A CONTRIBUTION TO THE KNOWLEDGE OF SOME SOUTH AMERICAN HYMENOPTERA, CHIEFLY FROM PARAGUAY

By C. SCHROTTKY

MONOBIA Saussure

On January 7, 1905, I observed a female of the solitary wasp Monobia angulosa Saussure var. cingulata Bréthes, entering a small hole in the ground. When this hole was carefully opened it showed a vertical channel widening a little beneath, 4 cm. long, terminating in a globular cell 12 mm. in diameter. In this cell nine larvæ of a noctuid were packed close together. They were of a green color with white lateral stripes and measured 10–12 mm. in length. Under these larvæ, on the bottom of the cell, was found the small whitish larva of the wasp, about 2.5 mm. long; apparently but a few days old.

MEGACILISSA Smith

On January 12, at 4 o'clock in the morning, a male of Megacilissa matutina entered my room, attracted doubtless by the shining lamp. It was still night when I was surprised by this singular visitor. Megacilissa eximia Smith had been observed on the wing after sunset and before sunrise, but never after seven o'clock in the morning. From this new record of a very early hour one may conclude that on warm nights the Megacilissæ are flying all night long, which may explain their comparative rarity in collections. They fly very rapidly and it is not easy to catch them, but they are not at all rare. If one knows their food-plants, they may at times be seen by thousands, as I found in Brazil in the case of M. eximia and here with M. matutina. I do not know whether there have been observed any other South American bees with nocturnal habits. [Compare the account of M. yarrowsi, Cresson, in Annals and Magazine of Nat. History, December, 1899, p. 411.—T. D. A. C.]

FRIESEA Schrottky

In Rev. Mus. Paul., v (1903), p. 418, and T. xiv, fig. 2 a–e, I published a new genus of Panurgidae, Friesea. Prof. T. D. A. Cockerell kindly informed me that this name was preoccupied in 1895

1 With notes by Professor T. D. A. Cockerell, signed T. D. A. C.
by Prof. K. W. von Dalla Torre and suggested to me to rename my genus. I, therefore, propose to change it to

PARAFRIESEA n. nom.

*Type, Parafriesea brasiliensis.* (Friesea brasiliensis Schrottky.)

**PROSOPIS** Fabricius

Early in November, 1904, I took a specimen of *Prosopis* on flowers of *Petroselinum sativum*. As at this time the white Mimose were flowering, I spent most of my time in hunting for the beautiful *Pepsis, Eumenes, Montezumia*, etc., visiting these shrubs. Only at the end of December, when the blossoming time of the Mimosa was over, did I remember the *Prosopis* found on the *Petroselinum* and began to watch this plant a little more carefully. In a few days I had the good fortune to obtain about fifty specimens of *Prosopis*, and nearly every day during January I added to the number. Now as this most attractive plant has ceased to flower I think it useful to record the species obtained. The fifteen species may be separated by the following table:

1. The first recurrent nervure enters the first cubital cell before its apex; wings with a fuscous cloud..............................1. *petroselini*.
   The first recurrent nervure interstitial or enters the second cubital cell; sometimes it enters the first cubital cell but in that case the wings have no fuscous cloud........................................2.
2. Scutellum and postscutellum yellow..........................2. *polybioides*.
   Scutellum yellow, the postscutellum black..........................3.
   Scutellum and postscutellum black or only the sides of the scutellum alone have a yellow spot..............................8.
3. Wings with a fuscous cloud.........................................4.
   Wings hyaline...................................................5.
   Abdominal segments with fasciae of white hairs..................4. *paulistana*.
5. Sides of the clypeus ferrugineous..............................6.
   Clypeus totally yellow.........................................5. *femoralis*.
   Abdomen with the first segment ferrugineous....................7. *rivalis*.
7. Legs black, the tibiae with the base yellow..................6. *gracillima*.
   Legs fulvous.....................................................6a. *gracillima* var. *paranensis*.
8. Scutellum on each side with a yellow spot....................8. *tricolor*.
   Scutellum black..................................................9.
   Clypeus ferrugineous..............................................10. *paraguayanensis* ♀.
   Clypeus yellow with the sides black.............................9. *itapuensis* ♀.
   First joint of antennae yellow, fulvous or ferrugineous.........11.
11. Metathorax more or less truncate........................................12.
Metathorax rounded, the horizontal and vertical, parts not separated, uni-
formly punctured........................................10. paraguayensis ♂.
Wings with a fuscous cloud......................................11. cockerellii.
No yellow spot above the clypeus.................................12. culiciformis.
14. Smaller; spot above the clypeus pentagonal; the metathorax less dis-
tinctly sculptured........................................15.
Larger; spot above the clypeus almost rectangular; the metathorax more
strongly sculptured, the first recurrent nervure interstitial.....13. tristis.
15. The yellow color of the clypeus and the face at its side, not interrupted;
 punctures on mesonotum scattered, the first recurrent nervure in-
terstitial ..............................................................14. xanthocephala.
The yellow color of the clypeus and the face on its side interrupted by a
narrow black line; punctures on mesonotum very dense, first recurrent
nervure received by the first cubital cell.............15. longicornis.

1. PROSOPIS PETROSELINI new species

Male.—Length, 6½ mm.; abdomen, 1½ mm. wide; wings, 4½
mm.; antennæ, 2¼ mm. Black; the clypeus, a trapeziform spot
above it, the face at the sides of the clypeus, and the inner orbits of
eyes nearly to their summit pale yellow; antennæ ferrugineous;
scutellum, the tubercles of the thorax and a small spot upon the
tegulae bright yellow; apical margin of the first abdominal segment
on the sides with a line of small white hairs, the apical margin of
the other segments fringed with inconspicuous white hairs. The
tibæ of the anterior legs are honey-colored, with a black longitudinal
stripe outside, extreme apex of the femora and base of the tarsi
honey-colored, the rest fuscous. Middle legs: tibæ at their extreme
base and apex, pale ferrugineous; hind legs with the tibæ at their
base pale yellow about one-fourth of their length; the rest black.
Wings hyaline, with a fuscous cloud occupying the apical half of the
median, the first cubital and the whole marginal cell, extending
beyond to the apex of the wing.

Head densely punctured; pronotum with two indistinct ferru-
gineous spots; mesonotum coarsely punctured; pleuræ with scattered,
deeply impressed punctures, metathorax opaque, truncate, covered
with very small pale hairs; the basal space enclosed by distinct carinae,
smooth, in the middle with three short longitudinal carinae; first
abdominal segment in the middle strongly punctured, the punctures
becoming finer towards the sides; second segment much more finely-
punctured, deeply depressed at its base; the punctures on the follow-
ing segments are not more distinguishable. Wings: The second
cubital cell extremely narrow; the first recurrent nervure is received by the first cubital cell a little before its apex.

Taken in December, 1904, on *Petroselinum sativum* at Villa Encarnación.

2. **PROSOPIS POLYBIOIDES** new species

*Female.*—Length, 7 1/2 mm.; abdomen, 1 3/4 mm. wide; wings, 5 1/2 mm.; antennae, 2 mm. long. Black; the clypeus in the middle, a patch above it, the face at the sides of the clypeus, the inner orbits of the eyes extending upwards nearly to their summit, and the three basal joints of the antennae dark orange-red; the sides of the clypeus and the rest of the antennae, except the apex of the last joint which is ferrugineous, are fuscous; the tubercles of the thorax and the anterior margin of the pronotum are dark orange-red; the hind margins of the tubercles are followed by a semicircular pale yellow line; the scutellum and postscutellum are bright yellow. Abdomen: First segment on its apex with a narrow fascia of white hairs laterally; apical margin of the second segment and the rest of abdomen covered with very fine yellowish hairs, the segments 2–5 with their apical margins pale brown. Legs: The inner side of the anterior tibiae and the apical half of the anterior femora are honey-colored; the posterior tibiae at their base are pale yellow. Tegulae brownish; wings hyaline, with a very dark fuscous cloud that occupies the apex of the median, the first cubital and the marginal cells, and extends to the apex of the wing.

The head is densely covered with fine punctures; the mesonotum is coarsely punctured; the pleurae with scattered deeply impressed punctures; metathorax truncate, covered with pale hairs, the basal space coarsely rugose. Abdomen: First segment shining, finely punctured, the following segments opaque. Wings: The second cubital cell receives the first recurrent nervure just in the basal angle and the second recurrent nervure a little before its apex.

This species has a striking resemblance to *Polybia scutellaris* White, but is, however, smaller.

Taken December 30, in Villa Encarnación, Paraguay.

**Note:**—The coloration of this species is variable. The extension of the orange red of the head is sometimes much reduced so that the base of the clypeus, the patch above it and the third joint of the antennae become fuscous. In one specimen the face at the sides of the clypeus is yellow. The same thing occurs with the last joint of abdomen. The margin of the pronotum has sometimes only two orange-red spots and even these sometimes disappear and the pro-
the metathorax tegulae the second basal segment the median is deeply impressed with hairs, the margins of the thorax, and the scutellum, are bright yellow; the antennae are ferrugineous in front and fuscous above; pronotum with two orange-red spots; tegulae brownish, with a minute yellow spot; the apical margins of the abdominal segments are fringed with minute white hairs, but they form no conspicuous fasciae; the whole anterior tibæ and tarsi, the intermediate tibæ at their base and apex and the posterior tibæ at base are yellow; the wings are hyaline, with a fuscous cloud occupying the marginal cell and extending to the apex of the wing; in the first cubital cell as well as in the apex of the median cell the cloud becomes less pronounced.

Head densely punctured; mesonotum and pleuræ covered with deeply impressed punctures; metathorax truncate, the truncation in the middle depressed and covered with radiating plicæ; basal space in the middle with two low longitudinal carinae, at the sides of which is a smooth space, surrounded by a distinct oval impression. The first abdominal segment is densely and deeply punctured; second segment with a deep basal depression, covered with fine and very numerous punctures except on its apex. The neuration of the wings is the same as in P. polybioides.

Taken frequently in December, 1904, and January, 1905, in Villa Encarnación, Paraguay.
Note.—The coloration of this species scarcely varies; the two orange-red spots on the pronotum alone being sometimes ferrugineous or yellowish; in the latter case sometimes confluent, and forming a more or less extended transverse line.

4. PROSOPIS PAULISTANA new species

Male.—Length, 5½ mm.; abdomen, 1½ mm. wide; antennæ, 3½ mm.; wings, 5 mm. Black; with yellow markings: the clypeus, a spot above it, the sides of the face, the inner orbits of the eyes, the collar, the tegulae in front, the tubercles of the thorax, the scutellum, the apex of the anterior femora, the tibiae in front and inside, the tarsi, the posterior tibiae at apex and the tarsi (the second pair of legs is wanting); the rest of the legs dark brown. The abdominal segments at their apex fringed with distinct fasciae of white hairs. The wings are hyaline, with a faint cloud in the marginal cell extending to the apex of the wing and becoming less distinct in the first cubital and the apex of the marginal cell.

Head densely punctured, mesonotum with deep, large, and dense punctures, those on the pleuræ deep but scattered. Metanotum truncate, the truncation covered with pale hairs, the basal space shining, small, with a longitudinal median furrow and a trapezoidal smooth space on each side; the apex surrounded by short and low radiating striae. Abdomen densely covered with fine punctures that become gradually smaller on each segment, being hardly distinguishable from the fourth segment to the apex. The second segment near its base with a deep transversal depression. The neuration of the wings as in P. polybioioides.

Habitat.—State of S. Paulo, Brazil, October 10, 1901, described from a single specimen.

Note:—The abdomen being the length is given approximately.

5. PROSOPIS FEMORALIS Schrottky


Male.—Length, 5 mm.; abdomen, 1½ mm. wide; wings, 4 mm.; antennæ, 2 mm. long. Black; the clypeus, a pentagonal spot above it, the face at the sides of the clypeus, the inner orbits of the eyes, the two basal joints of the antennæ in front, the collar, the tubercles of the thorax, the tegulae in front, the base of the costal nervure of the wings, the scutellum and the greater part of the legs are yellow; the posterior femora alone are wholly fuscous, the intermediate and
anterior femora behind and the apical part of the posterior tibiae being more or less fuscous; the flagellum of the antennae is ferrugineous in front and fuscous above. The tegulae behind are pale brown. Wings hyaline, with fuscous nervures. The apex of the abdomen is ferrugineous below; the apical margins of the second and third segments are also sometimes ferrugineous; the second segment has sometimes a minute fascia of white hairs on the sides.

Head densely, thorax coarsely punctured; the pleurae are covered with scattered deep punctures and short yellowish hairs; the metathorax is truncate, the truncation with a longitudinal low depression and fine radiating striae towards the margin; the basal space is punctured, a little raised, with six longitudinal furrows, the two median converging forming a V, the two exterior small and less distinct. First abdominal segment is covered with fine punctures, the second segment has a deep transverse depression near its base, from whence to its apex it is very finely punctured; the rest of the abdomen is smooth and shining. Both recurrent nervures are nearly interstitial; the first recurrent joins the cubitus just behind the first transverse cubitus, the second before the second transverse cubitus.

Taken at Villa Encarnación, December 27 and 28, 1904.

This species seems to be very similar to P. rugosa Smith, judging from his description. The differences are, however, in the color of the legs, the structure of the basal space of the metathorax, and of the abdominal segments. Some of my specimens have no fasciae of white hairs on the abdominal segments, nevertheless it may be but the Southern form of P. rugosa Smith.

The original description, in Rev. Mus. Paul, v, p. 339, treats of female and male; this is a mistake, both specimens described there being males. I think that by direct observations it may be found that gracillima is the female of this species, but for the present it seems more convenient to consider them different species.

6. PROSOPIS GRACILLIMA Schrottky


Female.—Length, 6 mm.; abdomen, 1½ mm. wide; wings, 4½ mm.; antennae, 2 mm. Black; the middle of the clypeus, a rectangular small spot above it, the face on each side of the clypeus, the inner orbits of the eyes, the collar, the tubercles of the thorax, the tegulae in front, the scutellum and the base of the tibiae, are yellow; the mandibles, the labrum and the sides of the clypeus, are fuscous;
the antennæ beneath are ferrugineous, but above they are fuscos; the tarsi are fuscos, but the base of the front pair is ferrugineous; hinder part of the tegulae pale brown; the wings hyaline and iridescent, the nervures dark brown. Abdomen with the apical margins of the segments covered with fine white hairs, forming distinct fasciae laterally.

Head densely covered with fine punctures, those on the mesonotum deeper and stronger, the pleuræ with the punctures smaller and more scattered than on the mesonotum; on the yellow scutellum are a few, small, scattered punctures. The truncation of the metathorax is rather densely covered with pale hairs, the basal space with shallow furrows; one enclosing an oval space, truncate at the base in the middle, from the apex of which two others extend backwards to the sides; two others, but less distinct, are found on each side of the oval space diverging behind so that the whole appearance is radiated. The abdomen is smooth and shining, without any distinguishable punctures. Both recurrent nervures are interstitial.

Taken at Villa Encarnación, November 7, 1904.

Another specimen from the same place, taken December 20, 1904, has the mandibles, the labrum, the sides of the clypeus and a spot between the antennæ not fuscos but ferrugineous, as described for the type which came from S. Paulo, Brazil. The legs, too, are not black but brown, except the base of the tibiae which are yellow. Notwithstanding these differences, I do not think they form two different species, but rather that the form with the brown or even fulvous legs belong to the second generation or to a variety of this species, especially as there are in two specimens some other differences in the coloring. I give their full description pending larger and better series before deciding definitely as to whether these forms belong to one or to various species.

6a. PROSOPIS GRACILLIMA var. PARANENSIS new variety

Female.—Length, 6 mm.; abdomen, 1½ mm. wide; wing, 4½ mm.; antennæ, 2 mm. Black; the middle of the clypeus, the face on each side of it, the inner orbits of the eyes, the collar, the tubercles of the thorax, the tegulae in front and the scutellum are yellow; the mandibles, the labrum, the sides of the clypeus and the hind orbits to the middle of the eyes, are ferrugineous. Above the clypeus is a ferrugineous spot with yellow centre; the antennæ are ferrugineous beneath, fuscos above; the hinder parts of the tegulae and a small cuneate spot in front of the tubercles, are brown; the legs, except
the base of the posterior tibiae which is yellow, are fulvous without any black. The abdominal segments at their apical margins are clothed with fine white hairs, which form indistinct fasciae laterally. The wings are hyaline, with brown nervures.

Head densely covered with fine punctures; mesonotum with the punctures less dense but deeper and stronger; the pleurae are covered with minute pale hairs and a few scattered but rather strong punctures. The base of the metathorax has irregular longitudinal folds or wrinkles, the truncation covered with pale hairs. The abdomen is impunctate, smooth and shining. Both recurrent nervures are interstitial.

Taken in Villa Encarnación, December 26 and 28, 1904.

7. PROSOPIS RIVALIS new species

Female.—Length, 6 mm.; abdomen, 1½ mm. wide; wing, 4½ mm.; antennæ, 2 mm. long. Black; the clypeus, except the sides which are ferrugineous, is almost rectangular, a spot above it, the face on each side of the clypeus, the inner orbits of the eyes nearly to their summit, the collar, the tubercles of the thorax, the tegulae in front, the scutellum, and the extreme base of the anterior and the posterior tibiae are yellow, the mandibles, the labrum, the antennæ, the legs and the first abdominal segment, except a black patch on the apex of the dorsal face, are ferrugineous. Wings hyaline, the nervures fuscous.

Head densely covered with fine punctures, the mesonotum with less dense but stronger punctures; the pleurae have very fine, scattered punctures; the metathorax is truncate, the truncation covered with very fine pale hairs, and divided longitudinally by a shallow furrow, the basal area is longitudinally plicate, the sides covered with dense fine punctures; the abdomen is impunctate and polished, the apical margins of segments 2–5 being brown; near the base of the second segment is a low transverse depression.

Taken at Villa Encarnación on January 25, 1905.

8. PROSOPIS TRICOLOR new species

Male.—Length, 6 mm.; abdomen, 1¾ mm. wide; wings, 4 mm.; antennæ, 2 mm. long. Black; the clypeus, a pentagonal spot above it, the face on each side of the clypeus, the inner orbits of the eyes nearly to their summit, the basal joint of the antennæ in front, a transverse line on each side of the pronotum joining the tubercles of the thorax, and the tubercles, a spot in front of the tegulae, a spot on each side
of the scutellum, and the base of the tibiae, are yellow; the mandibles, the rest of the antennæ and the rest of the legs, the first abdominal segment, except a large black patch on the dorsal face, are ferrugineous; the sixth ventral plate and sometimes the fifth dorsal plate are also ferrugineous; the posterior parts of the tegulae are fulvous. Wings hyaline, with brown nervures.

Head and mesonotum densely covered with fine punctures, those on the scutellum more scattered; the pleuræ are covered with a few, shallow, almost imperceptible punctures; the truncation of the metathorax is covered with very fine whitish hairs, the basal space sculptureless, impunctured, with only a short, shallow, transverse depression near its base; the abdomen is smooth, impunctured, the apical margins of the segments pale brownish, from the second segment to the apex it is covered with inconspicuous yellowish hairs. Both recurrent nervures are interstitial.

Taken at Villa Encarnación, January 9 and 11, 1905.

[Distinguished from P. arsenica, Vachal, by the smooth impunctured abdomen, the rather larger size, etc.—T. D. A. C.]

9. PROSOPIS ITAPUENSIS new species

Female.—Length, 4–5 mm.; abdomen, 1 mm. wide; wings 3½ mm.; antennæ, 1½ mm. long. Black; the middle of the clypeus, the face on each side of it, the inner orbits of the eyes extending nearly to summit, the tubercles of the thorax, the anterior tibiae in front, and the base of the intermediate and posterior tibiae, are yellow; the mandibles are ferrugineous; the labrum is fuscous; the sides of the clypeus are black; the basal joint of the antennæ is black, the rest of the antennæ being ferrugineous in front, but fuscous above; the tarsi are ferrugineous; the tegulae are brown, with a minute yellow spot in front. Wings hyaline, the nervures nearly black.

The head and mesonotum are densely covered with very fine punctures; scutellum is long, about one and one-half times as long as wide, and covered with fine scattered punctures; pleuræ opaque, the punctures rather finer than those on the head and more scattered; the basal area of the metathorax is smooth, opaque with a shallow groove in the middle near the base which is parted longitudinally by a small low carina, the truncation is parted longitudinally by a low furrow which itself divides above in two branches forming thus a Y; the abdomen is smooth. The first recurrent nervure joins the cubitus a little before the first transverse cubitus, the second re-
current nervure just before the second transverse cubitus or the angle of the second cubital cell.

*Male.*—Length, 4 mm.; abdomen, $\frac{2}{3}$ mm. wide; wing, 3½ mm.; antennae, 2 mm. long. Black; the mandibles, labrum, clypeus, except a very fine black line on each side, the face on each side of the clypeus, the inner orbits of the eyes, the tubercles of the thorax, the apex of the anterior femora, the anterior tibiae in front, and the middle and hind tibiae at base, are yellow; the basal joint of the antennæ is black, the second joint yellowish, the rest of the antennæ beneath fulvous but above fuscous; the abdomen is black with the apex ferruginous.


The female has the same coloring as *variolosa* Sm. but differs from it by its smaller size, less distinctly sculptured thorax and abdomen and by the cheeks not being flat.

[Distinguished from *P. palmaris*, Vachal, by the apparently weaker sculpture of the thorax, especially the metathorax, the basal area of which is “almost reticulated” in *palmaris.—T. D. A. C.]

10. **PROSOPIS PARAGUAYENSIS** new species

*Female.*—Length, 5 mm.; abdomen, 1 mm. wide; wings, 3¾ mm.; antennae, 1¾ mm. long. Black; the mandibles, the labrum, the clypeus, the antennæ, the legs and the greater part of the first abdominal segment, are ferruginous; the face on each side of the clypeus, the inner orbits of the eyes to three-quarters of their height, the tubercles of the thorax, the tegulae in front and the extreme base of posterior tibiae, are yellow; rest of the tegulae brown. Wings hyaline, splendidly iridescent, with fuscous nervures.

Head densely punctured, the mesonotum, scutellum and pleuræ covered with fine, not very dense, punctures; metanotum rounded; there is no sharp division between the horizontal and vertical parts, while one cannot speak of a basal area, it being apparently absent, whole metathorax being uniformly covered with very dense rugose punctures. The abdomen is highly polished, the first segment covered with very fine, scattered punctures. The first recurrent nervure is received by the first cubital cell a little before its apex; the second recurrent nervure is almost interstitial with the second transverse cubitus.

*Male.*—Length, 4 mm.; abdomen, $\frac{3}{4}$ mm. wide; wing, 3 mm.;
antennae, 1½ mm. long. Black; the mandibles, the labrum, the clypeus, a quadrate spot above it, the face at the sides of the clypeus, the inner orbits of the eyes, and the tubercles of the thorax, are yellow; the antennae are fulvous beneath, a little darker above; the legs are fulvous, but with a large dark brown spot on the posterior femora and tibiae. The first abdominal segment beneath is totally, and above on the apical margin, rufous. The sculpture, the neuration of the wings, etc., as in the female.

Females, December 27 and January 25.

Males, December 17, 25, 26, 27, 29, 1904; January 12 and 26, 1905.

A rather common species.

Its systematical position is near amazonica Gribodo.

11. PROSOPIS COCKERELLI new species

Male.—Length, 6 mm.; abdomen, 1½ mm. wide; wing, 4½ mm.; antennae, 2½ mm. long. Black; the clypeus, a pentagonal spot above it, the face on each side of the clypeus, the inner orbits of the eyes, the tubercles of the thorax, the anterior tibiae in front, and the posterior tibiae at extreme base, are yellow; the mandibles, the labrum, and the antennæ beneath are ferrugineous; the antennæ above are dark fuscous; the tarsi, the tegulæ and the apical margins of the abdominal segments are brown. Wings hyaline, with a fuscous cloud that occupies the whole radial cell, and extending beyond it towards the apex of the wing, enclosing first cubital and the apex of the median cell; the nervures are black.

Head densely covered with fine punctures; the mesonotum and the scutellum with dense strong and deep punctures; those on the pleuræ are also deep and strong but scattered; the metathorax is truncate, the basal area divided by a broad, longitudinal furrow, with a few strong irregular punctures, and at each side with an oblique furrow; the truncation is rugose but shining; the first abdominal segment is strongly punctured, shining, the second segment near its base with a deep transverse depression, from whence to the apical margin covered with very fine, almost inconspicuous punctures; segments 3-5 are thinly covered with very fine yellowish hairs. Both recurrent nervures almost interstitial.

Taken at Villa Encarnacion, January 4, 1905.

Named in honor of Prof. T. D. A. Cockerell, of Boulder, Colo.
12. PROSOPIS CULICIFORMIS new species

Male.—Length, 5 mm.; abdomen, 4½ mm. wide; wing, 3½ mm.; antennae, 2 mm. long. Black; the mandibles, the labrum, the clypeus, the face on each side of it, the inner orbits of the eyes reaching nearly to summit, the two basal joints of the antennae beneath, the tubercles of the thorax, the anterior tibiae in front, the intermediate and posterior tibiae at base and apex, are yellow; the rest of the antennae ferrugineous beneath, darker above; the tarsi are fulvous; while the tegulae are pale brown. Wings hyaline and splendidly iridescent, their nervures fuscous. The apex of the abdomen is ferrugineous.

Head and mesonotum covered densely with fine punctures, the pleurae with very fine whitish hairs and interspersed fine punctures, those on the scutellum scattered; the metathorax is truncate, its basal area limited on each side by an oblique furrow, opaque, uniformly punctured; the abdomen impunctured, the second segment without transverse depression; the first recurrent nervure is interstitial, the second nearly so.

Taken at Villa Encarnación, January 10 and 19, 1905.

13. PROSOPIS TRISTIS new species

Male.—Length, 5 mm.; abdomen, 1½ mm. wide; wing, 3¾ mm.; antennae, 2 mm. long. Black; the mandibles, the labrum, the clypeus, a rectangular spot above it, the face on each side of the clypeus, the inner orbits of the eyes, the two basal joints of the antennae, the tubercles of the thorax, the anterior femora at apex, the anterior tibiae total, the intermediate and posterior tibiae at base, are yellow; the rest of the antennae ferrugineous beneath but a little darker above; the tarsi fulvous, the tegulae brown. Wings hyaline, faintly darkened towards apex, the nervures brown. The apical margins of the abdominal segments are fuscous.

Head densely covered with fine, mesonotum with strong, punctures; the punctures on the scutellum are more scattered, on the pleurae fine and scattered; the metathorax is truncate, the basal area rough with a few longitudinal plicae; the first abdominal segment is polished, but covered with very fine, almost inconspicuous, scattered punctures, the rest of abdomen being a little more opaque. Both recurrent nervures are interstitial.

Taken at Villa Encarnación, December 22, 1904.
14. **Prosopis xanthocephala** new species

*Male.*—Length, 4½ mm.; abdomen, ¾ mm. wide; wing, 3½ mm.; antennæ, 2 mm. long. Black; the labrum, the mandibles, the clypeus, a pentagonal spot above it, the face on each side of the clypeus, the inner orbits of the eyes, the two basal joints of the antennæ beneath, the tubercles of the thorax, from there an oblique line to the anterior margin of the pronotum, a minute spot on the tegulae, the apical half of the anterior femora, the anterior tibiae and tarsi, the intermediate femora in front, the intermediate tibiae, except a small fuscous spot behind, the posterior tibiae at their base and apex, and the intermediate and posterior tarsi, are yellow; the rest of the antennæ ferrugineous beneath, fuscous above; the tegulae are brownish. Wings hyaline, the nervures brown. The apex of the abdomen is ferrugineous.

Head densely covered with fine punctures, the mesonotum with fine and scattered punctures, the scutellum with only a few fine dispersed punctures; the pleurae are semiopaque; the metathorax is truncate, the basal area with a few low longitudinal plicæ; the abdomen semiopaque, the second segment without transverse depression. Both recurrent nervures are interstitial.

*Taken at Villa Encarnación, December 29, 1904.*

15. **Prosopis longicornis** new species

*Male.*—Length, 4½ mm.; abdomen, ¾ mm. wide; wing 3¼ mm.; antennæ, 2½ mm. long. Black; the mandibles, the labrum, the clypeus, a pentagonal spot above it, the face on each side of the clypeus, the inner orbits of the eyes, the two basal joints of the antennæ in front, the tubercles of the thorax, the apical half of the anterior femora, the anterior tibiae and tarsi, the intermediate and posterior tibiae at their base, and the intermediate and posterior tarsi, are yellow; the rest of the antennæ ferrugineous beneath, fuscous above. Wings hyaline, the tegulae brown, the nervures dark brown.

Head and mesonotum densely covered with fine punctures, those on the scutellum and on the pleurae fine and scattered; the metathorax is truncate, the basal area opaque, granular, in the middle with a few groove-like impressions; the abdomen semiopaque, the second segment with a shallow transverse depression near its base. The first recurrent nervure enters the first cubital cell before its apex, the second recurrent being interstitial.

*Taken at Villa Encarnación, December 27, 1904.*

[Mr. Schrottky does not refer to the numerous South American
species of *Prosopis* described by Vachal in Ann. Soc. Ent. France, 1901, pp. 79–82, but after comparing the descriptions, I do not believe any of them are identical with those described above. For the convenience of students, I give a table of the Vachalian species, using the characters employed in Mr. Schrottky's table as far as possible. I also include a lately-described Mexican species.

| Scutellum nearly all yellow; first abdominal segment not ferruginous; legs not fulvous | 1. Mesopleurae and mesosternum sparsely punctured (Bolivia) scrobicauda, Vach. ♀. |
| Scutellum black, with at most a yellow spot on each side | 2. Mesopleurae and mesosternum densely punctured (Peru) aspicollis, Vach. ♀. |
| A yellow spot at each side of scutellum | 3. Mandibles red or reddish (Goyas, Brazil) arsenica, Vach. ♀. |
| No such spot; scutellum all black | 4. Mandibles yellow (Peru) cribellata, Vach. ♂. |
| Sides of clypeus black, the face having three yellow vittae | 5. Clypeus yellow crenulata, Clkl. ♂. |
| All the tibiae yellow (Mexico) breviradia, Vach. ♀. |
| Hind tibiae with a yellow basal annulus (Bolivia) palmaris, Vach. ♂. |
| Radial cell broad, scarcely acute; flagellum obscure reddish beneath (Bolivia) breviradia, Vach. ♀. |
| Radial cell normal, or not broad and short | 7. Legs with some yellow markings or spots; insect less punctate atripecs, Vach. ♀. |
| Legs black; insect well punctate (Peru) | 8. Larger; hind tibiae with a yellow basal annulus (Bolivia) stilbaspis, Vach. ♀. |
| Smaller; hind tibiae with only yellow basal spots (Bolivia) | 9. Monednla signata (Linnaeus). |

The following species, observed at Villa Encarnación, are additional to the fauna of Paraguay:

**Family Chrysididae:**

*Holopyga lazulina* Dahlbom.

**Family Mutillidae:**

*Rhoptromutilla hepatica* (Gerstaecker).

*Mutilla scoparia* (Gerstaecker).

**Family Sphegidae:**

*Sphex opacus* Dahlbom.

**Family Bembecidae:**

*Bembidula discisa* Taschenberg.

*Monedula signata* (Linnaeus).

**Family Eumenidae:**
Eumenes canaliculata.
Montezumia ferruginea Saussure.

Family Vespidae:
Polistes carnifex Fabricius.
Polistes ferreri Saussure.
Polybia sericea (Olivier).

Family Apidae:
Temnosoma metallicum Smith var. chapadae Cockerell.
Augochlora graminea Fabricius.
Augochlora nulleri Cockerell.
Augochlora nana Smith.
Augochlora vesta Smith var. cupreola, Cockerell.
Psacnythia facialis Gerstaecker.
Ceratina maculifrons Smith.
Hemisia lanipes (Fabricius).
Bombus carbonarius Handlirsch.
Bombus cayennensis Fabricius.
Trigona clavipes Fabricius.

I formerly indicated Entechnia taurea Say as belonging to the Paraguayan fauna; but this determination was wrong and the species was Entechnia fulvifrons Smith. The same error has been made by A. Ducke who records E. taurea from Pará, and also by E. L. Holmberg who recorded it from Argentina; in both cases the insect in question was E. fulvifrons.

[1 Since this was described I have examined Smith's type of A. vesta, and find that cupreola is not a variety of it, but a distinct species—T. D. A. C.]