

DESCRIPTIONS OF NEW SPECIES OF WASPS WITH NOTES  
ON DESCRIBED SPECIES.

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The following notes and descriptions have accumulated during the past three years. Some of the descriptions were drawn up years ago, while the others have been made since November, 1909, when the writer came to Washington.

Superfamily VESPOIDEA.

Family ANTHOBOSCIDÆ.

Genus SIEROLOMORPHA Ashmead.

The genus *Sierolomorpha* Ashmead was founded<sup>1</sup> for a curious little wasp described<sup>2</sup> by Ashmead under the name *Sierola ambigua*. In Ashmead's tables to the genera of Vespoidea it is placed in the family Cosilidæ, but according to his own tables this is wrong, as the intermediate coxæ are distinctly separated,<sup>3</sup> and following his characters it runs out at category 5 (p. 40) in his family Tiphidæ because there is only one complete, well-defined cubital cell, the second being only faintly indicated, as in the genus *Trypoxylon*. The cubitus of the hind wings is much beyond the transverse median vein. The habitus of *Sierolomorpha* would recall certain of the Bethylids, or is more like *Tiphia* than like *Anthobosca*. The ventral constriction of the abdomen is like *Anthobosca* and not like the Bethylids. The genus may for the present be placed in the family Anthoboscidæ, which may be recognized by the shape of the first abdominal segment, the unarmed pygidium, and other characters.

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<sup>1</sup> Can. Ent., vol. 35, 1903, p. 42.

<sup>2</sup> Bull. 45, U. S. Nat. Mus., 1893, p. 56.

<sup>3</sup> The use of the distance between the intermediate coxæ as a family character in this group is open to question. The above-mentioned distance varies to some extent in the sexes, and in the genus *Anthobosca* (which Mr. Turner has shown *Cosila* Guérin is a synonym, hence the change of the family name from that used by Ashmead) the type of the family, the distance between the intermediate coxæ is great enough to permit one to say that they are well separated.

## Family SCOLIIDÆ.

## Genus SCOLIA Fabricius.

*Type.*—*Scolia quadripunctata* Fabricius (Latreille, 1810).

Mr. C. Schrottky has <sup>1</sup> contended that the type of the genus *Scolia* Fabricius is *Scolia atrata* Fabricius. *Scolia atrata* was the first species included and according to the system used by Saussure and Sichel <sup>2</sup> belongs to *Elis*. In stating that the type of *Scolia* is *atrata* Fabricius, Schrottky adheres to the antiquated first-species rule. This adherence is unfortunate, as the idea has been entirely done away with by most systematists in all groups of animals, as well as being ruled against by the International Congress of Zoological Nomenclature.

The genus *Scolia* as originally defined by Fabricius <sup>3</sup> included 10 species. The eighth species, *Scolia quadripunctata* Fabricius, was chosen as the type by Latreille in 1810.<sup>4</sup> No older designation of type for this genus is known to the writer, therefore *Scolia quadripunctata* Fabricius is considered the type of the genus *Scolia* Fabricius.

Other designations of the type of *Scolia* are *Scolia flavifrons* Fabricius by Bingham (1897) and Ashmead (1903).

## Family ELIIDÆ.

## Genus ELIS Fabricius.

*Type.*—*Elis sexcincta* Fabricius (Bingham, 1897).

Mr. R. E. Turner <sup>5</sup> places the genus *Plesia* Jurine as a synonym of *Elis* Fabricius; the types of the two genera involved show that this view is correct. Colonel Bingham in 1897 <sup>6</sup> fixed as the type of the genus *Elis* Fabricius *Elis sexcincta*, the first species originally included in the genus;<sup>7</sup> W. H. Ashmead<sup>8</sup> fixed as the type of *Plesia* Jurine *Tiphia namea* Fabricius, a species originally included. *Elis sexcincta* Fabricius and *Tiphia namea* Fabricius are congeneric, so the synonymy is:

ELIS FABRICIUS, Syst. Piez., 1804, p. 248, n. 46.

*Plesia* JURINE, Nouv. meth. class. Hym., 1807, p. 150.

<sup>1</sup> Deutsche Ent. Zeit., vol. 2, March, 1910, p. 196.

<sup>2</sup> Cat. des species gen. Scolia, 1864.

<sup>3</sup> Syst. ent., 1775, p. 355, n. 111.

<sup>4</sup> Considerations Generales sur L'Ordre Naturel des Crustaces Arachnides et Insects.

<sup>5</sup> Ann. Mag. Nat. Hist. (8), vol. 4, Sept., 1909, p. 165.

<sup>6</sup> Fauna Brit. India Hym., vol. 1, p. 89.

<sup>7</sup> C. Schrottky, Deutsche Ent. Zeit., vol. 2, March, 1910, p. 197, also uses this type.

<sup>8</sup> Can. Ent., 1903, p. 5.

## Family EUMENIDÆ.

## Genus PTEROCHILUS Klug.

## PTEROCHILUS MORRISONI Cresson.

*Pterochilus morrisoni* CRESSON, Proc. Ent. Soc. Acad. Nat. Sci. Phila., April, 1879, p. XIX.

*Pterochilus flavobalteatus* CAMERON, Ponomia Journ. Ent. Col., vol. 1, No. 3, 1909, p. 34.

Specimens of *Pterochilus morrisoni* collected in Colorado (one from Rifle, which is in the Transition Life Zone, collected July 2, 1908, by S. A. Rohwer, and others without definite data) agree even better with Cameron's description of *P. flavobalteatus* than they do with Cresson's description of *P. morrisoni*. There seems to be no doubt about the identity of the two forms.

## PTEROCHILUS SENECONIS, new species.

Related to *Pterochilus morrisoni* Cresson, but may be separated by the sharper angles to the truncate part of the clypeus, whitish markings, and small pale spot on the mesopleuræ.

*Female*.—Total length about 8 mm. Clypeus in outline pentagonal, wider than long, with shallow, sometimes confluent punctures, apex truncate, the lateral angles sharp; front somewhat produced between the antennæ, with close, rather large punctures, vertex and cheeks more sparsely so; impressed line from anterior ocellus short and feeble; occiput carinated, arcuate; antennæ very robust, the third joint subequal with the two following; thorax punctured similar to the front, notauli present only posteriorly; sides of pronotum irregularly punctured; metanotum rounded, perpendicular; abdomen finely reticulate, with small, well-separated punctures better defined on the apical margins, second segment wider than long. Black; spot on clypeus, mandibles except piceous apices, inner orbits to emargination of eye, spot on posterior orbits, scape beneath line on pronotum narrowed within, tegulæ, spot below, two spots on scutellum, line on metanotum, spot on lateral posterior face of propodeum, all the dorsal abdominal segments apically, second ventral apically, and lateral spots on three following whitish; legs black, tibiæ except spot within, and tarsi yellow; flagellum rufo-ferruginous beneath. Wings dusky hyaline, venation basally pale, apically dark brown.

Paratypes show the clypeus may be almost or entirely black, the second ventral segment with the band interrupted.

*Male*.—Total length about 8 mm. Differs from the female in the entirely pale clypeus, orange-colored flagellum, four anterior femora being pale beneath, and ventral segments two to six with a pale apical band. The clypeus and thoracic markings are yellowish.

Florissant, Colorado. Type, female collected on June 28, 1908, on flowers of *Senecio cyambalarioides* Nuttall; two other females collected June 15 and June 21; two males collected near Florissant on June 18, 1906, one at flowers of *Senecio*, sp.; one male collected east of Lake George (near Florissant), June 18, by W. P. Cockerell. Unless otherwise stated, the specimens were collected by S. A. Rohwer.

*Type*.—Cat. No. 13732, U.S.N.M.

**PTEROCHILUS LEUCOTÆNIUS, new species.**

Should be easily recognized by its size, whitish markings, and rufo-ferruginous legs.

*Female*.—Total length about 14 mm. Clypeus convex, depressed apically to the truncate anterior margin, the angles of the truncation sharp, in outline pentagonal, feebly punctured basally, apically with rather large, irregular, separate punctures; front with close, well-defined punctures, vertex and occiput with smaller and more widely separated punctures; front raised between the antennæ; no incomplete impressed line from the anterior ocellus; occiput carinated, broadly arcuately emarginate; antennæ robust, the third joint subequal with the two following; mesonotum and scutellum punctured similar to the front; notauli present only posteriorly; metanotum rounded perpendicular; abdomen dulled with fine reticulations, the apical margins of the three last segments with irregular punctures. Black; basal half of clypeus, except two spots, narrow inner orbits below emargination, pronotum dorsally in part, tegulæ except middle spot, spot beneath tegulæ, two small spots on scutellum, line on metanotum, spots on lateral posterior angles of prododeum, band on all the dorsal segments, slightly dentate laterally on the apical ones, band on second and spots on third ventral segment whitish; scape beneath and legs beyond bases of femora rufo-ferruginous; wings dusky hyaline, basad of basal vein slightly yellowish, apical margin distinctly dusky; basal venation and stigma yellowish, apical venation dark brown.

Paratypes show that the clypeus may be entirely pale.

Lethbridge, Alberta, Canada. Five females collected July 4 and 9, 1909, by Mr. J. B. Wallis.

*Type*.—Cat. No. 13731, U.S.N.M.

**PTEROCHILUS DIVERSICOLOR, new species.**

Perhaps related to *Pterochilus luteicollis* Cameron, but differs from his description of this species in many characters.

*Female*.—Total length 9 mm. Slender; clypeus in outline nearly hexagonal, much wider than long, apex gently rounded, the angles obtuse, surface finely punctate-striate; mandibles slender, with three blunt, inner teeth; front hardly produced between the antennæ; front with separate, rather large punctures, vertex and cheek more



finely and sparsely so, antennæ subclavate, third joint slightly longer than the two following; thorax with the punctures rather more separated than those of the front; suture between mesonotum and scutellum foveolate; metanotum rounded, the perpendicular face nearly impunctate; posterior face of the propodeum with a median furrow; abdomen longer than the head and thorax, first segment long, about one-third longer than the apical width, length and width of second segment subequal; dorsal surface with distinct separate punctures, becoming smaller apically. Head and thorax (except a broad band between eyes at vertex, a median black line on mesonotum expanding at the ends, and mesopectus, which are black) *testaceous*; abdomen *rufo-testaceous*, the first four dorsal segments narrowly banded with white; wings yellowish hyaline, venation basally *testaceous*, apically dark brown.

San Diego County, California. One female collected by Mr. D. W. Coquillett.

*Type*.—Cat. No. 13733, U.S.N.M.

### Family MASARIDÆ.

#### Genus PSEUDOMASARIS Ashmead.

##### PSEUDOMASARIS COQUILLETTI, new species.

In color and habitus much like *P. edwardsii* Cresson. The female may be separated by the presence of a fine raised line on the scutellum, the orbits entirely yellow, and with an interrupted yellow band on the vertex. The male may at once be known from *edwardsii* by the club of the antennæ not being concave beneath.

*Female*.—Length 15 mm. Clypeus much wider than long, the apical margin broadly, arcuately emarginate, the surface finely sculptured; third antennal joint longer than the fourth and fifth; ocelli nearly in an equilateral triangle; the postocellar line shorter than the ocellorbital line; thorax finely, closely granular; notauli wanting; angles of propodeum sharp; transverse cubiti separated on the radius; abdomen finely, closely granular. Black with abundant yellow markings; the following parts yellow: Mandibles, clypeus except two black lines, labrum, large subtriangular spot above antennæ, orbits broadly, an interrupted band on vertex, basal five antennal joints, pronotum except a black line, tegulæ, two lines on mesonotum, large spots on mesopleuræ, apex of scutellum, metanotum, two spots on metapleuræ, propodeum except two large black spots, all the segments of the abdomen broadly (more or less emarginate in the dorsal middle). Legs yellow except coxæ, trochanters and base of femora beneath which are black. Wings yellowish-hyaline; venation yellowish.

*Male*.—Length 14 mm. Colored like the female except the black on the propodeum and metapleuræ is larger, and there is no black on

the clypeus. Structurally the male is like *zonalis* Cresson, except the apical segment of the abdomen, which resembles *edwardsii* differing in the apical dorsal protuberances being closer together.

Los Angeles County, California. A male and female collected in April by Mr. D. W. Coquillett, for whom the species is named.

*Type*.—Cat. No. 13734, U.S.N.M.

### Family PSAMMOCHARIDÆ.

#### Genus PRIOCNEMIS Schiödde.

##### PRIOCNEMIS SUBCONICUS, new species.

Apparently most closely allied to *conicus* Say, but may be separated at once by the opaque abdomen. From *subopacus* Cresson it may be known by the narrowly arcuate pronotum and different shape of the third cubital cell. From *idoneus* Banks the flat vertex, paler wings, and longer calcarium of the hind tibiæ (it being one-half times as long as the basitarsis) will distinguish it.

*Female*.—Length 11 mm. Clypeus produced, the anterior margin nearly truncate, the anterior surface more closely sculptured than the basal; front so closely punctured as to appear granular, the impressed line faint; scape robust, about two-thirds the length of the first joint of the flagellum; antennæ slender, much longer than the head and thorax, the third joint a little longer than the fourth; postocellar line distinctly shorter than the ocellocular or ocelloccipital line, lateral-ocellar line shorter than the diameter of the anterior ocellus; posterior margin of the pronotum narrowly arcuate; propodeum with an indistinct impressed line; tarsal comb wanting; apical tarsal joint without spines, legs feebly spined; transverse median its own length beyond the basal; second cubital narrowed basally; third cubital cell one-third longer below; hind cubitus slightly basad of the transverse median vein; abdomen opaque. Black, opaque; well clothed with black hairs; wings not quite uniformly dark brown, venation nearly the same color.

Lawrence, Kansas. One female collected at "twilight" in July by Mr. E. S. Tucker.

*Type*.—Cat. No. 13735, U.S.N.M.

### Superfamily SPHECOIDEA.

#### Family SPHECIDÆ.

#### Genus PODIUM Fabricius.

##### PODIUM CAROLINA, new species.

Differs from the meager description of *P. rufipes* Fabricius in having the clypeus quinque-dentate, not quadridentate. Nor does this agree with Saussure's interpretation of *P. rufipes*, which has the clypeus quinque-dentate.

*Female*.—Length 16 mm. Clypeus armed with five sharp teeth; space between the eyes at the vertex distinctly less than at the clypeus; ocelli in an acute triangle; front below the ocelli with irregular, confluent punctures; the rest of the head with widely separated punctures; third antennal joint not much shorter than the fourth and fifth; pronotum sculptured like the head, with a distinct median sulcus; mesonotum with larger and closer punctures than the scutellum or pronotum; mesopleuræ and pectus punctured as mesonotum; propodeum striato-punctate, rounded, not abruptly truncate; petiole a little more than twice the length of the posterior coxæ; second cubital cell narrowed above, receiving the second recurrent vein at about the apical fourth; first recurrent vein received by the first cubital cell free from the transverse cubitus. Black: most of mandibles, and legs below about the middle of the femora rufous; pubescence sparse, gray. Wings clear hyaline, a cloud at upper apex, and one in the second cubital cell fuscous; a narrow fuscous line on basal side of basal vein; venation dark brown.

Tryon, North Carolina. One female collected by Mr. W. F. Fiske, June 20.

*Type*.—Cat. No. 13736, U.S.N.M.

#### Genus CHLORION Latreille.

CHLORION (PALMODES) RUFIVENTRIS, var. OPUNTIÆ, new variety.

Differs from the typical form in the nonimpressed scutellum, and in the strong aciculation of the vertex, pronotum, and the anterior part of the mesonotum.

Victoria, Texas. One female collected "On *Opuntia*," April 17, 1908, by J. D. Mitchell.

*Type*.—Cat. No. 13737, U.S.N.M.

#### FAMILY PSENIDÆ.

##### Genus STIGMUS Panzer.

STIGMUS CONESTOGORUM, new species.

Closely related to *americanus* Packard, but the pygidium is about one and a half times as long as wide (in *americanus* it is hardly as long as wide); and the legs and venation are darker.

*Female*.—Clypeus polished, the anterior margin slightly emarginate medially; front very finely granular, rest of head polished, impunctate; impressed frontal line wanting; head nearly quadrate, as in *americanus* Packard; eyes not strongly converging to the clypeus; third antennal joint subequal with second, distinctly longer than fourth, apical joint robust neither pointed nor spatulate, not as long as two preceding; pronotum sharply carinate, dentate laterally; mesonotum shining impunctate except anteriorly where it is finely scratched; scutellum not impressed; sutures on mesopleuræ strongly foveolate;

dorsal aspect of propodeum with a transversely ridged enclosure, parted by a longitudinal carina, in outline the inclosure is somewhat like a truncate arrowhead; sides of propodeum reticulate; second cubital cell slightly narrowed above; sides of petiole with strong oblique carinæ apically, in length subequal with the posterior femora; pygidium well defined, narrow, about one and a half times as long as wide. Shining black; spot on mandibles and tubercles tegulæ and posterior tarsi ferruginous; anterior femora and posterior tibiæ brownish; venation brown, stigma black.

Highspire, Pennsylvania. One female collected by Mr. W. S. Fisher, June 13, 1908; two other females collected near Harrisburg, Pennsylvania, June 14, 1909, by A. B. Champlain, and July 18, 1909, by Mr. P. R. Myers; also a female from the Baker collection from Pennsylvania.

*Type*.—Cat. No. 13769, U.S.N.M.

STIGMUS APHIDIPERDA, new species.

Of the described nearctic species this is more closely allied to *S. fraternus* Say, from which it may be known by the dorsal lateral angle of the pronotum (not the sides) being dentate, the apical joint of the antennæ not spatulate and other minor characters.

*Female*.—Length 4 mm. Process of the clypeus slightly emarginate; frontal impressed line strong; pedicellum and third antennal joint subequal in length, third joint longer than the fourth; ocellocipital line about twice as long as the postocellar line; mesonotum finely punctured; dorsal aspect of propodeum with a trapazoidal-shaped enclosure bounded laterally by rectangular-shaped reticulations; posterior part of sides of propodeum granular; petiole shorter than the hind femora, obliquely striate; pygidium short, not twice as long as wide, narrow. Black; mandibles, scape in front, four anterior tibiæ and tarsi, posterior tarsi and tegulæ dark ferruginous; tubercles white; wings hyaline, iridescent; venation and stigma black.

The intermediate tibiæ may be mostly black.

*Male*.—Length 4 mm. Bears about the same relation to the female as does the male of *fraternus* to its female. Anterior margin of the clypeus somewhat produced; head dulled with fine granulation, frontal impressed line strong; antennæ rather slender, third and fourth joints subequal, the apical joint pointed; mesonotum finely granular; scutellum somewhat impressed; sutures of the mesopleuræ not as strongly foveolate as in female; sculpture of propodeum similar to the female, but the enclosure is not narrowed anteriorly. Differs from the female in coloration in the black flagellum, and nearly black intermediate tibiæ.



Highspire, Pennsylvania. Seven females and four males bred from young peach stems by Mr. W. S. Fisher in December, 1910, and recorded under the Bureau of Entomology number "Quaintance 5692." The nests were provisioned with wingless specimens of *Aphis persicæ-niger* Smith. Also two females from Colorado.

*Type*.—Cat. No. 13770, U.S.N.M.

**STIGMUS INORDINATUS HUBBARDI**, new subspecies.

*Female*.—Separated from typical *inordinatus* by the absence of the frontal impressed line and having all the femora pale.

*Male*.—Differs from typical *inordinatus* in the eyes converging more strongly to the clypeus, so the distance between them at the clypeus is subequal with half the distance between them at the vertex. The legs are also pale.

Palm Springs, California. Many males and females bred from pupæ in *Polyporus*, issuing March 1. Collected by Mr. H. G. Hubbard, for whom the subspecies is named.

*Type*.—Cat. No. 13771, U.S.N.M.

This may be raised to a species eventually, as the male presents good differences.

**STIGMUS FRATERNUS COLORADENSIS**, new subspecies.

*Female*.—Differs from *fraternus* Say in the apical joint of the antennæ not being spatulate, and the femora are all more or less black.

Colorado. Two females from the C. F. Baker collection.

*Type*.—Cat. No. 13772, U.S.N.M.

**STIGMUS FULVIPES**, var. **COQUILLETI**, new variety.

*Male and female*.—Differs from *fulvipes* Fox in the dark-brown antennæ and black femora.

Los Angeles County, California. Two females and one male collected by Mr. D. W. Coquillett, for whom the variety is named.

*Type*.—Cat. No. 13773, U.S.N.M.

Mr. Coquillett also collected typical *fulvipes* in Los Angeles County, California.

**GONOSTIGMUS**, new genus.

Habitus very like *Stigmus* Panzer, but differing at once in the shape of the head. Head seen from the front, excluding clypeus, distinctly longer than wide; seen from above, the head is quadrate, slightly narrowing posteriorly; facial quadrangle strongly narrowed below; eyes large and broadened below as in *Crabro*, but not as strongly so; clypeus strongly produced in the middle, truncate; labrum concealed; mandibles long, slender, single except the bidentate apex, the outer

tooth longer, maxillary palpi 6-jointed, labial palpi 4-jointed, palpi long, slender; antennæ inserted at the top of the clypeus and almost against the orbits, the distance between them almost as great as the width of eyes at clypeus; abdomen, thorax, legs, and wings much as in *Stigmus*.

The lower posterior margin of the head is strongly angled in the genotype, but this may only be a specific character.

*Type*.—*Gonostigmus typicus* Rohwer.

*Gonostigmus* may at once be separated from *Stigmus* by the head being longer than wide, the facial quadrangle being narrowed below, the larger and produced clypeus, the antennæ inserted very close to the orbits.

GONOSTIGMUS TYPICUS, new species.

*Female*.—Length 3 mm., slender. Lower inner orbital margins finely foveolate; head strongly angled on the lower posterior margin; the posterior margin finely carinate; front finely granular, the rest of the head shining and impunctate; ocellar line at least as long as the ocellocular line; flagellum simple, the first and second joints equal in length; pronotum strongly ridged and sharply angled laterally; dorsulum very finely longitudinally scratched; scuto-dorso suture strongly foveolate; propleuræ strongly longitudinally striate; a longitudinal suture on the mesopleuræ, the area above which is finely striate-granular, the area below finely striate; propodeum dorsally with large reticulations, laterally longitudinally striate; legs without spines; petiole slightly longer than the hind femora, with five fine carina on the dorsal and lateral surfaces; abdomen normal. Black, shining; mandibles, scape, two joints of flagel, tubercles, tegulæ; four anterior legs, posterior trochanters and tarsi pale yellow. The usual pubescence sparse; wings clear hyaline, iridescent; venation and stigma dark brown, nervures paler toward the base of the wings.

Motzorongo, Vera Cruz, Mexico. One female collected February 11, 1892, by H. Osborn.

*Type*.—Cat. No. 13738, U.S.N.M.

Genus DIODONTUS (Curtis) Shuckard.

DIODONTUS BIDENTATUS, new species.

This may be the undescribed male of *Diodontus adamsi* Titus, but the description of that species is very brief, and the following species differs in being 3 mm. smaller and having the tubercles pale. It is easily distinguished from the other described Nearctic species by the dentate clypeus.

*Male*.—Length 3.5 mm. Labrum concealed; clypeus produced in the middle, with two large, obtuse teeth, the emargination between

angulate; vertex and occiput finely granular, with large irregular, separated punctures which are smaller and closer in the postocellar area; postocellar line equal with the ocellocular line, but distinctly shorter than the ocelloccipital line; the apical antennal joints with short spines at the apex beneath; scutellum and mesonotum shining, with well separated, distinct punctures; the sutures separating the scutellum not foveolate; mesopleuræ irregularly, coarsely granular; propodeum with irregular, coarser reticulations; legs normal; second cubital cell narrowing above; abdomen with small indistinct punctures. Black; mandibles and legs below femora reddish-yellow; tegulæ and tubercles yellow. Wings distinctly dusky; venation black and pale brown.

Nerepis, New Brunswick. One male collected August 20 by Mr. A. G. Leavitt.

*Type*.—Cat. No. 13739, U.S.N.M.

#### Genus PASSALÆCUS Shuckard.

##### PASSALÆCUS MELANOCRUS, new species.

Related to *P. annulatus* (Say), but the scutellum is not impressed, the propodeum does not have an impressed median line, and the femora are black.

*Male*.—Length about 5 mm. Slender; clypeus and front closely granular, vertex and occiput shining with separate, small punctures; frontal line distinct; postocellar line much greater than the ocellocular line; antennæ not spinose or dentate, the third joint distinctly shorter than the fourth, apical one about one-fourth longer than the preceding; dorsulum with distinct, close punctures, with two impressed foveolate lines anteriorly; scutellum sparsely punctured and not impressed; propodeum rather finely reticulate, without an impressed line, upper surface of posterior face with a poorly defined fovea; abdomen shining with little or no hair. Black; mandibles, except margin, tubercles and base of posterior tibiæ yellow; apical margins of flagellar joints except apical one and scape beneath whitish; tegulæ brownish; four anterior tibiæ and tarsi reddish-yellow. Wings hyaline, iridescent; venation dark brown.

Davis Mountains, Texas. Three males bred July 5, 1907, from material collected April 12, 1907, from the galleries of *Dendroctonus barberi* Hopkins. Notes under Bureau of Entomology number "Hopk. U. S. 3904."

*Type*.—Cat. No. 13740, U.S.N.M.

## Genus CERATOPHORUS Shuckard.

## CERATOPHORUS GRINNELLI UTAHENSIS, new subspecies.

Very like *grinnelli* Rohwer, but differs in the female sex as follows:

*C. grinnelli grinnelli.*

1. Apical part of enclosure of propodeum shining impunctate.
2. Fovea on posterior face of the propodeum punctiform.
3. Second recurrent vein basad of the second transverse cubitus by one-fourth its length.

*C. grinnelli utahensis.*

1. Same dull finely longitudinally striate.
2. Fovea on posterior face of the propodeum narrow, elongate.
3. Second recurrent vein very nearly interstitial with the second transverse cubitus.

Beaver Valley, Utah.

*Type*.—In the Museum of the Brooklyn Institute, New York.

## Family CRABRONIDÆ.

## Genus LINDENIUS Lepeletier.

## ENOPLOLINDENIUS, new subgenus.

General habitus as *Lindenius*; clypeus quadra-dentate; mandibles simple; basal joints of antennæ emarginate; facial fovea deep, sharply defined; supraorbital fovea elongate, well defined; ocelli in almost an equilateral triangle; posterior orbit and sides of occiput with strong carinæ; head and thorax with close fine punctures; pronotum crested, long for group, lower than dorsulum, no smooth enclosed area on metanotum; venation as *Lindenius*; four posterior legs normal; anterior femora enlarged and flattened; anterior tarsi strongly flattened and somewhat distorted; abdomen shining impunctate.

*Type*.—*Lindenius* (*Enoplolindenius*) *clypeatus* Rohwer.

This may prove to be a distinct genus when the female is discovered. It is very distinct from *Lindenius* by the characters given above.

## LINDENIUS (ENOPLOLINDENIUS) CLYPEATUS, new species.

*Male*.—Length about 4 mm. The notch between the lateral and middle teeth of clypeus deeper than the notch between the middle teeth; a carina in the depression from anterior ocellus to facial fovea; the area between the eye and postocellar carina subfoveolate; pronotum before the carina foveolate; scutellum with indistinct striations with the punctures; suture between postscutellum and dorsal aspect of propodeum foveolate; propodeum laterally separated from posterior face by a distinct line-like carina; depression of posterior face heart-shaped; propodeum dorsally with a median fovea which meets the fovea on posterior face. Black; mandibles, tubercles, small spots



on pronotum, and four anterior legs below trochanters, except a line on femora, reddish-yellow (the reddish tint may be due to potassium cyanide, but probably not). Wings hyaline, beautifully iridescent; venation dark brown.

Brownsville, Texas.

*Type*.—In the Museum of the Brooklyn Institute, New York.

Orbital carina strong, the area between it and the eye margin foveolate.

Genus CRABRO Fabricius.

CRABRO (SOLENIUS) TOWNSENDI, new species.

Allied to the North American species *interruptus* and *cinctibellus*, but much different in the sculpture of the propodeum.

*Female*.—Length nearly 11 mm. Production of the clypeus broader at the apex, the emargination very shallow; facial fovea very narrow and deep, without a bounding carina above but nevertheless well defined; ocellar line subequal with the ocellocular line; supraorbital fovea as long as first two joints of the flagellum; head with close, large, distinct punctures, the punctures of the front a little larger than those of the cheeks; first joint of flagellum a very little longer than second; pronotum sharply carinated, the lateral tooth small; dorsulum striato-punctate, anteriorly a few distinct punctures; scutellum striato-punctate; mesopleuræ striato-punctate above; below mostly punctured though there is a tendency to striation; propodeum dorsally and posterior face strongly striato-reticulate; the broad median furrow foveolate; strongly longitudinally, propodeum laterally striate; legs and venation normal for *Solenius*; abdomen with strong, distinct, rather close punctures, larger on the first segment and becoming smaller apically; apical margins of the first two segments somewhat depressed; pygidial fringe thick. Black; tegulæ rufotestaceous; scape, two elongate spots on pronotum, tubercles, two oval spots on scutellum which meet, four anterior knees, all the tibiae and tarsi, elongate spots on the first three dorsal segments (narrowly separated) and bands on the fourth and fifth dorsal segments yellow. Wings fusco-hyaline; venation pale brown, stigma and costa reddish; the usual facial pubescence slightly yellowish.

Meadow Valley, Mexico. Collected by Mr. C. H. T. Townsend, for whom the species is named.

*Type*.—Cat. No. 13741, U.S.N.M.

CRABRO (subgenus?) SCHWARZI, new species.

Very distinct and belonging to an undescribed subgenus, falling near *Metacrabro* and *Xylocrabro*. Easily known by the head narrowing behind eyes, the occiput margined, and coarse sculpture.

*Male*.—Length 8 mm. Clypeus strongly carinated; distance between the eyes at the clypeus slightly less than the length of the

clypeus; facial fovea not sharply defined above; supraorbital foveæ wanting; ocellar line slightly longer than ocellocular line; head strongly narrowing behind eyes, the occiput strongly margined; antennæ short, simple; pronotum strongly crested, dentate laterally; dorsulum with large, close punctures, scutellum more sparsely punctured, some of the punctures on the dorsulum are confluent; mesopleuræ above striato-punctate, below with large separate punctures; propodeum dorsally and posterior face strongly reticulate, the posterior face transversely so; propodeum laterally rather strongly longitudinally striate; legs slender and simple; anterior face of the abdominal segment depressed; first two dorsal segments with large, rather close, distinct punctures; the following segments finely and closely so. Black; scape line on the pronotum, tubercles, anterior, legs below middle of femora, tips of middle femora above, middle tibiæ exteriorly, spurs of hind tibiæ, base of first abdominal segment with a narrow line running to the elongate spots, and elongate lateral spots on second, third, and fourth segments yellow. Wings dusky hyaline; venation black. Pubescence almost wanting.

Cacao, Trece Aguas, Alta Vera Paz. Guatemala, March 23, 1906. One male collected by Schwarz (for whom the species is named) and Barber.

*Type*.—Cat. No. 13742, U.S.N.M.

CRABRO (HOPLCRABRO) FERRUGINEIPES Rohwer.

This species was described from a single male collected at Pecos, New Mexico. From the C. H. T. Townsend collection of Meadow Valley, Mexico, there are five males and four females. The female is much like the male but is of course larger and has the antennæ simple.

CRABRO (HOPLCRABRO) NOVANUS, new species.

Of the described Mexican species perhaps this is more like *sonorensis* Cameron, but is at once distinguished by the sculpture. Belongs in with *decemmaculatus* Say, but may be known at once by the sculpture of the propodeum.

*Female*.—Length 13.5 mm. Anterior margin of the clypeus slightly produced into a truncate process, middle carina strong; facial fovea as on *Hoplocrabro*, as is the rest of the head; post ocellar line a little shorter than ocellocular line; third joint of antennæ distinctly longer than fourth; head with small close punctures, much sparser on the cheeks; pronotum feebly carinated, not dentate, separated by a broad furrow from mesonotum; dorsulum with rather close, distinct punctures; scutellum more sparsely punctured; mesopleuræ striato-punctate; propodeum dorsally with rather large, well separated, distinct punctures; median furrow broad, well defined, striolate; posterior face with separate striato-punctations; propodeum laterally very finely longitudinally striate; legs robust; first dorsal segment with scattered,

distinct, small punctures, the following segments closely punctured. Black; tegulæ brownish; mandibles except apices, scape, interrupted line on pronotum, tubercles, postscutellum, spots on all the dorsal segments (meeting on the fifth and sixth) yellow; legs black, four anterior knees, all the tibiæ and tarsi yellow. The tibiæ are dark brown within. Wings fusco-hyaline; venation reddish brown. Pubescence fuscous.

Meadow Valley, Mexico. Six females. Collected by Mr. C. H. T. Townsend.

*Type*.—Cat. No. 13743, U.S.N.M.

Genus *THYREOPUS* Lepeletier (Ashmead).

*THYREOPUS (THYREOPUS) VENATOR*, new species.

Very distinct, easily recognized by the closely punctured dorsulum, punctured mesopleuræ and separate abdominal spots.

*Female*.—Length 10 mm. Median carina of the clypeus strong; distance between the eyes at the clypeus about equal with the length of the clypeus; facial fovea not sharply defined above; lateral ocelli above the supraorbital line; post-ocellar line subequal with the ocellocular line; head closely punctured; first flagellar joint slightly shorter than two plus three; pronotum hardly carinate but with a sharp lateral tooth; dorsulum and scutellum sculptured like the head; mesopleuræ with the punctures more distinct; propodeum dorsally irregularly rather feebly striate, no median furrow; posterior face punctured with some faint striations also, laterally finely striato-granular; legs robust, rather strongly spined; abdomen elongate, shining, impunctate, pygidium with somewhat elongate punctures. Black; spot on mandibles, scape in front, line on pronotum, tubercles, large spots at the sides of all the dorsal segments and four anterior tibiæ in front pale yellow; wings smoky-hyaline, venation black. Pubescence gray or fuscous.

*Male*.—Very like the female. The tooth on the pronotum is sharper; the flagellum is simple but slightly flattened; the shield is wider than long, and wider at the apical third, with two or three longitudinal pale lines otherwise black; and the pronotum is black.

The suture on the mesopleuræ may be strongly or feebly foveolate, the scape almost entirely black, and the pronotum with small pale spots, the postscutellum black or with a yellow line.

Meadow Valley, Mexico. Collected by Mr. C. H. T. Townsend.

*Type*.—Cat. No. 13744, U.S.N.M.

*THYREOPUS (BLEPHARIPUS) MELANIUS*, new species.

Related to *ater* Cresson, but the ocelli are not in depressions and the sculpture is finer and the insect duller.

*Female*.—Length 7 mm. Clypeus with a median carina, the anterior margin rounded; space between the eyes at the clypeus slightly

greater than the length of the clypeus; postocellar line distinctly shorter than the ocellocular line; no depressions around the ocelli; a distinct furrow from anterior ocellus to the facial fovea; head with distinct small, well separated punctures but dull because of the very fine close punctures; first and second flagellar joints subequal; pronotum not crested or dentate; dorsulum, scutellum, and mesopleuræ sculptured like the head, the punctures of the dorsulum larger and those of the mesopleuræ smaller; enclosure separated by foveolate suture from the posterior face, the base foveolate, the middle furrow strong and above foveolate; propodeum laterally and posterior face granular, the latter more strongly so; legs and abdomen normal. Entirely black; wings dusky hyaline, venation black; gray pubescence abundant on the pleuræ.

*Male*.—The male agrees with the above characters, except the head and thorax are shining, the punctures smaller, and the strongly foveolated middle furrow of the metathorax. The gray pubescence is very sparse.

Meadow Valley, Mexico. Collected by Mr. C. H. T. Townsend in September.

*Type*.—Cat. No. 13745, U.S.N.M.

THYREOPUS (CROSSOCERUS) XANTHOGNATHUS, new species.

A very distinct little species. In some points it seems to be related to *angulicolle* Cameron (described as belonging to *Rhopalum*), but the shorter first abdominal segment will distinguish it at once.

*Female*.—Length 5 mm. Anterior margin of the clypeus rounded, without a median carina; space between the eyes at the antennæ less than the length of the clypeus; a depression near each lateral ocellus; ocellar line shorter than the ocellocular line; front with small, rather close, distinct punctures, cheeks and occiput almost impunctate; first flagellar joint longer than the second; dorsulum with small punctures on a very finely granular surface; scutellum and mesopleuræ with small punctures but the surface not granular; enclosure well defined, the base, median furrow, and bounding sutures faintly foveolate; enclosure with fine oblique striæ; posterior face and pleuræ finely striato-granular; second abdominal segment subequal with the first; pygidium with large, distinct, separate punctures. Black; mandibles (apices rufous) line on scape, tubercles, four anterior knees and tibiæ exteriorly, four anterior tarsi, base of posterior tibiæ and tarsi yellow; wings hyaline, slightly dusky, venation black. Pubescence sparse.

Meadow Valley, Mexico. Collected by Mr. C. H. T. Townsend.

*Type*.—Cat. No. 13746, U.S.N.M.



## Family NYSSONIDÆ.

## Genus GORYTES Latreille.

## GORYTES (GORYTES) NEGLECTUS, new species.

Related to *Gorytes mystaceus* (Linnæus), but is smaller and the suture between the mesonotum and scutellum is foveolate. Superficially resembles *G. (Hoplisoides) costalis* (Cresson), but is otherwise quite different.

*Female*.—Length about 8 mm. Anterior margin of the clypeus broadly rounded out, the surface finely, closely punctured apically the punctures are much larger; facial quadrangle higher than broad; eyes distinctly but not strongly emarginate above the middle, disregarding the emargination subparallel; front with small, distinct, well separated punctures, no impressed line from the anterior ocellus; postocellar line almost twice as long as the ocellocular line; antennæ slightly thickened apically, the third and fourth joints subequal; mesonotum with rather large, well defined, separated punctures; the suture between the scutellum and mesonotum foveolate; mesopleuræ more finely punctures than the notum, the suture strongly foveolate; sides and posterior face of propodeum shining, with small well separated punctures, posterior face with a broad irregularly foveolate furrow, enclosure sharply defined by strongly foveolate sutures, a median foveolate furrow which is broader anteriorly, surface with well defined punctures; third cubital cell strongly narrowed to radius where it is shorter than the second; first and second recurrent veins separated by a distance about as great as the length of third cubital cell on the radius; first dorsal segment with small, setigeous punctures, the following dorsal segments finely reticulate; pygidium rather narrow, with rather large, close punctures covered with fuscous hair; second ventral segment prominently angular basally, with large punctures interspread among the fine close ones which cover the entire center. Black; two basal spots on clypeus, scape beneath, line on pronotum, tubercules, spot behind, spot above tegulæ, metanotum, small spot on propodeum, band on first three dorsal segments (broadest on the first) and lateral spots on second ventral segment yellow; basal three joints of flagellum beneath, tegulæ, legs except the dusky coxæ and trochanters and slightly yellowish anterior tibiæ and tarsi ferruginous; pile fuscous; wings dusky hyaline, radial cell strongly clouded; venation dark brown, stigma paler.

Texas. One female from the Belfrage collection.

*Type*.—Cat. No. 13747, U.S.N.M.

From the description *Gorytes sapellonis* Baker would seem to be a very different insect.

## GORYTES (PSEUDOPLISUS) GYPONACINUS, new species.

*Female*.—Length 10 mm. Anterior margin of clypeus truncate; eyes strongly converging to clypeus; impressed middle line strong; front very closely finely punctured with large, widely separate punctures intermingled; antennæ normal for this group; mesonotum and scutellum with fine close punctures; suture between mesonotum and scutellum foveolate; metapleural suture foveolate at top; bounding sutures of enclosure subfoveolate; extreme lower portion of posterior face rugose; suture between metanotum and propodeum foveolate; abdominal segments shining, the apical ones dulled with fine tessellation; pygidium with large, separate punctures. Black; clypeus except apical margin, spot above, lower half of inner orbits, scape, line on pronotum, tubercles, spot behind, line on scutellum metanotum, large spots on propodeum, apical band on all dorsal abdominal segments, knees and legs below yellow or slightly brownish-yellow; wings clear except fuscous radial cell; venation including stigma dark brown.

*Male*.—What may be to be the male differs from the female besides the usual sexual differences, in the more strongly foveolated suture between the metanotum and propodeum; and the infuscate posterior tarsi.

Washington, District of Columbia. One female seen storing her nest with a green bug (*Gypona VIII-lineata flavilineata* det. Heidemmann) July 5, 1909, by A. K. Fisher. The male from Waldoboro, Maine, collected July 24, 1909, by J. H. Lovell and recorded under his number 4514.

*Type*.—Cat. No. 13748, U.S.N.M.

This seems to be nearest to *rufomaculatus* Fox, but is not that species; in some ways it is like *venustiformis* Rohwer, but the clearer wings will readily separate it from that form.

Since the above was written three metatypes have been studied; two males, Trenton, New Jersey, August 10, 1906, and a female, Germantown, Pennsylvania, August, 28, 1906. Collected by H. S. Harbeck.

## GORYTES (PSEUDOPLISUS) VENUSTIFORMIS, new species.

*Male*.—Length about 10 mm. Allied to *venustus* Cresson, but differs from that species in the following manner: The large, sparser punctures of head and mesonotum; apical joints antennæ shorter and normal (not rounded beneath); lateral sutures of enclosure faintly foveolate; a yellow spot below tegulæ; yellow spots on the propodeum much larger; apical half of the wings dark brown, not yellowish.

Boulder, Colorado. One male collected at flowers of *Helianthus pumilis*, July 31, 1908, by S. A. Rohwer.

*Type*.—Cat. No. 13749, U.S.N.M.

## GORYTES (HOPLISUS) HELIANTHI, new species.

*Female*.—Length about 10 mm. Differs from *diversus* Fox only as follows: Front and mesonotum more shining, without the very fine striations; antennæ more robust about as in *diversus* male; enclosure with the striæ wanting or nearly beyond base; front yellow; a black diamond-shaped spot enclosing ocelli; enclosure black, base of dorsal segments 2, 3, and 4 black, the following segments rufous; propodeum without yellow, rufous; venation darker and the second discoidal cell fuscous.

Boulder, Colorado. One female collected at flowers of *Helianthus pumilis*, September 8, 1908, by S. A. Rohwer.

*Type*.—Cat. No. 13750, U.S.N.M.

## GORYTES (HOPLISOIDES) KNABI, new species.

Belongs near *denticulatus* Packard, but vertex is flatter, the scutellum with sparser punctures, the clypeus not so angled above, the striæ of enclosure better defined, legs much darker, costa and stigma dark, and is slightly smaller.

*Male*.—Length 7 mm. Anterior margin of the clypeus truncate, the surface with fine close punctures, with a few large punctures scattered over it; front finely granular, with large, distinct, widely separate punctures; depression from the anterior ocellus distinct though not strong; postocellar line much greater than the ocellular line; eyes converging to clypeus but not strongly so; third antennal joint distinctly longer than fourth; flagellum thickened apically; dorsulum and scutellum with large, distinct punctures; suture between the dorsulum and scutellum foveolate; large punctures of the mesopleuræ and propodeum somewhat sparser than those on the dorsulum; enclosure of the propodeum not sharply defined with about sixteen carinæ; abdomen with large punctures, those of the first segment smaller and sparser; spines of the legs feeble. Black; scape in front, narrow line on most of inner orbits, line on pronotum, tubercles, spot behind, posterior border of scutellum, line on post-scutellum, large spots on metathorax, first dorsal segment except a large median basal spot, a narrow line on the dorsal and ventral segments 2-5 yellow; femora and tibiæ beneath brownish-yellow. Wings hyaline, radial cell clouded; venation brown.

Progreso, Yucatan, Mexico. One male collected August 6 by Mr. F. Knab (for whom the species is named) during an hour's stay on shore.

*Type*.—Cat. No. 13751, U.S.N.M.

## Family TRYPOXYLONIDÆ.

## Genus PISON Spinola.

## PISON CRESSONI, new species.

Perhaps closest to *conformis* Smith, but differs in many important points from the description of that species.

*Male*.—Length 10 mm. Anterior margin of clypeus with three obtuse teeth, the middle one broader and truncate, the lateral ones rounded; false margin of clypeus wavy; space between the eyes at the clypeus somewhat greater than the space between them at the vertex; furrow from anterior ocellus slightly indicated; postocellar line subequal with ocellocular line; a faintly depressed, transverse area behind lateral ocelli; head, including clypeus to false margin, finely granular; antennæ thickened apically, first joint of flagellum longer than second; mesonotum with close, small distinct punctures; scutellum with larger and sparser punctures; propodeum not channeled and with the punctures somewhat more widely separated than those on the dorsulum; posterior face with the usual median channel, the lowest part faintly striated; propodeum laterally shining, with small, separate punctures; legs without spines; abdomen punctured like mesonotum, narrow apical margin of basal segments depressed. Black; three basal antennal joints ferruginous; tegulæ and tubercles brownish; with the exception of the sides of propodeum the insect is clothed with fuscous pile, the pile more evident on the orbital margins and propodeum dorsally. Costal margin of wings and area before basal nervure dark fuscous, the rest of the wings subhyaline; venation brown, stigma paler.

San Antonio, Nicaragua. Two males collected May, 1899.

*Type*.—Cat. No. 13752, U.S.N.M.

Named after Mr. E. T. Cresson.

## Family LARRIDÆ.

## Genus TACHYSPHEX Kohl.

## TACHYSPHEX HELIANTHI, new species.

In Fox's table to the Nearctic species of *Tachysphex* this species runs in with *amplus* Fox, but it is quite different from any species of this section. It may be easily separated from the described species by the long antennæ, coarse sculpturing, and small size.

*Female*.—Length 6 mm. Clypeus rounded out medianly, the lateral angles obtuse, apical part shining, with large widely separated punctures, basal part with small close punctures; mandibles with two blunt teeth near inner middle; front with close, rather small, well-defined punctures, the punctures of the vertex sparser;



depression behind the lateral ocelli not sharply defined, with a median furrow; interocellar area indistinctly parted, front without an impressed line; space between the eyes at the vertex subequal with the length of the third antennal joint; antennæ slender, longer than the head and thorax united, scape shorter than the two following joints, third joint longer than fourth; mesonotum and scutellum with rather large, well-defined, separated punctures, those of the scutellum more widely separated, scutellum not impressed; dorsal aspect of propodeum coarsely granular, sides and posterior face punctured, posterior face with a median furrow which is separated from the dorsal aspect by a carina; legs feebly spined, inner calcarium of posterior tibiæ much shorter than the basitarsis; second cubital cell on radius longer than third; abdomen finely coriaceous, the first three dorsal segments broadly depressed apically; pygidium well defined, a little more than twice as long as wide at base, apically impunctate, basally finely granular with a few punctures. Shining black; apices of mandibles and tarsi piceous; scape in front, four basal flagellar joints and a spot on tegulæ ferruginous; wings dusky hyaline, the duskieness more prominent as a band below stigma, iridescent; venation blackish; insect almost nude.

Boulder, Colorado. One female collected on flowers of *Helianthus pumilus*, September 8, 1908, by S. A. Rohwer. The eyes in life are dark rufous.

*Type*.—Cat. No. 13754, U.S.N.M.

TACHYSPHEX GILLETTEI, new species.

*Female*.—Length 11 mm. Clypeus rounded out anteriorly with a small lateral tooth; region around the antennæ with close, rather fine punctures; front with larger and well separated punctures; interocellar area with the punctures denser than those on the front; vertex punctured like the front; space between the eyes at the vertex about equal to the length of antennal joints two and three; seen from the front the head between the eyes is emarginate; third antennal joint but little shorter than the fourth; mesonotum at the sides closely finely punctured; in the middle with a few scattered punctures, giving it a shining appearance; scutellum convex, shining, not impressed, sculptured like the mesonotum; dorsal aspect of propodeum finely granular, sides and posterior face finely, transversely striated; fovea of posterior face not very large; second cubital on the radius much wider than the third on the same nervure; legs rather strongly spinose; abdomen shining, impunctate; pygidium about twice as long as broad at base, with a few rather large punctures. Black; tegulæ testaceous; spines and tarsi beyond the first joint rufous; abdomen clear red; eyes (dry) greenish; wings hyaline, venation testaceous; entire insect almost nude.

Rocky Ford, Colorado. One female collected June 4, 1904. Collector unknown. Named in honor of Prof. C. P. Gillette.

*Type*.—Colorado Agricultural College.

In Fox's table this seems to be nearest to *T. amplus* Fox (New Mexico and Nevada), but that species does not have the occiput emarginate, the sculpture of the mesonotum is different, and the venation is not testaceous. Disregarding the space between the eyes at the vertex, it is close to *T. semirufus* (Cresson), but it is larger, more robust, the venation is not black, the mesonotum and pygidium are somewhat different.

**TACHYSPEX COQUILLETTI, new species.**

Related to *amplus* Fox. The female may be separated from this species by the smaller size and the different dentation of the clypeus.

*Female*.—Length 8 mm. The depressed margin of the clypeus crenulate, with five broad, rounded teeth, the lateral teeth subangulate; surface of the clypeus shining, with small separate punctures; front with close distinct punctures, those of the vertex larger and sparser; interocellar area strongly parted, the vertex not so strongly so; space between the eyes at the vertex subequal with the third antennal joint; antennæ hardly antennuate, the third joint slightly shorter than the fourth; mesonotum and scutellum rather coarsely granular, scutellum not parted; propodeum sharply truncate posteriorly, the dorsal and posterior aspects separated by a carina, dorsal aspect granular, sides striato-granular, posterior face striate; legs rather strongly spined; inner calcarium of the posterior tibiæ shorter than the hind basi-tarsis; second cubital cell longer on the radius than the third; abdomen shining, practically impunctate; pygidium poorly defined, not one and a half times as long as the basal width, broadly rounded apically. Black; tegulæ testaceous; abdomen and tarsi red or reddish; tibiæ and hind femora piceous; head, thorax, and legs with dense silvery pile; wings hyaline, iridescent; venation pale brown.

*Male*.—What may be the male hardly differs from Fox's description of the male of *amplus*, and until a specimen of *amplus* male has been examined can not be separated.

Los Angeles County, California. One female and two males collected by Mr. D. W. Coquillett, for whom the species is named.

*Type*.—Cat. No. 13755, U.S.N.M.

**TACHYSPEX ARGYROTRICHUS, new species.**

*Male*.—Length about 8 mm. Clypeus subtruncate, with a small lateral tooth, basal portion finely, closely punctured; front and vertex finely, closely granular; no impressed line from the anterior ocellus; occiput flat; space between the eyes at the vertex about the same

as the length of antennal joints three and four; fourth antennal joint a little longer than third; mesonotum finely, closely punctured or granular; scutellum punctured with distinct punctures; dorsal aspect of propodeum closely granular, sides and posterior face finely, transversely striated; fovea of the posterior face not sharply defined; emargination of the fore femora rounded; inner calcarium of the posterior tibiæ about the same length as the basitarsus; second and third cubital cells on the radius of about the same width; abdomen above finely reticulated, more strongly so apically; eighth ventral plate broad, very shallowly circularly emarginate, lobes wanting. Black; tegulæ ferruginous; four apical joints of the tarsi rufous; three basal segments of the abdomen red; eyes (dry) greenish; wings yellowish hyaline, venation rather weak, testaceous; face clypeus; thorax and abdomen above with rather sparse silver pile.

Trinidad, Colorado. One male collected July 19, 1899. Collector unknown.

*Type*.—Colorado Agricultural College.

This species is closely related to *T. exsectus* Fox, but is distinguished from that species by the yellow wings, the testaceous venation and the clypeus being armed with a lateral tooth; the scutellum not being impressed.

TACHYSPHEX JOHNSONI, new species.

*Female*.—Length 8 mm. Anterior margin of the clypeus rounded out, with two rather small lateral teeth, near the eyes is a larger, sharper tooth; basal portion of clypeus finely, closely punctured; front with distinct, rather close punctures; vertex more finely and closely punctured; a furrow from the anterior ocellus to level of the antennæ; occiput flat; distance between the eyes at the vertex a little greater than the length of antennal joints two and three, but not as great as the length of antennal joints three and four; third antennal joints a little shorter than the fourth; mesonotum and scutellum finely, closely punctured; scutellum not impressed; dorsal aspect of propodeum finely granular; sides and posterior face transversely striated, the striæ on the posterior face stronger; posterior face with a somewhat heart-shaped fovea; legs not strongly spinose; inner calcarium of the posterior tibiæ as long as the basitarsis; second and third cubital cells of about equal width on the radius; abdomen apparently impunctate; pygidium a little more than twice as long as broad at the base, poorly defined with large widely separated punctures. Black; mandibles at the apex and apical joints of the tarsi rufous; tegulæ luteus; two basal segments of the abdomen clear red; eyes (dry) pale green; wings hyaline; venation testaceous and rather weak; face, clypeus, femora beneath, tibiæ and thorax more sparsely, and bands on the dorsal abdominal segments with silvery pile.

Cope, Colorado. One female collected August 9, 1905, by S. A. Johnson, for whom the species is named.

*Type*.—Colorado Agricultural College.

This species is close to *T. mundus* Fox, but may be distinguished from that species by the broader, poorer defined, sparser punctured pygidium; the absence of a transverse carina separating the dorsal aspect of propodeum from the posterior face; the more shining and finer sculptured front; the fewer punctures of the clypeus; and the bright red color of the abdomen.

**TACHYSPHEX OPWANUS, new species.**

*Male*.—Length 7.5 mm. Anterior margin of the clypeus rounded out, teeth small almost wanting; front finely granular; vertex with fine punctures; occiput flat; furrow from the anterior ocellus distinct; space between the eyes at the vertex greater than the length of antennal joints two and three, but not as great as the length of joints three and four; third antennal joint distinctly longer than the fourth; mesonotum and scutellum finely closely punctured; dorsal aspect of propodeum finely granular; sides shining very finely striated; posterior face not separated from the dorsal aspect by a transverse carina, rather coarsely transversely striated, fovea distinct sharply defined; emargination of the fore femora rounded; inner calcarium of the hind tibiæ almost as long as the basitarsus; second and third cubital cells of about equal width on the radius; abdomen very finely punctured; last ventral plate rather narrow, arcuately emarginate lobes narrow and short. Black; eyes (dry) green; tegulæ ferruginous; four apical joints of the tarsi two basal segments of the abdomen, except the base of the first rufous; wings slightly yellowish hyaline, venation pale brown; clypeus, femora beneath and bands on the dorsal abdominal segments covered with silvery pile; front with golden pile.

Golden, Colorado. One male collected in July, by C. P. Gillette.

*Type*.—Colorado Agricultural College.

This species is something like *T. exsertus* Fox. It is also similar to *T. mundus* Fox, but it may be known from both of these by the golden pile of the front and other characters.

The last three species described resemble each other in general appearance, but may be separated as follows:

- Front with golden pubescence; posterior face of the propodeum coarsely striated; teeth of the clypeus small.....*opwanus*.  
 Front without golden pubescence; posterior face of the propodeum not coarsely striated; teeth of the clypeus larger..... 1.  
 1. Anterior margin of the clypeus with two lateral teeth; apical third of the clypeus smooth with large scattered punctures; inner calcarium of the hind tibiæ as long as the basitarsus.....*johnsoni*.  
 Anterior margin of the clypeus with one lateral tooth; entire clypeus closely punctured; inner calcarium of the hind tibiæ shorter than the basitarsus.....*arygrotrichus*.



## TACHYSPHEX MAURUS, new species.

The female runs in Fox's table to *nigrior* Fox, but the clypeus has two small lateral teeth, and the punctures of the mesonotum are small and widely scattered. The male runs in the same table to *mundus* Fox, but the first joint of the flagellum is one-half as long as the second, and the inner calcarium of the hind tibiæ is shorter than the hind basitarsis.

*Female*.—Length 9 mm. Front with small separate punctures, closer along the inner orbits; interocellar area closely punctured, indistinctly parted; vertex with widely separated punctures, and a Y-shaped impressed line; space between the eyes at the vertex greater than the length of the second and third antennal joints, but much less than the length of the third and fourth; third joint much shorter than the fourth, the fourth and fifth subequal; propodeum granular dorsally, punctured laterally, striate posteriorly; second cubital cell longer on the radius than the third; inner calcarium of the hind tibiæ subequal with the length of the hind basitarsis; hind basitarsis curved basally; apical third of the dorsal abdominal segments depressed; pygidium well defined twice as long as the basal width, with well-separated punctures, apex narrowly truncate. Black; tegulæ, spines, and calcaria testaceous; rather densely clothed with silvery pile; wings hyaline, iridescent, venation dark brown.

*Male*.—Length 6 mm. Clypeus sharply rounded medially, the teeth small; front closely and uniformly punctured; abdominal segments not as broadly depressed as in the female; last ventral segment squarely emarginate, lobes sharp, narrow; hind basitarsis not curved. Otherwise as in the female.

Lee County, Texas. Two females and two males collected by Rev. G. Birkmann in May, June, and August.

*Type*.—Cat. No. 13756, U.S.N.M.

## TACHYSPHEX NEOMEXICANUS, new species.

Belongs in with *montanus* (Cresson) *pauvillus* Fox, and *consimilis* Fox, but may be separated from these by the conformation of the clypeus, the size and the color.

*Female*.—Length 12 mm. Anterior margin of the clypeus crenulate, the lateral angles not sharp; clypeus strongly convex, the lower portion smooth, shining, with large, separate punctures, basal portion with close, small, distinctly defined punctures; front with distinct, close, well-defined punctures; the punctures of the vertex separated; antennal foveæ sharply defined above, large; occiput seen from above straight; an impressed line extending from occiput to between bases of antennæ, interrupted only by the subtriangular-shaped depression behind the lateral ocelli and the anterior ocellus; space between the eyes at vertex greater than the length of antennal

joints two and three, but less than the length of joints three and four; antennæ of the normal type, the third joint but little shorter than the fourth; mesonotum and scutellum shining, with rather large, separate, well-defined punctures; scutellum not impressed; mesopleuræ more closely punctured than the notum; dorsal aspect of the propodeum coriaceous, sides and posterior face striate, posterior face with a shallow median fovea; legs strongly spinose, inner calcarium of posterior tibiæ shorter than the basitarsis, the abscissæ of the radius are, in order of their length, the longest first, 4123; broad apical margin of first and second segments depressed; abdomen dulled with very fine tessellation; pygidium well margined, with large, widely separated punctures. Black; outer margin of tegulæ pale brown; apical tarsal joints reddish; abdomen bright red; wings hyaline, slightly dusky, vitreous; venation pale brown, costa and stigma black, sparsely clothed with silvery pile.

Rio Ruidoso (altitude about 6,500 feet), White Mountains, New Mexico. One female collected August 7 "under dead pine bark," by C. H. T. Townsend.

*Type*.—Cat. No. 13757, U.S.N.M.

**TACHYPHEX FEDORENSIS, new species.**

*Female*.—Length 15 mm. Anterior margin of the clypeus rounded out, with two distinct lateral teeth, and slightly emarginate in the middle; the apical half shining, with a few large punctures; the basal part finely granular. Front and vertex closely punctured; a distinct median furrow from between base of antennæ almost to the occiput; space between the eyes at the top about equal to the length of antennal joints three and four; third and fourth antennal joints about equal; mesonotum closely, finely punctured, appearing almost granular; scutellum not impressed, punctures separated and distinct; mesopleuræ granular, dull; dorsal aspect and sides of propodeum granular; posterior face finely striated, with a distinct furrow which broadens above into a V-shaped fovea; legs robust, strongly spinose; second and third cubital cells of about equal length at the top; abdomen above dull; finely granular; a little more shining ventrally, a series of large punctures along the apical ventral margins; pygidium shining, with rather large sparse punctures; about twice as long as broad at base. Black; tarsi and spines brownish; wings smoky, venation pale brown; face and clypeus slightly, mandibles and apical margins of abdominal segments one to three with fine silvery pile.

*Male*.—Length 10 mm. Clypeus slightly produced in the middle, without teeth; punctured all over, the apical part with the punctures a little larger and more separated; the middle furrow of front not as distinct as in the female; dorsal aspect of a propodeum slightly

impressed in the middle; legs not so strongly spinose as in female; emargination of the fore femora rounded; emargination of the eighth ventral plate broad, rather shallow, arcuate; lobes short, triangular. Pubescence of face and clypeus denser than in female; the thorax with silvery pubescence.

Fedor, Lee County, Texas. Females and males collected in May and June by Rev. G. Birkmann.

*Type*.—Cat. No. 13758, U.S.N.M.

This insect belongs near *punctifrons* Fox. It may be known from *punctifrons* by the presence of two teeth on the clypeus and the absence of "dense sericeous pile." The wings are as dark as some specimens of *æthiops* Cress. The male is separated from the male of *punctifrons* by the greater space between the eyes at the top; in *punctifrons* it is about equal to the antennal joints three and four; in *fedorensis* it is greater than joints three and four. The male is separated from *intermedius* Viereck by the denser punctured mesonotum, etc.

TACHYSPHEX BRUESI, new species.

Separated from *tenuipunctus* Fox, its nearest ally, by the sculpture of the propodeum and black abdomen.

*Female*.—Length 8 mm. Clypeus broadly rounded apically with two small lateral teeth, its surface and the front coarsely granular; vertex and interocellar area closely punctured, neither distinctly parted; depression of the vertex shallow, poorly defined; the space between the eyes at the vertex greater than the length of the second and third antennal joints, but less than the third and fourth; the third and fourth antennal joints subequal; mesonotum with large separate punctures, those on the sides closer; scutellum with well separated punctures, not impressed; propodeum subtruncate and transversely striate posteriorly, dorsally finely reticulate, laterally striato-reticulate; third cubital cell longer on the radius than the second; legs not strongly spined, inner calcarium not as long as the hind basitarsis; apical margins of the dorsal abdominal segments narrowly depressed; pygidium well defined, two and a half times as long as broad; sparsely punctured, the apex narrowly truncate. Black; tarsi and tegulæ somewhat brownish; wings dusky-hyaline, iridescent; venation brown.

Milwaukee County, Wisconsin. One female from the F. Rautenberg collection. Also one female in the same collection from Florida.

*Type*.—Public Museum of Milwaukee, Wisconsin.

*Paratype*.—Cat. No. 13759, U.S.N.M.

Named for Mr. C. T. Brues, who sent the specimens for study.

## TACHYSPHEX SPHECODOIDES, new species.

*Female*.—Length about 7 mm. Median part of clypeus margined anteriorly, the lateral angles sharp, with a short, obtuse median tooth; basal portion of the clypeus convex, densely punctured; front with large separate punctures, vertex more sparsely punctured than the front; furrow from anterior ocellus distinct; occiput flat a little lower than the eyes; distance between the eyes at the vertex about the same as the length of the antennal joints three and four; third and fourth antennal joints about equal; anterior third of the mesonotum finely, closely punctured, the posterior part shining, sparsely punctured; scutellum convex shining, punctured like the posterior part of the mesonotum; mesonotum finely, closely punctured; dorsal aspect of propodeum finely granular, at the base there are a number of short longitudinal carinæ, the middle one the longest; sides finely striated, near the top the striæ are broader and more distinct; posterior face shining, finely transversely striate; fovea very well defined, pointed beneath; second and third cubital cells about equal on the radius; abdomen shining, impunctate; pygidium not well defined, smooth, almost without punctures; about twice as long as wide at base. Black; tegulæ on the outer margins ferruginous; eyes (dry) dark green; mandibles at apex and two apical joints of tarsi dark rufous; abdomen clear red. Wings clear hyaline, iridescent; venation brown; face, clypeus, pleuræ, small patches on sides of abdomen and the anterior femora beneath with silvery pubescence; antennæ clothed with fine white pile.

Rocky Ford, Colorado. One female collected May 12, 1905. Collector unknown.

*Type*.—Colorado Agricultural College.

A very distinct species, perhaps most closely related to *T. punctulatus* H. S. Smith, but the sculpture of the mesonotum and propodeum, and the clearer wings, will easily separate it from that species.

## TACHYSPHEX LEENSIS, new species.

*Female*.—Length about 7 mm. Anterior margin of the clypeus rounded, the middle broadly produced, the angles evident but not sharp; anterior part of the clypeus shining, with large separate punctures, the sculpture of the basal part not clearly seen on account of the pubescence; head opaque, very finely granular; space between the eyes at the vertex a little greater than the length of the antennal joints two and three; third and fourth antennal joints about equal; entire thorax very finely granular; scutellum not impressed; posterior face with an oval-shaped fovea; radial cell obliquely truncated; third cubital cell wider on the radius than the second; legs feebly spined, spines feeble and pallid; tarsal bristles long; piceous; abdomen subopaque, microscopically punctured; pygidium well defined,



narrow, acute at apex, very sparsely punctured. Black; mouth parts and tegulæ pale brown; two basal segments of the abdomen, with the exception of a spot on the second, red. (Undoubted specimens will be found with the abdomen entirely black.) Wings dusky hyaline, iridescent; venation brown; clypeus and front with close silvery pile; thorax and abdomen in certain lights with close silvery pile.

Lee County, Texas. Collected May 8, 1906, by Rev. G. Birkmann.

*Type*.—Cat. No. 13760, U.S.N.M.

The space between the eyes at the vertex would place this species in the *tarsatus* group, but it is not any of these being nearest to *punctulatus*, from which it may be distinguished by the different sculpture, the fourth antennal joint not longer than the third, and other characters. It has some resemblance, in general habitus, and in the inner calcarium of the posterior tibiæ being a little longer than the basitarsus, to *mundus* Fox; but that species has the posterior face of metathorax transversely striated, the dorsulum and scutellum punctured and the eyes are closer together at the vertex. It is also somewhat like *consimilis* Fox, but the sculpture of the thorax and distinct pubescence on the abdomen will distinguish it from this species.

TACHYSPHEX WHEELERI, new species.

*Female*.—Length a little over 5 mm. Anterior margin of the clypeus rounded out, with two small, distinct lateral teeth, basal portion finely granular; front finely granular, vertex finely punctured; depression behind lateral ocelli rather deep, parted by a furrow; interocellar area by a deep furrow, which extends to between the bases of the antennæ, but is not as strong below the anterior ocellus; distance between the eyes at the vertex about the same as the length of the antennal joints two and three; antennæ normal, third joint a little shorter than the fourth, mesonotum and scutellum finely punctured, the punctures of the scutellum a little more separated than those of the mesonotum, scutellum not impressed; dorsal aspect of propodeum finely granular, without an impressed line; sides finely striato-granular; posterior face separated from the dorsal aspect by a carina, which is broken in the middle by the upper part of the triangular-shaped fovea, transversely striated; radial cell obliquely truncate, second cubital cell wider on the radius than third; legs feebly spinose, spines feeble and pallid; abdomen shining, apparently impunctate; pygidium well defined for species of this group, with large well separated punctures, acute at apex, and a little more than twice as long as broad at base. Black; palpi and tegulæ brownish; apex of mandibles piceous; abdomen clear red; usual silvery facial pubescence; thorax and abdomen in certain lights, with silvery pile.

Lee County, Texas. Collected in May, 1907, by Rev. G. Birkmann.

*Type*.—Cat. No. 13761 U.S.N.M.

This species, which is named in honor of Dr. W. M. Wheeler, belongs to the group composed of *tarsatus* (Say); *semirufus* (Cresson), *punctulatus* H. S. Smith, *hitei* Rohwer, and *antennatus* Fox. The members of this group have the abdomen clear red, the space between the eyes at the vertex about the same as the length of the second and third antennal joints; and the pygidial area rather poorly defined. The females may be separated as follows:

- “Flagellum long, not setaceous, sparsely acuminate apically” (Fox); clypeus with one lateral tooth (pygidium two and one-half times as long as broad at base).  
 Texas..... *antennatus* Fox.
- Flagellum normal, acuminate apically..... 1.
1. Pygidium not twice as long as broad at base, broad, poorly defined (clypeus with two lateral teeth). Colorado..... *hitei* Rohwer.
- Pygidium twice or more than twice as long as broad at base..... 2.
2. Mesonotum very closely punctured, the punctures not becoming sparser posteriorly; scutellum similar (clypeus with two lateral teeth). Eastern United States..... *tarsatus* (Say).
- Mesonotum more sparsely punctured, especially posteriorly; scutellum shining, usually more sparsely punctured than the dorsulum..... 3.
3. Clypeus with two lateral teeth; leg spines pallid..... *wheeleri* Rohwer.
- Clypeus with one lateral tooth; leg spines black or piceous..... 4.
4. Clypeus with large, widely scattered punctures..... *punctulatus* H. S. Smith.
- Clypeus granular; front granular..... *semirufus* (Cresson).

What may be the male of *wheeleri* may be described as follows: Length 4 mm. Slender; clypeus rounded on the anterior margin, without lateral teeth; front very finely granular, vertex punctured; space between the eyes at the vertex about the same as the length of antennal joints three and four; third antennal joint a little shorter than the fourth; mesonotum and scutellum shining, sparsely punctured; scutellum rather strongly convex, not impressed; dorsal aspect of propodeum granular, sides and posterior face finely transversely striated; legs almost spineless, the spines small and white; radial cell obliquely truncate; second and third cubital cells about equal on the radius; abdomen shining, almost impunctate; eight ventral plate rather deeply circularly emarginate, lobes rather broad. Black; palpi, tegulae, and apex of the tarsi brownish; two basal segments of abdomen red; front and clypeus with silvery pubescence. Wings hyaline, iridescent; venation brown.

The male was collected by Rev. G. Birkmann in Lee County, Texas, August 8, 1905.

## Genus TACHYTES Panzer.

## TACHYTES CHRYSOCERCUS, new species.

Distinct in the large size, yellowish and dusky wings, red legs, golden pubescence of the pygidium and subequal first and second flagellar joints.

*Female*.—Length 16 mm. Anterior margin of the clypeus rounded, somewhat crenulate laterally; head and thorax dull, finely closely punctured; ocellar area parted by a furrow, area behind the ocelli slightly depressed; third antennal joint slightly longer than the fourth; scutellum not impressed; propodeum finely granular, furrow on the posterior face distinct, a triangular-shaped fovea on apex of dorsal aspect; legs strongly spined; second cubital cell about twice as long on the radius as the third; abdomen hardly as long as the head and thorax; pygidium sharply defined, the apex rounded. Black; mandibles, legs below bases of femora and abdomen (the abdomen is darker) ferruginous; tegulæ paler than the femora; densely clothed with golden pile, scape, head, and metathorax with long fuscous hair; pubescence of abdomen and pygidium especially bright and dense. Wings yellowish, apices dusky; venation reddish yellow. Pulvilli black.

Meadow Valley, Mexico. One female collected by Mr. C. H. T. Townsend.

*Type*.—Cat. No. 13762, U. S. N. M.

## TACHYTES XENOFERUS, new species.

From the descriptions evidently belongs near *vicinus*, but is distinguished by the space between the eyes at vertex being greater than the length of the second and third antennal joints not “nearly the length of;” the ventral segments do not bear “a dense tuft of longish brownish hair;” the wings can hardly be said to be “flavo-hyalinis,” although they are slightly yellowish.

*Female*.—Length 10 mm. Anterior margin of the clypeus rounded, armed laterally with six small teeth, the two inner ones larger, surface with distinct separate punctures; front finely granular, impressed line wanting; ocellar and surrounding area gently raised; vertex finely punctured, the depression shallow; space between the eyes at vertex greater than the length of the second and third antennal joints, but much less than the length of the third and fourth joints; scape pilose hairy beneath, flagellum pilose, the third and fourth joints equal; thorax with close, fine punctures; propodeum rounded posteriorly, distinctly shorter than the mesonotum, no well-defined channel on the transversely striato-punctate posterior face; third cubital cell slightly longer on the radius than the third; legs rather robust, feebly spined; ventral segments almost without hair; pygidium broad, well

defined, apex rather acutely rounded. Black; palpi tegulæ, and calaria testaceous; tarsi and tibiæ somewhat piceous; densely clothed with silvery pile, that of the thorax slightly yellowish; pygidium with silvery hair. Wings hyaline, iridescent, faintly yellowish; venation testaceous.

*Male*.—Length 9 mm. Clypeus rounded, without teeth; third antennal joint shorter than the fourth; anterior coxæ without spines; pygidium truncate; last ventral plate deeply, broadly, arcuately emarginate, lobes narrow rounded at apex. Otherwise very like the female.

Deesa, India. Described from a stylopized male and female, collected June, 1898, by Lieut. Col. C. G. Nurse.

*Type*.—Cat. No. 13763, U.S.N.M.

This may only be a stylopized aberration of *Tachytes vicinus* Cameron, but at present it is impossible to prove such to be the case.

#### Genus LARROPSIS Patton.

*Type*.—*Larrada tenuicornis* Smith (original designation).

Patton in describing<sup>1</sup> the genus *Larropsis* designated as the type *Larrada tenuicornis* Smith. His description of the genus does not apply to this species which led Kohl and Fox to treat it as an unknown genus. The type-species is, however, a well-known species and is congeneric with *Larrada distincta* Smith, the chosen type of *Ancistromma* Fox. Fox's genus being described a year later must rank as a synonym of Patton's.

LARROPSIS PATTON, Ent. News, vol. 3, 1892, p. 90.

*Ancistromma* FOX, Proc. Acad. Nat. Sci. Phila., 1893, p. 487.

#### LARROPSIS FILICORNIS, new species.

*Female*.—Length about 11 mm; antennæ about 7 mm. Slender; the shape of the head recalls that of the genus *Lyroda*. Anterior margin of the clypeus rounded out, not distinctly dentate, but laterally there are faint indications of teeth; anterior part of the clypeus is coarsely, irregularly punctured, the basal part is like the front; eyes not nearly as strongly converging as usual, the distance between them at the vertex a little greater than the length of antennal joints two to four; front with an indistinct impressed line; depression behind the lateral ocelli not strong; front and vertex rather closely punctured. Antennæ long and slender; the third joint a little shorter than the fourth; apical joint equal in length with the preceding; mesonotum, scutellum, and mesopleuræ punctured similar to the front, scutellum not impressed; dorsal aspect of propodeum rather finely reticulato-granular, at some angles appearing finely obliquely striated from the median furrow; a deep, longitudinal, foveolated

<sup>1</sup> Ent. News, vol. 3, 1892, p. 90.



furrow from the base to almost the apex; posterior face granular with a few transverse striæ, the upper margin with a distinct transverse carina; sides granular; legs rather robust, but not very strongly spined; tarsal comb of short bristles as in *Tachytes*; the inner calcarium of the posterior tibiæ not as long as the basitarsus; third cubital on radius equal to a little longer than the second; abdomen shining, finely reticulate; pygidium well defined, apparently twice as long as broad at base, smooth, with a few scattered punctures, rounded at the apex. Black; palpi, tegulæ, apices of tarsi and calcarium reddish testaceous; head, thorax, and abdomen with short white pile; wings distinctly dusky, especially at the tips; venation pale brown.

Lee County, Texas. Collected May 10, 1898. Collected by Rev. G. Birkmann at the town of Fedor.

*Type*.—Cat. No. 13764, U.S.N.M.

The pygidium of the paratype is reddish, and the furrow of the propodeum is not so distinct, the striate being longer.

Related to *Larropsis tenuicornis* (Smith), but may be separated by the greater space between the eyes at the top, and the sides of propodeum not being striate.

LARROPSIS PORTIANUS, new species.

In Fox's table to the species of *Ancistromma* this species runs to *conferta* Fox, but is quite different from that species. The male has, judging from the description, a superficial resemblance to *L. tachysphécoides* (Viereck), but the distance between the eyes at the vertex is not as great as in that species.

*Female*.—Length 7.5 mm. Anterior margin of the clypeus subtruncate, very slightly emarginate, with two lateral teeth, the outer tooth the larger, surface with small, distinct, separated punctures, some larger ones near the anterior margin; front with close, distinct punctures, vertex with the punctures somewhat more separated; an impressed line from anterior ocellus to between bases of antennæ; depression behind the lateral ocelli triangular in outline, with a longitudinal impressed line in the middle; space between the eyes at vertex a little greater than the length of second and third antennal joints; antennæ robust, scape large, not as long as the two following joints, pedicellum but longer than wide, third and fourth joints subequal in length; mesonotum and scutellum with rather large, distinct, well-separated punctures; scutellum indistinctly impressed; mesopleuræ granular; dorsal aspect of propodeum with a broad, shallow median furrow, striato-granular, the striæ poorly defined, oblique from center; posterior face sculptured like dorsal aspect with an acute median triangle, the point downward; sides of propodeum with the striæ stronger than on the dorsal surface; legs strongly spined, the inner calcarium of posterior tibiæ longer than the basi-

tarsus; first abscissa of the radius longer than second, third much longer than the second but shorter than the fourth; abdomen with distinct, small, separate punctures; pygidium not sharply defined, with large, separate punctures, about one and a half times as long as broad at base, apex obtusely rounded. Black; base of mandibles scape beneath, flagellum beneath apically, tegulæ, legs except a black spot on coxæ above, and abdomen red; head and thorax with silvery pubescence, abdomen almost nude; wings hyaline, iridescent venation testaceous.

A paratype has the second and third abscissa of the radius subequal.

*Male*.—Length 6.25 mm. Anterior margin of the clypeus rounded out, hardly dentate; sides of propodeum not as strongly striate as in the female; mandibles, antennæ, coxæ, anterior femora, bases of the four posterior femora black; abdomen ornamented with silvery pile. Except where mentioned, the male agrees with the above description of the female.

Las Cruces, New Mexico. Type female collected on staminate flowers of *Croton neomexicanum* September 25, 1895; two paratype females collected October 5, 1895; type male collected September 23, on *Gutierrezia sarothræ*, var. *microcephala*. All were collected by Prof. T. D. A. Cockerell.

*Type*.—Cat. No. 13765, U.S.N.M.

#### Genus NOTOGONIA Costa.

##### NOTOGONIA BELLA, new species.

Seems to be closest structurally to *Notogonia truncata* Cameron, but that species is colored differently.

*Female*.—Length about 10 mm. Clypeus with distinct, median size punctures, apical margin shining and with a rounded notch in the middle; head and dorsulum finely granular, scutellum somewhat shining, with distinct punctures; depression from the anterior ocellus nearly breaking all the way through the crest; depression above lateral ocelli triangular; scape carinated ventrally; third and fourth antennal joints equal; propodeum granular; longitudinal furrow of propodeum dorsally shallow; carina separating the posterior face from the dorsal aspect not sharp; femora rather robust; abdomen dull; pygidium (under high power) covered with short spines; third cubital cell a little wider on the radius than the second. Black; femora and tibiæ clear red; covered with close golden pile, longer and denser on the propodeum. Wings light amber-yellow, with a apical third streaked with lavender; venation except the pale brown costa and stigma, the color of the wing.

Tabernilla, Canal Zone, Panama. One female collected June 4, 1907, by Mr. A. Busck.

*Type*.—Cat. No. 13766, U.S.N.M.

## Genus ZOYPHIUM Kohl.

## ZOYPHIUM RUFIPES, new species.

Should easily be recognized by the red legs, size, and two small teeth on the sides of the clypeus.

*Female*.—Length 6.5 mm. Emargination of the mandibles deep; depressed, shining, median portion of the clypeus gently rounded, laterally with two small teeth; space between the antennæ at the base not quite twice as great as the space between the base of antenna and eye margin; scape subequal in length with the distance between the base of antenna and eye margin; antennæ short, thickening apically, pedicellum globose about half as long as the third antennal joint third joint distinctly longer than the fourth, apical joint obtusely pointed not as long as the two proceeding joints; head rather coarsely granular; eyes strongly diverging to the clypeus; postocellar line at least three times as long as the ocelloccipital line; pronotum somewhat declivitous; mesonotum and scutellum closely, rather coarsely punctured; suture between mesonotum and scutellum strongly foveolate; mesopleuræ rather finely punctured; propodeum dorsally and posteriorly with fine, separated punctures, sides shining almost impunctate; dorsal aspect with a broad U-shaped depression, basally with a longitudinal carina; posterior face with a large somewhat Y-shaped fovea, the tail at ventral end rounded, the arms subfoveolate outside; a strong carina separating the sides of propodeum from the dorsal and posterior aspects; femora very robust, inner calcarium of posterior tibiæ nearly as long as basitarsis; venation very like *Z. sericeum* Kohl; abdomen shining, finely closely punctured, first segment with the punctures well separated; pygidium triangular, apex rounded, densely covered with short bristle-like spines; second dorsal segment with the apical fourth depressed. Black; spot on mandibles, flagellum beneath, tubercles, tegulæ, dorsal part of pronotum (except two yellow spots), scutellum, metanotum, legs below trochanters rufous; rather densely covered with sercious pile; wings hyaline, iridescent; venation testaceous.

Duariga, Dawson District, North Queensland. One female from Mr. W. F. H. Rosenberg.

*Type*.—Cat. No. 13767, U.S.N.M.

## Genus SOLIERELLA Spinola (following Kohl).

Dr. F. F. Kohl<sup>1</sup> divides the genus *Solierella* Spinola into four sections. The species grouped together in his genus can be divided into groups on the mandibles in the following manner:

Mandibles not emarginate exteriorly.....*Silaon* Piccioli.  
Mandibles distinctly or shallowly emarginate exteriorly.....*Solierella* Spinola.

<sup>1</sup> Die Gattungen der Sphegiden, 1896, pp. 451-453.

Whether such groups should be considered as genera or not is a matter of opinion. For the present it may be well to recognize them as such.

Genus *SOLIERELLA* Spinola.

As far as known to the author this group divides itself into two, as follows:

Emargination of the mandibles strong; transverse median and basal vein interstitial or nearly.....*Solierella* Spinola.

Emargination of the mandibles weak; transverse median basad of basal vein.

*Niteliopsis* S. Saunders.

Kohl's group 3,<sup>1</sup> which is *Niteliopsis*, is not correctly defined according to Saunder's description. Kohl says, "Die Basalader entspringt interstitial." Saunder's figure shows it quite free and basad of the basal vein. The mandibles are originally described thus: "Mandibulae curvatæ, basi robustæ prope medium excavatæ, apice acutæ edentulæ."

Genus *SILAON* Piccioli.

*Sylaon* is an emendation. All the American species referred to *Niteliopsis* belong here. The species known to the author may be divided into the following groups:

Transverse median basad of basal vein; first cubital cell receiving a recurrent vein.  
group *compeditus* Piccioli.

Transverse median beyond basal vein; second cubital cell receiving both recurrent veins or the first recurrent interstitial with the first transverse cubitus.

group *vierecki* Rohwer.

Transverse median and basal veins interstitial or nearly so..... 1.

1. First recurrent vein received by the first cubital cell.....group *chilensis* Kohl.

First recurrent vein received in the second cubital cell or interstitial with the first transverse cubitus.....group *plenoculoides* Fox.

The Nearctic species would be grouped as follows, according to the above arrangement:

Group *compeditus*.

*sayi* (Rohwer).

Group *chilensis*.

*lucidus* (Rohwer).

*parvus* (Rohwer).

*niger* (Rohwer).

*affinis* (Rohwer).

*inermis* (Cresson).

*mexicanus* (Rohwer).

Group *vierecki*.

*vierecki* (Rohwer).

*fossor* (Rohwer).

*foxii* (Viereck) from description.

Group *plenoculoides*.

*plenoculoides* (Fox).

*striatipes* (Ashmead) (male, not female).

*modestus* (Rohwer).

<sup>1</sup> Die Gattungen der Sphegiden, 1896, p. 453.



## SILAON MEXICANUS, new species.

Closest to *inermis* (Cresson), but differs in the entire last ventral abdominal segment and other characters.

*Male*.—Length 4.75 mm. Middle of the clypeus produced into a broad, truncate lobe, anterior margin impunctate, shining, basally finely granular as in the rest of the front; carinæ as in *inermis* but not as strong; vertex and occiput with distinct close punctures; ocelli in nearly an equilateral triangle; pronotum rounded, neither angled or crested; dorsulum, scutellum, and mesopleuræ with rather large, distinct, rather close punctures; triangular area of the propodeum with close longitudinal striæ; propodeum laterally and posterior face finely striato-granular; legs and venation as in *inermis*; abdomen very finely sculptured, apical ventral plate entire at apex. Black; mandibles, line on pronotum, tubercles, anterior femora apically more broadly so beneath, spot on intermediate femora beneath, four anterior tibiæ and tarsi, and posterior tarsi yellowish; tegulæ and hind tibiæ brown; usual sparse silvery pubescence; wings dusky, venation black. Antennæ robust, somewhat flattened.

San Rafael, Jicoltepec, Mexico.

*Type*.—Cat. No. 13768, U.S.N.M.

Belongs to species group *chilensis* in the foregoing arrangement.

## Genus MISCOPHINUS Ashmead.

## MISCOPHINUS NIGRICEPS, new species.

Related to *M. texanus* Ashmead, but the thorax is entirely rufous and the median carina of the propodeum is incomplete.

*Female*.—Length 7 mm. Clypeus broadly rounded anteriorly with the usual lateral narrow notch; head finely, opaquely, granular; no impressed line from the anterior ocellus; anterior ocellus not surrounded by a depression; third antennal joint distinctly longer than the fourth; pro- and mesothorax with fine separate punctures; propodeum without a complete median carina, finely, obliquely striate, posterior face not so closely striate, separated from the dorsal surface by a fine carina, with a median depression; abdomen, legs, and wings normal. Rufo-ferruginous; apex of abdomen dusky; head black, clypeus, mandibles (apices piceous) and first three joints of antennæ rufo-ferruginous. Wings hyaline, apical margin broadly dusky; venation dark brown.

Santa Monica, California. One female collected by Mr. C. E. Hutchinson, September 15, 1901.

*Type*.—Cat. No. 13553, U.S.N.M.