.—Resembles the female, but is smaller, the anterior tibiæ and tarsi are mostly yellowish or testaceous, and their femora more broadly yellow at tip, the four posterior tibiæ have a yellow line behind, and their femora at tip beneath are more or less yellow; the base of the fifth abdominal segment is more or less black, and the two apical ones entirely rufo-fulvous, the extreme tip is slightly emarginate. Length $1\frac{3}{4}$—$2\frac{1}{4}$ lines; expanse of wings 3—$3\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad Two ♀, four ♂ specimens.

Genus **CRABRO**, Fabr.

♀. Abdomen petiolated.

Crabro auriceps, n. sp.

Black; face and cheeks golden; mandibles, scape of antennæ, collar, tubercles and a transverse band behind them, scutellums, most of legs, and three bands on abdomen, the two last interrupted on the disk, yellow; abdomen ferruginous at tip and beneath; wings fusco-hyaline, darker at tips.

Male.—Black; head very large, subquadrate, broader in front than behind; vertex opaque; the face, a transverse line above the mandibles, and the cheeks or broad outer orbits, clothed with dense, bright golden pubescence; mandibles, except extreme tips, yellow; antennæ black, the two basal joints entirely yellowish. Thorax opaque-black; an uninterrupted line before the mesothorax, the tubercles and a broad transverse band just behind them, basal half of the scutellum, connected with a spot on each side at base, a small spot on each side near the base of the wings, and a transverse narrow line suddenly constricted and pointed at each end, all yellow; pleura and metathorax with a slight golden pubescence, the latter abrupt behind, entirely black, subopaque, and covered with fine irregular striæ, the disk with a central, longitudinal impressed line; tegulæ honey-yellow. Wings pale fusco-hyaline, much darker along the costa at tip; nervures fuscous. Legs yellow; coxæ piceous, posterior pair mostly yellowish; all the femora

more or less tinged with ferruginous behind, the posterior pair blackish before; tips of all the tarsi dusky. Abdomen petiolated, strongly subfusiform, shining, the four basal segments black above, the first with a yellow band near the tip, deeply indented on the disk in front; second segment with a rather large sublunular yellow spot on each side about the middle, dilated on each side and nearly reaching the disk of the segment; third segment black, stained with ferruginous on each extreme side; fourth segment with a narrow, transverse yellow band interrupted on the disk, the extreme sides stained with ferruginous; remaining segments, as well as the entire venter, ferruginous; extreme apex slightly pubescent. Length $5\frac{1}{2}$ lines; expanse of wings 8 lines.

Collection.—Ent. Soc. Philad. One specimen.

Crabro claviventris, n. sp.

Black; face, cheeks and pleura silvery; scape of antennæ, clypeus, tubercles and most of the four anterior legs, yellow; two bands on abdomen and the venter entirely, fulvous; wings hyaline; abdomen strongly clavate; hind tibiæ much swollen.

Male.—Black, subopaque; head rather large, quadrate; face, clypeus and cheeks densely clothed with bright silvery pile; clypeus and mandibles yellow, the latter black at tips; antennæ pale piceous, the two basal joints yellow, the second obscurely so. Thorax: pleura and metathorax rather densely clothed with bright silvery pile; the incisure in front of the mesothorax very deep; tubercles and tegulæ yellowish, the latter tinged with ferruginous; metathorax with a rather deep central excavation on its posterior face. Wings hyaline, beautifully iridescent; apical margins slightly dusky. Legs yellow; the four posterior coxæ, except tips, and the posterior legs, except base and tips of their trochanters and base of their tibiæ, blackish; tips of intermediate femora and middle of their tibiæ, dusky; posterior tibiæ very much swollen beyond the basal fourth, which is very slender. Abdomen elongate, very slender at base, and very much swollen at tips, shining; first segment long, basal two-thirds cylindrical, swollen at tip, black, remaining segments fulvous, the dorsal surface of the second, a large, broad, subtriangular mark on the dorsal surface of the third and fourth, covering their apical half and basal middle, and the entire dorsal surface of the remaining segments, black; venter entirely fulvous. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Collection.—Dr. J. Gundlach. One specimen.

This curious little species seems to belong to the subgenus *Rhopalum*, and may be at once recognized by its strongly and suddenly clavate abdomen, and the much swollen hind tibiæ.

??. Abdomen subsessile.

Crabro cubensis, n. sp.

Black; face, cheeks and clypeus, golden; basal half of antennæ, prothorax, tubercles, spot before tegulæ, scutellums, legs, and five transverse spots on each side of abdomen, yellow; wings fusco-hyaline.

Female.—Black, opaque; head large, quadrate, very densely and finely punctured; sides of the face, clypeus, extending on each side beneath the eyes, and the cheeks, densely clothed with bright golden pubescence; antennæ with the three basal joints, yellow, the fourth fulvous, the remainder blackish. Thorax deeply and rather closely punctured, prothorax narrow, yellow, sharply carinated in front, with the lateral anterior angles reflexed and very acute; tubercles, and a rather large, oblique, subcuneiform mark before the wings, yellow; scutellum shining, sparsely punctured, entirely yellow, extreme sides acute, with a small spot on each basal corner; postscutellum with a narrow, transverse, yellow line; metathorax irregularly rugose, the sides transversely rugose, the posterior face abrupt; tegulæ dull honey-yellow, shining. Wings pale fusco-hyaline, darker at tips; nervures ferruginous. Legs yellow, their coxæ and apical half of the posterior femora black, tips of the tarsi dusky; the four anterior femora sometimes tinged with ferruginous. Abdomen subsessile, short, ovate, convex, shining, very minutely punctured; sides of all the segments, except the apical one, with a more or less transverse, yellow line or spot, those on the first and fifth segments smallest, those on the fourth longest and nearly meeting on the disk; venter entirely black, shining. Length 4—5 lines; expanse of wings 7—8 lines.

Collection.—Ent. Soc. Philad. Three specimens.

Crabro crœsus, St. Farg.

Solenius crœsus, St. Farg. Ann. Soc. Ent. Fr. iii, p. 727; Hym. iii, p. 132. Dahlb. Hym. Europ. i, p. 388. Guér. LaSagra's Hist. Cuba, Ins. p. 767.

Crabro crœsus, Smith, Brit. Mus. Cat. iv, p. 424.

Collection.—Ent. Soc. Philad. Two specimens.

Genus **PSEN**, Latr.

Psen argentifrons, n. sp.

Black, shining; face silvery; tubercles, tibiæ and tarsi, yellow; apical margins of abdominal segments obscure testaceous; wings hyaline, iridescent, third submarginal cell with its outer nervure angular.

Female.—Black, shining; head rather wider than the thorax; face, beneath the insertion of the antennæ, the clypeus and the cheeks, densely clothed with bright silvery pubescence; mandibles ferruginous, black at tips; antennæ blackish above, rufo-piceous beneath. Thorax shining, finely punctured; a line over the collar, most of the pleura,

postscutellum, and sides of metathorax, clothed, more or less, with pale, glittering, somewhat silvery pubescence; tubercles yellowish; metathorax rugose; tegulæ dull honey-yellow. Wings hyaline, iridescent; nervures blackish; second submarginal cell receiving the first recurrent nervure near its base; third submarginal cell nearly twice the width of the second, its outer nervure bent inwards above the middle, the second recurrent nervure sinuate, received by the third submarginal cell at the extreme base. Legs blackish, the four anterior tibiæ and tarsi, and the base of the posterior tibiæ, whitish. Abdomen oblong-ovate, shining; first segment with a rather long, slender petiole; apical margins of all the segments, except the last, obscure testaceous; apical segment pubescent. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

Male.—Resembles the female, but is more slender, the antennæ longer, and except the tips, entirely blackish; the abdomen much more elongate beyond the petiole, and the extreme apex acute and slightly recurved.

Collection.—Dr. J. Gundlach. Two specimens.

Genus **CERCERIS**, Latr.

Cerceris flavocostalis, n. sp.

Ferruginous; broad orbits, tip of antennæ, collar, tegulæ, most of pleura, scutellum, spots on metathorax, most of legs, and the first and apical margins of remaining abdominal segments, yellow; wings fusco-hyaline, costa broadly yellow; abdomen very minutely punctured.

Female.—Dull ferruginous, opaque, slightly pubescent; head large, broader than the thorax, yellow, stained on the vertex, occiput and cheeks with ferruginous; the sides of the face, when viewed from above, have a bright silvery reflection; vertex flattened, with a transverse, slightly arcuated, blackish line, passing just behind the ocelli, and down the middle of the face are two blackish lines on which the antennæ are situated, divided by a yellowish line which is elevated and acutely carinate between the antennæ; clypeus strongly produced, slightly convex, truncate at tip, dull ferruginous, with a yellow, subtriangular spot on its disk; mandibles long, acute, honey-yellow, black at tips; antennæ dull fulvous, fuscous above near the middle, the four apical joints orange-yellow. Thorax opaque, dull ferruginous; collar, most of pleura, tegulæ, scutellum, the triangular space on the dorsal base of the metathorax, as well as its sides, and two small approximate spots on the posterior face, all yellow; mesothorax with two very indistinct longitudinal lines on the disk; pleura prominent; the central well impressed line of the metathorax and its extreme tip, about the insertion of the abdomen, black. Wings fusco-hyaline, the posterior margin and the

posterior pair subhyaline, the costa broadly yellowish. Legs yellowish, the anterior trochanters and femora dull ferruginous, the four posterior coxæ, trochanters, femora and tips of posterior tibiæ, piceous; posterior femora gradually dilated towards the tips with the apex truncate and the margins reflexed, and when viewed endways it is circular, the tibiæ inserted on the inner side of the circle; the tibiæ spinose; tarsal claws dusky. Abdomen dull ferruginous-brown, very minutely punctured, subopaque; the first segment and the apical margins of the four following segments, above and beneath, yellow; apical segment with its disk flattened and enclosed on each side by a longitudinal carina, converging at base, and fringed with pale brownish pubescence, the enclosed space finely rugose; the ventral segments clothed with yellowish-sericeous pubescence, longer and more dense on the apical margins. Length $7\frac{1}{2}$ lines; expanse of wings 12 lines.

Male.—Resembles the female, but is smaller and slenderer; the head is not so large, the clypeus not produced, but flattened, large and semicircular, the pieces on each side fringed with golden pubescence; the antennæ are longer, the mesothorax is margined with blackish; the metathorax wants the two small approximate yellowish spots beneath the triangular basal piece; the anterior femora at base and the four posterior femora, are black; the abdomen is narrower and more pubescent, the basal half of the first segment is dull ferruginous, and the apical margin of the sixth segment is also yellow. Length $5\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Dr. J. Gundlach. Two specimens.

Cerceris triangulata, n. sp.

Ferruginous; face, collar, spot beneath the wings, tegulæ, scutellum, a large, sublunular spot on each side of metathorax, legs, and the first and narrow apical margins of the third, fourth and fifth segments of abdomen, yellow; basal triangular piece on metathorax black; wings fusco-hyaline, costa pale yellowish; abdomen deeply and coarsely punctured.

Female.—Head large, subquadrate, opaque, ferruginous, deeply and closely punctured, slightly pubescent; face, cheeks, clypeus and basal half of mandibles, yellow; when viewed from above, the lower part of the face is bright silvery; clypeus elevated, short and convex above, obliquely and broadly truncate, and flattened beneath; antennæ fulvous. Thorax opaque, dull ferruginous, deeply and closely punctured, pubescent; the collar, a spot beneath the wings, tegulæ, scutellum, and a large sublunular spot on each side of metathorax, yellow; tip of metathorax dull ferruginous, the triangular enclosed basal piece black and obliquely striated. Wings pale fusco-hyaline, darker at the apex along

the costa; costa, from the stigma to the base, pale yellowish. Legs, including their coxæ, yellow; the anterior femora and tips of the tarsi tinged with ferruginous; posterior tibiæ dilated at tip, with the margins reflexed, as in the preceding species. Abdomen dull ferruginous, subopaque, deeply and grossly punctured; most of the first segment and the apical margins of the third, fourth and fifth segments obscurely, yellowish, the latter much attenuated in the middle and wider on the sides; apical segment and venter more or less pubescent. Length 6 lines; expanse of wings 9 lines.

Collection.—Dr. J. Gundlach. One specimen.

Closely allied to *C. flavocostalis*, but is at once distinguished by the deep and coarse punctation.

Cerceris bilunata, n. sp.

Black, coarsely punctured; apical half of abdomen ferruginous; face, collar, tegulæ, spot beneath the wings, scutellum, two large lunular spots on metathorax, legs, a band on the first and second abdominal segments and narrow apical margins of the third and fourth segments, all yellow; wings fusco-hyaline, dark at tip.

Male.—Black, deeply and coarsely punctured, slightly pubescent; face, a small spot behind the antennæ, clypeus, mandibles, except tips, and line or spot on the cheeks, yellow; clypeus large, flat, rounded at base and in front; the space on each side of clypeus fringed with silvery pubescence; antennæ obscure fulvous, fuscous beyond the middle nearly to the tips, sometimes entirely fulvous; basal joint beneath yellowish. Thorax black; the collar, a spot on each side of pectus, tegulæ, a spot beneath the wings, scutellum, and a large lunular spot on each side of metathorax, all yellow; postscutellum tinged with ferruginous, the enclosed triangular basal space black and obliquely striated. Wings pale fusco-hyaline, much darker at tips; nervures pale. Legs yellow, the tarsi more or less tinged with ferruginous. Abdomen deeply and coarsely punctured, the three basal segments black, the remaining segments ferruginous, sometimes the apical half of the third segment is ferruginous; the first and second segments each with a rather broad apical yellow band, the third and fourth segments with narrow yellow apical margins, subobsolete on the fourth segment; beneath, the second segment is almost entirely yellow, the remainder ferruginous, clothed with sericeous pubescence. Length $4\frac{1}{2}$ lines; expanse of wings $6\frac{3}{4}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

Easily recognized by the tricolored—black, ferruginous and yellow—abdomen.

Cerceris festiva, n. sp.

Black, feebly punctured; face, collar, tegulæ, spot beneath the wings, scutellum, a longitudinal spot on each side of metathorax, four anterior legs, basal two-thirds of hind tibiæ, and apex of the four basal segments of abdomen, yellow; wings fusco-hyaline, darker at tips.

Male.—Black, shining, feebly punctured, slightly pubescent; face, broad frontal and narrow outer orbits, clypeus, carinæ between antennæ, and base of mandibles, yellow; clypeus large, flattened, rounded at base and in front, the pieces on each side densely clothed and fringed with silvery pubescence; antennæ ferruginous, yellow at base, and fuscous above towards the tips. Thorax shining, very feebly punctured; collar, tegulæ, tubercles and a spot just beneath them, scutellum and a large longitudinal spot on each side of the metathorax, yellow; the latter feebly punctured and polished. Wings subhyaline, the apical costal half fuscous, as well as the tips of the posterior wings. Legs yellow; the posterior pair, except the basal two-thirds of their tibiæ, black; the four anterior tarsi more or less dusky towards the tips. Abdomen shining, feebly punctured; apical margins of the first four dorsal segments yellow, broad at the sides and much narrowed in the middle; fifth segment with a small yellow spot on each side; beneath, the second and third segments each with a yellow band slightly narrowed in the middle. Length $4\frac{1}{4}$ lines; expanse of wings 6 lines.

Collection.—Dr. J. Gundlach. One specimen.

Cerceris zonata, n. sp.

Black, deeply and coarsely punctured; face, collar, tegulæ, spot beneath the wings, scutellums, most of legs, and apical margins of abdominal segments, yellow; wings subhyaline, darker at tips.

Female.—Black, subopaque, deeply and coarsely punctured, slightly pubescent; face, clypeus, mandibles except tips, and a spot behind the summit of the eyes, yellow; face silvery; clypeus large, flattened; antennæ ferruginous, yellow at base. Thorax: collar, tegulæ, spot beneath the wings, scutellum and postscutellum, yellow; metathorax entirely black, roughly punctured, the triangular enclosed basal space rugose, the incisures deeply impressed, continuing down the disk to the insertion of the abdomen. Wings subhyaline, dusky at tips, slightly iridescent; nervures and stigma blackish. Legs yellow; the coxæ except tips, a spot at base of the four anterior femora, the posterior femora except tips, and tips of their tibiæ, black, their tibiæ sometimes dusky. Abdomen coarsely punctured; a broad band on the first segment, and the posterior margins of the four following segments narrowly, yellowish, the latter wider on each side; venter piceous, the second and third

segments with obscure yellowish lateral spots or interrupted bands. Length 3 lines; expanse of wings 5 lines.

Male.—Resembles the female, with the antennæ longer, and the sixth abdominal segment margined posteriorly with yellow like the fifth.

Collection.—Ent. Soc. Philad. Four specimens.

Closely resembles *C. festiva*, but is smaller and at once distinguished by the immaculate metathorax and coarse punctation.

Fam. EUMENIDÆ.

Genus **ZETHUS**, Fabr.

Zethus rufinodus, Latr.

Eumenes rufinoda, Latr. Gen. Crust. et Ins. iv, p. 137, pl. 14, fig. 5, ♀. Sauss. Mon. Guêpes. Sol. p. 42.

Zethus rufinodus, Sauss. Mon. Guêpes. Sol. Suppl. p. 118, pl. 6, fig. 3, ♀.

Collection.—Dr. J. Gundlach. One specimen.

Zethus Poeyi, Sauss.

Zethus Poeyi, Sauss. Rev. Zool. 1857, p. 270.

Collection.—Ent. Soc. Philad. Three ♀, four ♂ specimens.

Genus **EUMENES**, Latr.

Eumenes abdominalis, Drury.

Sphex abdominalis, Drury, Illustr. Ins. i, pl. 45, fig. 2.

Vespa attenuata, Oliv. Encycl. Méth. vi, p. 674. Fabr. Syst. Ent. p. 372; Spec. Ins. i. p. 469; Mant. Ins. i. p. 293; Ent. Syst. ii. p. 282.

Polistes attenuatus, Fabr. Syst. Piez. p. 279.

Eumenes abdominalis, Sauss. Mon. Guêpes. Sol. p. 70. Guér. in LaSagra's Hist. Cuba, Ins. p. 768.

Eumenes colona, Guér. in LaSagra's Hist. Cuba, Ins. pl. 19, fig. 1.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

This species is erroneously figured by Guérin in LaSagra's Hist. Cuba, as *E. colona* Sauss., and states that that species, as well as *E. ornata* Sauss., is found on the Island of Cuba. I have not seen specimens of either species from that locality.

Eumenes cubensis, n. sp.

Fuscous; orbits, clypeus, anterior margin of prothorax, subtriangular spot beneath the wings, two spots on mesothorax, anterior margin of scutellum, post-scutellum, part of metathorax, tibiæ and tarsi, apex of petiole of abdomen, and two bands on the second segment, yellow; wings fusco-hyaline, fuliginous at tips.

Female.—Head fuscous, very densely punctured, slightly pubescent; the orbits, filling up the deep sinus in front, a subtriangular mark between the antennæ, and the clypeus, bright yellow; clypeus smooth, deeply emarginate at tip; mandibles and palpi pale ferruginous; antennæ bright ferruginous, paler at base, the seventh to tenth joints

more or less blackish. Thorax fuscous, very densely punctured, clothed with a short, pale yellowish pubescence, becoming quite white on the metathorax; anterior margin of the prothorax, a subcuneiform mark on each lateral margin of the mesothorax, a large subtriangular mark on each side of the pleura anteriorly, most of the tegulæ, anterior margin of the scutellum dilated on each side, the postscutellum, and the dorsal surface enclosing a large subrhomboidal fuscous mark which occupies most of the disk, all more or less bright yellow; pleura and metathorax covered with a very short, fine silvery-sericeous pile, more obvious in certain lights. Wings subhyaline, the costal margin broadly stained with yellowish-fuscous; the apical margins dusky, especially the marginal cell. Legs fusco-ferruginous; the anterior femora beneath, their tibiæ, the intermediate femora beneath at tip, their tibiæ, as well as the posterior tibiæ, yellow; all the tarsi yellowish-ferruginous. Abdomen fuscous, covered with a very short, dull yellowish pubescence; the petiole or basal segment nearly as long as the head and thorax, slender and blackish at base, gradually dilated to the tip which is truncate and broadly margined above and beneath with yellowish, the anterior middle of the yellow margin deeply indented above, and about the dorsal middle of this segment there is a large dull ferruginous stain; remaining segments subglobose, the second segment very large, with a yellowish band across the middle and another on the apical margin; apical segments fusco-ferruginous; beneath pale fusco-ferruginous, the second segment with a broad yellowish band. Length 7 lines; expanse of wings $10\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Eumenes ferruginea, n. sp.

Pale ferruginous; orbits, clypeus, anterior margin of prothorax and scutellum, postscutellum, spot beneath the wings, legs in part, and apex of first and second segments of abdomen, obscurely yellowish; middle of antennæ blackish; wings pale yellowish-hyaline.

Male.—Uniformly pale ferruginous, slightly pubescent; orbits of the eyes, filling up the deep sinus in front, and the clypeus, obscure pale yellowish; clypeus elongate, deeply notched at tip, and silvery in certain lights; vertex and occiput fuscous; antennæ longer than the head and thorax, ferruginous, more or less blackish between the base and tip, the latter thickened and then suddenly tapering to an acute point, the terminal joint very slightly curved at tip. Thorax very closely punctured, somewhat hoary in certain lights; anterior margin of the prothorax, a spot beneath the tegulæ, a subobsolete spot on each side of the mesothorax, anterior margin of the scutellum dilated on each

side, postscutellum, and a rather large spot on each side of the metathorax at tip, obscure yellowish; mesothorax narrowly margined, before and behind, with blackish. Wings pale yellowish-hyaline, more deeply yellowish along the costa, the marginal cell slightly dusky; nervures pale testaceous. Legs pale yellowish-ferruginous, fuscous at base, the tibiæ and tarsi paler. Abdomen shining; basal segment fuscous, punctured, longer than the thorax, slender at base and gradually dilated towards the tip, which is truncate and margined above and beneath with yellow; on each side, about the middle, there is a short obtuse tubercle, the dorsal surface is convex, with several dull ferruginous stains; remaining segments pale ferruginous, the second large, convex, more or less stained with pale fuscous, with the apical margin narrowly yellow; beneath, the second segment has an obscure yellowish spot on the disk. Length $4\frac{1}{2}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **ODYNERUS**, Latr.

Odynerus Prœtus, n. sp.

Dull ferruginous; base of clypeus, inner orbits, prothorax in front, spot beneath tegulæ, scutellums, most of metathorax, legs in part, and apical margins of abdominal segments, yellowish; wings deep yellowish-hyaline.

Female.—Head dull ferruginous, dusky above the insertion of each antenna, around the ocelli, and on the occiput; inner orbits of the eyes, filling up the deep sinus, a small subcordate mark between the antennæ, the clypeus, and most of the mandibles, yellowish; clypeus large, closely punctured, flattened on the disk and slightly and obtusely emarginate at tip; mandibles black at tip; palpi pale ferruginous; antennæ yellowish-ferruginous, the flagellum tinged with fuscous above, the scape yellowish beneath. Thorax fusco-ferruginous, closely and rather deeply punctured, covered with a very short, fine, dull yellowish, subsericeous pile; broad anterior margin of the prothorax above, continued in a narrow line to the tegulæ, and a large spot on each side of the pleura just beneath the tegulæ, yellowish; mesothorax fusco-ferruginous, tinged with blackish on the anterior and posterior margins, the disk with two distant, very faint, longitudinal, ferruginous lines, confluent behind the middle; scutellum and postscutellum yellowish, the apical margin of the former blackish, and the yellowish portion divided down the middle by a faint fuscous line; metathorax yellow, the suture between it and the postscutellum, as well as a large spot on the apical middle, fusco-ferruginous, posterior face rather suddenly depressed, with a small tubercle on each side at the angulation; pleura

fuscous beneath; tegulæ dull yellowish, with a ferruginous stain on the middle. Wings deep yellowish-hyaline, faintly dusky at tips; nervures honey-yellow. Legs deep yellowish, the femora above and at base beneath pale ferruginous. Abdomen oblong-ovate, the basal segment dome-shaped, obtusely rounded at base, without transverse suture or carina, distinctly punctured, the remaining segments indistinctly so; apical margins of all the segments above narrowly yellowish, almost divided on the disk by a narrow line, those of the second and third segments broader and dilated on the extreme sides, especially on the first segment where there is a rather large triangular mark, the bands on the remaining segments more or less emarginate on each side anteriorly; apical segment with a large, broad, angular, dull yellowish mark on the middle; beneath marked as above, except that the apical segment is immaculate, and the second segment is almost entirely yellowish, with three ferruginous spots arranged transversely near the apical margin. Length $8\frac{1}{2}$ lines; expanse of wings 15 lines.

Collection.—Dr. J. Gundlach. One specimen.

Odynerus consors, n. sp.

Black; orbits, spot between antennæ, clypeus, mandibles, prothorax in front, tegulæ, spot beneath the wings, scutellums, most of metathorax and legs, and apical margins of abdominal segments, yellowish; abdomen fuscous, the first and third segments blackish; wings yellowish-hyaline, apex dusky.

Male.—Head black, deeply and closely punctured; the orbits, filling up the sinus in front, a spot between the antennæ, dilated above, clypeus, labrum, and mandibles, except tips, yellow, in one specimen more or less ferruginous; antennæ nearly as long as the thorax, terminated by a hook, black, tinged with ferruginous at base and tips, scape yellowish beneath. Thorax dull-blackish, densely punctured, slightly pubescent; broad anterior margin of prothorax continued in a narrow line to the tegulæ, sometimes interrupted, a large spot beneath the tegulæ, scutellum except its apical margin, and postscutellum, yellowish, sometimes tinged with ferruginous; pleura slightly sericeous in certain lights, with an oblique dull yellowish stain on each side beneath; metathorax mostly yellowish, the extreme sides spotted or stained with fuscous, the posterior face deeply and broadly excavated, covered with fine transverse striæ, more or less distinct, and with a large blackish mark covering the disk and spreading out on each side at base; lateral angles prominent and obtuse; tegulæ yellowish, with a ferruginous spot on the middle. Wings yellowish-hyaline, more deeply yellowish along the costa, the apex, especially about the marginal cell, dusky; nervures honey-yellow. Legs yellow, the femora tinged with ferruginous above.

Abdomen shaped and marked as in the preceding species, but the general color is fuscous, with the third, and sometimes the first, segments, except their apical margins, blackish, and the spot on the terminal segment above is scarcely defined. Length $6\frac{1}{2}$—$7\frac{1}{2}$ lines; expanse of wings $10\frac{1}{2}$—12 lines.

Collection.—Dr. J. Gundlach. Two specimens.

This may possibly be the male of *O. Prœtus*.

Odynerus cubensis, Sauss.

Odynerus cubensis, Sauss. Mon. Guêpes. Sol. p. 181, pl. 18, fig. 8.

Collection.—Ent. Soc. Philad. Six (♂ ♀), specimens.

Odynerus apicalis, n. sp.

Black; clypeus, mandibles, transverse band above antennæ, base of antennæ, prothorax above, tegulæ, spot beneath tegulæ, scutellum, most of metathorax and legs, basal segment of abdomen except disk, and the apical margins of the second and third segments, yellowish, apical segments ferruginous; wings fusco-hyaline.

Female.—Opaque-black; head and thorax deeply and closely punctured, the former broader than the thorax, rather short; a broad transverse band on the front, filling up the sinus of the eyes and deeply and somewhat obliquely indented above the insertion of each antenna, broad posterior orbits and the clypeus, yellow, sometimes strongly tinged with ferruginous; mandibles yellowish-ferruginous, sometimes yellowish at base; clypeus depressed, rhomboidal, the extreme tip truncate; antennæ black, the two basal joints ferruginous. Thorax: prothorax yellow above, tipped with dull ferruginous just before the tegulæ; pleura somewhat sericeous, with a large, rounded, yellow spot beneath the tegulæ; mesothorax immaculate; scutellum with two large, quadrate, yellowish marks, nearly confluent; postscutellum yellowish; metathorax finely and transversely striated, deeply excavated on the disk with a large yellowish mark on each side covering the lateral angles, which are rather prominent and obtuse; tegulæ yellowish, with a ferruginous dot on the middle. Wings subhyaline, faintly tinged with fuscous, honey-yellow along the costa, with the marginal cell almost entirely fuscous. Legs yellowish; the femora except tips beneath, the tibiæ beneath and most of the tarsi, pale ferruginous. Abdomen ovate, basal segment nearly equal in width to the second, remaining segments gradually tapering to the tip, and more deeply and densely punctured than the basal segments; first segment rounded at base without suture or carina, the apical margin confluent with a large angular mark on each lateral margin, yellowish; apical margin of the second and third segments, broader on the second segment, yellow, that on the third

sometimes tinged with ferruginous; remaining segments, above and beneath, dull ferruginous; beneath, the apical margins of the second and third segments are narrowly yellowish, more or less sinuate on each side anteriorly. Length 6 lines; expanse of wings 10 lines.

Male.—Similar to the female, but smaller; the markings of the face are tinged with ferruginous; the basal joint of the antennæ is yellow within, with a black line above, the apical joint ferruginous and hooked; the yellow of the prothorax does not continue all the way to the tegulæ, being interrupted with black; fourth segment of abdomen is black with the apical margin, above and beneath, narrowly yellowish, remaining segments are obscure yellowish-ferruginous, more or less dusky at base; beneath, the second segment has a yellow spot on each side of the middle. Length $4\frac{1}{2}$ lines; expanse of wings $7\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad., one ♂; Dr. J. Gundlach, two ♀, specimens.

Closely allied to *O. cubensis*, but the face is much broader, and, as well as the basal segment of the abdomen, is differently marked, and the third segment is margined at tip with yellow. It may be a variety of *O. guadulpensis* Sauss.

Odynerus cingulatus, n. sp.

Black; clypeus, spot between antennæ, line behind the eyes, base of antennæ, most of prothorax above, tegulæ, spot beneath the wings, scutellums, most of legs, and apical bands on two basal segments of abdomen, yellow; wings fusco-hyaline, the costal tip fuliginous.

Female.—Black, opaque, slightly pubescent; head not broader than the thorax, rounded when viewed in front, closely and deeply punctured; a broad line behind the eyes, near their summit, a subcordate spot between the insertion of the antennæ, and the clypeus, bright yellow, the latter suborbicular, prominent, with the extreme tip slightly truncate; mandibles piceous; antennæ piceous, black at tips, the basal joint bright yellow. Thorax deeply and closely punctured, more so than the head; the prothorax above, but not reaching the tegulæ, a round spot immediately beneath the anterior wing, tegulæ, scutellum and postscutellum, bright yellow; metathorax truncate behind, reticulated, the posterior declivity obliquely striated. Wings fusco-hyaline, more deeply so along the costa; the extreme tip, especially the marginal cell, more or less fuliginous. Legs yellow; coxæ and posterior femora, except tips, black; tarsi tinged with ferruginous. Abdomen elongate; basal segment somewhat dome-shaped, with a transverse carina anteriorly on the verge of the truncation; posterior margin of the first and second segments above with a rather broad band, dilated on each ex-

treme side, that on the second segment continued beneath where it is indented on each side anteriorly; apical segments closely punctured; beneath shining. Length $5\frac{1}{2}$ lines; expanse of wings 9 lines.

Collection.—Dr. J. Gundlach. One specimen.

Odynerus obliquus, n. sp.

Black; clypeus, line between the antennæ, line behind eyes, base of antennæ, anterior margin of prothorax, spot on each side of metathorax, most of legs, apical margins of two basal segments of abdomen and an oblique spot on each side of the second at base, yellowish; wings subhyaline, marginal cell dusky.

Female.—Black, deeply and closely punctured, slightly pubescent, somewhat shining; posterior orbits of the eyes, the sinus in front, a longitudinal line between the antennæ, and the clypeus except its apical third, yellowish, more or less varied with dull ferruginous; mandibles piceous, with an exterior yellow line; antennæ black, the flagellum piceous at base, the long basal joint bright yellow. Thorax: broad anterior margin of prothorax, a rounded spot just beneath the anterior wing, connected with a much smaller spot beneath, tegulæ, except a minute black dot on the disk, a dot just behind the tegulæ, scutellum, faintly divided down the middle, the postscutellum, and a rather large elongate spot on each side of the metathorax behind, yellow; pleura sericeous. Wings subhyaline, faintly tinged with fuscous; the costal margin stained with honey-yellow; the marginal cell, and the apical margins faintly, fuliginous. Legs yellow; the coxæ, trochanters and the posterior femora, black; tarsi fusco-ferruginous. Abdomen with the basal segment somewhat dome-shaped, deeply and closely punctured, with a transverse suture on the anterior margin, apical margins yellowish, slightly tinged with ferruginous, broader in the middle than on the sides; second segment large, convex, shining, delicately punctured, a rather broad apical band and an oblique spot on each side at base, dull ferruginous margined with yellowish, the apical band on this segment is continued beneath, but not so broad as above; remaining segments gradually acuminate, entirely black. Length $4\frac{3}{4}$ lines; expanse of wings 8 lines.

Male.—Resembles the female, except that the clypeus is entirely yellowish, the antennæ are terminated by a hook, and all the markings, though situated as in the female, are bright yellow and not varied with ferruginous. Length 4—$4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$—$7\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One ♀, two ♂ specimens.

Smaller than *O. cingulatus*, and at once distinguished by the basal oblique spot on each side of the second abdominal segment.

Odynerus bucuensis, Sauss.

Odynerus Bucu, Sauss. Mon. Guêpes. Sol. p. 185. Guér. in LaSagra's Hist. Cuba, Ins. p. 770, pl. 19, fig. 3.

Odynerus Bucuensis, Sauss. Mon. Guêpes. Sol. Suppl. p. 232.

Collection.—Ent. Soc. Philad. Two ♂ specimens.

A small male specimen (3 lines long) varies by the abdomen being tinged with fuscous and the spot on each side of the metathorax being subobsolete.

Odynerus dejectus, n. sp.

Black; line behind the eyes, sinus in front, spot between antennæ, most of clypeus, base of antennæ, anterior margin of prothorax, spot on disk of mesothorax, tegulæ, a spot on each side behind them, a spot beneath the wings, postscutellum, a mark on each side of metathorax, the tibiæ, apical margins of the first, second and fifth segments of abdomen and a spot on each side of the two basal segments, yellowish; wings fusco-hyaline.

Female.—Opaque-black, deeply and closely punctured; a line behind the eyes near their summit, the sinus in front, a spot between the insertion of the antennæ, and the basal half of the clypeus, deeply and squarely emarginate before, obscure yellowish; antennæ black, the basal joint, except the apical half above, yellow. Thorax: the anterior margin of the prothorax slightly interrupted on the disk, a small quadrate spot on the disk of the mesothorax posteriorly, tegulæ, a minute spot on each side just behind the tegulæ, a round spot on each side of the pleura just beneath the base of the anterior wings, the postscutellum, and an elongate mark on each side of the metathorax, yellowish. Wings fusco-hyaline, darker along the costa, and especially in the marginal cell. Legs black; tips of the four anterior femora, their tibiæ, and the posterior tibiæ except tips, yellowish. Abdomen robust, not much contracted at base; basal segment roughly punctured, with a faint transverse suture at base, its apical margin broader on the middle, continued along the lateral margin and then produced within about one-fourth the width of the segment, yellowish; second segment large, convex, shining, finely punctured, more strongly so at tips; the apical margin above and beneath, and a rounded spot on each side near the base, as well as the apical margin of the fifth segment not quite reaching the sides, yellow. Length $4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

Closely allied to *O. bucuensis*, but is distinguished by its more robust form, the spot on the disk of the mesothorax, and the absence of bands on the fourth and sixth segments of the abdomen. It may, however, be the female of that species.

Odynerus Enyo, St. Farg.

Odynerus elegans, Guér. Icon. Règ. Anim. Ins. p. 446, pl. 70, fig. 5.

Odynerus Enyo, St. Farg. Hym. ii, p. 648. Sauss. Mon. Guêpes. Sol. p. 185. Guér. in LaSagra's Hist. Cuba, Ins. p. 770.

Collection.—Ent. Soc. Philad. Seven ♀, six ♂ specimens.

The ♂ of this elegant species differs from the ♀ by the smaller size, and by the clypeus, mandibles and line between the antennæ being yellow, while in the ♀ they are black.

Odynerus simplicicornis, Sauss.

Odynerus simplicicornis, Sauss. Mon. Guêpes. Sol. Suppl. p. 253. Guér. in La-Sagra's Hist. Cuba, Ins. p. 771, pl. 19, fig. 5.

Collection.—Ent. Soc. Philad. Six ♀, five ♂ specimens.

The nest of this species is somewhat of an oblate-spheroidal shape, constructed of fine earth of a beautiful fawn color. It is attached to a slender twig and measures 4½ by 6 lines; sometimes two nests are attached, close together, to the same twig; the outer surface is uneven, and on the upper side there is a stout peduncle, by which the nest has been attached to another body. The opening made by the imago in its escape is large, and always on the side of the nest.

Fam. VESPIDÆ.

Genus **POLISTES,** Fabr.

Polistes carnifex, Fabr.

Vespa carnifex, Fabr. Syst. Ent. p. 365; Spec. Ins. i, p. 461; Mant. Ins. i, p. 288; Ent. Syst. ii, p. 260. Christ. Hymen. p. 239. Oliv. Ency. Méth. vi, p. 681.

Polistes carnifex, Fabr. Syst. Piez. p. 272. Sauss. Mon. Guêp. Soc. p. 90, pl. 10, fig. 5. Guér. in LaSagra's Hist. Cuba, Ins. p. 772.

Polistes rufipennis, Latr. Voy. Humb. et Bonpl. Ins. ii, p. 97, pl. 38, fig. 4.

Polistes major, Beauv. Ins. d'Afr. et d'Amer. p. 206, pl. 8, fig. 1.

Polistes chlorostoma, St. Farg. Hym. i, p. 521.

Polistes onerata, St. Farg. Hym. i, p. 524.

Polistes valida, Say, Bost. Journ. Nat. Hist. i, p. 389.

Polistes transversosignatus, Spinola, Voy. Entom. de Ghiliani, p. 62.

Collection.—Ent. Soc. Philad. Six (♂ ♀) specimens.

Polistes lineatus, Fabr.

Vespa lineata, Fabr. Spec. Ins. i, p. 461; Mant. Ins. i, p. 288; Ent. Syst. ii, p. 259. Oliv. Ency. Méth. vi, p. 581.

Polistes lineata, Fabr. Syst. Piez. p. 271.

Polistes lineatus, Sauss. Mon. Guêp. Soc. p. 95, pl. 11, fig. 6.

Polistes cubensis, St. Farg. Hym. i, p. 526.

Collection.—Ent. Soc. Philad. Seven (♂ ♀) specimens.

Varies by the segments of the abdomen being more or less distinctly banded with blackish at base.

I have before me nine specimens of this species which have been attacked by parasitic fungi, similar to that figured by Saussure (Mon. Guêp. Soc. pl. 5, fig. 9, and pl. 11, fig. 5) as attacking *Icaria cincta* and *Polistes americanus*, except that the fungi which are developed, or swelled at the ends, have their stalks much longer than is represented in the figure of *I. cincta*.

Polistes minor, Beauv.

Polistes minor, Beauv. Ins. d'Afr. et. d'Amer. p. 207, pl. 8, fig. 3. Sauss. Mon. Guêp. Soc. p. 96, pl. 11, fig. 3. Guér. in LaSagra's Hist. Cuba, Ins. p. 773.

Polistes Poeyi, St. Farg. Hymén. i, p. 532.

Collection.—Ent. Soc. Philad. Fifteen (♂ ♀) specimens.

Polistes incertus, n. sp.

Dull ferruginous, varied with yellowish; vertex, middle of antennæ, sutures of thorax, most of hind femora and tips of their tibiæ, blackish; abdomen banded with yellow; wings stained with yellowish-fuscous, especially along the costa.

Male.—Head yellowish; a large quadrate mark on the vertex, enclosing the ocelli, and the posterior margin of the occiput, blackish; antennæ ferruginous, paler at tips and beneath, the middle above more or less blackish. Thorax dull ferruginous; broad margins of the pectus, most of the pleura, tegulæ, most of scutellum, and the postscutellum, yellowish; sutures of the pleura, a spot beneath the base of the wings, margins of the mesothorax, as well as a line down its middle, and the sutures between the scutellum, postscutellum and metathorax, black or blackish; the posterior middle of the scutellum is dull ferruginous, so that the yellow forms a large spot on each side confluent on the basal middle; metathorax dull ferruginous, with four longitudinal yellowish lines, one on each extreme side and two on the middle, divided by a deep, shining, blackish groove. Wings uniformly tinged with yellowish-fuscous, very deeply so in the costal and marginal cells. Legs yellowish, slightly tinged with ferruginous; the coxæ within, the four anterior femora at base beneath, the posterior femora except tips, and their tibiæ at tips above, black or blackish; tips of the tarsi ferruginous. Abdomen dull ferruginous, sericeous; basal segment slender at base and gradually dilated to the tip, with a slight prominence on each side about the middle; base of the second segment rather suddenly constricted; apical margins of all the segments with a broad yellowish fascia, dilated an each extreme side, more or less emarginate on each side anteriorly, and interrupted on the middle by a very narrow, faintly impressed, dull ferruginous line; apex subtruncate; beneath marked

as above, except that the basal segment is entirely yellowish, with its posterior face flat, triangular and carinated on each side. Length $6\frac{3}{4}$ lines; expanse of wings $11\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

This may be only a ♂ variety of *P. lineatus*, but it is much smaller, slenderer, and somewhat differently marked, with the base of the first segment of the abdomen more slender and the second segment rather suddenly narrowed at base.

Genus **POLYBIA**, St. Farg.

Polybia phthisica, Fabr.

Vespa phthisica, Fabr. Ent. Syst. ii, p. 281.
Polistes phthisica, Fabr. Syst. Piez. p. 278.
Polybia phthisica, Sauss. Guêp. Soc. p. 186, pl. 23, figs. 7—8.
Vespa cajennensis, Fabr. Ent. Syst. Suppl. p. 265. Coqueb. Ill. Icon. Ins. p. 62, pl. 15, fig. 3.
Polistes cajennensis, Fabr. Syst. Piez. p. 280.
Polistes hectica, Fabr. Syst. Piez. p. 278
Vespa ochrosticta, Weber. Obs. Ent. p. 104.
Vespa fasciata, Oliv. Ency. Méth. vi, p. 676.
Polistes fasciata, St. Farg. et Serv. Ency. Méth. x, p. 172.
Polistes fulvo-fasciata, Latr. Gen. Crust. et Ins. iv, p. 142.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

The specimens before me of this species are pale yellowish-ferruginous, with the yellow markings generally more or less indistinct.

Polybia cubensis, Sauss.

Polybia cubensis, Sauss. Mon. Guêp. Soc. p. 202, pl. 25, figs. 5—6. Guér. in LaSagra's Hist. Cuba, p. 774.

Collection.—Ent. Soc. Philad. Nine (♂ ♀) specimens.

The nest sent as belonging to this species, is shaped very similar to that figured by Saussure (Mon. Guêp. Soc. pl. 4, fig. 3*a*) as the nest of *Icaria variegata*.

Fam. ANDRENIDÆ.

Genus **COLLETES**, Latr.

Colletes submarginata, n. sp.

Black, clothed with whitish pubescence, disk of thorax with black pubescence; legs piceous; wings hyaline; abdomen polished, apical margins of the segments above fringed with white pubescence, broadly interrupted on the middle of the three basal segments.

Female.—Black; head closely and rather finely punctured, clothed with whitish pubescence, long and dense on the cheeks and beneath, shorter on the face and more dense and subappressed on the sides of the face, on the vertex the pubescence is more or less black; clypeus

depressed, deeply and rather closely punctured, somewhat shining; immediately above the clypeus, between the insertion of the antennæ, a semicircular prominence which has a few deep punctures; labrum and mandibles polished, the latter tinged with piceous and fringed with pale pubescence; antennæ black, more or less tinged with piceous; the flagellum, except the two basal joints, dull rufo-testaceous. Thorax closely and finely punctured, rather densely clothed with short hoary pubescence, that on the mesothorax and scutellum more or less black, that on each side of the metathorax long and dense; scutellum deeply punctured; posterior face of metathorax flat, channelled down the middle, with the sides feebly punctured, and the base and channel smooth and shining; just behind the postscutellum a narrow space longitudinally striated and extending the whole width of the metathorax; pleura closely punctured, rather sparsely pubescent, especially just beneath the wings; tubercles beneath the tegulæ clothed with black pubescence and fringed posteriorly with dense white pubescence; tegulæ piceous-black, smooth and polished. Wings hyaline, the extreme tip tinged with fuscous; nervures black. Legs piceous-black; the four anterior femora densely clothed with long hoary pubescence, their tarsi and the posterior tibiæ and tarsi with short, dense, yellowish-brown pubescence. Abdomen smooth and polished; base of the first segment clothed with hoary pubescence, the apical margins of the first five segments fringed with white pubescence, widely interrupted on the middle of the three basal segments and entire on the others; apical segments feebly punctured and thinly clothed with short pale pubescence; beneath black, tinged with pale piceous towards the tip. Length 5½ lines; expanse of wings 8½ lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **HALICTUS**, Latr.

Halictus Poeyi, St. Farg.

Halictus Poeyi, St. Farg. Hym. ii, p. 271.

Collection.—Ent. Soc. Philad. Ten (♂ ♀) specimens.

Genus **AUGOCHLORA**, Smith.

Augochlora Regina, Smith.

Augochlora Regina, Smith, Brit. Mus. Cat. i, p. 77.

Collection.—Ent. Soc. Philad. Eight (♂ ♀) specimens.

This lovely species varies in length from 4½ to 6 lines; some specimens are more tinged with bluish than others, and the legs vary from pale piceous to black.

Augochlora præclara, n. sp.

Brilliant metallic green; abdomen oblong-ovate, tinged with bluish; wings hyaline, apical third dusky; legs blue-green, clothed with pale pubescence.

Female.—Head bright golden-green, finely and very closely punctured, clothed with a short pale pubescence; the prominence beneath the base of antennæ indistinctly punctured; clypeus strongly tinged with blue, depressed, subquadrate, sparsely and rather deeply punctured, the anterior margin fringed with pale pubescence; mandibles purplish-blue at base, piceous at tips; antennæ dull black, basal joint purplish-blue. Thorax bright golden-green, very finely and closely punctured, sparsely pubescent; scutellum indistinctly punctured, clothed with rather long, pale pubescence, slightly mixed with black; metathorax slightly tinged with bluish, clothed, especially behind, with pale pubescence, the base with a transverse, semicircular space which is covered with fine radiating striæ, posterior face flat, subcordate, finely sculptured, golden-green; tegulæ blue-green, polished. Wings hyaline, the apical third tinged with fuscous; nervures and stigma fuscous. Legs green, more or less tinged with bluish; the tibiæ and tarsi rather densely clothed with short pale pubescence; apical joints of the tarsi dull testaceous. Abdomen oblong-ovate, much narrowed towards the base, smooth and polished, green, more or less tinged with bluish, especially on the apical margins of the segments which have a purplish hue in certain lights; the base, sides and apex of the abdomen thinly clothed with pale pubescence; venter flattened, blue-green, rather densely clothed with subappressed, pale pubescence. Length 4 lines; expanse of wings 7 lines.

Collection.—Ent. Soc. Philad. One specimen.

Augochlora elegans, n. sp.

Green; abdomen and legs bluish, the former subsericeous, with a splendid violet reflection; wings hyaline; abdomen oblong-ovate.

Male.—Head brilliant green, more or less tinged with bluish in certain lights, very finely and densely punctured, clothed with pale pubescence, which is long on the cheeks, and more or less black on the vertex and occiput; face subtriangular, depressed; the prominence beneath the base of the antennæ large, elongate, rather deeply and very closely punctured and margined on the sides and above with a deep violet hue; clypeus produced, quadrate, subconvex, more or less bluish in certain lights, covered with deep and close punctures, the apical margin truncate; mandibles piceous, blue-green at base; antennæ half again as long as the head, entirely black, the scape clothed with whitish pubescence. Thorax brilliant green, finely, closely and uniformly punctured,

sparsely clothed with fine whitish pubescence, longer, more dense and mixed with black on the scutellum and metathorax; mesothorax with three finely impressed, abbreviated, longitudinal lines, one on the disk and one on each side over the tegulæ; thorax beneath more or less tinged with deep blue; scutellum bright golden-green, rather sparsely punctured and somewhat depressed on the disk; postscutellum blue-green, roughly punctured; metathorax slightly tinged with bluish in certain lights, rounded on the sides, very finely and closely punctured, the posterior face depressed, but not abruptly, less distinctly punctured with a rather deep, longitudinal, impressed line, extreme base with a transverse, semicircular, depressed space which is covered with fine longitudinal striæ, slightly radiating posteriorly; tegulæ bronze-green, polished. Wings hyaline, faintly iridescent, the extreme apical margin faintly dusky; nervures brown-black. Legs brilliant blue-green, clothed with fine hoary pubescence; tarsi rufo-piceous. Abdomen oblong-ovate, strongly tinged with blue, and with a beautiful violaceous reflection in certain lights, polished, very delicately punctured, the apical margins depressed especially on the sides and impunctured, clothed with a very short, fine, pale pubescence, giving the segments a beautiful sericeous appearance when viewed in certain lights; the pubescence at the base, the extreme sides and apex of the abdomen longer and slightly mixed with black; venter flattened, blue-green and pubescent. Length $4\frac{1}{4}$ lines; expanse of wings 7 lines.

Collection.—Ent. Soc. Philad. and Dr. J. Gundlach. Two specimens.

Augochlora magnifica, n. sp.

Green; face, legs and abdomen more or less deeply tinged with blue; abdomen oblong-ovate, the segments broadly margined at tip with violet; wings hyaline.

Male.—Shaped and sculptured as the preceding species; brilliant green, clothed with pale pubescence; the face more or less deeply tinged with bluish, and above the antennæ it is of a deep, opaque, purplish-blue hue; antennæ dull black, somewhat piceous. Thorax as in the preceding species; tegulæ brownish. Wings hyaline, nervures pale-brownish. Legs as in the preceding species, except that they are more or less tinged with piceous and the femora have a violet reflection. Abdomen oblong-ovate, polished, very delicately punctured, brilliant blue-green, with the apical margins of the segments depressed, impunctured, and broadly violaceous; extreme apex tinged with dull testaceous. Length $4\frac{1}{4}$ lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Much like *A. elegans*, but is at once distinguished from that species by the abdominal segments being beautifully margined with violaceous.

Augochlora parva, Poey MSS.

Dark bronze-green; abdomen tinged with piceous; head tinged with dull-blue, the face densely pubescent; wings hyaline.

Female.—Head large, broader than the thorax, dark bronze-green, tinged with opaque deep blue on the vertex, very closely and finely punctured; sides of the face beneath the antennæ, the clypeus and the cheeks, densely clothed with short silvery-white pubescence; clypeus more deeply punctured, depressed and truncate at tip; antennæ entirely piceous-brown. Thorax dark bronze-green, somewhat shining, very closely and finely punctured, clothed with a thin pale pubescence, longer and more dense on the scutellum and metathorax; mesothorax with three indistinctly impressed longitudinal lines; scutellum polished, less closely punctured; metathorax bronze-green, the base with a transverse row of short, longitudinal, radiating striæ, the posterior face with a deep pit; tegulæ pale-brownish, polished. Wings hyaline, iridescent; nervures dull testaceous. Legs piceous, pubescent; tarsi yellowish. Abdomen ovate, subdepressed, clothed with short pale pubescence, rather dense at tip, dark bronze-green, tinged with piceous at base and with bluish towards the apex, the apical margins of the segments mostly dull testaceous, subdepressed and impunctured. Length $2\frac{1}{4}$ lines; expanse of wings 4 lines.

Male.—Resembles the female, but is less robust, the antennæ are rather longer than the head and thorax, the latter is more densely pubescent, the wings beautifully iridescent, the legs pale piceous with their tarsi yellow, and the abdomen more slender and elongate, entirely pale piceous, with the segments rather strongly contracted at base. Length 2 lines; expanse of wings $3\frac{1}{4}$ lines.

Collection.—Ent. Soc. Philad. Four ♀, one ♂, specimens.

Genus **AGAPOSTEMON**, Guér.

Agapostemon femoralis, Guér.

Andrena femoralis, Guér. Icon. Reg. Anim. iii, p. 447, pl. 73, fig. 1; LaSagra's Hist. Cuba, Ins. p. 775, pl. 19, fig. 7.

Agapostemon femoralis, Smith, Brit. Mus. Cat. Hym. ii, p. 88.

Collection.—Ent. Soc. Philad. Forty ♂ specimens.

I have two ♂ specimens before me which differ from the above only by having the head and thorax dull black, very faintly tinged with obscure bluish, instead of being brilliant blue-green. It is probably only a variety.

Agapostemon semiviridis, n. sp.

Metallic green; antennæ, legs and abdomen black, the second, third and fourth segments of the latter with a white fascia at base, broader on each side; wings hyaline, apical margins dusky.

Female.—Head bluish-green, finely and very closely punctured, clothed with pale pubescence, longer on the cheeks and slightly mixed with black on the vertex; cheeks finely aciculate; anterior margin of the clypeus piceous, truncate and fringed with long pale pubescence; mandibles piceous; antennæ piceous, the flagellum paler. Thorax bright golden-green, sometimes tinged with coppery, very closely and minutely punctured, or very finely granulate, clothed with short pale pubescence, slightly mixed with black above; scutellum brilliant golden-green, sparsely punctured; sutures between the mesothorax, scutellum, postscutellum and metathorax tinged with deep blue in certain lights; metathorax covered with close, fine striæ, those at the base longitudinal and radiating posteriorly, those on the sides transverse or somewhat oblique, posterior face with a large, suborbicular, depressed space enclosed by a sharp, well-defined carina, and covered with fine striæ which radiate from the tip of the metathorax; a densely pubescent semicircular space just behind the tubercles which are polished; tegulæ rufo-testaceous. Wings hyaline, slightly iridescent, the apical margins tinged with pale fuscous; nervures brownish. Legs pale piceous, densely clothed, especially the posterior pair, with pale ochraceous pubescence; anterior tibiæ and all the tarsi rufo-testaceous; anterior coxæ green. Abdomen ovate, opaque black, the extreme base, the lateral and apical margins clothed with short pale pubescence; basal margins of the second, third and fourth segments above with a band of dense, white, appressed pubescence, dilated on each side and more or less interrupted on the third and fourth segments; apical segment clothed with coarse black pubescence, with a longitudinal depressed space on the disk fringed with pale pubescence; venter piceous, clothed with pale brownish pubescence. Length 6 lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. Three specimens.

This may be the ♀ of *A. femoralis* Guér.

Agapostemon festivus, n. sp.

Bright green, abdomen tinged with blue; anterior half of clypeus, labrum, mandibles, base of antennæ, most of legs, and basal margin of first three or four segments of abdomen, yellow; wings hyaline.

Male.—Head green, golden on the face and tinged with obscure blue on the vertex, finely and closely punctured, clothed with pale pu-

bescence, long and more dense on the cheeks, and pale ochraceous on the face; anterior half of the clypeus, labrum and the mandibles, yellow, the latter piceous at tips; antennæ as long as the head and thorax, piceous-brown, dull fulvous beneath, basal joint beneath yellow. Thorax brilliant green, clothed with rather thin pale pubescence; mesothorax very finely and closely punctured, and in certain lights the disk has a dull blackish shade, and a finely impressed longitudinal central line; pectus and pleura rugose, golden-green; tubercles smooth and polished with a semicircular pubescent space just behind them; space on each side between the pleura and metathorax transversely rugose; metathorax irregularly rugose, more finely so on each side, the base covered with well-defined somewhat irregular striæ radiating posteriorly, the posterior face with a rather large, orbicular, depressed, bright golden-green space, enclosed by a sharply-defined carina, the surface somewhat rugose with a central line; tegulæ pale brownish or rufo-testaceous. Wings hyaline, somewhat iridescent, the apical margins slightly dusky; nervures fuscous. Legs yellow, pubescent; coxæ green; trochanters except a line beneath, tips of the femora, and the tibiæ exteriorly, dark fuscous; tarsi yellow, more or less tinged with dusky; posterior femora elongate, robust but not globose. Abdomen ovate, delicately punctured, bright green tinged with blue, the basal segment more or less dull piceous; apical margins of the segments subdepressed; across the middle of the first segment an irregular, transverse, yellow band, and at the extreme base of the second, third and sometimes the fourth segments a regular, more or less broad, yellow band, below these bands on the second and third segments there is an opaque blackish, transverse shade; venter dull fulvo-testaceous. Length $3\frac{1}{2}$—4 lines; expanse of wings 5—6 lines.

Collection.—Ent. Soc. Philad. Three specimens.

Agapostemon Poeyi, Lucas.

Andrena Poeyi, Lucas. Guér. LaSagra's Hist. Cuba, Ins. p. 775.

Female.—Brilliant green, clothed with pale pubescence; head short, rather broad, very densely and deeply punctured; clypeus short, transverse, the anterior margin black and fringed with long pale pubescence; labrum and mandibles piceous, the latter green at base; cheeks coarsely aciculate; antennæ short, piceous. Thorax very densely punctured, somewhat tinged with golden; mesothorax very finely and closely punctured, somewhat rugose; scutellum sparsely punctured on the disk, shining, golden-green; metathorax densely striated, the striæ at the base radiating posteriorly, those on the sides oblique, the posterior face

with a large, subquadrate, depressed, transversely striated space enclosed by a sharply-defined carina; tegulæ fuscous. Wings hyaline, very faintly tinged with pale fuscous, especially on the apical margins; nervures fuscous. Legs piceous, clothed with pale ochraceous pubescence, longer and more dense on the posterior pair. Abdomen ovate, very minutely punctured, shining, bright green, more or less tinged with blue, the base, sides and apex clothed with pale pubescence; when viewed in certain lights, the disk of some of the segments have a transverse band of a deep violet hue; apical segment densely clothed above with fuscous pubescence; venter green, pubescent. Length $4\frac{3}{4}$ lines; expanse of wings $7\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Not being quite sure that this species is correctly referred, I give a more detailed description of it.

Genus **NOMIA**, Latr.

Nomia Robinsoni, n. sp.

Black; head and thorax clothed with ochraceous pubescence; antennæ beneath and the legs rufo-testaceous; wings subhyaline; abdomen with three or four beautiful green or golden-green bands.

Female.—Black; head rather densely clothed with short pale pubescence; face broad and flat, deeply and rather closely punctured; antennæ piceous-black, the flagellum beneath brownish. Thorax closely and rather finely punctured; mesothorax clothed with short fuscous pubescence, anterior margin with a line of short, dense, pale ochraceous pubescence extending on each side to the base of the wings and covering the tubercles; pleura thinly clothed with pale pubescence, the postscutellum with short, very dense, pale ochraceous pubescence; metathorax finely punctured, the posterior face concave and the sides with a patch of rather long pale pubescence; tegulæ piceous. Wings hyaline, the apical margins broadly pale fuscous; nervures pale ferruginous. Legs piceous, densely clothed with short pale pubescence; posterior tibiæ and tarsi pale testaceous, densely pubescent. Abdomen ovate, black, somewhat shining, very delicately punctured; the base, sides, and lateral apical margins of the first segment fringed with pale pubescence; apical margins of all the segments depressed and impunctured, those of the second, third and fourth segments pale emerald-green, with a beautiful golden-yellow reflection; apex rather densely clothed with pale pubescence; venter piceous, densely pubescent. Length $5\frac{3}{4}$ lines; expanse of wings 9 lines.

Male.—Black; face densely clothed with short, ochraceous pubescence; antennæ longer than the head and thorax, gradually attenuated

to the tips, piceous, the flagellum fulvous beneath. Thorax as in the ♀, except that the pubescence is more dense and entirely ochraceous and somewhat sericeous; scutellum slightly depressed on the middle; metathorax shining and sparsely punctured. Wings as in the ♀. Legs yellowish-testaceous, clothed with short pale ochraceous pubescence; the coxæ, trochanters, femora, especially above, and a small spot on the posterior tibiæ exteriorly, fuscous; posterior tibiæ short, subtriangular, much dilated and compressed at tip within, with a prominent, obtuse, compressed tubercle on the inner edge; basal joint of the posterior tarsi longer than their tibiæ and slightly dilated at base. Abdomen oblong-ovate, the apical margins of the second, third, fourth and fifth segments above emerald-green, with a beautiful bright golden-yellow reflection, the band on the fifth segment does not extend to the lateral margins; in one specimen the apical bands have a beautiful orange-ferruginous or igneous reflection. Length $5\frac{1}{2}$—6 lines; expanse of wings 9—10 lines.

Collection.—Ent. Soc. Philad. One ♀, three ♂ specimens.

It gives me pleasure to dedicate this elegant species to my friend Coleman T. Robinson, Esq., of New York City.

Fam. APIDÆ.

Genus **PANURGUS**, Panz.

Panurgus? parvus, n. sp.

Dark green, shining; abdomen piceous, segments contracted at base; face densely clothed with silvery-white pubescence; wings hyaline, iridescent.

Female.—Dark green, shining; head very closely and minutely punctured; the face, clypeus and cheeks clothed with a dense, short, silvery-white pubescence; antennæ as long as the head and thorax, stout, piceous, the flagellum beneath rufo-testaceous. Thorax thinly clothed with whitish pubescence, finely punctured, rather sparse on the mesothorax, the disk of which is slightly depressed; at the basal middle of the metathorax a semicircular depressed space, covered with fine radiating striæ; tegulæ rufo-testaceous. Wings hyaline, iridescent; nervures fuscous. Legs piceous, thinly clothed with pale pubescence; tarsi paler. Abdomen oblong-ovate, subdepressed, piceous, smooth and polished; second and third segments contracted at base; apical margins of the segments subdepressed and paler; the apex and venter clothed with pale pubescence. Length 2 lines; expanse of wings $3\frac{1}{2}$ lines.

Male.—Resembles the ♀, but the antennæ are longer and the abdomen narrower and not depressed.

Collection.—Ent. Soc. Philad. ♂; Dr. J. Gundlach ♀. Two specimens.

This species does not answer exactly to the characters of the genus in which I have placed it, but I am unable, at present, to refer it to another which seems more allied. It bears a very close resemblance to *Augochlora parva* described above (p. 171), but is separated at once by the anterior wings having only two submarginal cells. The neuration of the wings is very similar to that of *Panurgus*.

Genus **MEGACHILE**, Latr.

Megachile atriceps, n. sp.

Black; thorax and base of abdomen clothed with ochraceous pubescence, rest of abdomen with bright ferruginous pubescence; wings bright yellow, the apical margin fuliginous.

Female.—Large, elongate; head large, subglobose, not wider than the thorax, black, clothed with short, dense, blackish-fuscous pubescence, that on the cheeks longer and whitish, very closely and minutely punctured; clypeus very transverse, rugose, the apical margin truncate; mandibles large, dull black, subobsoletely striated and interspersed with scattered, ill-defined punctures, and clothed with a very short, thin, pale ochraceous pubescence; antennæ as long as the width of the head, black, the flagellum beneath brownish. Thorax black, very closely and minutely punctured, rather densely clothed with ochraceous pubescence, paler beneath, and much longer and more dense on the metathorax; tegulæ rufo-testaceous. Wings bright gamboge-yellow, the apical margins broadly fuliginous; nervures fulvo-ferruginous. Legs black, clothed with pale pubescence, the tarsi within with ferruginous pubescence. Abdomen oblong, not broader than the thorax, the sides subparallel, black, densely clothed with short, bright ferruginous pubescence, longer and more dense on the apical margins of the segments, and deeper in color towards the apex; sides of the basal segment clothed with rather long, dense, ochraceous pubescence; ventral scopa dense and bright ferruginous, ochraceous at base. Length 9 lines; expanse of wings 14 lines.

Collection.—Ent. Soc. Philad. Two specimens.

This fine, large species is readily recognized by the elongate, parallel form, the black head, deep yellow wings, and bright ferruginous pubescence of the abdomen. Prof. Poey writes me that "it makes its nest in dry wood, which it pierces like the Xylocopæ."

Megachile Poeyi, Guér.

Megachile Poeyi, Guér. Icon. Règ. Anim. iii, p. 450; LaSagra's Hist. Cuba, Ins. p. 778, pl. 19, fig. 10.

Collection.—Ent. Soc. Philad. Three ♀, three ♂ specimens.

Prof. Poey informs me that he has "found the nest of this species, formed of cuttings of leaves, under stones. It has for its enemy the *Leucospis Poeyi* Guér."

Megachile singularis, n. sp.

Black; head and thorax densely clothed with ochraceous pubescence; wings fusco-hyaline; tibiæ and tarsi yellowish-fuscous, the anterior tarsi pale and broadly dilated; abdomen narrower than the thorax, elongate-subquadrate, the apex bidentate.

Male.—Black, very closely and finely punctured; head large, transverse, rather wider than the thorax, the face densely clothed with long ochraceous pubescence, pale on the clypeus, the pubescence on the vertex, occiput and cheeks rather short and tinged with fuscous; eyes large and elongate; mandibles flattened, subtriangular, being subacute at tip and broadly dilated beneath about the middle; on the lower margin of the cheeks the pubescence is long and pale ochraceous; antennæ about as long as the width of the head, black, filiform, the apical joint dilated and compressed. Thorax above densely clothed with dull ochraceous pubescence, somewhat mixed with black on the disk; on the pleura and the metathorax behind the pubescence is sparse especially on the latter; tegulæ piceous, pubescent in front. Wings fusco-hyaline, the apex, especially about the marginal cell, fuliginous; posterior pair clearer; nervures dull ferruginous. Legs pubescent, shining; coxæ, trochanters, anterior femora above and the four posterior femora entirely, piceous-black; the anterior femora beneath, and all the tibiæ, dull yellowish-fuscous; the four posterior tarsi paler, and clothed with golden-yellow pubescence; anterior tarsi yellowish-white, the three basal joints broadly and obliquely dilated, and having behind a pale, thick fringe, much longer and yellowish on the basal joint; apical joint fuscous; intermediate tarsi very long and slender, being three times as long as their tibiæ, gradually attenuated to the tip, the terminal joint nearly as long as the first joint, with the claws very long, slender, deeply cleft, and very acute; posterior tarsi not much longer than their tibiæ, stout, the basal joint dilated, the other joints short and subacute, the claws stout and cleft. Abdomen elongate-subquadrate, about as long as the head and thorax and not so wide as the latter, subdepressed, sides parallel, apical and basal margins of the segments depressed, the anterior face of the first segment deeply concave; dorsal segments

thinly clothed with an erect dull ochraceous pubescence, long on the basal segment and very short on the remaining segments; basal margins of the third and fourth segments and almost the whole of the two apical segments clothed with a short, dense, appressed, ochraceous pubescence; the last segment incurved, with a rounded, depressed, naked space on the disk, below which on the posterior margin are two short, distant, subacute teeth; venter flat, piceous, shining. Length 6 lines; expanse of wings $10\frac{1}{2}$ lines

Collection.—Dr. J. Gundlach. One specimen.

Megachile curta, n. sp.

Black; head and thorax densely clothed with long pale pubescence, which is black on the vertex and scutellum; antennæ long; legs simple; wings hyaline; abdomen short, incurved at tip, the basal margins of the segments with a narrow fascia of whitish pubescence as well as an uneven line between mesothorax and scutellum.

Male.—Short and robust, black, very closely and minutely punctured; head large, transverse, rather broader than the thorax, the face densely clothed with long pale ochraceous pubescence, on the vertex and occiput it is black, and on the cheeks and beneath it is long and white; eyes large; mandibles moderate, black, acute at tip and fringed beneath with pale pubescence; antennæ piceous, pale beneath, filiform, slender, as long as the head and thorax together, terminal joint pointed not dilated nor compressed. Thorax short, robust, clothed above with black pubescence, slightly mixed with whitish, on the pleura and beneath it is rather longer and entirely whitish; narrow anterior margin of the mesothorax, covering the tubercles, two short, oblique, longitudinal lines on the disk of the mesothorax in front, and its posterior margin broader above the tegulæ and in front of the scutellum, clothed with short, appressed, pale ochraceous pubescence; scutellum clothed with long black pubescence, and the metathorax, especially on the sides, with long pale pubescence; tegulæ piceous. Wings hyaline, the apical margins pale fuscous and slightly iridescent; nervures fuscous. Legs simple, piceous-black, and clothed, especially the femora beneath, with rather long whitish pubescence; anterior femora beneath at tip tinged with ferruginous. Abdomen very short, about as broad as long, incurved at tip, shining, piceous-black, the apical and basal margins of the segments depressed; basal segment clothed with long pale pubescence; apical lateral margins of the segments fringed with whitish pubescence, and the basal margins of the second and third, and almost the whole dorsal surface of the two following segments, clothed with a very short, dense, appressed,

pale ochraceous pubescence; tip of the terminal segment very slightly emarginate; ventral segments with an apical fringe of whitish pubescence. Length 4 lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

Megachile maura, n. sp.

Entirely black; wings fusco-hyaline; legs piceous.

Female.—Deep shining black, clothed with short, dense black pubescence; the clypeus, a flattened space above it, vertex, disk of mesothorax, scutellum and the abdomen above except the basal segment, naked, smooth and polished; clypeus depressed, rather closely punctured; mandibles robust, broad at tip, sparsely punctured, shining, and deeply grooved along the outer margin; antennæ piceous-black, the flagellum pale beneath. Thorax finely and sparsely punctured; anterior middle of the mesothorax with a longitudinal impressed line abbreviated on the disk; scutellum with a few subobsolete, scattered punctures, the tip rounded; tegulæ piceous. Wings fusco-hyaline, darker on the apical margins; posterior pair clearer; nervures dull ferruginous. Legs piceous, clothed with blackish pubescence, the anterior tibiæ rugose exteriorly. Abdomen short, broad at base, gradually narrowed to the tip which is obtusely pointed and somewhat recurved; the basal segment above thinly clothed with short black pubescence, larger and thicker on the sides; remaining segments above naked, smooth, polished and indistinctly punctured, the apical margins depressed on each side and sometimes pale piceous; apical segment opaque dark fuscous, obtuse-truncate at tip; ventral scope black, long and dense. Length 6 lines; expanse of wings 11 lines.

Collection—Ent. Soc. Philad. Two specimens.

Closely allied to *M. morio* Smith, and *M. xylocopoides* Smith, but distinct from both species by the punctation being much less dense.

Genus **CERATINA**, Latr.

Ceratina cyaniventris, n. sp.

Bright metallic-green, polished; abdomen deep blue; wings subhyaline, iridescent.

Female.—Head bright metallic green, slightly tinged with bluish in certain lights, deeply and rather closely punctured, slightly pubescent; clypeus sparsely punctured with a conical whitish mark on the disk, the anterior margin truncate and blackish; antennæ piceous. Thorax bright metallic green, slightly tinged with bluish in certain lights, closely and distinctly punctured, sparse on the disk of the mesothorax, which is tinged with golden-green and has four, indistinctly impressed,

longitudinal lines, the middle one abbreviated behind, the extreme lateral one abbreviated before; tegulæ piceous. Wings subhyaline, faintly tinged with fuscous, iridescent; nervures blackish. Legs green, pubescent, the tibiæ and tarsi piceous. Abdomen subglobose, broader behind, deep blue, tinged with green and purple when viewed in certain lights, closely and rather deeply punctured, the punctures becoming coarser and somewhat rugose towards the tip, which is slightly incurved and clothed with a thin pale pubescence; venter pubescent. Length 3 lines; expanse of wings 5 lines.

Collection.—Ent. Soc. Philad. One specimen.

Genus **NOMADA**, Fabr.

Nomada cubensis, n. sp.

Piceous-black; face, orbits, cheeks, mandibles, base of antennæ, collar, tubercles, tegulæ, large mark on pleura, scutellum, two spots on metathorax, most of legs, and three bands and four spots on abdomen, yellow: wings subhyaline, fuscous at tips.

Female.—Piceous, closely punctured, slightly pubescent; face, orbits, and mandibles except tips, yellow; clypeus and labrum, dull ferruginous; antennæ fulvous above, yellowish-fulvous beneath. Thorax opaque, coarsely punctured, somewhat rugose; collar, tubercles, tegulæ, and a large subquadrate mark on pleura, yellow; the pleura beneath tinged with dull rufous, with two round, obscure ferruginous spots before the middle coxæ; scutellum entirely yellow, subbilobate, somewhat prominent, with a small yellow spot on each extreme basal corner; postscutellum with a transvere yellow line; metathorax with a large, subovate, yellow mark on each side behind. Wings fusco-hyaline, darker at the extreme apex; nervures dull ferruginous, stigma yellowish. Legs yellow; the coxæ, except a spot beneath, the trochanters and the femora, more or less tinged with fuscous; apical joints of tarsi dusky. Abdomen short, ovate, polished, pale piceous, very minutely and closely punctured; first and second dorsal segments with a rather broad, median, yellow band, attenuated on the middle anteriorly; on each side of the third and fourth segments, a yellow spot; the fifth segment almost entirely yellow; apical segment truncate at tip and densely pubescent; beneath pale piceous, pubescent, the third segment with a broad, continuous, yellow band. Length $3\frac{3}{4}$ lines; expanse of wings $6\frac{1}{4}$ lines.

Male.—Resembles the female, but is piceous-black, with the yellow markings brighter; the clypeus and labrum are yellow; the antennæ are obscure fulvous, paler beneath, with the basal joint beneath tinged

with yellowish; the two round spots before the middle coxæ are yellow; the anterior wings have a fuscous cloud at their apex; the fifth segment of the abdomen has a continuous yellow band, the remaining segments immaculate and pubescent, and the apical segment obtusely pointed and depressed. Same size as the female.

Collection.—Ent. Soc. Philad. ♂; Dr. J. Gundlach ♀. Five specimens.

Nomada flaviceps, n. sp.

Piceous-black; most of head, collar, tubercles, tegulæ, large mark on pleura, scutellums, two spots on metathorax, most of legs, and three bands on abdomen above, bright yellow; wings subhyaline, apex fuscous.

Male.—Head bright yellow, polished, with a few very indistinct scattered punctures; a large quadrate spot, commencing at the insertion of the antennæ, extending back and covering the ocelli, the labrum, tips of mandibles, throat, and the extreme posterior margin of the cheeks, piceous-black; a minute spot before each posterior ocellus and two approximate spots before the anterior ocellus, yellow; antennæ nearly as long as the head and thorax, rufo-piceous, the tips blackish. Thorax piceous-black, polished, the mesothorax finely and sparsely punctured, pleura apparently impunctured; collar, tubercles, tegulæ, and a large mark on pleura deeply emarginate beneath, bright yellow; scutellum subbilobate, entirely bright yellow, as well as a minute spot on each extreme basal corner and a transverse line on postscutellum; metathorax very finely punctured, slightly pubescent, with a subtriangular yellow spot on each side behind. Wings pale fusco-hyaline, faintly iridescent, a fuscous cloud at the extreme tip; nervures pale ferruginous, stigma and the costal nerve of the marginal cell yellowish-fulvous. Legs yellowish; coxæ piceous, with a yellow spot beneath, very large on the posterior pair; the four anterior trochanters and femora dull ferruginous; posterior trochanters and femora except tips, fuscous; tips of tarsi dusky. Abdomen piceous-black, smooth and polished, slightly pubescent; a broad, continuous, bright yellow band on the middle of the two basal segments and a narrow one on the fourth, almost hidden by the third segment; apical segment depressed and obtusely pointed; beneath, the third segment has a continuous, bright yellow band, gradually attenuated on the middle posteriorly. Length 4 lines; expanse of wings 7 lines.

Collection.—Dr. J. Gundlach. One specimen.

This elegant species is allied to *N. cubensis*, but is easily distinguished by the sparse punctation and the almost entirely yellow head; the markings of the abdomen are also different.

Nomada tibialis, n. sp.

Piceous, with a purplish reflection, especially on the abdomen; sides of the face, spot on the middle, most of clypeus, base of mandibles, collar, tubercles, two spots on pleura, spot on coxæ, basal joint of posterior tarsi exteriorly, and apical margins of abdominal segments, whitish; legs ferruginous; wings subhyaline, fuscous at tips.

Female.—Head broad, piceous-black, shining, indistinctly punctured, clothed with a short silvery-white pubescence, dense on the cheeks; sides of the face broader beneath, a minute spot beneath the base of the antennæ, a transverse mark on the clypeus much produced in the middle posteriorly, and a spot on base of mandibles, white; antennæ nearly as long as the head and thorax, piceous. Thorax piceous-black, with a slight purplish reflection in certain lights, polished, sparsely and finely punctured; mesothorax and pleura mostly tinged with obscure rufous, the latter clothed with a thin silvery-white pubescence; collar, tubercles, two spots on each side of pleura, the anterior one the smallest, and two spots at base of the scutellum, white; scutellum subbilobate, slightly pubescent; metathorax smooth and polished, immaculate, the sides above densely clothed with appressed silvery pubescence; tegulæ piceous. Wings subhyaline, faintly iridescent, the apex with a fuscous cloud; nervures fuscous; third submarginal cell nearly as long as the first, and very much constricted towards the marginal. Legs ferruginous, thinly clothed with whitish pubescence; a spot on the four posterior coxæ beneath, and a line on the basal joint of the posterior tarsi exteriorly, white. Abdomen ovate, piceous-black with a strong purplish reflection, shining, the second segment, except its apical margin, very densely and minutely punctured, the rest apparently impunctured; near the apical margin of each of the four basal segments, a narrow whitish fascia, broader on the first segment, the others slightly undulate and somewhat interrupted on the third segment, the posterior margin of each fascia is fringed with pale pubescence; apical segment truncate, densely clothed with fuscous pubescence, with a transverse space of dense pale pubescence on its disk; beneath fuscous, the sides of the segments rather densely clothed with pale pubescence, a spot on each side of the second segment, and a continuous band on the third, attenuated in the middle posteriorly, whitish. Length 4—4½ lines; expanse of wings 7—8½ lines.

Collection.—Ent. Soc. Philad. Four specimens.

Genus **PASITES**, Latr.

Pasites pilipes, n. sp.

Chestnut-brown, polished; sides of face, clypeus, collar, tubercles, two spots on pleura, postscutellum, and narrow bands on abdomen, white; hind legs of ♀ densely pilose; wings hyaline, costo-apical margin fuscous.

Female.—Chestnut-brown, polished, clothed with pale pubescence; face flat, highly polished, impunctured; sides of the face obscurely, and the clypeus, whitish; cheeks and labrum densely pubescent; antennæ piceous, paler at base. Thorax indistinctly punctured, pleura and metathorax rather densely clothed with silvery-white pubescence; a line on the collar, tubercles, two spots on pleura, two small spots on scutellum, and the postscutellum, white; scutellum slightly subbilobate; tegulæ brown, the outer margins pale. Wings hyaline, faintly tinged with fuscous, slightly iridescent, the costo-apical margin broadly fuscous. Legs chestnut-brown, clothed with pale pubescence, which is long and dense on the posterior tibiæ and tarsi; posterior coxæ dilated and flattened, with a whitish spot at tip. Abdomen broadly ovate, convex, polished, rather densely clothed with short pale pubescence on the sides and apex; on the middle of the first, second, fourth and fifth segments above, a narrow, rather uneven, whitish fascia, that on the fourth segment interrupted on the middle; on each extreme side of the third segment a short, narrow, whitish line; apical segment truncate, densely clothed with fuscous pubescence; beneath chestnut-brown, immaculate. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Male.—Resembles the female, except that the abdomen is longer, not so broad, and pointed at tip as in the males of *Nomada;* the posterior legs are not densely pilose as in the ♀. Length 3 lines; expanse of wings $5\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

This species has much the general appearance of a *Nomada*, and in in the ♂ specimen, the only difference I can see is, that the anterior wings have only two submarginal cells, instead of three; but in the ♀, the form is more robust, and the hind legs are densely pilose, which is never the case in the females of *Nomada*.

Genus **EPEOLUS**, Latr.

Epeolus Wilsoni, n. sp.

Black; face, cheeks, collar, posterior margin of mesothorax, two lines on its disk anteriorly, angular mark on pleura, most of metathorax, large indented mark on each side of first abdominal segment and bands on the other segments interrupted on the disk, yellowish; wings fusco-hyaline; tibiæ, tarsi and apex of abdomen dull fulvous.

Male.—Velvety-black; frontal orbits, clypeus, labrum and mandibles,

dull ferruginous; face and cheeks densely clothed with short, appressed, yellowish pubescence, on the vertex and occiput it is thin and erect; antennæ piceous, the three basal joints dull rufous. Thorax finely and closely punctured; a line on the collar extending on each side on the pleura, covering the tubercles, then running down for a short distance and then curving across to near the base of the middle coxæ, two short lines on the anterior middle of the mesothorax, and its posterior margin extending on each side over the tegulæ, clothed with short yellowish pubescence; in front of the tegulæ there is a patch of short yellowish-fuscous pubescence, continued from the yellow line behind; scutellum black, its posterior margin obtusely emarginate, and the lateral teeth well developed and subacute, the anterior and posterior margin clothed with short yellowish pubescence, as well as the whole of the postscutellum, which has a tuft of long dense yellowish pubescence on each extreme side; metathorax with a large oblique mark of dense yellowish pubescence on each side, deeply emarginate on the outside and behind; thorax beneath densely clothed with an appressed silvery-ochraceous pubescence, which also more or less covers the coxæ and femora beneath; tegulæ dull ferruginous. Wings uniform fusco-hyaline, tinged with yellowish, the apical margins much darker; nervures fusco-ferruginous. Legs piceous, shining; the tibiæ and tarsi dull fulvous, clothed with short golden-yellow pubescence. Abdomen oblong-ovate, deep velvety-black; on each side of the basal segment a large bright yellow mark, deeply indented on the middle within, and dilated on the lateral apical margin; remaining segments with an apical yellow fascia interrupted on the middle, the fasciæ on the fifth and sixth segments are nearly obsolete; two last segments dull ferruginous; terminal segment pubescent, obtusely pointed and depressed at tip, with two diverging carinæ on the disk; beneath piceous, stained with obscure rufous, shining; apical margins of the three basal segments more or less clothed with very fine silvery-ochraceous pubescence, the remaining segments dull ferruginous, their apical margins densely fringed with deep golden-yellow pubescence. Length 7 lines; expanse of wings 13 lines.

Collection.—Ent. Soc. Philad. One specimen.

I dedicate this superb species to Dr. Thomas B. Wilson, to whom I am greatly indebted for the invaluable assistance he has rendered me in the study of Entomology.

Epeolus vicinus, n. sp.

Velvety-black; face, collar, most of pleura, two lines on anterior middle of mesothorax, its lateral and posterior margins, posterior margin of scutellum, postscutellum, lateral marks on metathorax and bands on abdomen interrupted in the middle, yellow; mouth, base of antennæ, tegulæ and legs, ferruginous; wings subhyaline.

♂ ♀.—Very similar to the preceding species, but is much smaller and more robust in proportion to the size, and differs in color and markings as follows:—The head is entirely black, except the labrum and mandibles, which are ferruginous; the two short lines on the anterior middle of the mesothorax and its posterior margin are much broader; the mark on the pleura is much the same in the ♀ and is confluent beneath with the silvery-ochraceous pubescence which covers the under surface, thereby leaving a large rounded black spot on each side of the pleura; in the ♂ this black spot is indistinct, being almost entirely covered by the silvery-ochraceous pubescence; the lateral marks on the metathorax are shaped the same, but not so distinctly defined; the wings are much clearer; the legs, including the coxæ, are entirely ferruginous; the first segment of the abdomen has its basal, apical and lateral margins rather broadly yellowish, the two former are interrupted on the middle, especially the apical margin; the fascia on the second segment is much dilated on each extreme side, nearly reaching the base of the segment; the fasciæ on the remaining segments are very slightly or not at all interrupted on the middle; in the ♀ the fifth segment is depressed, subrugose and fuscous on the disk, truncate at tip, and has a subtriangular yellowish mark on each side. Length 5½ lines; expanse of wings 9 lines.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

Epeolus pulchellus, n. sp.

Black: face, collar, spot on anterior middle of mesothorax, a spot on each side before the scutellum, most of pleura, postscutellum, sides of metathorax and broad marks on each side of abdomen above, bright yellow; wings subhyaline, fuscous towards the tips; antennæ, mouth, tegulæ, legs, and apex of venter, ferruginous.

Male.—Robust, deep velvety-black; the face about the insertion of the antennæ, densely clothed with short, appressed, golden-yellow pubescence; labrum and mandibles obscure ferruginous. Thorax coarsely rugose; collar, a rounded spot on the anterior middle of the mesothorax, faintly divided by the finely impressed central line, a rather large transverse mark on each side in front of the scutellum, lateral posterior margin of the scutellum and the postscutellum, deep yellow; pleura marked as in the ♀ of *E. vicinus;* scutellum rugose, its posterior mar-

gin very slightly emarginate and the lateral teeth short and obtuse; on each extreme side of the postscutellum a tuft of yellowish pubescence; metathorax with a deep yellowish mark on each side deeply emarginate on the outside; tegulæ dull ferruginous. Wings fusco-hyaline, fuscous at tips, subhyaline at base, with a brassy-gloss especially towards the apex; nervures fusco-ferruginous. Legs, including the coxæ, entirely pale ferruginous. Abdomen ovate, robust, deep black; on each side of the first segment a large, somewhat irregular, semicircular, bright yellow mark, rounded before and nearly meeting on the posterior middle; on each side of the two following segments a broad, transverse yellow band, largest on the second segment, with the anterior margin slightly concave; on the fourth segment a small cuneiform yellow mark pointed outwardly; on the fifth segment three small, approximate, yellowish spots; remaining segments obscure fuscous, pubescent, immaculate, the apical segment obtusely pointed and depressed; beneath piceous, clothed with pale sericeous pubescence, the four apical segments yellowish-ferruginous. Length $4\frac{1}{4}$ lines; expanse of wings 8 lines.

Collection.—Dr. J. Gundlach. One specimen.

Genus **CŒLIOXYS**, Latr.

Cœlioxys Uhlerii, n. sp.

Cœlioxys rufipes, Cresson, Proc. Ent. Soc. Philad. ii, p. 407 ♀.

Collection.—Ent. Soc. Philad. One specimen. Mr. P. R. Uhler.

This fine species, which I mistook for *C. rufipes* Guér., differs from that species by the much larger size (nearly three lines longer), the more distinct markings, and the different shape of the anal plates of the abdomen, those of *rufipes* answering to the description given by Guérin of his ♀ specimen from Mexico. (See Proc. Ent. Soc. Philad. ii, p. 408.) The basal segment of the abdomen of *rufipes* is always more or less rufous, while in *Uhlerii* it is black.

Cœlioxys rufipes, Guér.

Cœlioxys rufipes, Guér. Icon. Reg. Anim. iii, p. 452, pl. 73, fig. 9; LaSagra's Hist. Cuba, Ins. p. 778.

Collection.—Ent. Soc. Philad. Two ♀, one ♂, specimens.

Prof. Poey informs me that "the Cœlioxys retire for the night, many in company, upon the *Escoba amarga* (Parthenium hysterophorus, L.)

M. Guérin describes and figures (LaSagra's Hist. Cuba, Ins. p. 779, pl. 19, fig. 11,) *Cœlioxys abdominalis* as being found in the vicinity of Havana, as well as on the Island of St. Thomas, but Prof. Poey informs me that neither Dr. Gundlach or himself, after forty years of research in the Island of Cuba have ever found it.

Cœlioxys producta, n. sp.

Black, polished, varied with white pubescence; wings fuliginous, subviolaceous, hyaline at base; legs dull rufous.

Female.—Deep black, polished; head rather closely and deeply punctured, the punctures very sparse on the vertex and between the antennæ, thinly clothed with short pale pubescence, that on the cheeks dense and silvery; face depressed on each side; occiput fringed with whitish pubescence; antennæ piceous-black. Thorax deeply and rather closely punctured, the mesothorax sparsely punctured especially on the disk; lateral anterior margin of the mesothorax, the anterior and posterior margins of the pleura, a spot on the tegulæ, and two spots in front of the scutellum, of dense white pubescence; scutellum flattened, the disk impunctured, the posterior margin sharp, the middle produced, obtusely pointed and slightly recurved, the lateral teeth long, slightly diverging, with the point obtuse and slightly bent downward and inward; metathorax clothed, especially on the sides, with long whitish pubescence; tegulæ black, smooth and polished. Wings with their basal half hyaline, the remainder fuliginous, especially the costal and apical margins, and with a slight violaceous reflection; nervures black. Legs, excepting the coxæ, dark rufous, punctured, clothed with whitish pubescence, which is dense on the femora and tibiæ beneath. Abdomen elongate, conical, polished, deeply and rather closely punctured on the sides, especially the basal segment, very sparse and scattered on the disk; sides of the second and three following segments with the anterior half much depressed, leaving the posterior half elevated and sparsely punctured; apical margins of the first five segments fringed with silvery-white pubescence, very narrow on the middle and gradually broader on the sides; apical segment rather long, sublanceolate, finely punctured, polished, the apical third depressed, coarsely sculptured, rather suddenly narrowed, with the apex rounded and obtuse; venter deeply and sparsely punctured, the apex more closely punctured, the inferior plate slightly longer than the superior, sublanceolate, rather suddenly narrowed towards the tip which is emarginate on each side, making the extreme tip subacutely pointed with a small subacute angle on each side of it. Length 6 lines; expanse of wings 10 lines.

Collection.—Ent. Soc. Philad. One specimen.

Larger than *C. rufipes*, from which it is at once separated by the more sparse punctation, the nearly smooth mesothorax, the different shape of the anal plates of the abdomen and the different coloring of the wings.

Genus **MELISSA**, Smith.

Melissa rufipes, Perty.

Crocisa rufipes, Perty, Del. An. Art. p. 149, pl. 28, fig. 10.
Mesocheira azurea, St. Farg. et Serv. Encycl. Méth. x, p. 106.
Mesoplia azurea, St. Farg. Hym. ii, p. 280.
Melissa rufipes, Smith, Brit. Mus. Cat. ii, p. 280.

Collection.—Ent. Soc. Philad. Two (♂ ♀) specimens.

Prof. Poey informs me that this species "retires to a bush to sleep; it seizes a branch with its mandibles and places itself in a horizontal position, the back turned towards the ground."

Genus **MELISSODES**, Latr.

Melissodes Lanierii, Guér.

Macrocera Lanierii Guer. Icon. Règ. Anim. iii, p. 455, pl. 74, fig. 7; LaSagra's Hist. Cuba, Ins. p 780.

Collection.—Ent. Soc. Philad. ♂; Dr. J. Gundlach, ♀. One ♀, five ♂ specimens.

Melissodes maura, n. sp.

Entirely deep black; abdomen shining, nearly naked; wings tinged with fuscous.

Female.—Robust, deep black; head, thorax and base of abdomen clothed with rather short, dense, black pubescence; very finely and closely punctured; clypeus covered with dense, deep punctures, the anterior margin truncate or very slightly concave; antennæ black, the flagellum testaceous-brown beneath. Thorax: the punctures on the disk of the mesothorax and metathorax rather sparse and scattered; tegulæ piceous. Wings pale fusco-hyaline, with a very faint violaceous reflection, the apical margins darker; nervures blackish; the first recurrent nervure received by the second submarginal cell beyond its middle, the second recurrent nervure received at the tip of the third submarginal cell, which is as long as the first and rather suddenly constricted towards the marginal cell. Legs black or piceous-black, rather densely clothed with black pubescence, especially on the tibiæ and basal joint of the tarsi, much longer and more dense on the posterior pair; tips of tarsi piceous. Abdomen broad, subconvex, shining, very closely and minutely punctured, the apical margins of the segments smooth and polished; basal segment, the basal margins of the other segments, the extreme sides and apex of the abdomen clothed with black pubescence, very short and thin on the basal margins of the second and following segments and much longer and more dense on the basal segment; apical segment depressed on the disk, the tip slightly notched; venter deep black, densely punctured, the apical margins of

the segments with a dense fringe of black pubescence. Length 6 lines; expanse of wings 10 lines.

Collection.—Ent. Soc. Philad. One specimen.

Melissodes pullata, n. sp.

Black, more or less tinged with fuscous, especially in ♂; hind legs of ♀ densely clothed with fuscous pubescence; abdomen shining; wings subhyaline; clypeus and labrum of ♂ pale testaceous.

Female.—Black; head and thorax densely clothed with black pubescence, slightly tinged with fuscous, finely and closely punctured; clypeus very densely punctured, the apical margin truncate or slightly concave; mandibles fringed beneath with long fuscous pubescence; antennæ black, brownish beneath. Thorax: mesothorax sparsely punctured, especially on the disk; tegulæ shining black. Wings uniformly tinged with pale fuscous, with a faint metallic reflection; nervures fuscous, arranged as in the preceding species. Legs piceous-black, clothed with blackish pubescence, very long and dense on the posterior pair; tips of tarsi rufo-piceous. Abdomen subdepressed, piceous-black, shining, minutely punctured; basal segment, the lateral middle of the second, third and fourth segments and the two apical segments, clothed with rather dense, dark fuscous pubescence; beneath piceous-black, the apical margins of the segments with a fringe of dense dark fuscous pubescence. Length 5 lines; expanse of wings 8 lines.

Male.—Resembles the female, except that the pubescence is entirely dark fuscous, and more sparse on the abdomen and legs; the clypeus and labrum are yellowish-testaceous, with a dusky spot on each side at base of the former; the antennæ are broken off near the base.

Collection.—Ent. Soc. Philad. ♀; Dr. J. Gundlach ♂. Two ♀, one ♂, specimens.

Much less robust than *M. maura*, with the color more or less tinged with fuscous, and not deep black as in that species.

Genus **ANTHOPHORA**, Latr.

Anthophora atrata, n. sp.

Black, tinged with fuscous; most of clypeus and labrum, and scape of antennæ beneath, white; wings subhyaline; legs rufo-fuscous at base; extreme sides of the abdomen more or less tufted with white pubescence.

Male.—Black; head and thorax clothed with rather short, dense black pubescence, more or less tinged with fuscous in certain lights; the clypeus except a black line on each side at base, a transverse mark above the clypeus, lower sides of the face, and the labrum except a black spot on each side at base, white; clypeus large, prominent, subtriangular, broadly truncate in front; labrum clothed with short pale

pubescence; mandibles piceous; antennæ piceous, the flagellum brown beneath, the scape white beneath. Thorax black above, piceous beneath, clothed with rather short, dense, blackish-fuscous pubescence; tegulæ piceous, pubescent. Wings faintly tinged with pale fuscous; nervures piceous. Legs piceous; the coxæ, trochanters and femora rufo-piceous, sometimes rufo-testaceous, clothed with short, dark fuscous pubescence. Abdomen blackish-piceous, opaque, the apical margins of the segments paler; basal segment clothed with fuscous pubescence, slightly mixed with whitish on the extreme sides; remaining segments almost naked, having a very thin, short, fuscous pubescence; extreme sides of the segments more or less tufted with whitish pubescence; beneath shining, pale rufo-piceous. Length $5\frac{1}{2}$ lines; expanse of wings $10\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. Two specimens.

Genus **XYLOCOPA**, Latr.

Xylocopa morio, Fabr.

Apis morio, Fabr. Ent. Syst. ii, p. 315. ♀.

Xylocopa morio, Fabr. Syst. Piez. p. 338. Halid. Trans. Linn. Soc. xvii, p. 319.

Xylocopa cajennæ, St. Farg. Hym. ii, p. 203, ♂. Guér. LaSagra's Hist. Cuba, Ins. p. 776.

Xylocopa teredo, Guilding, Trans. Linn. Soc. xiv. p. 313, pl. 8, figs. 1 ♀, 5 ♂. Westw. Nat. Libr. xxxviii, p. 268, pl. 21, fig. 1 ♂, 2 ♀.

Xylocopa cubæcola, Lucas, LaSagra's Hist. Cuba, Ins. p. 776, pl. 19, fig. 8. ♀.

Collection.—Ent. Soc. Philad. Nine ♀, five ♂ specimens.

There seems to be much uncertainty as to the correct synonymy of this species. All the females before me are black, and all the males are fulvous or honey-yellow; both sexes answer to the description of the species which I have quoted above as synonymous with *X. morio* Fabr., and I have little doubt that they all belong to one and the same species, notwithstanding that Guérin mentions both sexes of *X. cajennæ* in his description of that species, which is probably an error. The females show plainly six dorsal segments to the abdomen, which is naked above, with the extreme sides of the segments and the apical margin of the sixth segment fringed with black pubescence; while the male abdomen shows seven dorsal segments, the last two of which are densely clothed with rather long, deep yellowish-ferruginous pubescence, as well as the two basal segments where the pubescence is much shorter, and the seventh segment has on each side of the middle a dense tuft of long fuscous pubescence. Length ♂ ♀ 9—10 lines.

Genus **EXOMALOPSIS**, Spin.

Exomalopsis pulchella, n. sp.

Black, polished, clothed with pale glittering pubescence; sides of the first segment of abdomen, an oblique line on each side of second, basal margins of third and fourth and the whole of fifth segments, silvery-white; wings hyaline, fuscous at tips; hind legs of ♀ with a dense scopa of long pubescence, the basal half pale, the apical half fuscous.

Female.—Black, polished, strongly tinged with piceous; head feebly punctured; the vertex, occiput, cheeks and labrum, clothed with rather dense, pale, silky pubescence, that on the occiput and cheeks long; sides of the face with a patch of silvery-white pubescence; clypeus flat, truncate in front; antennæ piceous, the flagellum brown beneath. Thorax rather densely clothed with pale ochraceous pubescence, sparse and mixed with blackish on the disk of mesothorax, long and dense on the scutellum, and silvery-white on the pleura beneath; tegulæ rufo-piceous. Wings hyaline, slightly iridescent, the apical margins pale fuscous; nervures and stigma pale fuscous. Legs piceous, paler at base, clothed with silvery-white pubescence; posterior tibiæ and basal joint of tarsi with a dense scopa of long pubescence, that on the tibiæ whitish, tinged with ochraceous, silky, slightly mixed with fuscous at base, that on the basal joint of the tarsi fuscous, mixed with whitish beneath. Abdomen short, subglobose, smooth and polished; base and sides of the first segment, an oblique line on each side of the second, a narrow fascia at the base of the third and fourth, slightly interrupted or attenuated on the middle, and the whole of the fifth segment, clothed with a dense silvery-white pubescence, most obvious in certain lights; beneath rather densely clothed with short, pale glittering pubescence. Length $3\frac{1}{4}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Male.—Resembles the female, but not so robust, the pubescence more glittering, the face and clypeus densely clothed with silvery-white pubescence; the pubescence of the hind legs is colored as in the female, but not half so long; the abdomen is not so broad, more pointed at tip, and not so smooth; the fasciæ on the third and three following segments are distinct, while the oblique line on each side of the second segment is obsolete; venter naked, sericeous. Length 3 lines; expanse of wings 6 lines.

Collection.—Ent. Soc. Philad. Three ♀, one ♂, specimens.

Exomalopsis similis, n. sp.

Piceous, clothed with pale ochraceous pubescence; sides of the face, pleura, and markings of abdomen similar to *E. pulchella*, whitish; wings hyaline, tinged with pale fuscous at tips; scopa of hind legs entirely pale ochraceous.

Female.—Piceous, more or less tinged with brownish; head and

thorax as in *E. pulchella*, but more distinctly punctured, not so shining, and the pubescence less glittering; on the scutellum and postscutellum the pubescence is dense and rather long. Wings hyaline, the tips faintly tinged with pale fuscous; nervures fuscous, the stigma testaceous. Legs brown, paler at base, the pubescence pale glittering ochraceous; the posterior pair with the scopa long, dense and entirely silky ochraceous. Abdomen strongly tinged with brownish, broadly ovate, subdepressed, feebly punctured, shining, apical margins of the segments pale brownish; markings similar to those of *E. pulchella*, but less distinct and not so glittering; the apical segment is clothed with pale ochraceous pubescence, as well as the venter. Length $3\frac{1}{4}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Distinguished at once from *E. pulchella* ♀, by the scopa of the hind legs being entirely ochraceous.

Exomalopsis pubescens, n. sp.

Piceous, clothed with short ochraceous pubescence, closely and finely punctured; face densely clothed with pale glittering pubescence; wings subhyaline, iridescent; legs clothed with ochraceous pubescence; abdomen globose, the third and following segments with a fascia of dense ochraceous pubescence.

Male.—Short, robust, piceous-brown, closely and finely punctured, clothed with a short, dense, ochraceous pubescence; face and clypeus with a dense, appressed, pale, glittering pubescence; antennæ piceous at base (flagellum broken off). Thorax densely clothed with dark ochraceous pubescence, longer and somewhat whitish on the pleura beneath; disk of mesothorax naked; tegulæ yellowish-testaceous. Wings faintly tinged with pale fuscous, iridescent; nervures testaceous. Legs pale brownish, clothed with a rather dense ochraceous pubescence; tips of the tibiæ and the tarsi yellowish. Abdomen short, globose, shining, closely, finely and distinctly punctured; base and sides of the first segment, a slightly oblique line on each side of the second, and a fascia on each of the following segments, covering most of the segments and slightly interrupted on the middle of the third segment, of short, dense, appressed, pale ochraceous pubescence, glittering in certain lights; beneath pale testaceous, shining. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

Collection.—Dr. J. Gundlach. One specimen.

Smaller, and more distinctly punctured and pubescent than the preceding species, with the abdomen short and globose.

Genus **CENTRIS**, Fabr.

Centris versicolor, Fabr.

Apis versicolor, Fabr. Ent. Syst. ii, p. 340, ♀.
Centris versicolor, Fabr. Syst. Piez. p. 359. St. Farg. Hym. ii, p. 154.
Hemisia versicolor, Klug. Illig. Mag. vi, p. 227.
Centris tabaniformis, Fabr. Syst. Piez. p. 358, ♂.
Centris decolorata, St. Farg. Hym. ii, p. 160, ♂.

Collection.—Ent. Soc. Philad. Two ♀ specimens.

Centris apicalis, Guér.

Anthophora apicalis, Guér. Icon. Règ. Anim. iii, p. 455, pl. 74, fig. 4.
Anthophora versicolora, Guér. LaSagra's Hist. Cuba, Ins. p. 780.
Centris pœcila, St. Farg. Hym. ii, p. 154.

Collection.—Ent. Soc. Philad. Seven ♀, two ♂ specimens.

Closely allied to *C. versicolor*, but is at once distinguished by the legs being entirely black.

Centris Æthiops, n. sp.

Entirely deep black; wings dark fusco-hyaline, with a violaceous reflection: abdomen shining.

Female.—Deep black, shining, closely and finely punctured; occiput and cheeks beneath, clothed with long black pubescence, thin on the face and vertex; clypeus prominent, polished, with a few deep, scattered punctures, the anterior margin truncate; labrum densely pubescent; mandibles piceous; antennæ piceous-black, the flagellum paler beneath. Thorax densely clothed with black pubescence; metathorax naked, shining; tegulæ dull black. Wings dark fusco-hyaline, with a violaceous reflection; nervures black. Legs black, the pubescence black. Abdomen deep shining black, closely and finely punctured, the punctures indistinct on the apical margins of the segments; sides of the basal segment and the apex clothed with black pubescence; beneath tinged with piceous, and clothed with black pubescence. Length 7 lines; expanse of wings $12\frac{1}{2}$ lines.

Collection.—Ent. Soc. Philad. One specimen.

Centris fulviventris, n. sp.

Black; head, thorax, legs, and base and apex of abdomen, densely clothed with fulvo-ochraceous pubescence; legs brown; most of clypeus, labrum, mandibles, flagellum beneath, and the abdomen, fulvous; wings subhyaline.

Female.—Black; head and thorax densely clothed with fulvo-ochraceous pubescence, paler on the cheeks and pleura; a large spot on each side of the clypeus, nearly confluent on the disk, the labrum and the mandibles except tips, pale fulvous; antennæ piceous, the flagellum beneath testaceous; tegulæ piceous, margined exteriorly with testaceous. Wings pale fusco-hyaline; nervures pale fuscous. Legs brown,

paler at base, clothed, especially the posterior pair, with dense fulvo-ochraceous pubescence. Abdomen somewhat narrower than the thorax, fulvous, shining; the basal, apical and ventral segments clothed with ochraceous pubescence. Length 5½ lines; expanse of wings 10 lines.

Collection.—Dr. J. Gundlach. One specimen.

Centris? cornuta, n. sp.

Black; thorax, except disk of mesothorax, base and apex of abdomen, and posterior tibiæ, clothed with ochraceous pubescence; disk of mesothorax, and rest of legs, clothed with black pubescence; head large, quadrate; clypeus short, transverse, with a stout incurved tooth on the middle; labrum forming a very large, flattened plate, passing beneath the mandibles, which are long and cleft at tips; most of clypeus, and a stripe down each side of labrum, whitish; abdomen narrow; wings subhyaline.

Female.—Head large, quadrate, black, polished; cheeks and occiput broad; ocelli arranged in a slight curve in a subtriangular depression on the vertex, which is prominent in front of ocelli; eyes ovate, moderate; face very short, clothed with short ochraceous pubescence, mixed with black on the posterior middle; clypeus short, very transverse, emarginate on each side, with a large, very prominent, incurved, subacute tooth on the middle, pale yellowish-white, the anterior and posterior margins and the tooth except its lateral base, black; labrum forming a very large, flattened plate, passing beneath the mandibles, black, polished, with a broad, pale yellowish-white stripe on each side, converging towards the tip, which is truncate, somewhat reflexed and armed above with a long, slender, porrect, subacute spine; the cheeks much produced beneath the base of the mandibles, forming an obtuse process, against which the sides of the labrum seem to rest; mandibles very long, narrow and cleft at tip, shining black, fringed beneath with a row of scattered, black pubescence; antennæ black, the flagellum beneath piceous. Thorax robust, clothed with short, dense, pale ochraceous pubescence, sparse on the pleura beneath; mesothorax with a large space of dense black pubescence covering nearly its entire surface; sides of the scutellum with a tuft of long blackish pubescence; metathorax naked, smooth and shining on the middle, and clothed on each side with long, dense, ochraceous pubescence; tegulæ piceous, highly polished. Wings faintly tinged with pale fuscous, with a slight metallic gloss; nervures fuscous. Legs piceous-black, clothed with black pubescence, mixed with pale on the femora beneath; posterior tibiæ and basal joint of their tarsi flattened and dilated, densely clothed on the outside with short pubescence, that on the tibiæ ochraceous, and that on the tarsi black; spurs of the posterior tibiæ long and acute, the

inner one pectinated, the pectinations gradually longer towards the base; tarsal claws bidentate. Abdomen narrower than the thorax, oblong-ovate, convex, polished, black, sparsely punctured, clothed with a short, pale ochraceous pubescence, very thin and short on the second and third segments, more dense on the apical segments, and long on the basal segment, the anterior face of which is deeply excavated; beneath shining, sparsely pubescent. Length 7 lines; expanse of wings $10\frac{1}{2}$ lines.

Collection.—Dr. J. Gundlach. One specimen.

This singular species is remarkable for the curiously constructed head, which differs from that of any other Hymenopterous insect known to me. The structure of the antennæ and legs, and the neuration of the wings, coincide with that of *Centris;* but the shape of the head, and of the clypeus, labrum and mandibles, is so very different, that the species will doubtless form a new genus, for which I would propose the name of *Gundlachia*, which may be more fully determined when more specimens have been discovered, and when the parts of the mouth can be examined.

Genus **MELIPONA**, Latr.

Melipona fulvipes, Guér.

Melipona fulvipes, Guér. Icon. Règ. Anim. iii, p. 462, pl. 75, fig. 6. Poey, Mem. Hist. Nat. Cuba, i, p. 142, pl. 6, figs. 14—22. Guér. LaSagra's Hist. Cuba, Ins. p. 781.

Collection.—Ent. Soc. Philad. Numerous ♀, ☿ and ♂ specimens.

Genus **APIS**, Linn.

Apis mellifica, Linn.

Apis mellifica, Linn. Faun. Suec. 1697. Guér. LaSagra's Hist. Cuba, Ins. p. 781. Smith, Bees of Great Britain, p. 241, with full synonymy.

Collection.—Ent. Soc. Philad. Three specimens.

The following species, belonging to the families treated of in this paper, mentioned as having been found on the Island of Cuba, are unknown to me:—

Paniscus rufus, Brullé. Hym. p. 155.

Bracon erythræus, Brullé, Hym. p. 401.

Pelopœus assimilis, Dahlb. Hymen. Europ. p. 23.

Methoca Poeyi, Guér. Icon. Règ. Anim. iii, p. 430. (See remarks on p. 113 of this paper.)

Pepsis speciosa, Fabr. Syst. Piez. p. 216. Guér. LaSagra's Hist. Cuba, Ins. p. 760.

Eumenes colona, Sauss. Guêp. Sol. p. 70. Guér. LaSagra's Hist. Cuba, Ins. p. 767.

Eumenes ornatus, Sauss. Guêp. Sol. Suppl. p. 147, pl. 8, fig. 3. Guér. LaSagra's Hist. Cuba, Ins. p. 768.

Odynerus brachygaster, Sauss. Guêp. Sol. p. 173. Guér. LaSagra's Hist. Cuba, Ins. p. 771, pl. 19, fig. 6.

Odynerus incommodus, Sauss. Guêp. Sol. p. 143. Guér. LaSagra's Hist. Cuba, Ins. p. 769.

Polistes americanus, Fabr. Ent. Syst. ii, p. 276. Sauss. Guêp. Soc. p. 93, pl. 11, figs. 4, 5. Guér. LaSagra's Hist. Cuba, Ins. p. 772.

Megachile binotata, Guér. Icon. Règ. Anim. iii, p. 450; LaSagra's Hist. Cuba, Ins. p. 777, pl. 19, fig. 9.

Cœlioxys abdominalis, Guér. Icon. Règ. Anim. iii, p. 453; LaSagra's Hist. Cuba, Ins. p. 779, pl. 19, fig. 11.

CORRIGENDA.

Page 36, line 35, for "**Pimpla terminalis,**"* read "**Pimpla nubecula.**"
28, line 35, for "carina;" read "carina,".
37, lines 21, 23 and 31, for "*terminalis,*" read "*nubecula.*"
38, lines 19 and 22, for "*terminalis,*" read "*nubecula.*"
84, line 39, for "pair," read "tarsi."
96, line 22, for "**Smiera palens**," read "**Smiera pallens**."

* Preöccupied by Brullé.

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