

8 Q
478
B615
v. 6
pt. 1
Ent.

B I O L O G I A
111
CENTRALI-AMERICANA.

I N S E C T A.

COLEOPTERA. (VOL. VI. PART 1.)

PHYTOPHAGA (part).

BY

MARTIN JACOBY, F.E.S.

1880-1892.



6. *Malacorhinus sericeus*.

Ovate, convex, testaceous; thorax rufous or testaceous, impunctate, with a silky gloss; elytra very minutely punctured, each with two spots at the base, two below the middle, and one at the sides, black; tibiae and tarsi fuscous.

♂. Elytra with a small oblong fovea at the sides.
Length $2\frac{1}{2}$ lines.

Hab. GUATEMALA, Chiacam, Senahu (*Champion*); NICARAGUA, Chontales (*Janson*).

At first sight *M. sericeus* seems to be scarcely separable from *M. decem-punctatus*, which it resembles exactly in the number and position of the elytral spots. It differs, however, as follows:—the thorax is not nearly so constricted at the base, and its surface is entirely impunctate and silky in appearance; the two posterior spots on the elytra are placed immediately behind the middle, and not so far back as in *M. decem-punctatus*; and, lastly, the elytral fovea of the male is small and has no tubercle within. Specimens from Chontales are redder in tint, and are more convex in shape and more widened at the middle, than those from Guatemala. The first two joints of the antennæ are generally testaceous, the other joints fuscous.

7. *Malacorhinus biplagiatus*. (Tab. XXXIII. fig. 20, ♂.)

Black, above reddish-fulvous; head and thorax impunctate; elytra very finely punctured, each with a round spot near the scutellum, and a transverse one below the middle, black.

♂. Elytra widened towards the middle, each with one or two tubercles near the lateral margin, the tubercles followed by a narrow elongate fovea.

Var. Elytra with the black spots enlarged and connected, leaving a central spot and the apices fulvous.
Length $2-2\frac{1}{2}$ lines.

Head with the frontal tubercles and the clypeus narrowly transverse and distinctly raised; antennæ black (the basal joint often fulvous), the third joint slightly shorter than the fourth; thorax subquadrate, distinctly narrowed at the base, the surface (when seen under a very strong lens) very finely punctured; scutellum fulvous; elytra scarcely more distinctly punctured than the thorax, each with a round spot near the scutellum, and a more transversely-shaped one below the middle, black; underside and legs black.

Hab. MEXICO, Ventanas (*Höge*), Capulalpam, Yolotepec, Cordova, Juquila, Yolos, Oaxaca (*Sallé*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, Capetillo, Zapote (*Champion*).

The male of *M. biplagiatus* is of a more widened shape towards the middle than the female, and may be known by the conical tubercle placed at the centre of (and a little within) the lateral margin of the elytra; this tubercle is often preceded by a shallow fovea and followed by a deeper one; in front of the latter the lateral margin seems doubled, enclosing a narrow and elongate depression. In an example from Yolotepec, which I refer to the same species, the disc of the elytra is black, enclosing a subquadrate fulvous spot at the middle, and the lateral margins and the apices are fulvous. Another specimen (a male) from Yolotepec differs from the type in having a narrow transverse band at the base of the elytra, this band being connected at the sides with a broad band placed below the middle; in this example the elytra have two tubercles placed near

the lateral margin with an elongate fovea between them, and the antennæ are more robust. In a third specimen from Capulalpam (a female) the elytral spots are larger, and the extreme apices are also black; and the first three joints of the antennæ are fulvous. Whether all these forms must be referred to varieties only, or represent other species, I am not able to say, as long series of specimens from the different localities are required to settle this point. We figure an example from Capetillo.

8. *Malacorhinus basalis*.

Fulvous, the antennæ and legs black; thorax very minutely punctured; elytra closely and finely punctured, each with a transverse spot at the base and another below the middle, bluish-black.

♂. The first joint of the antennæ strongly dilated at the apex, fulvous.

Var. The posterior elytral spot wanting or only indicated; femora sometimes fulvous.

Length $1\frac{1}{2}$ line.

Hab. MEXICO, Santecomapan, Toxpam (*Sallé*); GUATEMALA, Zapote, San Gerónimo, El Jicaro, Tamahu, Panima (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Caldera (*Champion*).

M. basalis differs from *M. biplagiatus* in being smaller, and in having the underside fulvous instead of black; the elytral spots are narrowly transverse and have a bluish gloss, and the surface is more distinctly though finely punctured. The male has the joints of the antennæ shorter and more robust, the first joint club-shaped and distinctly thickened; and the head furnished with a deep fovea, the clypeus being raised and somewhat curved upwards. The female has sometimes two obsolete depressions on the thorax, the thorax itself being more transversely shaped than in the male. There is no elytral fovea visible in any of the specimens before me; and nearly all those from Chiriqui are devoid of the posterior elytral spot.

9. *Malacorhinus sex-punctatus*. (Tab. XXXIII. fig. 21, ♂.)

Testaceous, the antennæ and tibiæ black, above reddish-fulvous; thorax impunctate; elytra closely and finely punctured, with a spot at the shoulder, another larger one near the scutellum, and a sublateral spot before the middle, black.

♂. Elytra with an oblong depression near the lateral margin, the latter slightly thickened and produced in front of the depression.

Length 2-2½ lines.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Of the same colour and size as *M. biplagiatus*; but differs in the elytra being more closely and distinctly punctured, and in the position and shape of the spots (these being placed in a triangle at the base); and also in the position and sculpture of the fovea in the male, it being placed before (not at) the middle, and also being shallower and without tubercles. In the only male specimen before me there is a small extra black spot placed at the middle of each elytron near the suture. The antennæ are slender, and the third joint is distinctly shorter than the fourth.

10. *Malacorhinus guatemalensis*.

Black, above testaceous; thorax nearly impunctate; elytra closely punctured, the interspaces slightly rugose, an elongate spot near the scutellum and another one below the middle, black.

Var. The two elytral spots joined into a longitudinal stripe.

Length $1\frac{1}{2}$ line.

Head with a few fine punctures; the frontal tubercles strongly raised, trigonate; the palpi piceous; antennæ slender, black, the third joint slightly shorter than the fourth; thorax about one half broader than long, narrowed at the base, the surface with a few fine punctures; elytra testaceous or pale flavous, more distinctly punctured than the thorax, the interspaces somewhat rugose.

Hab. GUATEMALA, near the city (*Salvin*), Capetillo, Purula (*Champion*).

Smaller than *M. biplagiatus*, and of a paler colour above; the elytral spots of elongate (not transverse) shape and the surface finely wrinkled. There seems to be no appreciable difference between the two sexes.

11. *Malacorhinus apicalis*.

Testaceous or pale fulvous, the antennæ, knees, tibiæ, and tarsi black; thorax scarcely visibly, the elytra very finely punctured, each elytron with a subquadrate spot at the shoulder, a transverse one below the middle, and the extreme apex, black.

Var. The elytral spots larger and connected at the sides, and the apical spot placed at the suture.

Length 2 lines.

Hab. GUATEMALA, Zapote, Pantaleon, Mirandilla (*Champion*).

It is somewhat doubtful whether *M. apicalis* represents a distinct species or is only a variety of *M. biplagiatus*; it differs from the latter in having a pale under surface (the breast and part of the abdomen is slightly stained with piceous), testaceous (not black) femora, and in the black apices of the elytra; the thorax is also much less constricted at the base. There are four specimens before me agreeing in the above particulars. I am unable to say whether there is any difference between the sexes in regard to the structure of the elytra or the antennæ; the examples are possibly all females.

12. *Malacorhinus fulvicornis*.

Reddish-fulvous; antennæ slender, fulvous; tibiæ and tarsi black; thorax minutely punctured; elytra more distinctly and closely punctured, a narrow transverse band at the base, and a still narrower stripe below the middle, black.

Length $2\frac{1}{2}$ -3 lines.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

The antennæ in the present insect are entirely fulvous and more than half the length of the body, the joints being elongate and slender; the third joint is one half shorter than the fourth. The second transverse stripe of the elytra is very narrow and straight, and is placed immediately below the middle, but does not quite extend to either margin. The underside and the femora are reddish-fulvous.

Two specimens only.

13. *Malacorhinus godmani*.

Black, the head and thorax fulvous; elytra extremely finely punctured, reddish-fulvous, a subquadrate spot at the base, and a more transversely-shaped and smaller spot below the middle, black.

♂. Antennæ robust, the third joint strongly curved and with its apex produced; elytra with an oblong depression at the sides.

Length 2 lines.

Hab. GUATEMALA, Chiacam (*Champion*).

The single male specimen obtained is similarly coloured to several of the preceding species, but differs in the structure of the antennæ from any of its congeners. These organs have the joints (with the exception of the elongate first and the short second one) robust, somewhat widened and triangularly shaped, and the third joint (which is longer than the fourth) is strongly curved at its inner margin; the three basal joints are fulvous, the others black. The thorax is rather more transversely shaped than in many of the allied species; and the elytra have their basal spot broad and extending to the suture but not to the lateral margin, and the posterior spot placed directly below the lateral depression.

14. *Malacorhinus semifasciatus*.

Testaceous, the antennæ, tibiæ, and tarsi black; head and thorax fulvous; elytra testaceous, their apices fulvous, a spot at the shoulder, another near the scutellum, a transverse band at the middle, and another band below the latter, black.

♂. Elytra with a fovea at the middle of the sutural margin.

Var. The bands and spots of the elytra more or less connected at the suture.

Length $1\frac{1}{2}$ line.

Head impunctate; the frontal tubercles strongly developed; antennæ nearly as long as the body in the male, shorter in the female, the third joint one half longer than the second but one half shorter than the fourth joint; thorax subquadrate, slightly narrowed at the base, the surface with some extremely fine punctures; elytra scarcely more distinctly punctured.

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*).

In well-marked specimens the two narrow transverse black bands of the elytra are very distinct, and either connected with the scutellar spot or with each other; in others the posterior band is often nearly obsolete or entirely absent; the disc of the elytra is generally testaceous, and the apices more or less fulvous. In the male insect the antennæ are furnished with rather robust and somewhat triangularly dilated joints; the elytral foveæ, which in the allied species are generally placed at the lateral margin, are here transferred to the suture. Many specimens.

15. *Malacorhinus tricolor*.

Testaceous, the antennæ, tibiæ, and tarsi black, the head and thorax rufous; elytra scarcely visibly punctured, testaceous, each with three transverse rufous bands, the first two margined with black.

♂. Antennæ with the terminal joints strongly serrate.

Length 3 lines.

Head impunctate; the frontal tubercles transverse, narrow; clypeus distinctly swollen, narrowly transverse;

antennæ half the length of the body, black, the fourth joint one half longer than the third, the terminal five joints strongly transversely dilated and acutely dentate at the apex; thorax about one half broader than long, distinctly narrowed at the base, the surface with a few scarcely visible punctures, rufous, shining; elytra nearly impunctate, testaceous, a broad transverse band below the middle, the apices, and the extreme lateral margin, rufous, a transverse band at the base and the anterior edge of the central band, black, the shoulders rufous; tibiæ black, armed with a small spine.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

This handsomely-marked species will be easily recognized by its coloration and the structure of the antennæ in the male; the elytral bands, with the exception of the basal one, extend to the sutural and lateral margins.

16. *Malacorhinus scutellatus*.

Narrowly elongate, fulvous; the head, antennæ, scutellum, and the breast and legs, black; thorax impunctate; elytra finely rugose and closely punctured.

Length $2\frac{1}{2}$ lines.

Head broad, black, impunctate, impressed with an oblong fovea between the eyes; the anterior edge of the clypeus and the sides of the labrum testaceous; antennæ half the length of the body, black, the first joint fulvous at the apex, the third joint one half longer than the second; thorax twice as broad as long, the sides strongly narrowed at the base, nearly straight, the surface somewhat convex, impunctate, flavous; scutellum black; elytra closely punctured, the interstices slightly rugose; the breast and the legs black; the tibiæ mucronate; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate.

Hab. MEXICO, Ciudad in Durango (*Forrer*).

A single specimen.

17. *Malacorhinus dilaticornis*. (Tab. XXXIII. fig. 22, ♂.)

Black, the lower part of the head, the basal joints of the antennæ, the thorax, and the four anterior legs fulvous; elytra minutely punctured, black, a transverse band (or spot) before, and another band below the middle, fulvous.

Length 3 lines.

♂. Head with some fine punctures on the vertex, the latter black; the lower portion fulvous; the frontal tubercles very broad, subquadrate; antennæ more than half the length of the body, the six lower joints fulvous, the rest black, the basal joint strongly swollen at the apex, the second joint very small, the third joint greatly enlarged and dilated and with its lower surface concave, the fourth joint narrow at the base and transversely widened at the apex, the remaining joints filiform and nearly equal in length; thorax subquadrate, slightly constricted at the base, fulvous, an elongate spot on each side, and another at the middle, near the base, black, the disc impunctate, with an obsolete depression on each side; scutellum black; elytra very finely and closely punctured, narrowly elongate, black, a transverse band before the middle and another slightly oblique one near the apex of each, fulvous; the four anterior legs fulvous, the femora and the tibiæ with a black streak at their upper margin; the first joint of the anterior tarsi greatly enlarged, that of the intermediate legs less strongly widened.

Hab. MEXICO, Cuernavaca (*Sallé*), Tonila in Colima (*Höge*).

In the female the antennæ and the tarsi are simple and the posterior femora much shorter.

A male example from Cuernavaca is figured.

18. **Malacorhinus reticulatus.** (Tab. XXXIII. fig. 17, ♂.)

Testaceous, the antennæ (the basal and apical joints excepted), the tibiæ, and tarsi black; thorax fulvous, very minutely punctured; elytra very finely punctured, testaceous, the apical portion fulvous, the anterior part divided by narrow black bands, the bands surrounding a central sutural, a small basal, and two lateral testaceous spaces.

♂. The elytra with a deep fovea at the middle of the lateral margin.
Length 3 lines.

Hab. MEXICO, Cordova (*Sallé*).

M. reticulatus is at once distinguished amongst its allies by the curious pattern of the elytra, the black portion of which resembles a network enclosing semiregular patches of the ground-colour; of these patches three smaller ones at the sides and base respectively surround a larger sutural space at the middle of the disc. The antennæ have the first joint fulvous and the terminal three joints paler; the third joint is twice the length of the second. A single specimen.

19. **Malacorhinus (?) centro-maculatus.**

Testaceous or fulvous, the antennæ, tibiæ, and tarsi black; thorax and elytra opaque, the latter finely punctured, each elytron with a small central black spot.

Var. Elytra without black spots.

Length 3 lines.

Head impunctate; the frontal tubercles distinct at the middle only, but contiguous with the sides; antennæ nearly as long as the body, black, the apical three joints sometimes obscure fulvous, the second and third joints small and nearly equal in length; thorax nearly twice as broad as long, subquadrate, the sides narrowly margined and rather deflexed, the surface somewhat flattened, not visibly punctured; scutellum broadly trigonate; elytra opaque (like the rest of the upper surface), very finely and rather closely punctured, each with a small black spot placed at the middle of the disc; below and the femora fulvous, a streak at the upper edge of the anterior femora, and the tibiæ and tarsi, black; tibiæ with a small spine; the first joint of the posterior tarsi longer than the following three joints together; claws appendiculate.

Hab. MEXICO, Tepanistlahuaca (*Sallé*); GUATEMALA, Capetillo (*Champion*).

This species is provisionally placed in *Malacorhinus*; it differs from the other members of the genus in the more transversely shaped and not posteriorly constricted thorax, and in the longer metatarsus of the posterior legs.

LUPERODES.

Luperodes, Motschulsky, Etud. ent. vii. p. 102 (1858).

About twenty species of this genus have been described, all, with two exceptions, inhabitants of the eastern portions of the globe. *Luperodes* is closely allied to *Monolepta* and *Luperus*; from the latter it is separated by the first joint of the posterior tarsi being much longer, the body more ovate and convex, and the thorax generally with its posterior margin more or less rounded and the surface obsoletely transversely depressed. One American species, *L. kirschi*, Har., has been described; this, however, seems to agree better with *Luperus*, to judge from a specimen in my possession. We have nevertheless received a good many species from our country

which do not seem to differ to any marked degree from the Old-World forms; twelve are here described.

1. *Luperodes apicalis*.

Oblong ovate, slightly widened posteriorly, fulvous; antennæ, tibiæ, and tarsi black; thorax with two obsolete depressions; elytra very finely and closely punctured, fulvous, the apical portion black.

Length 2 lines.

Head impunctate; the frontal tubercles distinct; the clypeus not separated from the face; palpi piceous; antennæ nearly as long as the body, the second joint short, the third one half longer, black, the basal joint fulvous beneath; thorax twice as broad as long, the sides straight, the posterior margin rounded, the surface very finely punctured, with an obsolete transverse depression on each side; elytra slightly widened towards the apex, the latter black, the basal two thirds fulvous, punctured like the thorax; the underside and the femora fulvous, paler than above, the knees, tibiæ, and tarsi black; the first joint of the posterior tarsi as long as half the tibia.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

2. *Luperodes melanocephalus*.

Broadly ovate, testaceous; the intermediate joints of the antennæ, the head, and the breast black; thorax impunctate; elytra very minutely punctured, each with two spots at the base and two below the middle, black.

Length 3 lines.

Head impunctate, black; palpi robust; antennæ two thirds the length of the body, testaceous, the sixth and seventh joints and the apex of the terminal one, black, the third joint twice the length of the second, the other joints elongate, equal; thorax more than twice as broad as long, the sides nearly straight, slightly narrowed towards the apex, the anterior angles obliquely rounded, thickened, the posterior margin rounded, slightly sinuate in the middle, the surface impunctate, very obsoletely depressed at the sides; scutellum triangular, testaceous; elytra closely and finely punctured, obsoletely depressed near the middle, with an elongate spot at the shoulder, a rounded one near the scutellum, and two others placed transversely below the middle, black; legs testaceous, the posterior tibiæ with a long spine; the first joint of the posterior tarsi much longer than the following three joints united.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

There is only a single specimen before me of this comparatively large species; in the elytral pattern it somewhat resembles certain forms of *Diabrotica*.

3. *Luperodes biannularis*.

Ovate, convex, testaceous; the vertex of the head, the antennæ, and the tibiæ and tarsi black; thorax narrowly transverse; elytra finely punctured, each with a broad transverse band at the apex and a ring-shaped mark at the base, black.

♂. Antennæ longer than the body; the third joint extremely small, shorter than the second joint.

Length $1\frac{1}{2}$ line.

♂. Head impunctate at the vertex, the latter black; clypeus not separated from the face, forming a single piece with the latter; eyes very large; antennæ longer than the body, black, the second joint small, moniliform, the third only half the length of the preceding, the fourth joint extremely long, longer than the fifth; thorax transverse and short, more than twice as broad as long, the sides and the posterior margin rounded, the surface very finely and irregularly punctured, testaceous; scutellum black; elytra finely and closely punctured, the interspaces very finely semi-rugose; the underside and the femora testaceous, the tibiæ and tarsi blackish; the first joint of the posterior tarsi half the length of the tibia.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Many specimens.

4. *Luperodes apicicornis*.

Ovate, convex, testaceous, the antennæ (the apical joint excepted) and the tibiæ black; thorax finely punctured, the sides with a black band; elytra scarcely visibly punctured, with the base, a narrow transverse band before the middle, and the apical margins, black.

Var. The thorax and elytra testaceous, the apices of the latter obscurely piceous.

Length $1\frac{1}{2}$ line.

Head impunctate; the frontal tubercles very indistinct; antennæ as long as the body, the third joint one half longer than the second, the three or four basal joints more or less testaceous beneath, the apical joint entirely of that colour, the rest black; thorax transverse, the basal margin rounded, the surface very minutely punctured, with a very obsolete transverse depression on each side, the sides with a narrow longitudinal black band; elytra convex, scarcely more distinctly punctured than the thorax, testaceous or fulvous, with the base, a narrow transverse band before the middle (connected with the basal mark at the sutural and lateral margins), and the apices at the sides, black; the first joint of the posterior tarsi half the length of the tibia.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Separated from *L. biannularis* by the differently-coloured antennæ, the black sides of the thorax, and the similarly-coloured elytral apices. The third joint of the antennæ is also longer than in the allied species. The few specimens which I refer to the variety differ in the absence of the black thoracic and elytral markings, the apices of the elytra only being stained with piceous; they agree with the type in the colour and structure of the antennæ.

5. *Luperodes dimidiaticornis*.

Testaceous, the intermediate and the apical two joints of the antennæ black; thorax finely punctured, the sides with a black band; elytra closely punctured, a transverse band at the base, another below the middle, and a third near the apex, connected at the sides and at the suture, black.

Var. The apical band of the elytra absent, the other bands almost obsolete.

Length $1\frac{1}{4}$ line.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This species seems to be very variable in the markings of the elytra: in one example only are they plainly visible; in all the others the elytral bands are either nearly obsolete or incomplete. The band at the base generally leaves a small spot near the scutellum and another at the shoulder of the ground-colour and extends in a point downwards along the suture, this band being connected at the sides with a broader stripe extending to the posterior bands; the latter are, in most specimens, only faintly indicated. *L. dimidiaticornis* is of the same shape and size as the two preceding species, from which it is principally distinguished by the colour and structure of the antennæ—the sixth and seventh and the apical two joints being black and the second and third joints small and equal; these organs are also shorter than in the allied forms.

6. *Luperodes nigricornis*.

Pale fulvous, the antennæ and the posterior tibiæ black; elytra black, closely punctured, a transverse band at the middle, widened at the suture, fulvous.

♂. Antennæ longer than the body, the third joint very minute.
Length $1\frac{1}{2}$ –2 lines.

Hab. GUATEMALA, Senahu, Sinanja (*Champion*).

L. nigricornis is larger and of more flattened shape than *L. dimidiaticornis*, from which it differs in the finely punctured vertex in connection with the entirely black antennæ; the fulvous band at the middle of the elytra is widened at the suture and does not extend to the lateral margins. The antennæ in the male insect extend beyond the apex of the elytra; the third joint is smaller than the second, and the following three joints are somewhat thickened and elongate. These characters will assist in the recognition of *L. nigricornis*.

7. *Luperodes fulvo-fasciatus*.

Fulvous, the antennæ, knees, tibiæ, and tarsi black; thorax finely punctured, obsoletely depressed at the sides; elytra black, extremely finely punctured, a transverse band of regular shape at the middle, fulvous.
Length 2 lines.

Hab. MEXICO, Cordova (*Sallé*).

This insect resembles *L. nigricornis* in coloration, but is twice the size. The fulvous elytral band of *L. fulvo-fasciatus* is broader than in that species, of very regular shape, and extends quite to the lateral margins and very narrowly upwards along the suture to the base; the antennæ extend to two thirds of the length of the body and have their third joint twice as long as the second.

A single specimen.

8. *Luperodes humeralis*.

Ovate, widened posteriorly, fulvous; antennæ and legs black; thorax impunctate; elytra very finely and closely punctured, fulvous, a spot at the shoulder, and the lateral margin anteriorly, black.
Length 2 lines.

Head fulvous, impunctate; the clypeus not separated from the face; labrum piecous; antennæ nearly as long as the body, black, the third joint one half longer than the second; thorax twice as broad as long, the sides straight, the posterior margin rounded, the surface not visibly punctured, with a very obsolete transverse depression on each side; scutellum flavous; elytra finely and closely punctured, fulvous, the shoulders with a black spot, the lateral margins and the epipleuræ at the base black; legs black; the first joint of the posterior tarsi much longer than the following three joints united.

Hab. GUATEMALA, San Gerónimo, Panajachel (*Champion*).

The black antennæ and legs and the humeral spot of the elytra (which extends downwards along the lateral margin for a short distance) separate *L. humeralis* from any of its congeners.

9. *Luperodes sallæi*.

Fulvous, the antennæ, tibiæ, and tarsi black; thorax and elytra very finely punctured, the latter with a spot at the shoulder, another near the scutellum, the apical margin, and a subsutural spot near the apex, black.
Length 2 lines.

BIOL. CENTR.-AMER., Coleopt., Vol. VI. Pt. 1, January 1888.

Head impunctate; the frontal tubercles nearly obsolete; antennæ about two thirds the length of the body, black, the second and third joints small, the latter slightly longer than the second, the fourth and following joints very elongate; thorax twice as broad as long, the lateral and the posterior margins slightly rounded, the surface finely punctured, obsoletely depressed on each side; elytra not more strongly punctured than the thorax, with two spots at the base (the inner one near the scutellum, the outer one on the shoulder), a spot, of more elongate shape, near the suture below the middle, the lateral margins posteriorly, and the apical margins also, black; posterior femora at the apex, and all the tibiæ and tarsi, black; the underside fulvous; the first joint of the posterior tarsi half the length of the tibia.

Hab. MEXICO, Yolotepec, Juquila (*Sallé*).

10. *Luperodes impressicollis*.

Black, the head, the three basal joints of the antennæ, the thorax, and legs fulvous; head and thorax finely punctured, the latter impressed; elytra dark blue, very finely punctured.

Length 2 lines.

Head finely and rather closely punctured at the vertex; the frontal tubercles transverse, bounded posteriorly by a deep transverse groove; clypeus with a distinct central ridge; antennæ about half the length of the body, the joints rather short and robust, the three lower joints fulvous, the others black, the third joint very little longer than the second; thorax twice as broad as long, the sides slightly rounded at the middle, the posterior margin somewhat sinuate, the disc finely and closely punctured, with two more or less deep depressions which sometimes nearly unite; scutellum black; elytra very closely and finely punctured, dark metallic blue; underside black, clothed with yellow pubescence; legs fulvous, all the tibiæ armed with a spine; the first joint of the posterior tarsi rather longer than the following joints together; claws appendiculate; the anterior coxal cavities open.

Hab. MEXICO, San Andres Chalchicomula, Jacale (*Sallé*), Oaxaca (*Höge*).

11. *Luperodes minutus*.

Testaceous, the sixth and seventh and the apical three joints of the antennæ, black; thorax finely punctured, with the sides black; elytra closely punctured, an oblique longitudinal streak from the middle of the base to the suture, a transverse band below the middle, and the sides, piceous.

Var. The elytral markings nearly obsolete.

Length 1 line.

Head impunctate; antennæ as long as the body, the second and third joints very small, equal; thorax twice as broad as long, finely punctured, with a more or less distinct lateral depression, the lateral margins black or piceous; elytra very finely and rather closely punctured, very obsoletely depressed below the base, testaceous, with a short piceous streak commencing at the middle of the base, this streak being connected with an oblique and pointed stripe extending from the base to the suture (forming a V-shaped mark with the corresponding stripe on the other elytron), and a broader and irregular transverse piceous band below the middle, the latter connected with the similarly-coloured sides; the underside and legs testaceous; the first joint of the posterior tarsi half the length of the tibia.

Hab. PANAMA, Bugaba, David (*Champion*).

This is the smallest of our species. In the elytral markings *L. minutus* resembles *L. bianmularis* and *L. apicicornis*, but differs in the colour of the antennæ; the V-shaped anterior markings of the elytra are directed obliquely downwards along the suture, and the posterior band does not occupy the apices: these differences, together with the small size, will help to distinguish *L. minutus* from its allies.

12. *Luperodes* (?) *metallicus*.

Black, the basal joints of the antennæ and the tibiæ flavous; thorax distinctly punctured, obsoletely depressed; elytra metallic blue, semipunctate-striate.

Length 1 line.

Head bluish-black, impunctate, deeply transversely grooved between the eyes, the latter very large and occupying the entire side of the head; frontal tubercles very distinct, elongate; labrum and the palpi obscure fulvous; antennæ long and slender, black, the three basal joints flavous, the second and third very short and equal; thorax scarcely twice as broad as long, all the margins nearly straight, the surface obsoletely transversely depressed across the disc, rather strongly and closely punctured, black; scutellum black; elytra metallic greenish-blue, rather strongly punctured, the punctuation arranged in almost regular rows; tibiæ and tarsi flavous; the first joint of the posterior tarsi much longer than the following three joints together.

Hab. GUATEMALA (*coll. Jacoby*).

A single example. This small species apparently possesses all the characters of *Luperodes*, although I am not sure of the state of the anterior coxal cavities; the eyes are exceptionally large. The metallic colour of the elytra further separates *L. metallicus* from any other species of the genus.

LUPERUS.

Luperus, Geoffroy, Hist. Ins. i. p. 230 (1762); Weise, Archiv für Naturg. part 2, p. 589 (1886); Joannis, L'Abeille, iii. p. 115 (1866).

Calomicrus, Stephens, Illustr. Brit. Ent. iv. p. 293 (1831).

The great number of species of *Luperus*, very many of which have been included in it for want of a better place, make it no easy matter to define the genus properly; many of the characters supposed to be peculiar to it are of a rather more negative than positive nature, thus—the antennæ vary in regard to the length of the joints (which is also the case in many other genera), and the shape of the thorax and the length of the posterior metatarsus is equally variable. It may, however, be taken as a rule that the general shape of the body of *Luperus* is elongate, of delicate structure, and the legs are feeble and slender; the posterior tibiæ are armed with a spine (often difficult to detect), and the claws are appendiculate. The numerous species seem to be distributed over the greater part of the world; many are known from Europe and North America, but none have up to the present time been made known from our country. The species seem subject to a good deal of variation, which makes their determination often a difficult task.

1. *Luperus morrisoni*.

Black, the first five joints of the antennæ, and the anterior tibiæ fulvous; above metallic green or bluish; thorax extremely finely punctured; elytra more distinctly and very closely punctate.

Length 2 lines.

Head rather broader than long, impunctate; the frontal tubercles narrowly transverse, bounded behind by a deep groove; clypeus with a strongly raised central ridge; labrum and palpi piceous; antennæ two thirds the length of the body, the joints rather robust, the third joint scarcely longer than the second, the fourth

the longest, the five or six lower joints fulvous, the rest black; thorax about one half broader than long, the sides slightly rounded before the middle, nearly straight at the base, the angles distinct but not prominent, the surface very minutely punctured, with (when seen in a certain light) two or three small nearly obsolete depressions near the base; scutellum black; elytra closely covered with fine punctures which are somewhat arranged in rows; legs black, the extreme base of the four posterior tibiæ, and the anterior tibiæ entirely, fulvous; the first joint of the posterior tarsi as long as the following two joints together.

Hab. MEXICO, Northern Sonora (*Morrison*).

L. morrisoni differs from *L. cyanellus*, Lec., in the colour of the antennæ and legs, and in the more strongly punctured elytra. *L. meraca*, Say, is larger, and has the antennæ and legs flavous, and the elytra with traces of longitudinal sulcations; *L. longulus*, Lec., is of more elongate shape, with the legs black, the general colour dark bluish-black (not metallic blue or green), and the thorax entirely impunctate.

I am much indebted to Dr. Horn for specimens of these North-American species, with which I have been enabled to compare the present insect.

2. *Luperus lecontii*.

Luperus rufipes, Lec. Col. of Kansas and New Mexico, p. 27 (1859)¹; Proc. Ac. Phil. 1865, p. 209² (nec Scopoli).

Luperus lecontii, Crotch, Proc. Ac. Phil. 1873, p. 54.

Hab. NORTH AMERICA, New Mexico^{1 2}.—MEXICO, Northern Sonora (*Morrison*).

I refer two specimens from Northern Sonora to *L. lecontii*; this species is compared by Leconte with *L. meraca*, Say, with which it closely agrees, but differs in the less acute and dentiform angles of the thorax and in the entirely fulvous legs. I must, however, add that the Sonoran specimens though exhibiting these differences have the thorax black and impunctate; the elytra metallic green, and exceedingly finely and not closely punctured, and with traces (in one specimen) of slight longitudinal costæ; and the legs and antennæ fulvous, each joint of the latter being slightly stained with fuscous at the apex.

3. *Luperus ruginosus*.

Black, above dark bluish- or greenish-black; head, thorax, and elytra closely rugose-punctate.

Length $1\frac{1}{2}$ –2 lines.

Head strongly rugose at the vertex; the frontal tubercles and carina distinct, the latter short; antennæ two thirds the length of the body in the male, shorter in the female, black, the third joint about one half longer than the second; thorax about one half broader than long, the sides perfectly straight, the posterior margin slightly rounded, the surface unevenly rugose and punctured, the middle of the disc sometimes with some smooth round spaces and a short ridge near the base; scutellum black, smooth; elytra strongly and closely punctured, the interstices wrinkled throughout, the epipleuræ continued below the middle; the underside and the legs black, finely pubescent; the tibiæ mucronate, the posterior pair with a long spine; the first joint of the posterior tarsi as long as the following three joints united; claws appendiculate; the anterior coxal cavities incomplete.

Hab. MEXICO, Presidio, Ventanas, Ciudad in Durango (*Forrer*).

The straight sides of the thorax and the rugosely punctured upper surface will help to distinguish *L. rugosus* from its congeners.

4. *Luperus parvulus*.

Black, above metallic blue; thorax with a few fine punctures; elytra more distinctly punctured, the punctuation arranged in semiregular rows.

Length $1\frac{1}{4}$ line.

Head not visibly punctured; the frontal tubercles obsoletely raised, but broad; the carina also broad and short; labrum piceous; antennæ rather more than half the length of the body, the terminal joints distinctly thickened, black, the basal joints stained with fulvous below, the third joint not longer than the second; thorax subquadrate, distinctly narrowed at the base, only visibly punctured near the posterior angles; scutellum black; elytra slightly depressed below the scutellum, rather convex and subcylindrical, more distinctly punctured anteriorly than below the middle, the punctures semiregularly arranged, the apices broadly rounded; legs black, the femora rather robust; the first joint of the posterior tarsi as long as the following two joints united.

Hab. MEXICO, Guanajuato (*Sallé*).

L. parvulus is distinguished by its small size, the uniform metallic blue colour of the upper surface, and the distinctly thickened antennæ; also by the elytra being semi-regularly punctured, the punctuation almost obsolete at the apex.

5. *Luperus subcostatus*.

Black or piceous, the head (the vertex excepted), thorax, and femora fulvous; elytra metallic green, finely punctured, the interstices more or less distinctly longitudinally costate.

Var. Head entirely fulvous.

Length 2 lines.

Head smooth, impunctate, the vertex greenish-piceous, the lower part flavous; the frontal tubercles strongly developed, flavous; the anterior edge of the clypeus straight; palpi slender, filiform, the third joint piceous; antennæ scarcely half the length of the body, black, the three lower joints partly or entirely fulvous, the third joint twice as long as the second, the fourth and following joints closely pubescent; thorax about one half broader than long, the sides strongly rounded before the middle, constricted near the base, the anterior angles obliquely rounded, somewhat produced outwards, and each furnished with a single hair, the surface entirely impunctate, fulvous, shining; scutellum black; elytra very finely semi-punctate-striate, the rows of punctures often doubled and towards the apex quite indistinct, the interstices longitudinally costate on the disc, the punctuation closer and more irregular at the sides; the breast and abdomen piceous; the apices of the tibiæ and the tarsi obscure fuscous; the posterior tibiæ with a small spine; the first joint of the posterior tarsi not longer than the following two joints together; claws appendiculate; anterior coxal cavities open.

Hab. MEXICO, Iguala in Guerrero (*Höge*).

Of this species there are but two specimens before me. One (the variety), apparently a female, differs from the other in the following manner:—the head and the antennæ are almost entirely fulvous, the antennæ are shorter, the thorax is scarcely so transverse, the elytra are more distinctly costate, and the first joint of the posterior tarsi is scarcely so long as the following two joints together; all other characters agree entirely. *L. subcostatus* may be known by the costate elytra; the shoulders are also rather prominent and angular. I somewhat doubtfully include it in the genus *Luperus*.

6. *Luperus subglabratus*.

Black, the head (the vertex excepted), antennæ, thorax, and legs fulvous; thorax subquadrate, impunctate; elytra metallic blue, scarcely visibly punctured.

Length $1\frac{3}{4}$ –2 lines.

Head more or less metallic æneous or greenish at the vertex, impunctate, the lower part fulvous; the frontal tubercles distinct, broad and rather elongate; clypeus narrowly transverse, its apex not much prolonged upwards; mandibles piceous at the apex; antennæ rather stout, fulvous, the third joint scarcely twice the length of the second; thorax about one half broader than long, the sides nearly straight, scarcely rounded or widened in front, the posterior margin slightly sinuate, the surface rather flattened, entirely impunctate, fulvous; scutellum piceous; elytra dark violaceous-blue, only visibly punctured when examined under a strong lens; legs fulvous; the first joint of the posterior tarsi as long as the following two joints united.

Hab. MEXICO, Acapulco in Guerrero (*Höge*).

L. subglabratus is separated from other similarly-coloured species by the shape of the thorax and by its straight sides and impunctate surface, and also by the nearly glabrous elytra; the head is in all the specimens more or less metallic green at the vertex. A single specimen, also obtained at Acapulco, is a little larger and has the elytra rather more distinctly punctured; it is probably a female of the same species.

7. *Luperus punctellus*.

Black, the three basal joints of the antennæ and the thorax fulvous; elytra opaque, black, finely punctured, the base and the sides with some longitudinal grooves.

Length $2\frac{1}{2}$ lines.

Head rather elongate, the vertex black, shining; the frontal tubercles strongly raised, trigonate; the clypeus with a distinct central ridge, its anterior margin straight; labrum broad, black; the apices of the mandibles fulvous; antennæ black (the terminal three joints wanting), the basal joints below, and the following two joints entirely, fulvous, the third joint one half longer than the second; thorax subquadrate, one half broader than long, the sides a little rounded, constricted near the extreme base, the angles slightly oblique, the posterior ones somewhat produced outwards, the surface impunctate, with a very small fovea on each side, fulvous, shining; elytra rather depressed, each with two short longitudinal depressions (divided by a short longitudinal ridge) placed immediately below the base and a longer depression below the shoulder, the latter gradually increasing in depth and ending below the middle, the punctuation arranged in close irregular lines and consisting of distinct and smaller impressions; the underside and the legs black; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

A single specimen, probably a female.

8. *Luperus albomarginatus*.

Testaceous, the base of the head, the antennæ, the tibiæ, and tarsi black; thorax fulvous; elytra black, finely punctured, the sutural and the lateral margins, narrowly, yellowish-white; breast piceous.

Length 2 lines.

Head flavous, the vertex piceous; the frontal tubercles distinct, but not very strongly raised; the clypeus broadly triangular; the labrum piceous; the palpi rather robust, piceous; antennæ two thirds the length of the body, black, the third joint twice as long as the second; thorax scarcely broader than long, the sides nearly straight, the surface impunctate, with two shallow impressions on the middle of the disc; scutellum black; elytra finely and distinctly but not very closely punctured, black, narrowly margined

(except at the base) with yellowish-white; femora flavous, the knees and the tibiæ and tarsi black; the first joint of the posterior tarsi as long as the following three joints together; the posterior tibiæ mucronate; claws appendiculate.

Hab. GUATEMALA, Zapote (*Champion*).

The single specimen obtained differs from any of its allies by the colour of the elytra.

9. *Luperus dissimilis*.

Obscure æneous, the lower joints of the antennæ and the legs more or less fulvous; thorax bifoveolate; elytra extremely closely and finely punctured, slightly rugose.

Var. Thorax flavous.

Length $1\frac{3}{4}$ -2 lines.

Head impunctate, metallic greenish or æneous; the frontal tubercles strongly raised, divided anteriorly by the blunt apex of the clypeus; antennæ half the length of the body, obscure fulvous, each joint stained with fuscous at the apex, the third joint twice as long as the second; thorax scarcely broader than long, the sides rounded before the middle, constricted at the base, the surface somewhat convex, with a few fine punctures, and a round fovea on each side; elytra with a very shallow sutural depression below the base, obscure æneous, the shoulders somewhat prominent and angular, the surface extremely closely and finely punctured, the interstices slightly rugose; legs flavous, the femora more or less stained with piceous; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; prosternum very narrow, but distinct; the anterior coxal cavities open.

Hab. MEXICO, Chihuahua city, Jalapa, Morelia in Michoacan, Mexico city (*Höge*), Guanajuato (*Salle*).

Many examples. *L. dissimilis* seems very closely allied to *L. torquatus*, Lec., of which Dr. Horn has kindly sent me some specimens for examination, but differs in the elytral sculpture, the punctuation being closer and more irregular and consisting of small and still smaller impressions; in *L. torquatus* the punctures are finer and more scattered, and the interspaces are very minutely granulate. Most of the specimens of *L. dissimilis* are entirely bronze-coloured; in some examples the thorax is flavous, and intermediate degrees are also not wanting. Two specimens from Morelia are more convex and widened posteriorly and apparently more strongly punctured, though not differing in other respects.

10. *Luperus modestus*.

Obscure testaceous, the antennæ and legs piceous; thorax and elytra very finely punctured.

Length $1\frac{1}{2}$ -2 lines.

Head not visibly punctured; the frontal tubercles strongly marked, transverse; eyes large and prominent; palpi piceous, the penultimate joint strongly incrassate; antennæ two thirds the length of the body, piceous, the basal joints sometimes more or less fulvous, the third joint twice as long as the second but slightly shorter than the fourth joint; thorax about one half broader than long, the sides very slightly rounded, the anterior angles not prominent and each furnished with a single long hair, the surface extremely finely and irregularly punctured; elytra rather more distinctly punctured than the thorax, the punctuation somewhat arranged in closely approached rows, the epipleuræ extending below the middle; tibiæ piceous, the posterior pair armed with a small spine; the first joint of the posterior tarsi rather longer than the following two joints together; claws appendiculate; anterior coxal cavities open.

Hab. PANAMA, Boquete in Chiriqui 3500 feet (*Champion*).

Of a uniformly dull testaceous colour, the upper surface shining; the pygidium in the female insect extending beyond the apex of the elytra. Many specimens.

11. *Luperus flavo-femoratus*.

Flavous, the antennæ obscure fuscous, the knees, tibiæ, and tarsi black, the upper surface pale yellowish-brown, shining; thorax impunctate; elytra finely punctured.

Length 2-2½ lines.

Head impunctate; the frontal tubercles distinct; eyes large; antennæ more than half the length of the body, fulvous, the intermediate joints more or less fuscous, the third joint more than twice the length of the second; thorax subquadrate, about one half broader than long, the sides narrowed at the base, slightly rounded in front, the disc impunctate, flavous; elytra slightly darker than the thorax (of a browner tint) and very shining, very finely and closely punctured; underside flavous; the knees and the tibiæ black, covered with yellow pubescence, the tarsi obscure fuscous or fulvous; the first joint of the posterior tarsi as long as the following three joints together; all the tibiæ mucronate; claws appendiculate.

Hab. GUATEMALA, Volcan de Atitlan 2500 to 3500 feet (*Champion*).

The present insect, although rather larger and of more robust appearance than is generally the case in *Luperus*, has all the structural characters of the genus.

ORCETES.

Head broad; the penultimate joint of the palpi incrassate; antennæ filiform, deformed in the male, the second and third joints short; thorax transversely subquadrate, the surface deeply depressed; elytra irregularly punctured, their epipleuræ obsolete below the middle; the posterior tibiæ with a short spine; the intermediate tibiæ notched near the apex in the male; the first joint of the posterior tarsi rather longer than the following three joints united; claws appendiculate; the anterior coxal cavities open.

This new genus, which should be placed near *Luperus*, is separated from any of the genera composing this section by the broad head and the depressed thorax, and by the elytral epipleuræ being obsolete below the middle; the male insect is further distinguished by the structure of the antennæ, and by the intermediate tibiæ being notched near the apex.

I include in it a single species from Nicaragua and Panama.

1. *Orætes flavicollis*. (Tab. XXXIII. fig. 4, ♂.)

Flavous, the antennæ (the basal four joints in the male, the basal two in the female, excepted) black; elytra finely punctured, irregularly depressed, dark violaceous-blue, the lateral margins anteriorly flavous.

♂. Antennæ with the third joint transverse, the fourth joint flattened and widened; thorax with a conical tubercle in the middle; the intermediate tibiæ notched at the apex.

Length 2 lines.

♂. Head broader than long, impunctate; the vertex swollen, divided by a central groove; the clypeus broad and flattened, separated from the sides of the face by a flattened space; antennæ nearly as long as the body, the first joint incrassate, the second joint very short, the third transverse, flattened, its inner apical angle produced into a tooth, the fourth securiform, flattened, the following joints elongate, pubescent; thorax twice as broad as long, the sides narrowed towards the base, the anterior margin slightly produced in the middle, the surface deeply depressed, with a tubercle at the centre of the depression (the tubercle impressed in the middle), the disc impunctate; scutellum triangular, flavous; elytra dark metallic violaceous, finely punctured, with some shallow irregular depressions, the lateral margin from the base to the

middle narrowly flavous; underside and the legs flavous; the intermediate tibiæ with a small notch near the apex.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, David (*Champion*).

The female differs from the male in the simple, not deformed, antennæ, these organs having the basal two joints only flavous; the third joint is slightly longer than the second, and the first joint is less thickened than is the case in the male insect; and the thorax is simply transversely sulcate on the disc and devoid of the tubercle. In all the specimens before me the thoracic tubercle of the male has at its extremity a small round impression. An example from Bugaba is figured.

METACYCLA.

Metacycla, Baly, Journ. Entom. i. p. 206 (1861).

Gastrogyna, Leconte, Proc. Ac. Phil. 1865, p. 210.

The female of *Metacycla* differs from the male in the abdomen being enormously developed and only partially covered by the elytra. The genus has hitherto contained three species only—one from California, one from Mexico, and one from Guatemala; two others are now added.

1. *Metacycla sallæi*.

Metacycla sallæi, Baly, Journ. Entom. i. p. 206¹.

Hab. MEXICO¹, Oaxaca (*Höge*), Tehuantepec, Juquila, Chabao (*Sallé*).—? PERU (*coll. Jacoby*).

Closely allied to *M. marginata*, but differing in the black thorax, and in the want of a fulvous elytral margin and similarly-coloured spots on the abdomen of the female; in this sex the abdominal segments are more or less margined with fulvous, but not spotted. Two specimens contained in my own collection, and labelled "Peru," do not seem to differ from the Mexican examples.

2. *Metacycla marginata*. (Tab. XXXIV. figg. 1, 2.)

Metacycla marginata, Chap. Gen. Col. xi. p. 213, note 1 (1875)¹.

Hab. GUATEMALA¹, Dueñas (*Champion*).

3. *Metacycla cæruleipennis*. (Tab. XXXIV. fig. 3.)

Black; thorax flavous, impunctate; elytra dark metallic blue, finely and closely punctured. ♀. Abdomen greatly inflated, the lateral margins fulvous. Length 2½–3 lines.

Hab. MEXICO, Chabao, Juquila, Panistlahuaca (*Sallé*), Jalapa (*Höge*).

BIOL. CENTR.-AMER., Coleopt., Vol. VI. Pt. 1, February 1888.

I am compelled to separate this insect from *M. sallæi* and *M. marginata* on account of the following differences:—the thorax is fulvous (instead of black as in *M. sallæi*), and the elytra are rather more finely punctured and of a bluish-plumbeous tint. More than a dozen specimens before me agree in these differences and show no intermediate stages. In *M. marginata* the elytra are rugose-punctate and margined with ferruginous. I am, however, unable to separate satisfactorily the female of the present insect (a single specimen only of this sex is before me) from that of *M. sallæi*; it seems to differ only in the flavous thorax.

4. *Metacycla robusta*. (Tab. XXXIV. fig. 4.)

Ovate, strongly dilated posteriorly, fulvous; antennæ black, the basal (and sometimes the apical) joints fulvous; thorax strongly transverse; elytra black, finely and closely punctured, depressed below the base. Length 3 lines.

Hab. COSTA RICA (*Van Patten*); PANAMA, Bugaba (*Champion*).

I have placed this species in *Metacycla* because it possesses all the characters peculiar to that genus; the thorax, however, is much more transverse in shape, and the elytra are remarkably widened and convex. In one specimen (from Bugaba) the first four and the last two joints of the antennæ are fulvous, in the other example the basal joint only is of that colour. The thorax is at least three times broader than long and impunctate, the sides are slightly, and the posterior margin distinctly, rounded; the elytra are very shining, black, closely punctured, and have a depression below the base, and their epipleuræ are continued below the middle; the posterior tibiæ are armed with a small spine; the first joint of the posterior tarsi is as long as the following two joints together; and the prosternum is very narrow, but distinct between the coxæ. In one specimen (probably the male) the last abdominal segment is sinuate at its outer margin, in the other it is simple; both examples have the same robust and dilated appearance.

PLATYMORPHA.

Body elongate; antennæ longer than the body, the second and third joints extremely short, the other joints elongate-triangular; thorax subquadrate, the disc depressed; elytral epipleuræ continued below the middle; the posterior tibiæ mucronate; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate; the anterior coxal cavities open. Anterior tibiæ and the first joint of the anterior tarsi strongly dilated in the typical species in the male.

Type *Platymorpha variegata*.

In general appearance *Platymorpha* agrees with *Chthoneis*; the third joint of the antennæ, however, is extremely small, and the posterior tibiæ are armed with a spine. The last-named character proves the affinity of *Platymorpha* with *Luperus* and its allies. I probably have only male specimens of *P. variegata* before me; these are at once

distinguished by the curious dilatation of the anterior tibiæ and of the first joint of the anterior tarsi.

The two species I refer to this genus inhabit Mexico or Guatemala.

1. **Platymorpha variegata.** (Tab. XXXIV. fig. 5.)

Fulvous; antennæ, the femora above, and the tibiæ, black; elytra scarcely visibly punctured, black, the extreme lateral margins and the apices fulvous.

Var. Elytra fulvous, each with two small black spots.

♂. Antennæ with the joints widened, the anterior tibiæ much widened and flattened at the apex, and the first joint of the anterior tarsi strongly dilated.

Length 3 lines.

Head impunctate, reddish-fulvous, the frontal tubercles indistinct; antennæ longer than the body, black, the second and third joints extremely short, the following joints elongate, the eighth joint triangularly widened; thorax twice as broad as long, its surface subdepressed, microscopically punctured, reddish-fulvous; scutellum fulvous; elytra scarcely more distinctly punctured than the thorax, black, the extreme basal and lateral margins and the apices fulvous; femora fulvous, their upper edge marked with black.

Hab. MEXICO, Yolotepec (*Sallé*); GUATEMALA, Capetillo (*Champion*).

Of the variety there are two specimens before me; these only differ from the typical form in the elytra being pale fulvous in colour, with a small black spot placed at the shoulder and a more transversely-shaped one at the middle.

2. **Platymorpha smaragdipennis.** (Tab. XXXIV. fig. 6.)

Chthoneis smaragdipennis, Jac. P. Z. S. 1879, p. 786¹.

Hab. GUATEMALA, Panajachel, Capetillo¹, San Gerónimo (*Champion*).

A careful examination of additional examples of this species has proved to me that the posterior tibiæ are armed with a small spine; the insect in consequence is wrongly placed in *Chthoneis*. The second and third joints of the antennæ are very small, and the thorax is deeply depressed on the disc and to a less extent near the anterior margin. The male differs from that of *P. variegata* in having simple anterior tibiæ and tarsi; it has the antennæ, however, as long as in that species. The colour of the elytra is bright metallic green and their surface is rugosely punctured throughout.

PTELEON.

Elongate; antennæ with short subtriangular joints; thorax transversely subquadrate; scutellum broad, its apex broadly rounded; elytra irregularly punctured, their epipleuræ continued below the middle; legs robust; all the tibiæ armed with a spine; the first joint of the posterior tarsi scarcely longer than the second joint; claws appendiculate; the anterior coxal cavities open.

Type *Pteleon semicæruleus*.

The spine at the apex of the tibiæ and the short subtriangular joints of the antennæ are the chief characters by which *Pteleon* is separated from *Metacycla*; the first joint of the posterior tarsi is also shorter than is the case in *Metacycla*.

1. *Pteleon semicæruleus*. (Tab. XXXIV. figg. 7, 8.)

Black; thorax scarcely visibly punctured; elytra dark blue, closely punctured, the interstices minutely granulate and semirugose.

Var. Thorax fulvous.

Length 2-2½ lines.

♂. Head broader than long; the eyes very prominent; the frontal tubercles strongly raised, transversely oblique; clypeus narrowly transverse; labrum piceous; antennæ black, scarcely half the length of the body, the third joint one half longer than the second, each of the following joints nearly equal in length to the third; thorax nearly twice as broad as long, the sides rounded before the middle, narrowed near the base, the anterior and posterior margins straight, the surface with a few fine scattered punctures, and a small but deep round fovea on each side; elytra parallel, the shoulders somewhat prominent, closely punctured, the interstices minutely granulate.

Hab. MEXICO, Tacambaro in Michoacan, Matamoros Izucar in Puebla (*Höge*).

The female is larger and very much broader than the male, and is somewhat flattened above; the thorax is without foveæ; and the elytra are more closely and finely rugose. The elytra are sometimes of a greenish or very dark purplish colour.

All our female examples but one belong to the variety.

***** *Tibia unarmed*.

CNEORANE.

Cneorane, Baly, Ent. Monthly Mag. ii. p. 97 (1865).

No species from the New World has hitherto been ascribed to this genus; two, however, received from our region, agree closely in every particular with the characters attributed to *Cneorane* by the author, and I accordingly include them in it.

The few described species of *Cneorane* are from India, Japan, and the Cape of Good Hope; the two now added are both from Mexico.

1. *Cneorane nigricornis*. (Tab. XXXIV. fig. 9.)

Black, the head, thorax, and femora fulvous; elytra dark violaceous, very finely and closely punctured. Length 3 lines.

Head impunctate; eyes large; the frontal tubercles strongly raised, transversely trigonate; the anterior edge of the clypeus straight; palpi slender, piceous; antennæ black, the third joint twice as long as the second but shorter than the fourth; thorax subquadrate, the sides straight at the base, very little rounded in front, the angles simple, not produced, the surface rather flattened near the base, more convex anteriorly, and without punctures; scutellum black; elytra parallel, dark metallic violaceous, very finely and closely punctured, the interstices slightly rugose, the epipleuræ continued nearly to the apex; femora fulvous; tibiæ and tarsi black, the former unarmed; claws appendiculate; anterior coxal cavities open.

Hab. MEXICO, Durango (*Höge*). One specimen.

C. nigricornis bears a remarkable resemblance to *C. elegans*, Baly, from Japan, with which it agrees in size and coloration; the thorax is, however, less transverse, and the elytra are more finely punctured; the first joint of the posterior tarsi is as long as the following two joints together.

2. *Cneorane mexicana*. (Tab. XXXIV. fig. 10.)

Fulvous; antennæ (the basal joints excepted), and the tibiæ at the apex, black; thorax subquadrate, finely punctured; elytra closely semirugose-punctate.

Length $3\frac{1}{2}$ lines.

Head without punctures; the frontal tubercles strongly raised, trigonate; labrum piceous; antennæ robust, black, the basal or the first two joints fulvous, the third joint one half shorter than the fourth; thorax subquadrate, rather broader than long, the sides slightly rounded before the middle and somewhat narrowed towards the base, the surface rather convex, distantly and finely punctured; scutellum broad, fulvous; elytra of the same reddish-fulvous colour as the thorax (in some specimens with a slight purplish reflection), closely punctured, the interspaces towards the sides finely rugose, the epipleuræ extending nearly to the apex; legs robust; the femora fulvous; the tibiæ unarmed, piceous towards the apex; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; the anterior coxal cavities open.

Hab. MEXICO, Cerro de Plumas, Oaxaca (*Höge*).

METACORYNA.

Body oblong; eyes moderate; palpi filiform; antennæ with the intermediate joints transverse, the eighth (or ninth) joint enormously developed and pear-shaped; thorax transversely subquadrate, the angles not produced; elytra convex, irregularly punctured, their epipleuræ continued below the middle; legs slender; tibiæ simple, unarmed; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; the anterior coxal cavities open.

Type *Metacoryna fulvicollis*.

The structural characters, including the curious development of some of the joints of the antennæ, of *Metacoryna* agree with those of the tenth group of Chapuis's arrangement, the "Cerophysinæ." In the typical form of *Metacoryna* the size of the eighth antennal joint is proportionately enormous, but in one of the other species it is less developed; and although all the specimens I have for examination agree with each other in this respect, I am unable to say whether this structure is peculiar to the male insect only.

I include three species from Mexico or Guatemala in this genus.

1. *Metacoryna fulvicollis*. (Tab. XXXIII. fig. 3, ♂.)

Black; head and thorax fulvous, impunctate; elytra dark blue, submetallic, extremely finely punctured. Length 3 lines.

Head impunctate; the frontal tubercles broadly transverse; labrum and palpi piceous; antennæ black, the three basal joints testaceous below, the fifth, sixth, and seventh joints transverse, the eighth joint pear-shaped, enormously dilated and swollen, and deeply foveolate beneath, the ninth joint transversely subquadrate, thickened, the apical joints small and of normal shape; thorax twice as broad as long, the sides rounded before the middle, the angles distinct but not produced, the surface very obsoletely flattened near the base, not visibly punctured, fulvous, opaque; scutellum triangular, black; elytra very finely and closely punctured, dark blue, submetallic; underside and legs black.

Hab. MEXICO, Tupataro (*Sallé*), Acapulco (*Höge*).

The specimen from Tupataro is figured.

2. *Metacoryna fulvipes*. (Tab. XXXIV. fig. 11.)

Black; the head, the basal joints of the antennæ, the thorax, and legs fulvous; elytra dark metallic blue, closely punctured.

♂. Antennæ with the eighth and ninth joints strongly swollen.

Length 2 lines.

Hab. MEXICO, Guanajuato (*Sallé*).

Much smaller than *M. fulvicollis*; the five or six basal joints of the antennæ fulvous and much less transverse, the swollen joints proportionately smaller; the elytra rather more strongly punctured and slightly rugose; the legs fulvous.

3. *Metacoryna guatemalensis*.

Black, the head, thorax, and legs testaceous; the ninth joint of the antennæ greatly swollen and widened, pear-shaped; elytra greenish-æneous.

Length 2 lines.

The vertex of the head piceous, impunctate, the lower portion fulvous; the frontal tubercles very distinct, broadly trigonate; labrum piceous; antennæ black, the two lower joints testaceous beneath, the second and third joints nearly equal, the following joints more or less triangularly widened, the ninth joint greatly swollen and enlarged, its upper surface deeply channelled, the terminal joint elongate and pointed; thorax about twice broader than long, the sides rounded at the middle, the posterior angles distinct, somewhat obliquely shaped at the sides, the surface impunctate, shining, testaceous; elytra extremely finely and sparingly punctured, the punctures placed in indistinct rows which are a little more plainly marked near the suture, the apices almost impunctate.

Hab. GUATEMALA, Calderas 6000 feet (*Champion*).

In *M. guatemalensis* the ninth antennal joint only is strongly enlarged: this is the only structural difference I can find between this and the preceding species, and it is not sufficient to justify its separation from the genus.

SCELIDA.

Scelida, Chapuis, Gen. Col. xi. p. 184 (1875).

Only a single species from Guatemala was known to the author of this genus; we are now acquainted with seven others. *Scelida* contains species of comparatively large size, nearly all of which are of metallic colour. The genus is characterized by the nearly subquadrate thorax, the unarmed tibiæ, and the open anterior coxal cavities, as well as by the narrow elytral epipleuræ which extend nearly to the apex. So far as at present known *Scelida* is confined to Central America, where it ranges from Mexico to the State of Panama.

1. *Scelida viridis*. (Tab. XXXIV. fig. 12.)

Scelida viridis, Jac. P. Z. S. 1879, p. 787¹.

Hab. MEXICO¹ (*coll. Jacoby*).

This species, of which a male and a female specimen are contained in my collection,

is of a more slender shape than usual, and has the thorax proportionately narrower. The elytra are green or blue, finely rugose, with traces of narrowly raised longitudinal lines in the male. The metallic green under surface covered with yellowish pubescence is a character which at once separates *S. viridis* from any of its allies except *S. bella*.

2. *Scelida* (?) *antennata*. (Tab. XXXIV. fig. 13.)

Piceous below; the lower part of the head and the thorax fulvous; antennæ with the apical joints widened; elytra metallic green, rugosely punctured.

Length 3 lines.

Head elongate, distinctly longer than broad, the upper portion greenish-piceous, this colour surrounding a fulvous spot, the lower part of the face flavous; antennæ black, the three basal joints testaceous below, pubescent, the third joint one half longer than the second, the fifth to the tenth joints slightly curved and widened in the middle; thorax subquadrate, one half broader than long, the surface finely punctured, bright flavous, shining; elytra elongate, parallel, bright metallic green, very closely punctured and transversely rugose; underside piceous, with a slight purplish gloss, clothed with whitish pubescence; the coxæ fulvous, the anterior pair black at the base; the posterior femora rather stout; the first joint of the posterior tarsi as long as the following two joints together.

Hab. MEXICO, Juquila (*Höge*).

A single specimen. *S. antennata* differs from any of its allies in the shape of the joints of the antennæ and in the rather thickened posterior femora; the latter, however, are not so stout as they are in the *Halticinæ*. This species should probably be placed in another genus.

3. *Scelida glabrata*. (Tab. XXXIV. fig. 14.)

Flavous, the terminal four joints of the antennæ fuscous; head and thorax impunctate; elytra metallic green, entirely impunctate.

Length $4\frac{1}{2}$ lines.

Hab. MEXICO, Capulapam (*Sallé*).

The entirely impunctate upper surface of this species, of which a single specimen only is before me, distinguishes it at once from any of its allies; in structural details it does not differ.

4. *Scelida rugosa*. (Tab. XXXIII. fig. 8.)

Reddish-fulvous, the terminal joints of the antennæ and the tarsi fuscous; thorax sparingly punctured, subquadrate; elytra dark metallic green, coarsely rugose and wrinkled.

Length 4 lines.

Head impunctate; labrum testaceous; palpi piceous; antennæ half the length of the body, the five lower joints testaceous, the rest fuscous, the fourth joint slightly longer than the preceding and the following joints; thorax slightly broader than long, the sides nearly straight, very slightly narrowed towards the base, the surface flat, with two obsolete foveæ at the sides, and furnished with a few fine punctures; scutellum fulvous; elytra parallel, subcylindrical, the entire surface strongly rugose and transversely or longitudinally wrinkled, the interstices impunctate; underside and femora fulvous, the knees and the tibiæ testaceous, the tarsi fuscous.

Hab. MEXICO, San Miguel del Rio (*Sallé*).

Of this interesting species there is also but a single specimen contained in the Sallé collection. The rugose sculpture of the elytra of *S. rugosa* is a rare exception amongst the Galerucinae, and entirely in opposition to the smooth and impunctate surface of the preceding species.

5. **Scelida elegans.** (Tab. XXXIV. fig. 15.)

Scelida elegans, Chap. Gen. Col. xi. p. 184, note 1¹.

Hab. GUATEMALA¹, near the city (*Salvin*).

S. elegans served Chapuis for the establishment of the genus, and may be known from its allies by the flavous colour of the head, thorax, underside, and legs, the bluish elytra, and their exceedingly close and distinct punctuation. The specimen in my collection measures 5 lines. Mr. Champion does not appear to have met with this or the following species.

6. **Scelida balyi.**

Scelida balyi, Jac. P. Z. S. 1878, p. 993¹.

Hab. GUATEMALA, Aceytuno (*Salvin*).

The locality of this species was, through an oversight, not given by me at the time of publication¹. Only a single specimen was obtained by Mr. Salvin. *S. balyi* differs greatly from any of the preceding forms by the black vertex of the head and the similarly coloured spots on the coxæ; and also by the shape of the mesosternum, the sides of which are conically raised and produced into a point.

7. **Scelida bella.** (Tab. XXXIII. fig. 9.)

Metallic green, the head, antennæ, thorax, and legs flavous; elytra metallic cupreous, finely rugosely-punctate. Length 4 lines.

Head impunctate; antennæ more than half the length of the body, flavous, the fourth joint slightly longer than the third; thorax quadrate, narrowed towards the base, the surface flat, with two obsolete foveæ, entirely impunctate; scutellum broader than long; elytra closely and finely rugose and punctured, of a metallic reddish-cupreous colour; underside metallic green, covered with yellow pubescence, the anterior portion of the breast and the legs flavous; the first joint of the posterior tarsi as long as the following two joints together.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

S. bella agrees with *S. viridis* in the colour and clothing of the under surface; but differs in the colour of the elytra, the shape of the thorax, and the less elongate first joint of the posterior tarsi.

8. **Scelida metallica.** (Tab. XXXIII. fig. 10.)

Metallic blue or green, the basal joints of the antennæ, the head, thorax, and legs fulvous; elytra scarcely visibly punctured, the basal portion raised.

Length 3-4 lines.

Head impunctate; antennæ slender, the apical joints fuscous, the five basal joints fulvous, the third joint one half smaller than the fourth; thorax subquadrate, one half broader than long, the sides straight,

converging in front, the surface obsolete depressed, impunctate; scutellum fulvous or piceous; elytra with the basal portion raised, very bright metallic blue or greenish, with a few extremely fine punctures; underside metallic blue, the sides of the breast pubescent; legs fulvous; the first joint of the posterior tarsi as long as the following three joints together.

Hab. MEXICO, Tuxtla, Cordova, Vera Cruz (*Sallé*), Oaxaca (*Höge*).

Easily separated from any other species of *Scelida* by the metallic under surface, and by the sculpture and polish and beautiful blue colour of the elytra.

We figure a specimen from Oaxaca.

SCELIDOPSIS.

Body elongate; antennæ filiform, the third joint much longer than the second; thorax subquadrate, longitudinally and transversely depressed; elytra opaque, their epipleuræ broad and extending to the apex; legs slender, unarmed; the first joint of the posterior tarsi longer than the following three joints together; claws appendiculate; the anterior coxal cavities open.

Type *Scelidopsis rufo-femorata*.

Scelidopsis is evidently closely allied to the genus *Scelida*, on account of the unarmed tibiæ, the long posterior metatarsus, and the open anterior coxal cavities; there is, however, a great difference in the shape and structure of the thorax, the latter in *Scelidopsis* being more quadrate and not constricted at the base. The surface of the thorax is (at least in one sex) deeply marked with longitudinal and transverse depressions, calling to mind the Eastern genus *Sastra*; and the elytral epipleuræ are much broader and more concave than in *Scelida*, in which they are very narrow. The opaque and impunctate elytra seems to be another character of *Scelidopsis*.

I include three species in this genus, all from Central America.

1. *Scelidopsis rufo-femorata*.

Rufous, the antennæ, knees, tibiæ, and tarsi black; thorax impunctate; elytra opaque, impunctate, dark purplish.

Length $2\frac{1}{2}$ lines.

Head impunctate, rufous; the frontal tubercles strongly raised; antennæ more than half the length of the body, black, the third and fourth joints slender, nearly equal; thorax subquadrate, the sides nearly straight, scarcely narrowed at the base, the surface shining, impunctate, with two rounded fovæ near the anterior margin and a deep transverse sulcation near the base, the sulcation limited at the sides by a deep oblique groove which extends nearly halfway up each side of the disc; scutellum fulvous; elytra entirely opaque, without any punctuation (extremely finely granulate when seen under a strong lens), of a purplish or bluish-violaceous tint; underside and the femora (with the exception of the apex of the latter) rufous or fulvous.

Hab. MEXICO, Cordova, Toxpam (*Sallé*).

2. *Scelidopsis subcostata*. (Tab. XXXIII. fig. 2.)

Black, the head, antennæ, and thorax rufous; elytra opaque, impunctate, dark bluish, with a short costa at the sides.

Length 3 lines.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

BIOL. CENTR.-AMER., Coleopt., Vol. VI. Pt. 1, February 1888.

The only specimen obtained by Mr. Champion differs in the following way from *S. rufo-femorata*: the underside and the legs are black, the antennæ are entirely rufous, and the elytra have the shoulders acutely raised in the shape of a short costa which terminates before the middle; all the rest agrees with *S. rufo-femorata*.

3. *Scelidopsis guatemalensis*.

Black, the head, thorax, and scutellum rufous; elytra dark bluish, opaque, impunctate. ♀ (?). The thorax without discoidal depressions. Length 3 lines.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

Two examples. *S. guatemalensis* differs from *S. rufo-femorata* in the black underside and similarly-coloured legs (the base of the anterior femora in one specimen, however, is rufous); and from *S. subcostata* in the colour of the antennæ, and in the want of the elytral costa. Whether the specimen without thoracic depressions represents another species or the female sex of *S. guatemalensis* I am unable to say. Both examples were obtained at the same locality, and, except in the sculpture of the thorax, agree perfectly with each other.

The typical specimen has the depressions on the thorax as in the two preceding species.

CHTHONEIS.

Chthoneis, Baly, Ent. Monthly Mag. i. p. 135 (1864).

Chthoneis possesses most of the structural characters of *Scelida*, but may generally be distinguished from that genus by the short second and third joints of the antennæ and the more transversely shaped thorax; one species is further distinguished by the dilated intermediate joints of the antennæ in the male insect.

The few species known are from Central or South America; one only was known to the author of the genus.

The insect described by me under the name of *Chthoneis smaragdipennis* (P. Z. S. 1879, p. 786) is here referred to another genus.

1. *Chthoneis jansoni*.

Chthoneis jansoni, Jac. P. Z. S. 1879, p. 786¹.

Var. Head black; the basal as well as the apical joints of the antennæ flavous.

Hab. MEXICO, Cordova, Toxпам, Cosamaloapam (*Sallé*), Jalapa (*Höge*); NICARAGUA, Chontales (*Janson*¹, *Belt*); PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).

Since the description of this species was published, a great many more specimens have been received; amongst these are some which have the head black. The antennæ in the male insect are considerably longer than, in the female only as long as, the body;

the elytra vary in colour from dark blue to violet and green, and are finely rugosely punctured.

C. jansoni has been found in abundance by Mr. Champion in the vicinity of the coffee-plantations on the slope of the Volcan de Chiriqui, at an elevation of 3000 feet.

2. *Chthoneis dilaticornis*. (Tab. XXXIII. fig. 24, ♂.)

Black; thorax flavous, impunctate; elytra dark violaceous, closely semirugose-punctate.

♂. Antennæ as long as the body, the intermediate joints dilated, the fifth and sixth joints deformed. Length 3 lines.

♂. Narrowly elongate; the head black, shining, impunctate; the frontal tubercles distinct, trigonate; antennæ black, the second and third joints very short and equal, the fifth and sixth joints elongate, hollowed at the middle, the former thickened at the base and the latter at the apex, the following joints irregularly flattened, the apical one terminating in an acute hook-like point; thorax narrowly transverse, the sides but little rounded, the surface impunctate, flavous, shining; elytra dark violaceous, closely punctured and semi-rugose; legs black.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

The female has shorter and simple antennæ.

MIRACES.

Oblong ovate; antennæ subfiliform, the apical joints gradually thickened; thorax transverse, the disc transversely grooved, the sides and the posterior margin rounded; elytral epipleuræ broad at the base, obsolete below the middle; legs rather robust; the tibiæ unarmed; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; the anterior coxal cavities open.

I propose the present genus for the reception of a small insect, which is principally distinguished from the allied forms by the distinct transverse groove (extending across the middle of the disc) of the thorax in connection with the unarmed tibiæ and rather stout antennæ. The single species I refer to it inhabits Guatemala and British Honduras.

1. *Miraces æneipennis*. (Tab. XXXIV. fig. 16.)

Piceous below; the head, antennæ, thorax, and legs fulvous; thorax impunctate; elytra dark metallic greenish or purplish, very finely punctured and granulate.

Length 1-1½ line.

Head obscure æneous or piceous at the vertex, fulvous at the lower portion, the latter rather swollen and impunctate; eyes large; the frontal tubercles trigonate; the clypeus in the shape of a narrow transverse ridge; antennæ scarcely half the length of the body, fulvous, all the joints of nearly the same length, the third joint scarcely longer than the second, the terminal joints gradually and slightly thickened; thorax nearly three times broader than long, the sides rounded and slightly widened at the middle, the anterior margin concave, and parallel with the posterior margin, the surface with a very distinct transverse groove at the middle of the disc, the groove extending nearly to the sides, impunctate, fulvous; scutellum piceous or black; elytra metallic green or æneous, slightly widened posteriorly, with an almost obsolete transverse depression below the base, very minutely granulate and finely punctured; legs fulvous; underside piceous or obscure fulvous.

Hab. BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Capetillo, San Gerónimo (*Champion*).

The specimens from Guatemala are larger than those from British Honduras, and one of them has the elytra stained with purplish reflections.

HECATÆUS.

Oblong ovate; antennæ short, the second and third joints small, the following joints subtriangular and gradually widened; thorax subquadrate, the angles slightly prominent, the surface without depressions; elytra irregularly punctured, their epipleuræ very broad at the base and continued below the middle; tibiæ unarmed; the first joint of the posterior tarsi nearly as long as the following three joints together; claws appendiculate; the anterior coxal cavities open.

The short antennæ with subtriangularly widened joints in connection with the unarmed tibiæ do not permit the placing of the small insect for which I propose the present genus in any other yet described. The single species I include in it is from the State of Panama.

1. *Hecatæus nigricollis*. (Tab. XXXIII. fig. 23.)

Black; head impunctate; thorax scarcely visibly punctured; elytra fulvous, a spot surrounding the scutellum and the posterior half black.

Var. Entirely black.

Length $1\frac{1}{2}$ line.

Head impunctate; the frontal tubercles distinct, trigonate; the clypeus with a strongly raised central ridge; antennæ less than half the length of the body, black, pubescent; thorax about one half broader than long, deflexed near the anterior angles, the latter slightly thickened, the lateral and the posterior margins moderately rounded, the surface with a few exceedingly fine punctures at the sides; scutellum black, its apex rounded; elytra a little more strongly punctured than the thorax, the anterior portion to below the middle fulvous, a small spot surrounding the scutellum and the rest of the surface black; underside and the legs black.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

The variety is of an entirely black colour.

ELYCES.

Oblong; clypeus not separated from the face; antennæ slender, much longer than the body, the third joint longer than the second but much shorter than the fourth; thorax transverse, the angles not produced; elytra irregularly punctured, their epipleuræ continued to the apex; tibiæ simple, unarmed; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate; anterior coxal cavities open.

The very long and slender antennæ, the head with the lower part formed of a single piece, the transverse thorax, and the unarmed tibiæ separate *Elyces* from any of the numerous genera of Galerucinæ. This genus is perhaps best placed near *Chthoneis* and *Scelida*, in Chapuis's twelfth group.

Four species from Central America are here referred to it.

1. *Elyces nigro-maculatus*. (Tab. XXXIII. fig. 5, ♀.)

Testaceous, the head at the base, the antennæ, and tibiæ black; thorax finely punctured; elytra closely and strongly punctate, a spot at the shoulder, another surrounding the scutellum, and a transverse band below the middle, black.

Length $1\frac{1}{2}$ –2 lines.

Head impunctate, black at the vertex; the lower portion of the face testaceous, forming a plane surface, and impressed with some rather deep punctures; labrum prominent, piceous; palpi with the penultimate joint strongly swollen, piceous; antennæ very long, extending far beyond the elytra, black; thorax more than twice broader than long, the lateral margins very slightly rounded, the surface with a few fine punctures; scutellum testaceous; elytra very closely and distinctly punctured, the spot at the shoulder elongate, the one surrounding the scutellum pointed at the suture, both often connected in the shape of a band, the posterior band wider at the sides than near the suture, and of variable thickness.

Hab. PANAMA, Bugaba, David, Caldera, Tolé (*Champion*).

The spots of the elytra are subject to a good deal of variation as regards shape and size; but there is generally a small space at the base of the ground-colour. In a single specimen the spots form two transverse bands which surround a central transverse testaceous spot, and the apices of the elytra remain testaceous; in this specimen the head is entirely black. An example from David is figured.

2. *Elyces quadri-maculatus*. (Tab. XXXIII. fig. 6, ♂.)

Testaceous, the apical joints of the antennæ, the tibiæ, and tarsi fuscous; thorax sparingly and finely punctured; elytra closely and more strongly punctured, a spot at the shoulder, another near the scutellum, and two spots below the middle, placed transversely, black.

Length $1\frac{1}{2}$ –2 lines.

Head entirely testaceous, impunctate; the frontal tubercles well developed; the lower portion of the face with a slightly raised central ridge; antennæ much longer than the body, very thin and slender, fuscous, the three or four lower joints testaceous, the third joint double the length of the second; thorax transverse, the sides slightly rounded at the middle, the surface finely and sparingly punctured; elytra closely covered with small and slightly larger punctures, the interspaces somewhat rugose, each with a small spot at the shoulder, another one below the base near the scutellum, and two small spots immediately below the middle, placed transversely, black.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

E. quadri-maculatus differs from the preceding species in the entirely testaceous head, the colour of the antennæ, and the spots of the elytra. The posterior spots on the latter are placed more forward than the corresponding band in *E. nigro-maculatus*. In one or two specimens the spots are larger and connected, forming bands; but the testaceous head and the other details pointed out above will separate these forms from *E. nigro-maculatus*.

3. *Elyces obscuro-vittatus*.

Testaceous, the antennæ fuscous; thorax transverse, short, the disc with five almost obsolete spots, finely punctured; elytra more distinctly punctured, each with an obsolete longitudinal subsutural and sublateral band.

Length $1\frac{1}{2}$ –2 lines.

Head impunctate, the vertex obscure fuscous, the lower part testaceous; the frontal tubercles distinctly raised, trigonate; the lower portion of the face flattened, forming a single piece with the clypeus; the labrum

piceous; antennæ slender, fuscous, longer than the body; thorax narrowly transverse, the sides nearly straight, the surface remotely and sparingly punctured, with some almost obsolete fuscous spots, of which two are placed near the middle, and three, transversely, near the base; scutellum piceous; elytra narrowly elongate, more distinctly and closely punctured than the thorax, with two almost obsolete narrow longitudinal bands extending from the base to the apex, one placed near the sutural and the other near the lateral margin; the underside and legs obscure, lighter or darker, testaceous.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

In one specimen the elytral bands are scarcely visible. The thorax is narrower and shorter, and its sides straighter than in *E. quadri-maculatus*. The terminal joints of the antennæ in all the specimens are unfortunately broken off, but even the remaining nine joints extend beyond the apex of the elytra. In its general structure *E. obscurivittatus* agrees well with *E. quadri-maculatus*.

4. *Elyces nigripennis*.

Black; head and thorax fulvous, impunctate; elytra black, finely and rather remotely punctured. Length $1\frac{1}{2}$ line.

Head with a few fine punctures at the vertex, fulvous; the frontal tubercles rather strongly swollen; the clypeus broad and scarcely thickened; the palpi black, their penultimate joint strongly thickened; antennæ black, two thirds the length of the body, the third joint twice as long as the second, the fourth joint the longest; thorax scarcely broader than long, the sides straight, slightly narrowed at the base, the surface rather convex, rather strongly deflexed at the sides, the disc impunctate, fulvous or flavous; scutellum black, rather broad, and obtusely rounded at the apex; elytra a little widened posteriorly, the shoulders but little prominent, the punctuation not very closely arranged.

Hab. GUATEMALA, Las Mercedes, Cerro Zunil, Sabo in Vera Paz (*Champion*).

The specimen from Sabo differs from the others in having the palpi and the scutellum fulvous; and the elytra more finely punctured. *E. nigripennis* is separated from the other species of the genus by the less transverse thorax and the shorter antennæ, but not by any other structural details.

MASURIUS.

Body elongate, subparallel; head broad; clypeus well defined; antennæ long, filiform, pubescent, the third joint more than twice the length of the second; thorax transverse; elytra irregularly punctured, their epipleuræ continued to the apex; tibiae unarmed; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate; anterior coxal cavities open.

In general appearance this genus resembles *Elyces*; the antennæ are, however, generally shorter and more robust; the head is differently shaped, and has a distinct clypeus; and the thorax is more transverse. *Masurius* also greatly resembles *Chthoneis*, but cannot be identified therewith on account of the longer third joint and the non-dilated intermediate joints of the antennæ; the thorax is also more transverse than in the typical species of that genus. *Masurius* does not possess well-defined characters, being somewhat intermediate between *Elyces* and *Chthoneis*; nevertheless it would not be advantageous to place the species included in it in either of these genera.

The four species referred to it are all from Central America.

1. *Masurius violaceipennis*.

Testaceous; the basal and the apical joints of the antennæ fulvous, the other joints black; thorax sparingly punctured, bifoveolate; elytra dark violaceous, finely and closely punctate.

Length 2 lines.

Head broader than long, impunctate; the eyes very prominent; the frontal tubercles very distinct, subquadrate, divided by the apex of the transversely-shaped clypeus; antennæ two thirds the length of the body, black, the first and the last joint fulvous, the third joint scarcely double the length of the second; thorax transverse, three times broader than long, the sides slightly rounded, the angles rather acute and slightly produced, the surface with a few fine punctures, and a round fovea on each side; scutellum testaceous; elytra very closely punctured, dark metallic violaceous, the shoulders bounded within by an elongate depression; the underside and the legs testaceous.

Hab. PANAMA, Bugaba (*Champion*).

M. violaceipennis differs from *M. flavipes* in the entirely testaceous head, and in the colour of the antennæ, elytra, and underside; it is also larger and broader, and the thorax is bifoveolate.

2. *Masurius flavicollis*.

Piceous, the lower part of the face, the thorax, and the femora flavous, the base of the head black; elytra black, with a slight violaceous tint, closely punctured, and transversely rugose.

Var. Head flavous.

Length 2 lines.

Head impunctate, black; the frontal tubercles distinctly raised, trigonate, flavous; clypeus flavous; labrum and palpi piceous; antennæ as long as the body in the male, shorter in the female, black, pubescent, the third joint shorter than the fourth; thorax twice as broad as long, the sides but little rounded, and slightly narrowed at the base, the angles not prominent, the surface covered with fine scattered punctures, flavous, shining; scutellum black; elytra violaceous-black, closely and distinctly punctured, the interspaces transversely rugose; legs pubescent, the femora flavous, the knees, tibiæ, and tarsi more or less piceous.

Hab. GUATEMALA, Zapote, Mirandilla, Sinanja (*Champion*).

3. *Masurius bifasciatus*. (Tab. XXXIV. fig. 17.)

Testaceous, the base of the head, the intermediate joints of the antennæ, the breast, and the tibiæ and tarsi black; thorax strongly transverse, scarcely visibly punctured; elytra finely punctured, subopaque, a broad transverse band at the base, another below the middle, and the sutural and apical margins, black.

Length $2\frac{1}{2}$ -3 lines.

Head with a few very fine punctures, the vertex black, shining; the frontal tubercles transverse; the lower edge of the clypeus strongly concave-emarginate; palpi robust, piceous; antennæ two thirds the length of the body (♀), the three lower and the eighth to the tenth joints flavous, the others black, the third joint more than twice the length of the second; thorax nearly three times broader than long, the sides slightly rounded before the middle, the angles rather prominent, the surface with an oblique narrow depression near the posterior angles, extremely finely granulate and punctured; scutellum testaceous; elytra very finely and closely punctured, the basal transverse band not extending to the basal margin, its edges sinuate, and its sides broader than the inner portion, the second band of the same shape, and extending to either margin, the latter thence narrowly black to the apex; the breast and the last abdominal segment black; the latter in the male with a short triangular fovea at the middle of the posterior margin.

Hab. PANAMA, Bugaba, David, Caldera in Chiriqui (*Champion*).

I am unable to say anything about the antennæ of the male, as in the two specimens of that sex before me these organs are unfortunately wanting. In the transverse

thorax, unarmed tibiæ, &c., this species approaches *Elyces*. The elytra have often two spots instead of the band at the base, and their lateral margin is black only from the posterior band to the apex.

b. *Anterior coxal cavities closed.*

Tibiæ mucronate:

CEROTOMA.

Cerotoma, Chevrolat in d'Orbigny's Dict. univ. Hist. Nat. iii. p. 342 (1843); Erichson, Archiv für Naturg. 1847, i. p. 169; Leconte, Proc. Acad. Phil. xvii. p. 205 (1865); Suffrian, Archiv für Naturg. 1867, i. p. 317.

Andrector, Horn, Trans. Am. Ent. Soc. iv. p. 152 (1872); Class. Col. N. Amer. p. 348 (1883).

Cerotoma at first sight closely resembles certain species of *Diabrotica*; the closed anterior coxal cavities and the appendiculate (not bifid) claws will, however, at once distinguish it from that genus. The males of nearly all the known species are further distinguished by the abnormal shape of the third joint of the antennæ; this joint is always the longest in both sexes. *Cerotoma* is confined entirely to the New World, but the species are not very numerous; several with open coxal cavities have been included in it by various authors, these species, however, cannot be retained in the genus; on the other hand, *Cerotoma* has been enlarged by a few species which have been erroneously referred to *Diabrotica*.

Four species inhabit our region, one of which appears to be very widely distributed in Tropical America.

1. *Cerotoma ruficornis*.

Galeruca ruficornis, Oliv. Encycl. Méthod. vi. p. 200 (1791)¹.

Cerotoma ruficornis, Weise, Archiv für Naturg. 1885, i. p. 157, t. 8. f. 6².

Galeruca denticornis, Oliv. Ent. vi. p. 659, t. 5. f. 78³.

Crioceris denticornis, Fabr. Ent. Syst. i. 2, p. 24 (1792); Syst. Eleuth. i. p. 457⁴.

Cerotoma denticornis, Jacq.-Duval in Sagra's Hist. física polit. y nat. de Cuba, vii. Ins. p. 126, t. 2. f. 8⁵; Suffrian, Archiv für Naturg. 1867, i. p. 317⁶.

Cerotoma atro-fasciata, Jac. P. Z. S. 1879, p. 792⁷.

Hab. MEXICO, Presidio, Ventanas (*Forrer*), Lagos in Aguas Calientes, Colima city, Zapotlan, Cuernavaca, Jalapa, Chilpancingo, Acapulco (*Höge*), Vera Cruz, Orizaba, Guanajuato, Oaxaca, San Andres Tuxtla (*Sallé*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA (*Salvin*¹, *Sallé*), Rio Naranjo, Capetillo, Dueñas, San Gerónimo, El Jicaró, San Joaquín, Sinanja, Chacoj, Cahabon (*Champion*); SALVADOR, La Union (*Champion*); NICARAGUA, Chontales (*Janson*).—VENEZUELA^{3 4}; ANTILLES, Cuba^{5 6}, Porto Rico², Guadaloupe¹.

An abundant insect in our region, though apparently not yet received from the State

of Panama, where it appears to be replaced by the very closely allied *C. salvini*. The numerous authors quoted above were evidently not acquainted with the many colour-varieties of this species; the black transverse bands of the elytra are sometimes partially or wholly absent, the elytra being in such cases entirely fulvous or yellow, with the exception of the narrow black basal margin; an opposite extreme of coloration, however, occurs in which the elytra are entirely black, with the exception of the narrow fulvous lateral margin; between these two forms all kinds of intermediate degrees are to be found, but in nearly every instance the small black sutural spot placed near the apex of each elytron is present. The colour of the legs is equally variable. The male of *C. ruficornis* is distinguished by the dilated and deformed third joint of the antennæ. The variety from Porto Rico, figured by Weise², is also found in Mexico. *C. atro-fasciata*, Jac.⁷, is only one of the numerous varieties with nearly unicolorous elytra.

2. *Cerotoma salvini*. (Tab. XXXIV. fig. 18.)

Cerotoma salvini, Baly, Trans. Ent. Soc. Lond. 1866, p. 478¹.

Hab. PANAMA (*Salvin*¹, *Boucard*), Bugaba, Volcan de Chiriqui, Caldera, Tolé (*Champion*).

C. salvini, an insect only known as yet from the State of Panama, might easily be mistaken for *C. ruficornis*, to some of the varieties of which it closely approaches in the pattern of the elytra. The structure of the head of the male of *C. salvini* is, however, different from that of *C. ruficornis*: in the latter the clypeus is shaped like a transverse ridge, and has three projecting points (one on each side and one in the middle); in the former this ridge is absent, and at each side of the clypeus a strong spine, curved upwards, is placed—by this character the male may be at once separated from that of the allied species. I know, however, no character by which to distinguish the female of *C. salvini*, unless the pattern of the elytra (that is of the typical form) is taken as such: typical examples may be described as having black elytra, with a rounded spot at the base, a narrow transverse band at the middle, and a short oblique band near the apex, as well as the extreme lateral margins of each, flavous. The legs seem always to be entirely flavous; in *C. ruficornis* the posterior femora are usually black at the apex. The antennæ in *C. salvini* do not differ in structure from those of *C. ruficornis*.

3. *Cerotoma dilatipes*. (Tab. XXXIV. fig. 19.)

Flavous, the breast black, the tibiæ obscure fuscous; thorax impunctate; elytra very closely punctured, each with a narrow transverse band before the middle, connected by a stripe with the shoulder, a Λ -shaped band below the middle, and a small spot at the apex, black.

♂. The anterior tibiæ and the first joint of the anterior tarsi strongly dilated.

Var. Head black, the thorax reddish-fulvous.

Length $2\frac{1}{2}$ –3 lines.

Head black at the extreme vertex, impunctate, the lower part of the face and the clypeus forming a nearly flat surface; antennæ slender, flavous, the third joint as long as the first and second joints together; thorax

scarcely broader than long, subquadrate, the surface impunctate; elytra very closely and distinctly punctured, flavous, with the suture anteriorly, a stripe from the shoulder to the anterior transverse band, the latter itself, a Λ -shaped band below the middle, and one or two small spots (one near the lateral, the other at the sutural margin), black; the apex of the posterior femora, the outer edge of the tibiæ, and the tarsi more or less distinctly, fuscous; the underside flavous.

Hab. MEXICO, Presidio (*Forrer*), Colima city, Cuernavaca (*Höge*).

The pattern of the elytra of *C. dilatipes* is again very similar to that of *C. ruficornis*, except that the black posterior band seems to be composed of two oblique spots joined together. In the male the anterior tibiæ are curved and strongly dilated towards the apex, and the first joint of the anterior tarsi forms a broad and flattened surface, the following joints being of normal size; in the female there is no dilatation of these parts, and this sex can only be separated from that of *C. ruficornis* by the shape of the black posterior band of the elytra. A single female specimen, from Colima city, agrees in the pattern of the elytra, but has a black head and a red thorax; in the absence of additional material I look upon this form as a variety of *C. dilatipes*. In another example (also a female), from Cuernavaca, the black markings of the elytra are almost confluent. For the better recognition of *C. dilatipes* I may add that (if present) the short anterior stripe which extends from the basal margin to the anterior transverse band of the elytra is always narrower than in *C. ruficornis*, and distinctly concave on its outer margin, while it is straight in the last-named species.

4. *Cerotoma rogersi*. (Tab. XXXIV. fig. 20.)

Black, the antennæ and legs flavous; thorax rufous; elytra finely punctured, black, each with a spot at the base, another at the apex, a transverse band at the middle, and the lateral margins, flavous.

♂. Antennæ with the third joint strongly widened, its apex deeply concave; lower part of the face flavous.

♀. Antennæ simple; the head entirely black.

Length $2\frac{1}{4}$ lines.

Hab. COSTA RICA, Cache (*Rogers*).

This insect is again closely allied to *C. salvini* and *C. ruficornis*, especially to the former in regard to coloration, but differing in the sculpture of the head of the male. From *C. ruficornis*, which it resembles in the last-named character, the present species is, however, known by the bright red colour of the thorax and the much less strongly and closely punctured elytra; the latter are differently marked, being black, with two spots and a transverse central band yellow. The transverse band is broader than in *C. salvini*, and does not quite extend to the sutural, and rarely to the lateral, margin; the apical spot is rounded, and not in the shape of a short oblique stripe. The clypeus of the male is devoid of the two curved spines which are to be seen in *C. salvini*, and the lower part of the face is bright flavous; while in the female the head is entirely black. The legs are never marked with black as in *C. ruficornis*.

MONOLEPTA.

Monolepta, Erichson, Archiv für Naturg. 1843, i. p. 265.

Numerous species, all inhabitants of the eastern hemisphere, are known of this genus, whose close affinity with *Luperodes* in almost every structural detail is undeniable. The third joint of the antennæ, however, is generally, but not always, shorter than in *Luperodes*, and the anterior coxal cavities are closed; the latter character at present forms the basis of the classification of the Galerucinae, although it is now known that it may possibly be a guide of very doubtful value. At all events, the numerous species from Central America which are here described under the above generic name have all the characters of *Monolepta*, and had to be separated from *Luperodes* on account of the closed coxal cavities. No species has hitherto been described from the New World.

1. ***Monolepta irazuensis***. (Tab. XXXIV. fig. 21.)

Testaceous, a spot on the vertex, the apex of each joint of the antennæ, nine spots on the thorax, and the centre of the breast black; elytra very closely punctured, two spots at the sides, and a short streak below the middle, black.

Length 3 lines.

Head not visibly punctured, testaceous, the vertex with a black triangular spot; antennæ testaceous, each joint spotted with black at the apex, the second joint small, the third joint one half longer than the second; thorax more than twice as broad as long, the surface feebly impressed at the sides, very finely punctured, and slightly wrinkled, with a large spot at the posterior angles, two spots at the middle, two smaller spots at the sides, and an elongate one at the centre of the base, black; scutellum black; elytra parallel, subcylindrical, very finely and closely punctured, the interspaces slightly wrinkled, with a spot at the middle, near the lateral margin, another in the same position near the apex, and a short streak near the suture below the middle, black; the breast at the middle, and a spot at the side of each ventral segment, black, the rest of the underside and the legs testaceous.

Hab. COSTA RICA, Volcan de Irazu (*Rogers*).

One specimen.

2. ***Monolepta unipunctata***.

Testaceous; antennæ black, the base of each joint testaceous; thorax finely punctured, with nine small black spots; scutellum black; elytra closely and distinctly punctured, testaceous, each with a small black spot near the lateral margin.

Length 3 lines.

Head narrow, impunctate; the vertex with a small piceous spot; eyes very large; antennæ more than half the length of the body, testaceous, the apex of each of the joints black, the third joint one half longer than the second; thorax twice as broad as long, the sides nearly straight, the posterior margin strongly rounded and produced in the middle, the surface closely punctured and slightly wrinkled, with an almost obsolete depression at each side, and nine small black spots—six placed transversely before and three below the middle of the disc; scutellum black; elytra rather convex, narrowed towards the apex, closely covered with larger and smaller punctures, testaceous, each with a small black spot placed at the middle and close to the lateral margin; below and the legs testaceous, the breast margined at the sides and posteriorly with black.

Hab. GUATEMALA, Panajachel (*Champion*).

M. impunctata is probably a variety of *M. irazuensis*, with smaller thoracic spots, different elytral pattern, and unicolorous underside; in all other respects the two insects agree with each other.

A single specimen, captured on the margin of the lake of Atitlan.

3. *Monolepta bipunctata*.

Testaceous, the intermediate joints of the antennæ fuscous; thorax finely rugose-punctate, obsoletely spotted; elytra closely and finely punctured, a spot at the middle, near the lateral margin, and another near the apex of each, black.

Length 2 lines.

Head rather elongate, with a few fine punctures on the vertex; eyes very large; antennæ half the length of the body, the three lower and the two apical joints fulvous, the rest black, the third joint scarcely longer than the second; thorax twice as broad as long, the sides slightly rounded, the surface finely rugose-punctate, with some very obscure piceous markings; scutellum black; elytra closely and finely punctured, the interstices still more finely so, with a spot at the middle of the sides, and a similar but larger spot near the apex of each, black.

Hab. GUATEMALA, Sinanja, Cerro Zunil (*Champion*).

Two examples. In the specimen from Sinanja the anterior elytral spot is the largest and of transverse shape, but in other respects it agrees with the one from Cerro Zunil.

4. *Monolepta elongata*.

Elongate, testaceous; antennæ (the basal three joints excepted) black; thorax minutely punctured, the lateral margins black; elytra extremely closely punctured, narrowly margined with black.

Length 2 lines.

Head extremely minutely punctured, the vertex with a small black spot; palpi piceous; antennæ more than half the length of the body, the three lower joints testaceous, obscurely stained with piceous, the third joint one half longer than the second; thorax twice as broad as long, all the margins slightly rounded, the sides narrowly black, the surface very finely punctured, with an almost obsolete depression at the sides; scutellum black; elytra narrowly elongate, rather more distinctly punctured than the thorax, the interstices very finely wrinkled, the margins very narrowly black; epipleuræ continued below the middle, the inner margin black; the first joint of the posterior tarsi as long as half the tibiae.

Hab. MEXICO, Guadalajara in Jalisco, Matamoros Izucar in Puebla (*Höge*), Orizaba (*Sallé*).

Of a more elongate and parallel shape and also larger than *M. subrugosa* and *M. imitans*.

5. *Monolepta chiriquensis*.

Black, the antennæ and legs flavous; head and thorax finely granulate and punctured; thorax obsoletely transversely depressed; elytra closely and rather strongly punctured.

Var. Elytra testaceous.

Length $1\frac{1}{2}$ line.

Head with a few fine punctures, minutely granulate; the frontal tubercles distinct; labrum obscure testaceous; antennæ two thirds the length of the body, flavous, the terminal joints obscure fuscous, the third joint not longer but more slender than the second, the fourth joint twice as long as the second; thorax transverse, nearly three times as broad as long, the sides slightly rounded, the disc with a transverse more or less distinct depression, the surface a little more closely but not more strongly punctured than the head; elytra

slightly widened behind, closely and strongly punctured, the interstices slightly rugose; the first joint of the posterior tarsi much longer than the following three joints together.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

It is possible that the specimens with testaceous elytra are immature. Many specimens were obtained of both forms.

6. *Monolepta subrugosa*.

Testaceous, the apical joints of the antennæ fuscous; thorax with two depressions, closely punctured, the sides black; elytra closely semirugose-punctate, testaceous, the sutural and lateral margins narrowly black.

Length $1\frac{1}{2}$ line.

Head without punctures, the vertex often with a black spot; the frontal tubercles distinct, divided by the apex of a raised central ridge which extends to the clypeus; antennæ two thirds the length of the body, the six or seven lower joints testaceous, the rest black, the second and third joints short, equal, the fourth joint shorter than the fifth; thorax transverse, the sides straight, the posterior margin rounded, the surface closely and finely punctured and somewhat rugose, the lateral margin with a narrow black band, the disc with a small transverse depression on each side; elytra a little less closely but as finely punctured as the thorax, the interspaces irregularly wrinkled, the suture and the lateral margins very narrowly black.

Hab. GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

This insect resembles unicolorous specimens of *Luperodes apicicornis*, but differs in the short third joint of the antennæ, the colour of the thorax and elytra, and the sculpture of the latter, as well as by the closed anterior coxal cavities.

7. *Monolepta imitans*. (Tab. XXXIV. fig. 22.)

Testaceous; antennæ piceous, the base of each of the joints pale; thorax with the lateral margins and a streak at the middle, piceous; elytra semirugose-punctate, testaceous, the sutural and lateral margins extremely narrowly piceous.

Length $1\frac{1}{2}$ line.

Head minutely granulose and finely but distinctly punctured, the vertex often with a more or less piceous spot; the clypeus with a distinct raised central ridge extending upwards between the frontal tubercles; antennæ two thirds the length of the body, piceous or black, all the joints pale testaceous at the base, the second and third short and equal; thorax twice as broad as long, the sides slightly but evenly rounded, the surface with an obsolete transverse depression, sculptured and punctured like the head, the extreme lateral margins and a narrow central longitudinal streak, piceous; scutellum piceous; elytra subcylindrical, closely and scarcely more distinctly punctured than the thorax, the interspaces very finely wrinkled, the extreme sutural and lateral margins piceous; underside and the legs testaceous.

Hab. MEXICO, near the city (*Höge*); GUATEMALA, near the city, Capetillo, San Gerónimo (*Champion*).

M. imitans greatly resembles *M. subrugosa*, but differs in having the joints of the antennæ shorter and more robust (in *M. subrugosa* they are slender and elongate), in the distinctly punctured head, the central mark of the thorax, and in the piceous margin of the elytra; in *M. subrugosa* the sides of the elytra are more broadly and more distinctly piceous, but this colour does not extend beyond the middle. The elytra in the present species, of which many specimens were obtained, are also more finely punctured than in *M. subrugosa*.

8. *Monolepta panamensis*. (Tab. XXXIV. fig. 23.)

Pale fulvous; thorax minutely punctured, the sides piceous; elytra convex, finely and closely punctured, the suture, a transverse band before and another below the middle, black.

Length 2 lines.

Head with a few fine punctures at the vertex; the eyes very large and prominent; the frontal tubercles trigonate, distinctly raised; antennæ fulvous, rather more than half the length of the body, the third joint about one half longer than the second; thorax transverse, slightly narrowed in front, the posterior margin rounded, the surface very finely and closely punctured, with an obsolete transverse depression on each side, the sides with a more or less distinct piceous longitudinal band; scutellum black; elytra more distinctly punctured than the thorax, with a narrow transverse black band before and a similar one below the middle, the suture anteriorly and the basal margin also narrowly black; legs fulvous; the first joint of the posterior tarsi as long as half the tibiæ.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

The thorax is sometimes devoid of the piceous lateral bands. *M. panamensis* cannot be mistaken for *Luperodes dimidiaticornis*, the latter being smaller and less robust, and differing also in the colour of the antennæ, in the first transverse band of the elytra being placed nearer the base, and in the anterior coxal cavities being open.

9. *Monolepta fulvo-maculata*.

Black, the basal joints of the antennæ and the legs fulvous; thorax testaceous; elytra extremely finely punctured, black, an elongate spot at the shoulder and another near the apex of each, testaceous.

Length $1\frac{1}{2}$ –2 lines.

Head finely punctured and minutely granulate, the vertex black, the clypeus fulvous; labrum and palpi piceous; antennæ more than half the length of the body, fuscous, the three lower joints and also the apical one fulvous, the third joint one half longer than the second; thorax twice as broad as long, the posterior margin slightly rounded, the surface scarcely visibly and very closely punctured, obsoletely transversely depressed; scutellum black; elytra scarcely more distinctly punctured than the thorax, each with an elongate testaceous spot at the shoulder and a narrower one near the apex, the latter extending nearly to the suture; legs fulvous.

Hab. MEXICO, Oaxaca (*Sallé*).

The coloration of this species is quite distinct from that of any of the allied forms.

10. *Monolepta triplagiata*.

Fulvous; antennæ, the apices of the femora, the tibiæ and tarsi, black; thorax and elytra reddish-fulvous, the former finely punctured, the latter with two black spots at the base and a transverse band at the middle.

Length $1\frac{1}{2}$ line.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

The third joint of the antennæ is but slightly longer though much more slender than the second; the thorax and the elytra are very closely and finely punctured; the two black spots on the latter are transversely placed immediately below the base, and the central band is very narrow and does not quite reach the sutural nor the lateral margin. The reddish colour of the upper surface and the elytral pattern separate this species from its allies. A single specimen only was obtained.

11. *Monolepta violacea*.

Black; the basal three joints of the antennæ, the head, thorax, and the anterior legs, fulvous; elytra dark violaceous-blue, scarcely visibly punctured.

Length 2-2½ lines.

Head impunctate; the frontal tubercles distinct, trigonate; the clypeus with an acute central ridge; antennæ two thirds the length of the body, black, the three lower joints, and often the base of the fourth joint, fulvous or flavous, the third joint about one half longer than the second; thorax scarcely twice as broad as long, the sides and the posterior margin rounded, the surface with two more or less distinct depressions, not visibly punctured; scutellum black; elytra extremely finely punctured, the interstices extremely minutely granulate; the anterior legs and the intermediate femora fulvous, the rest of the legs and the underside black.

Hab. MEXICO, Durango city, Ventanas, Ciudad in Durango (*Höge*).

The elytra in some specimens are nearly black, but in the majority are dark bluish or violaceous, and their punctuation can only be seen under a strong lens; the epipleuræ are continued below the middle. The metatarsus of the posterior legs is nearly half the length of the tibiæ; the latter are armed with a distinct spine.

12. *Monolepta cæruleipennis*.

Black; thorax fulvous, minutely punctured; elytra dark blue, distinctly and closely punctured.

Length 2 lines.

Head bluish-black, finely punctured at the vertex; antennæ black, the third joint twice as long as the second (the apical three joints are broken off); thorax transverse, the sides feebly, the posterior margin distinctly rounded, the surface very finely punctured, with an almost obsolete depression on each side; elytra rather convex, dark blue, closely and distinctly punctured, the interstices slightly rugose.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

M. cæruleipennis differs from *M. violacea* in the entirely black head, antennæ, and legs, and in the much more distinctly punctured elytra.

13. *Monolepta velutina*. (Tab. XXXIV. fig. 24.)

Oblong ovate, subdepressed, black, the basal joints of the antennæ, the thorax, and the tibiæ fulvous; elytra obscure bluish-black, opaque, impunctate.

Length 2 lines.

Head rather narrowly elongate, impunctate, opaque, the vertex finely granulate; the clypeus with a strongly raised, acute, central ridge; palpi piceous; antennæ half the length of the body, black, the basal three joints fulvous, the third joint twice as long as the second; thorax about one half broader than long, the sides and the posterior margin rounded, the surface obsoletely depressed on each side, flavous, opaque, finely granulate and impunctate; elytra rather flattened, very dark bluish-black, extremely finely granulate and opaque; femora piceous at the base, their apices and the tibiæ fulvous, the tarsi obscure fuscous.

Hab. MEXICO, Yolos (*Sallé*).

This species is distinguished by its entirely opaque and impunctate upper surface.

14. *Monolepta abdominalis*.

Black, the basal joints of the antennæ, the thorax, legs, and abdomen fulvous; elytra dark blue, closely and distinctly punctured.

Length 2 lines.

Of rather elongate and narrow shape; the head bluish-black at the vertex, very finely and rather remotely punctured; the frontal tubercles strongly raised, broadly trigonate, and nearly contiguous, scarcely divided by the apex of the clypeus; the labrum, palpi, and mandibles fulvous; antennæ half the length of the body, the six or seven lower joints fulvous, the others fuscous and each stained with fulvous at the base, the third joint slightly longer and rather more slender than the second, the apical joints somewhat thickened; thorax twice as broad as long, the sides slightly rounded at the middle only, the surface minutely punctured, fulvous, with a broad but shallow depression on each side; scutellum black; elytra dark metallic blue, very closely and distinctly punctured, the punctation here and there arranged in closely approached rows of larger and smaller impressions, the shoulders rounded; the breast and the apex of the last ventral segment black, the rest of the underside and the legs fulvous; the posterior tibiæ with the usual spine; the first joint of the posterior tarsi longer than the following three joints together.

Hab. MEXICO, Ciudad in Durango (*Höge*). A single specimen.

15. *Monolepta brunnea*.

Testaceous; head piceous; antennæ fulvous, the sixth to the eighth joints black; thorax obsolete impressed, obscure piceous; elytra chestnut-brown, finely punctured, the base distinctly raised. Length $1\frac{1}{4}$ line.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

M. brunnea is separated from the other small species of the genus by the elytra being distinctly raised at the base and dark brown in colour, in connection with the colour of the antennæ and that of the head and thorax. The second and third joints of the antennæ are short and equal; the thorax is more or less stained with piceous; and the elytra, which are finely and closely punctured, have a transverse depression below the raised basal portion, the depression being slightly darker than the rest of the surface.

16. *Monolepta championi*.

Reddish-fulvous; antennæ pale fulvous, the sixth, seventh, and the apical two joints black; thorax minutely punctured; elytra punctured like the thorax, reddish-fulvous, the base more or less piceous; legs testaceous.

Length $1\frac{1}{2}$ line.

Head not visibly punctured, deeply transversely grooved between the eyes, the latter very large; clypeus somewhat strongly raised in the middle; palpi piceous; antennæ half the length of the body, the third joint scarcely longer than the second; thorax more than twice as broad as long, minutely granulate and punctured; elytra convex, punctured like the thorax; the first joint of the posterior tarsi as long as half the tibiæ.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Two specimens. *M. championi* agrees in general shape and colour with *M. brunnea* and *M. triplagiata*; but differs from the first in the elytra not being raised at the base, and from both in the colour of the antennæ and in the unicolorous elytra.

17. *Monolepta hondurensis*.

Testaceous, the antennæ and tibiæ more or less fuscous; head and thorax minutely granulate and punctured,

the lateral margin of the latter piceous; elytra closely and finely punctured, the interstices still more finely punctate and slightly wrinkled, the extreme lateral margin piceous.

Length 2 lines.

Hab. HONDURAS (*Sallé*).

This insect is closely allied to *M. imitans* and *M. subrugosa*, but it seems to differ from both in several particulars. *M. hondurensis* is larger and of more elongate shape; the head is finely granulate and punctured (when seen under a strong lens); the clypeus has a very distinct central raised ridge, extending upwards between the antennæ (in *M. subrugosa* the clypeus is much more flattened and almost united with the frontal tubercles); the antennæ extend to about half the length of the body, the first three joints are testaceous and the rest fuscous; the thorax is more transverse than in the two allied species, and exceedingly finely punctured (the disc has the usual transverse shallow groove); and the punctuation of the elytra consists of small and still smaller punctures crowded together. Three specimens, agreeing entirely in the above particulars.

18. *Monolepta bipartita*. (Tab. XXXIV. fig. 25.)

Obscure fulvous; antennæ black, the basal and the apical two joints fulvous; thorax extremely finely punctured; elytra scarcely visibly punctate, black, this colour divided by a narrow transverse fulvous band.

Length 1-1½ line.

Head not visibly punctured; the frontal tubercles but slightly raised and nearly contiguous; the clypeus flattened, without any central ridge; palpi piceous; antennæ as long as the body in the male, shorter in the female, the three lower joints testaceous, the apical two joints fulvous, the apex of the terminal one fuscous, the third joint in the male extremely small, smaller than the second, in the female larger; thorax more than twice as broad as long, of usual shape, depressed on each side of the disc, the latter with some fine irregularly distributed punctures, flavous or fulvous; scutellum black; elytra convex, subcylindrical, very finely and closely punctured, black, the fulvous median band narrow, slightly widened at its middle, and nearly extending to the sides; below and the legs testaceous, the tibiæ more or less fuscous.

Hab. PANAMA, Bugaba, Volcan de Chiriqui, David, Caldera (*Champion*).

This small species much resembles in coloration *Luperodes dimidiaticornis*; but may be known, apart from its different generic characters, by the colour of the antennæ, these organs always having the apical two joints fulvous. Many specimens.