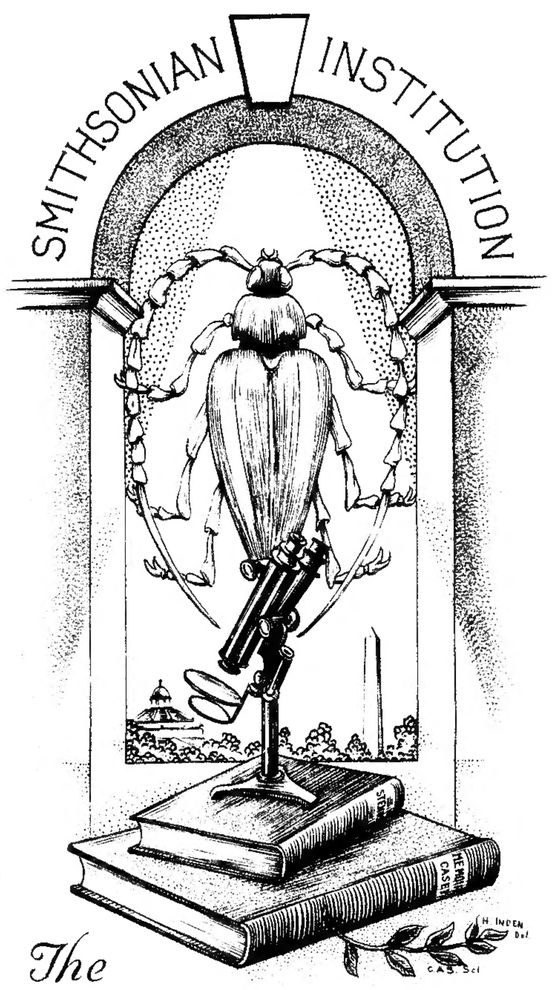

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BIOLOGIA CENTRALI-AMERICANA.

INSECTA.

COLEOPTERA. Vol. VI. Part 1, Supplement.

PHYTOPHAGA (part).

BY

MARTIN JACOBY, F.E.S.

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PLATES.

ZOOLOGIA.

Class INSECTA.

Order COLEOPTERA.

Tribe PHYTOPHAGA.

(SUPPLEMENT TO VOL. VI. PART 1.)

SINCE the publication of this portion of the Phytophaga was commenced in June 1880 a great number of accessions have been added to the collections placed at my disposal for examination. These relate chiefly to the earlier groups, those referable to the later ones having been duly inserted in their places. The additions therefore in all the Families from the commencement to the Eumolpidæ are very numerous and will render this part of the Supplement much more extended than that relating to the large Families which follow. The collection of M. Sallé had not then been acquired; and Mr. Champion had only been working for a short time in Guatemala, and his explorations in the State of Panama had not been commenced. Most of the additions derived from Herr Höge's second Mexican expedition have also still to be dealt with. These and many smaller consignments received from time to time have all swelled the materials which I now propose to examine.

ORSODACNE. (To precede *Aulacoscelis*, p. 1.)

Orsodacna, Latreille, Hist. Nat. Crust. et Ins. iii. p. 223 (1802).
Orsodacne, Gemminger & Harold, Cat. xi. p. 3237.

The twelve or thirteen species placed in this genus chiefly inhabit Europe or North America; three, however, are known from Chili and one from Ceylon. One of the North-American species extends southwards to our northern boundary.

1. Orsodacne childreni.

Orsodacna childreni, Kirby, Faun. Bor.-Amer. iv. p. 221, t. 7. fig. 6[1].

Hab. NORTH AMERICA, Canada [1], United States.—MEXICO, Northern Sonora (*Morrison*).

An examination of Kirby's type of *O. childreni* in the British Museum has proved to me that the Sonoran examples are conspecific with it. Kirby's description is, however, based upon an immature specimen in which the thorax (instead of being black, as in all the examples from Mexico before me) is fulvous with the disc obscure piceous, and the elytra are of a greenish colour. In the North-Mexican specimens the pattern of the elytra and other characters agree well with the type. The figure given by Kirby fairly represents the species, which may be known by the narrow black suture and the laterally widened transverse black band below the middle of the elytra.

AULACOSCELIS (p. 1).

Of this interesting genus, which up to the present time has included only three species, many others have since been received from Central America. Amongst the latter are two or three which may hereafter have to be removed to another genus, as they differ considerably from the typical forms in the structure of the antennæ and in the shape of the head and thorax.

These new species, however, possess all the more constant structural characters of *Aulacoscelis*, such as the more or less well-marked longitudinal grooves at the sides of the base of the thorax, and the rather flattened and depressed appearance of the elytra, and I accordingly refer them to it.

Aulacoscelis melanocera (p. 1).

To the locality given, add :—Mexico, Oaxaca (*Höge*), Northern Yucatan (*Gaumer*); Guatemala, Chacoj, Panzos (*Champion*); Costa Rica (*Van Patten*); Panama, Volcan de Chiriqui (*Champion*).

Aulacoscelis candezei (p. 1). (Tab. XXXV. fig. 7.)

Black or piceous; above fuscous, the elytra margined with fulvous.
Var. *a*. Head, thorax, and elytra nearly black.
Var. *b*. Above fulvous.
Length 3½ lines.

To the locality given, add:—Mexico, Cerro de Plumas, Ventanas (*Höge*), San Miguel del Rio (*Sallé*).

I have no doubt that I refer rightly the Mexican specimens before me to this species, and I am now enabled to give a more detailed description than the author has done in his short diagnosis. *A. candezei* seems to be a most variable insect in regard to colour, and it is very probable that other varieties exist; it greatly resembles *A. högei* in shape, but may be at once separated from that species by having two costæ on the elytra (instead of one) in both sexes. The thorax is of more transverse shape (agreeing in this respect with *A. melanocera*) and is either fuscous, black, or fulvous, with a few

fine punctures here and there. The elytra are opaque, finely punctured towards the base only, the posterior portion being nearly impunctate; a longitudinal costa, abbreviated at each end, is to be seen near the middle of the disc, and a more distinct one extends from the shoulder to the suture; and there is also a trace of a third costa between the other two at the base (all the costæ are, however, nearly obsolete in one male example); in the female insect these costæ are much more strongly raised and acute. The male has the first joint of the anterior and intermediate tarsi strongly dilated. The antennæ and the legs are entirely black in all the varieties. The elytra have a peculiar whitish or violaceous bloom, as in *A. högei*. Chapuis gave Guatemala as the locality for this species, but we have not received specimens of it from that country.

4. **Aulacoscelis tibialis.** (Tab. XXXV. fig. 2.)

Pale fulvous, the antennæ (the first joint excepted), knees, tibiæ, and tarsi black; thorax impunctate; elytra opaque, finely punctured.

♀. Elytra with two longitudinal costæ, the inner one very short, the outer one strongly raised and extending below the middle.

Length 5–5½ lines.

Head narrowed in front, impunctate, shining, depressed between the eyes; palpi black; antennæ half the length of the body, black, the first joint fulvous, the joints somewhat triangularly shaped, the terminal ones more elongate and slender; thorax scarcely broader than long, the sides straight behind and slightly rounded in front, the posterior margin straight, the surface shining, with a round fovea at each side and a less distinct depression at the middle of the base in the male, the base with a short longitudinal groove on each side, the disc impunctate; scutellum fulvous; elytra broadly ovate, opaque, extremely finely and closely punctured, almost smooth in the male, distinctly costate in the female (the outer costa commencing at the shoulder and extending to below the middle, the inner one only distinct at the base); the underside and the femora fulvous, the knees, tibiæ, and tarsi black.

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

Almost of the same size and shape as the male of *A. grandis*, but with the head and thorax more typical of the genus. The first joint of the intermediate tarsi in both sexes is widened and flattened. The thorax in the female is devoid of the depressions peculiar to the male, with the exception of the short longitudinal grooves at the base. Two specimens only were obtained.

5. **Aulacoscelis högei.** (Tab. XXXV. fig. 6.)

Reddish-fulvous; antennæ (the first joint excepted) black; thorax not visibly punctured; elytra elongate, very minutely punctate; the knees, tibiæ, and tarsi black.

♀. Elytra with a strongly raised costa at the sides.

Length 3–3½ lines.

Head with a few minute punctures; the palpi piceous or black; antennæ black or with the first joint fulvous; thorax subquadrate, the sides rounded at the middle, the base with a narrow transverse sulcation which is bounded at the sides by a deep and distinct longitudinal groove, the surface not visibly punctured, shining; elytra (♂) opaque and finely punctured, (♀) shining, more distinctly punctate, the sides with a strongly raised longitudinal costa extending to the suture, and a longitudinal depression within the shoulders.

Hab. NORTH AMERICA, Vancouver Island (*coll. Jacoby*).—MEXICO, Jalapa, Oaxaca, Chilpancingo, Acapulco, Ventanas, Tapachula in Chiapas (*Höge*), Tehuantepec (*Sallé*).

At first sight this species seems to be but a variety of *A. melanocera*, to which indeed it bears a great resemblance. *A. högei* differs, however, in the following manner: the shape is much more elongate and narrow, the thorax is distinctly less transverse, especially in the male, and the elytra are less shining and almost imperceptibly punctured. The elytra in the female of *A. melanocera* are, moreover, devoid of the lateral costa, and have only the shoulders acutely raised. Of both species I have the two sexes before me and they can be at once distinguished. The male of *A. melanocera* is shorter and of more widened shape than that of *A. högei*, and has the elytra much more shining and distinctly punctured and the thorax more transverse. In the male of *A. högei* a curious whitish bloom is to be seen on the elytra (when held sideways), which is entirely absent in the allied form. About fifty specimens have been received.

An example from Tehuantepec is figured.

6. **Aulacoscelis variabilis.** (Tab. XXXV. figg. 8, 9.)

Black; thorax fulvous, closely punctured; elytra very finely punctured, black, the lateral margins narrowly fulvous.

Var. Entirely black.

Length 3–4 lines.

Head piceous or obscure fulvous, distinctly and rather closely punctured at the sides; antennæ black, the joints short and subtriangular; thorax not or scarcely broader than long, the sides nearly straight, slightly narrowed at the base, the latter with a distinct short longitudinal groove on each side, the surface rather closely punctured, opaque; elytra very minutely punctured, of an opaque greenish-black tint, the base and the margins generally furnished with very short silvery-greyish pubescence, the extreme lateral margins and the epipleuræ fulvous; legs and underside black.

Hab. Mexico, Pachuca in Hidalgo (*Höge*), Real del Monte (*Flohr*).

A. variabilis may be readily known by the closely punctured head and thorax; its general coloration, although variable, is constant in the black ground-colour of the elytra. Herr Höge obtained more than a hundred specimens at Pachuca, amongst which those with a fulvous thorax predominate; the elytra in the black specimens are devoid of the fulvous margin and epipleuræ, and do not seem to differ much according to sex—a slight depression within the shoulder in the female being the only indication. The antennæ in the male are, however, rather longer than in the female. We figure both forms.

7. **Aulacoscelis fulvipes.**

Black or fuscous, pubescent; thorax finely punctured; elytra closely covered with greyish pubescence; legs fulvous.

Length 3 lines.

Entirely black or piceous, the head and thorax finely punctured, clothed with rather long greyish pubescence; the thoracic basilar groove somewhat indistinct; elytra closely pubescent, the punctuation not visible; legs entirely fulvous, the tarsi darker.

Hab. Mexico, Guanajuato (*Sallé*).

Closely allied to *A. femorata*, but differing in the thorax being more quadrate and much more finely punctured, and also in the general dark, nearly black, coloration.

8. **Aulacoscelis sanguinea.** (Tab. XXXV. fig. 10.)

Broadly ovate, sanguineous, the antennæ, knees, tibiæ, and tarsi black; elytra opaque, entirely impunctate.
Length 4 lines.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

Closely allied to *A. högei*, but much shorter and more broadly ovate; the thorax distinctly transverse, with the sides nearly straight; the elytra entirely opaque and impunctate, without depression or costæ in either sex; the antennæ longer and nearly half the length of the body; and the colour of the upper surface bright red, the head and thorax only being shining.

9. **Aulacoscelis elongata.** (Tab. XXXV. fig. 5.)

Elongate, parallel, pale fulvous, the antennæ (the first joint excepted), knees, tibiæ, and tarsi black; head and thorax impunctate, shining; elytra finely pubescent, opaque.
Length 6 lines.

♂. Head longer than broad, not constricted behind, with only a few fine punctures near the eyes; the clypeus separated from the face by a transverse groove, and at the sides by a short thick ridge in front of the antennæ; antennæ half the length of the body, the first joint fulvous, the others black, the third joint one half longer than the second but shorter than the fourth; thorax quadrate, not broader than long, the sides evenly rounded at the middle, the basal and apical margins nearly straight, the surface slightly convex, entirely impunctate, the base with a short and rather obsolete longitudinal groove on each side; scutellum pubescent; elytra but slightly narrowed towards the apex, covered with a long and silky pubescence which hides any punctuation; underside and the femora fulvous, the breast pubescent like the elytra, the intermediate tibiæ curved; the first joint of the anterior tarsi dilated; the last abdominal segment deeply emarginate at the apex.

Hab. Mexico, Playa Vicente (*Sallé*).

This is a large and peculiar-looking *Aulacoscelis* and has much the appearance of a species of the family Elateridæ. The typical characters of the genus are, however, well expressed in the shape of the thorax and its short longitudinal groove, as well as in the broad elytral epipleuræ, the armed tibiæ, and the simple claws. Only a single male specimen is contained in the Sallé collection. *A. elongata* differs from all its allies in the elongate and parallel shape and pubescent elytra.

10. **Aulacoscelis femorata.** (Tab. XXXV. figg. 3, 4.)

Elongate, parallel, fuscous or piceous; head and thorax fulvous, the latter distinctly punctured; elytra testaceous, finely pubescent.

Var. Head partly, the elytra entirely, dark fuscous.

♂. Head broad, all the femora strongly dilated.

♀. Head narrower, the elytra with a longitudinal depression at the base, the femora less strongly developed.

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

♂. Head broad, not constricted behind the eyes, the latter small, the vertex and lower portion finely and rather closely punctured and sparingly pubescent, the space between the antennæ raised on each side into

short but thick ridges which are separated by a transverse groove; mandibles long and slender; antennæ black, the first joint fulvous; thorax distinctly transverse, slightly narrowed near the base, the anterior margin rather strongly produced in the middle, the anterior angles somewhat prominent, the surface irregularly but distinctly punctured, with more or less distinct pubescence at the sides, the usual longitudinal groove scarcely visible; scutellum transverse; elytra closely covered with long fulvous pubescence, testaceous or nearly black, rather opaque; femora fulvous, strongly widened; tarsi fuscous.

Hab. Mexico, Capulalpam (*Sallé*), Ventanas in Durango, Chilpancingo (*Höge*).

The head and elytra in this insect vary in colour from testaceous to black, with occasional intermediate shades. In the male the short depression which is to be seen within the shoulders of the elytra in the female is absent, and the femora are much more strongly developed. Occasionally the thorax is much more thickly pubescent at the sides (in most specimens this is probably rubbed off); and in one female example the elytra are densely covered with dark yellowish pubescence and the intrahumeral depression is bounded at the sides by two short costæ. The antennæ in the male are longer than in the female, but the joints are rather short and robust in both sexes and shining.

11. **Aulacoscelis grandis.** (Tab. XXXV. fig. 1, ♂.)

Broadly ovate, subdepressed, black; thorax with three basal depressions; elytra orange-coloured, finely pubescent.

♀. The intermediate joints of the antennæ flattened and widened.

Length: ♂ 5, ♀ 7 lines.

Head elongate, constricted behind the eyes, the latter prominent, and with the space in front of their inner margin longitudinally depressed, the centre raised, sparingly covered with whitish pubescence; palpi black, the terminal joint elongate, ovate, and thickened; antennæ in the male half the length of the body, all the joints, with the exception of the first and second, of nearly equal length, slightly flattened, black; thorax scarcely broader than long, the sides with a narrow flattened margin, slightly narrowed in front and nearly straight, the basal margin with a short longitudinal groove on each side, and a deeper and larger one of subtriangular shape in the middle, the disc impunctate, with some more or less distinct obsolete depressions and longitudinal stripes of white pubescence; scutellum broad, black; elytra flattened, widened towards the middle, opaque, of a bright orange colour, covered with fine fulvous pubescence; underside and legs black, the latter slender; claws simple.

Hab. Mexico, Ventanas in Durango (*Höge*).

Of this fine large species, a male and a female specimen were obtained by Herr Höge during his second Mexican expedition. Although the typical characters of *Aulacoscelis* are here partly modified on account of the posteriorly constricted head (which somewhat resembles that of a species of the family Carabidæ), and the sculpture of the thorax differs from that of the other species, the main features of the genus are present; and taking into account the somewhat doubtful position and transitory form of *Aulacoscelis* amongst the Phytophaga, it would not have been of any advantage to establish another genus for the present insect.

The female of *A. grandis* is much larger than the male and has the intermediate joints of the antennæ more distinctly widened; it also has a deeper longitudinal

depression at the sides of the thorax. The thorax is without a transverse basal groove in either sex. The first abdominal segment is not three times longer than the second (as Chapuis says of the type), but is scarcely twice as long, and the whole underside is covered with thin yellowish pubescence.

Fam. DONACIIDÆ.

(To precede the Crioceridæ, p. 2.)

We have now to record from Central America both the known genera of this family.

DONACIA.

Donacia, Fabricius, Syst. Ent. p. 195 (1775).

This genus contains a large number of species, mostly inhabitants of the Palæarctic and Nearctic Regions, but also widely distributed in the warmer parts of the Old World. South America has apparently no representative, and the southern limit of the genus in the New World is in Cuba or Mexico. The single species here added to the Central-American fauna is a well-known North-American form.

1. **Donacia cincticornis.** (Tab. XXXV. fig. 11.)

Donacia cincticornis, Newm. Ent. Mag. v. p. 391 (1838)[1].
Var. *Donacia rufipennis,* Lac. Monogr. in Mém. Soc. Liége, iii. p. 110 (1845)[2].

Hab. North America [1] [2].—Mexico, Toxpam (*Sallé*).

I am not able to find any difference of importance between the Mexican specimens and one from North America contained in my own collection. The elytra are without transverse rugosities, except at the sides, and their apices are truncate; they are obscure brownish-æneous on the disc, this colour changing to a more metallic green at the sides. The thorax is slightly broader than long, without distinct angles, nearly smooth and impunctate, and with a distinct central groove. The antennæ are brownish, each joint being dark at its apex, the fourth being nearly twice the length of the third. The posterior femora extend slightly beyond the elytra and have a minute anterior and a distinct posterior tooth.

HÆMONIA.

Hæmonia, Latreille in Cuvier's Règn. Anim. v. p. 136 (1829).

This genus contains about a dozen members, all from Europe or North America. The different species are attached to water-plants and are more aquatic in their habits than *Donacia.* One inhabits Mexico; it has lately been obtained by Herr Höge in great numbers, in the lagoons in the vicinity of the city of Mexico.

1. **Hæmonia nigricornis.** (Tab. XXXV. fig. 12.)

Hæmonia nigricornis, Kirby, Faun. Bor.-Amer. iv. p. 222[1].

Hæmonia americana, Guér.-Ménev. Icon. Règne Anim., Ins. p. 259[2]; Lac. Monogr. in Mém. Soc. Liége, iii. p. 210[3].

Hæmonia melsheimeri, Lac. loc. cit. p. 211[4].

Hæmonia flohri, Jac. Stett. ent. Zeit. 1884, p. 126[5].

Hab. North America [2 3], Canada [1], United States [4].—Mexico [5], near the city (*Höge*), Ixtacalco (*Flohr*).

The insect described by me as *H. flohri*, upon comparison with a North-American example of *H. nigricornis*, kindly communicated by Dr. Horn, proves to be conspecific with that species, the black head and underside not being a constant character. Amongst the 200 examples obtained by Herr Höge there are several nearly black-coloured specimens; the legs, however, always remain fulvous.

LEMA (p. 2).

During the eight years this work has been in progress, a great many more species, the majority of which are apparently undescribed, have been obtained from our region. Many of the species are very closely allied and difficult to separate and require long series from the same localities before their differences can be thoroughly understood; it is therefore quite possible that some of those described as new in this work, as well as others included in Lacordaire's monograph, will eventually be regarded as varieties only, many having been founded on single specimens. In a monographic or faunistic work it is frequently necessary to describe from single examples, or three fourths of the species would have to remain unnamed; for the monographer there is no choice but to point out differences which he considers specific and which in so many closely allied forms as in *Lema* must often of necessity be minute.

Lema bituberculata (p. 2).

To the Mexican locality given, add:—La Parada (*Sallé*), Amecameca in Morelos (*Höge*).

I refer two specimens from the above localities to this species, with the description of which they agree in the main points. In both examples the two red frontal tubercles are present, although they are not equally well marked; the thorax in one specimen is scarcely punctured and the elytral punctuation is also less deeply impressed, but this may be a sexual difference; the antennæ are rather short and robust (as given by Clark); and the ninth row of elytral punctures is interrupted, though Clark says nothing about this and places the species after *L. nigrita*. In this last-named insect, however, as well as in all others belonging to the same group, the ninth row of punctures is entire, and *L. bituberculata* must therefore find its place in Lacordaire's second division.

3 (A). **Lema quadraticollis.**

Black; above metallic blue; antennæ rather short; thorax subquadrate, punctured at the middle and anteriorly; elytra slightly depressed below the base, deeply punctate-striate, the ninth stria not interrupted.

Var. Above obscure æneous.

Length 2 lines.

Head entirely impunctate, not constricted behind, the space round the eyes rugose, the latter but slightly notched; antennæ scarcely half the length of the body, black; thorax slightly broader than long, the anterior angles somewhat tuberculiform, the basilar sulcation deep, oblique at the sides, and impressed with some punctures, and from its middle a short longitudinal groove extends downwards to the base, the surface with two central rows of punctures, the sides also sparingly punctured anteriorly; elytra narrowly parallel, with a very short depression near the suture below the base, the punctuation deep, but as usual gradually diminishing towards the apex, the interstices flat.

Hab. MEXICO, Jalapa, Cuernavaca (*Höge*).

Amongst the small metallic blue species with uninterrupted ninth row of elytral punctures the present insect may be known by the slightly indented eyes, the punctured thorax, and the almost obsolete postbasal depression of the elytra (the latter being very deeply depressed in *L. angelica* and most of the allied forms); the variety only differs in colour. *L. fryi*, Clark, belongs to the second division of Lacordaire's arrangement, and may be distinguished from the present species by the interrupted ninth row of elytral punctures.

3 (B). **Lema fabricii.**

Bluish-black; above metallic blue; head and thorax distinctly punctured; elytra obsoletely depressed below the base, deeply punctate-striate, the ninth stria not interrupted.

Length 2 lines.

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

It will be sufficient to point out the differences which separate *L. fabricii* from the other species of this section, although only a single specimen was obtained. The head is very finely punctured and slightly wrinkled at the vertex, and the space surrounding the eyes is raised and distinctly punctured; the eyes are deeply notched; the antennæ are stout, short, and thickened at the terminal joints; the thorax, although of similar shape and structure to that of *L. quadraticollis*, is much more closely and distinctly punctured than in that species, and has the two central rows of punctures more prominent than the others; the elytra are still more deeply and very regularly punctured, but their basal depression is not more strongly developed than in *L. quadraticollis*. The principal characters by which *L. fabricii* may be known are the distinctly thickened terminal joints of the antennæ and the punctured head and thorax; the latter has a deep transverse groove and in the centre a shorter longitudinal one extending to the base.

3 (C). **Lema propinqua.**

Black or metallic blue; thorax but slightly constricted at the sides, the disc with two rows of punctures

(sometimes obsolete); elytra flattened, scarcely depressed below the base, deeply punctate-striate, the ninth stria entire; femora short.

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

Hab. PANAMA, Volcan de Chiriqui 4000 to 5500 feet (*Champion*).

L. propinqua, although not differing in any marked degree from several others of this section with uniformly coloured upper surface, may be known principally by its small size and subdepressed elytra. The head is convex at the vertex and impunctate; it is not constricted behind the eyes and has no central groove; the lower part of the face and the space surrounding the eyes, which latter are not very deeply notched, is covered with yellowish pubescence; the antennæ have the third joint one half longer than the second, and scarcely extend to the middle of the body (in which they differ from several similarly-coloured species described by Lacordaire). The thorax is but very moderately constricted at the sides and scarcely longer than broad; the basilar groove is distinct, placed at some distance from the base, and slightly rugose within; the disc in some examples is impressed with two more or less distinct rows of punctures which in others are often obsolete; some smaller punctures are also here and there visible at the sides. The elytra are almost imperceptibly depressed below the base and deeply and regularly punctured, the interstices becoming slightly costate towards the apex where the punctuation is much finer. The posterior femora are very short.

Many specimens; the majority are entirely black, others are blue above.

5 (A). **Lema chapuisi.**

Lema chapuisi, de Borre, Ann. Soc. Ent. Belg. xxv. p. 75 (1881)[1].

Hab. MEXICO[1].

This seems to be one of the largest-sized species of *Lema*, the length, as given by the author, being 9 millim. *L. chapuisi* is placed near *L. chalybeipennis*, Lac.

5 (B). **Lema amabilis.**

Rufous, the antennæ (the first two joints excepted), tibiæ, and tarsi black; elytra metallic violaceous-blue, with basal depression, the punctuation nearly obsolete below the middle.

Length 3 lines.

Head rufous, impunctate, the lateral grooves very deep; the eyes very deeply notched, surrounded by a blackish space; antennæ about half the length of the body, the first two joints rufous, the others black; thorax not longer than broad, deeply constricted at the middle, the basal groove obsolete, the surface impunctate, rufous, shining; scutellum black; elytra subdepressed, with a short impression below the base, the latter and the impression deeply punctured, the punctuation thence to the apex very fine but a little more distinct at the sides; underside and the femora rufous; tibiæ and tarsi black.

Hab. MEXICO, Vera Cruz, Cordova (*Sallé*); GUATEMALA, Mirandilla (*Champion*).

This species although no doubt closely allied to *L. chalybeipennis* appears to be distinct, on account of the rufous head and basal joints of the antennæ, and the colour of the femora; the elytra seem, however, to be similarly punctured. In the Guatemalan

example the head is entirely rufous (without the narrow black space surrounding the eyes), the thorax is slightly more transverse, and the femora are tinged with fuscous at the apex; other differences I am not able to find, and although it is possible that this specimen may represent a closely allied but distinct species (on account of the more transversely shaped thorax) I am not able to say so with certainty. The very fine punctuation from the middle to the apex of the elytra will assist in the better recognition of *L. amabilis*.

5 (c). **Lema interstitialis.**

Ferruginous, the antennæ (the first joint excepted), knees, tibiæ, and tarsi black; thorax punctured on the disc; elytra dark metallic blue, finely punctured, the interstices minutely punctate.

Var. The four anterior legs and the base and apex of the posterior femora black.

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

Head impunctate, without central groove; the eyes deeply notched; antennæ half the length of the body, black, the first joint fulvous; thorax slightly longer than broad, the sides moderately constricted, the surface with two rows of small punctures, not extending to the base, the basal sulcation shallow; scutellum fulvous; elytra almost imperceptibly depressed below the base, the latter more deeply punctured than the rest of the surface, the interstices somewhat transversely wrinkled and impressed with more or less distinct fine punctures, the lateral margins strongly thickened and accompanied by a row of deep punctures; underside and the femora ferruginous, the knees, tibiæ, and tarsi black.

Hab. MEXICO, Toxpam (*Sallé*).

L. interstitialis differs from *L. amabilis* in having only the basal joint (instead of the first two joints) of the antennæ fulvous, in the punctured thorax, and in the elytra being scarcely depressed below the base; and also in the finely punctured interstices of the elytra. The allied *L. chalybeipennis*, Lac., has the lower part of the head and the antennæ entirely black, and the basal depression of the elytra deep. Two specimens, also obtained at Toxpam, are considerably smaller and differ from the type, as well as from each other, in having the femora almost entirely, or partly at the apex, and the sides of the breast, black; it is possible that they represent a closely allied but distinct species. *L. mannerheimi*, Lac., from Cuba and San Domingo, differs from *L. interstitialis* in the colour of the head, antennæ, and legs.

Lema bouchardi (p. 2).

To the locality given, add:—MEXICO, Oaxaca (*Höge*), N. Yucatan (*Gaumer*); NICARAGUA, Chontales (*Janson*).

Lema cingulata (p. 3).

To the locality Mexico, add:—Mazatlan (*Sallé*).

I give a fresh description of this species, to which I refer two specimens contained in the Sallé collection:—

Black; thorax subquadrate, punctured on the disc; elytra metallic blue, with a narrow transverse fulvous

band, the surface strongly punctured anteriorly and finely so below the middle, the interstices minutely punctured; abdomen fulvous, spotted with black.

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

Head black, impunctate; eyes deeply notched; antennæ black, less than half the length of the body, the terminal joints short and slightly flattened and scarcely longer than broad; thorax not longer than broad, deeply constricted at the sides, the middle of the disc with two rows of small punctures; scutellum black; elytra with a slight depression below the base, the latter distinctly punctured, the lower portion finely punctate-striate, the ninth stria entire, the surface of a dark metallic blue colour, with a narrow fulvous transverse median band which is interrupted at the suture (in one specimen also at the sides); breast and legs black; abdomen fulvous, the sides (sometimes the middle) of the segments marked with black.

The Mazatlan examples differ from the type in the abdomen being fulvous and spotted with black (instead of wholly black), but apparently in no other way.

7 (A). **Lema fulvo-fasciata.** (Tab. XXXV. fig. 19.)

Reddish-fulvous, the antennæ, tibiæ, and tarsi black; elytra distinctly punctate-striate, purplish-black, with a broad transverse fulvous band across the middle.

Var. Elytra with the posterior purplish portion in the shape of an ovate spot, the extreme apex black; the knees black.

Length $2\frac{3}{4}$–3 lines.

Head impunctate, the space round the eyes strongly raised, but not punctured (in one specimen black); antennæ rather short and robust, not extending much beyond the base of the elytra, black, the basal joint sometimes fulvous; thorax not longer than broad, moderately constricted at the sides, the basal sulcation not very strongly marked, the surface (with the exception of a few minute punctures on the middle of the disc) impunctate; scutellum fulvous or black; elytra with a shallow depression below the base, very regularly and rather closely punctate-striate, the punctuation as usual more strongly impressed anteriorly than posteriorly, the interstices slightly convex towards the apex, the broad fulvous band dividing the purplish-black portion convex at its middle and with its margins rather uneven; underside and the femora fulvous (in one specimen the latter are black at the base and apex); tibiæ and tarsi black.

Hab. MEXICO, Acapulco in Guerrero (*Höge*), N. Yucatan (*Gaumer*).

Two examples of the type, and one of the variety.

L. fulvo-fasciata differs from any other species of our region (*L. cingulata* excepted) in the elytra having a broad fulvous median band, the rest of the surface being purplish-black; in one specimen there is an additional small fulvous spot placed at the margin near the extreme apex of each elytron. The last-named example has the head and femora entirely fulvous; the other has several black markings on the head and legs, as pointed out in the description. The colour of the head and underside and other details separate *L. fulvo-fasciata* from *L. cingulata*. The variety is from Yucatan.

Lema equestris (p. 3). (Tab. II. fig. 8.)

To the localities given, add:—MEXICO, Puebla (*Sallé*); GUATEMALA, Capetillo, Zapote, San Gerónimo, Purula (*Champion*); COSTA RICA (*Van Patten*).

The reference to the Plate was accidentally omitted on p. 3.

Lema bitæniata (p. 4).

To the locality given, add:—MEXICO, Toxpam, Cordova (*Sallé*); GUATEMALA, Panima in Vera Paz (*Champion*).

The single specimen from Guatemala only differs from the Mexican examples in having the antennæ fuscous instead of fulvous.

11 (A). **Lema incerta.**

Black, the two basal joints of the antennæ, the head, and thorax red; elytra violaceous-blue, the lateral margins, a transverse band at the middle, and another at the apex, flavous; femora flavous, the tibiæ black.

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

Hab. MEXICO, Tuxtla (*Sallé*).

It will only be necessary to point out the differences between *L. incerta* and *L. bitæniata*. The antennæ in *L. incerta* are shorter, and, with the exception of the two basal joints, nearly black (in *L. bitæniata* they are fulvous); and the thorax is narrower and more constricted in the middle, and the disc is impressed with a single row of rather distinct punctures. The punctuation and the pattern and colour of the elytra are absolutely the same as in *L. bitæniata*, but the tibiæ and tarsi are black. Although there is only a single example before me, there can be no doubt of its being a good species.

11 (B). **Lema dimidiaticornis.** (Tab. XXXV. fig. 13.)

Lema dimidiaticornis, de Borre, Ann. Soc. Ent. Belg. xxv. p. 78 (1881)[1].

Hab. MEXICO [1], Toxpam (*Sallé*), Cerro de Plumas (*Höge*); PANAMA, Bugaba (*Champion*).

This species seems subject to a good deal of variation in regard to colour, that is, if all the specimens before me are to be regarded as one and the same species. Only a single example agrees perfectly with the author's description; the others differ in the antennæ being fulvous, with the last joint black or nearly so (in the description the antennæ are stated to be fulvous with the last four joints fuscous); the fulvous spot at the base of the elytra is as often wanting as present, and the central fulvous band is in most specimens narrow and of equal width (instead of being broader at the lateral margin). *L. dimidiaticornis* may be separated from *L. equestris* by the colour of the legs and underside, and from *L. elegantula* and *L. bitæniata* by the elytra not having a narrow fulvous or flavous lateral margin. The author states that the punctuation of the elytra is rather feeble; in the specimens before me the punctuation is strong and deep at the base, but very fine below the middle. In the examples from Bugaba the elytra have their central fulvous band narrower and very regular, extending across the suture, and the apical spot in the shape of a narrow oblique stripe (instead of a spot as

in the typical form) which sometimes (in two specimens) is entirely absent; the colour of the underside and legs is, however, constant. An example from Toxpam is figured.

12 (A). **Lema distincta.**

Pale fulvous, the head, the intermediate joints of the antennæ, the basal margin of the thorax, the breast, and the tibiæ and tarsi black; elytra black, a small spot at the base, a narrow transverse band at the middle, and the apices fulvous.
Length 3 lines.
Head impunctate; eyes deeply notched; antennæ slender, half the length of the body, the basal joint black, the second and third joints obscure piceous, the four following joints black, the three apical ones flavous; thorax scarcely longer than broad, obscure testaceous, the sides very moderately constricted, the basal sulcation nearly obsolete, the disc with four obscure small piceous spots, placed transversely, the basal margin black; elytra with an obsolete depression below the base, rather strongly punctured on the anterior portion, the punctuation almost obsolete from the middle downwards, the interstices flat, with a broad black band, including a small fulvous spot, occupying their anterior half, and a similar band (the lower edge of which is deeply emarginate near the suture, and also extends a little distance down the latter) below the middle; femora above and the tibiæ and tarsi black.

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

The single specimen obtained, although closely allied to *L. flavo-fasciata*, Clark, differs sufficiently to regard it as distinct. The colour of the antennæ and legs and the nearly impunctate posterior portion of the elytra will help to distinguish *L. distincta*. The elytral punctuation is only deep near the suture, and anteriorly on all other parts it is almost imperceptible; the posterior black band extends to the extreme lateral margin, but the anterior one is interrupted by the latter.

12 (B). **Lema sexsignata.**

Ferruginous, the apical four joints of the antennæ fuscous; elytra dark violaceous-blue, the extreme lateral margin, a spot at the base, a transverse band at the middle, and the apex, bright yellow; abdomen flavous.
Var. Tibiæ black.
Length $2\frac{1}{2}$–3 lines.

Hab. MEXICO, Tuxtla (*Sallé*).

L. sexsignata is closely allied to *L. dimidiaticornis* and several other species belonging to the same group (e. g. *L. equestris* and *L. troberti*), but apparently distinct from all of them; it differs from the first named in the narrow yellow lateral margin of the elytra and in the flavous (not black) abdomen. It may be separated from *L. bitæniata* by the colour of the underside, and from *L. biornata* by the colour of the head. The elytra have a short postbasal depression within which the punctuation is, as usual, deep, though diminishing gradually towards the apex. The variety only differs in the colour of the tibiæ.

12 (C). **Lema apicicornis.** (Tab. XXXV. fig. 14.)

Black, the three apical joints of the antennæ, the thorax, and the abdomen flavous; elytra metallic violaceous-blue, a transverse band at the middle, and an oval spot at the apex, flavous.
Length 3–4 lines.

Head impunctate, black, with the usual grooves; antennæ black, the three (sometimes four) apical joints flavous, the fourth joint twice as long as the third; thorax about as long as broad, somewhat deeply constricted at the middle, the transverse basal sulcation not strongly marked, the disc with two rows of minute punctures arranged longitudinally, and the space between sometimes with a longitudinal groove; elytra with a distinct transverse depression below the base, deeply and regularly punctate-striate anteriorly, the punctuation becoming very much finer below the middle, and here replaced by lines, the interspaces between which are raised, each with a broad transverse flavous spot or band at the middle (not extending to the suture or lateral margin), and a rounded spot near the apex, the latter surrounded posteriorly by a narrow margin of the ground-colour; breast and legs black; abdomen flavous.

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

Numerous examples. In a single specimen the anterior femora are flavous, and the posterior femora have a flavous spot at the middle.

12 (D). **Lema sexplagiata.** (Tab. XXXV. fig. 15.)

Head, the eight lower joints of the antennæ, and the breast, black, the thorax, the femora more or less, and the abdomen, flavous; elytra black, a spot at the base, a larger one at the middle, and the apices, flavous.

Var. Legs entirely black.

Length 2½–3 lines.

Head deeply constricted behind, almost impunctate, the space surrounding the eyes alone finely punctured; antennæ black, the three (sometimes four) apical joints flavous, long and slender, the third joint twice as long as the second, but shorter than the fourth; thorax scarcely longer than broad, deeply constricted at the sides, the basilar sulcation almost obsolete, the disc impunctate, flavous, the basal margin (in some specimens) black; elytra without trace of a basal depression, finely punctate-striate, the punctuation scarcely stronger anteriorly than posteriorly, the interstices towards the apex more or less distinctly costate, black, with a round spot immediately below the base, a larger and more transversely shaped one at the middle, and the apices broadly, flavous; legs variable in colour, generally flavous, the base of the femora and their upper portion as well as the tibiæ and tarsi, black; abdomen flavous.

Hab. PANAMA, Bugaba (*Champion*).

Many specimens. In general coloration and in the pattern of the elytra *L. sexplagiata* exactly resembles *L. apicicornis*, a species obtained at the same locality; but differs in its generally smaller size, and in the elytra being without a basal depression, and having an extra spot placed near the base. The elytra in *L. sexplagiata* are flavous at the apex as well as at their margins (in *L. apicicornis* a narrow black margin surrounds the flavous portion), and their ground-colour is, moreover, entirely black instead of being of a distinct blue shade at all the darker portions as in *L. apicicornis*. In some specimens the black bands separating the elytral spots do not extend to the lateral margins, these latter as well as the epipleuræ remaining flavous; in all the lower margin of the posterior black band is deeply emarginate.

Lema transverso-fasciata (p. 4).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

Panama specimens differ from those from Costa Rica in having a slightly narrower blue band to the elytra, and in the interstices between the punctures being somewhat

more convex. *L. transverso-fasciata* in regard to the elytral pattern is no doubt as variable as many of its allies, thus necessitating the examination of long series of specimens to distinguish between varieties and species.

15 (A). **Lema obliterata.**

Rufous, the antennæ and legs black; thorax deeply constricted at the sides, impunctate; elytra convex, without basal depression, metallic blue, the punctures obliterated below the middle, the extreme apex obscure fulvous.

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

Head constricted, impunctate, rufous, the eyes somewhat deeply notched, the lateral grooves deep; antennæ entirely black, half the length of the body, the third joint slightly shorter than the fourth; thorax about as broad as long, deeply constricted at the middle, the anterior angles rounded, the surface impunctate, the basal sulcation not deep but distinct; scutellum piceous; elytra convex, subcylindrical, with an indication of a slight impression below the middle near the suture, the intrahumeral groove very short, the punctuation distinct at the base, but almost entirely obsolete from the middle, where it is replaced by slightly impressed striæ, the apical margin fulvous, the ninth row of punctures entire; legs entirely black; underside rufous.

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

A single specimen. This species is distinguished from its allies by the elytra being almost without depression, and with the punctuation at the middle nearly obsolete, in connection with its apical fulvous margin and the black legs and antennæ.

15 (B). **Lema cornuta.**

Lema cornuta, Fabr. Syst. Eleuth. i. p. 475[1]; Illig. Magaz. f. Insekt. iii. p. 159[2]; Oliv. Entom. vi. p. 741, t. 2. fig. 22[3]; Lac. Monogr. in Mém. Soc. Liége, iii. p. 382[4].

Hab. NORTH AMERICA[1 2 3 4].—MEXICO, Tuxtla, San Miguel (*Sallé*); GUATEMALA, Las Mercedes (*Champion*).

I cannot find any differences of importance to justify the separation of the specimens obtained in Mexico and Guatemala from one received from Texas contained in my collection. For the description of this species I must refer to Lacordaire's monograph; but the length given, $3\frac{1}{3}$ lines, is probably a mistake for $2\frac{1}{2}$ lines, the size of the examples before me.

Lema biornata (p. 5). (Tab. II. fig. 1.)

The reference to the Plate was accidentally omitted on p. 5.

Lema confusa (p. 5).

To the localities given, add:—MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Ventanas and Presidio in Durango (*Forrer*), Cordova, Tuxtla (*Sallé*), Cerro de Plumas, Jalapa, Tacambaro in Michoacan (*Höge*), Orizaba (*F. D. Godman & H. H. Smith*),

N. Yucatan (*Gaumer*); GUATEMALA, Las Mercedes, Zapote, San Gerónimo, Teleman (*Champion*); PANAMA, Bugaba, David in Chiriqui (*Champion*).

Lema trilineata (p. 6).

To the localities given, add:—MEXICO, San Pedro in Coahuila (*Dr. Palmer*), Vera Cruz, Toxpam (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

Lema nigrovittata (p. 6).

To the locality Mexico, add:—Hacienda de Bleados, San Luis Potosi, Queretaro, Parras, Saltillo in Coahuila (*Dr. Palmer*), Puebla, Etla, Guanajuato (*Sallé*), Zacualtipan, Tula in Hidalgo, Acapulco (*Höge*).

Amongst the large number of specimens lately obtained by Herr Höge there are several in which the lateral black elytral stripe is interrupted at the middle and in some instances only indicated on the humeral callus.

Lema opulenta (p. 6). (*L. ornata*, Tab. I. fig. 3.)

The reference to the Plate was accidentally omitted on p. 6.

Lema salvini (p. 6).

Also obtained by Mr. Champion at the locality given; this insect may be readily distinguished from the preceding two species by the elytra having the lateral margins, in addition to a discoidal and sutural stripe, black.

25 (A). **Lema bistriata.**

Fulvous, the antennæ (the basal joint excepted) and the tibiæ and tarsi black; elytra closely and deeply punctate-striate, the interstices longitudinally costate, the suture very narrowly, and a sublateral stripe, metallic bluish-black.

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

Head constricted behind the eyes, very finely transversely strigose on the vertex, the space surrounding the eyes swollen, the latter somewhat deeply notched; the labrum and mandibles fulvous; antennæ two thirds the length of the body, slender, black, the first joint fulvous; thorax scarcely broader than long, but very moderately constricted at the sides, the basal sulcation not very strongly marked, the surface impressed with a few very minute punctures on the middle (only to be seen under a very strong lens); scutellum fulvous; elytra rather flattened, without any trace of a basal depression, closely and deeply punctured, the interstices distinctly longitudinally costate, the second and the two outer costæ much broader than the others, the intermediate costæ confluent behind at some distance from the apex, with the suture narrowly, and a narrow stripe (placed just within and accompanying the strongly thickened lateral margin), commencing at the shoulder (where it is much wider) and extending nearly to the apex, metallic blue, the ninth row of punctures entire.

Hab. MEXICO, Juquila (*Sallé*).

This species may be separated from *L. bilineata*, *L. abrupta*, and others belonging to

the eighteenth group of Lacordaire's monograph, by the costate interstices, the obsolete basal depression, and the narrow sutural and sublateral stripes of the elytra.

In one specimen the upper edge of the femora is more or less stained with black.

25 (B). **Lema nigro-lineata.** (Tab. XXXV. fig. 25.)

Fulvous, the head, the seven lower joints of the antennæ, the sides of the breast, and the tibiæ and tarsi black; thorax impunctate; elytra closely punctate-striate, flavous, narrowly margined with black, the black margin interrupted before the apex.

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

Head black, impunctate; antennæ about half the length of the body, black, the apical four joints fulvous, the third joint twice as long as the second; thorax slightly longer than broad, fulvous, moderately constricted at the sides, the basilar groove rather shallow but well marked, the surface entirely impunctate, very shining; elytra without basal depression, deeply and closely punctured, the interstices costate near the apex, the sutural, basal, and lateral margins narrowly black (this colour extending to about four fifths of the length of the elytra, and forming a broader spot at the shoulders); the epipleuræ, underside (with the exception of a narrow black band at the sides of the breast), and femora flavous, the tibiæ black, the tarsi piceous.

Hab. MEXICO, Toxpam (*Sallé*).

A single specimen. *L. nigro-lineata* will enter the nineteenth group of Lacordaire's arrangement, on account of the fulvous terminal joints of the antennæ. The details of the elytral pattern, and the colour of the legs &c., separate the species from any of its allies of somewhat similar markings, more particularly from *L. abrupta*, Lac.

25 (C). **Lema variabilis.**

Fulvous, the head, the intermediate joints of the antennæ, the breast, and the tibiæ and tarsi black; thorax fulvous; elytra testaceous, a sublateral longitudinal stripe, a spot below the base, a transverse band beyond the middle, and the suture, black.

Var. The black markings more or less confluent.

Length 4 lines.

Head black, impunctate, the base more or less fulvous; antennæ less than half the length of the body, black, the apical three joints obscure fulvous; thorax subquadrate, the basilar sulcation not very deep, the surface entirely impunctate, fulvous; scutellum black; elytra slightly depressed below the base, finely punctate-striate, the interstices slightly convex towards the apex, the suture, a narrow sublateral stripe extending to the middle, an elongate spot below the base, and a subangulate transverse band of variable size below the middle, black; the breast black, the abdomen and the femora fulvous.

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

L. variabilis seems somewhat allied to *L. suffriani* and *L. semisepta*, but differs in the elytra having a transverse postmedian band. In the variety the basal spot is confluent with the black lateral stripe, and the transverse band is slightly curved in shape and extends across the suture; in the typical forms this band is abbreviated on each side, and angulate at its outer ends.

25 (D). **Lema maculigera.** (Tab. XXXV. fig. 17.)

Head and breast black, the antennæ and the thorax fulvous, the latter punctured on the disc; elytra testaceous,

deeply punctate-striate, the interstices costate towards the apex, a short sutural stripe at the base, a semilunate band at the shoulders, and another below the middle, black or bluish-black; legs fulvous.
Length 3½–4 lines.

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

Two specimens. The pattern of the elytra in *L. maculigera* resembles that of *L. suffriani* and *L. hamata*, from both of which the deep elytral punctuation and the more strongly costate interstices separate it. The thorax, instead of being impunctate, has some punctures at the sides of the anterior margin, and others placed longitudinally on the middle of the disc. The elytra are almost imperceptibly raised at (or depressed below) the base, but the markings vary in shape—in the specimen from Jalapa the humeral stripe is curved towards the suture at its lower end and is of equal width, in the other this stripe is narrower, more strongly curved, and extends nearer to the suture; in the latter the posterior semilunate band is interrupted at its middle, while the corresponding mark in the Jalapa specimen is shorter, less curved, and thicker. I cannot find any other differences to separate the two forms, except the more strongly raised elytral costæ, which I think indicate sexual difference only, in the Jalapa insect. The Jalapa specimen is figured.

27 (A). **Lema sexlineata.** (Tab. XXXV. fig. 22.)

Testaceous, the head, the basal joint of the antennæ, and the breast black; thorax impunctate; elytra finely punctate-striate, the suture anteriorly and posteriorly, a short stripe on each shoulder, and another near the apex at the sides, black.
Length 3 lines.

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

The single specimen before me differs again from *L. suffriani* and other allied forms in the elytral pattern and in the entirely testaceous legs. The antennæ are testaceous, but with the first two joints black, and of half the length of the body; the space surrounding the eyes is rugose. The thorax is subquadrate, impunctate, and of pale testaceous colour like the rest of the upper surface. The elytra have a shallow depression below the base, and are finely punctate-striate beyond the middle; the three anterior stripes are of equal length, the humeral stripe being rather broader than the sutural one; the posterior lateral stripe is placed in a line with the one on the shoulder and close to the lateral margin, but is only half the size of the posterior sutural stripe, the latter does not quite extend to the apex.

27 (B). **Lema hamata.**

Lema hamata, Lac. Monogr. in Mém. Soc. Liége, iii. p. 438[1].

Hab. PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA[1].

Two specimens obtained by Mr. Champion agree well with the description of

L. hamata. The Panama specimens have the elytral markings blue instead of black, as stated by Lacordaire.

Lema biannularis (p. 7).

To the locality given, add:—Mexico, Cordova (*Sallé*), Jalapa, Tapachula in Chiapas (*Höge*); Costa Rica (*Van Patten*), Cache (*Rogers*); Panama, Volcan de Chiriqui (*Champion*).

The type of this species is unfortunately not contained in the British Museum, and is probably lost. The numerous specimens received from the above localities nearly agree with Clark's description, but show so much variation amongst themselves that it is quite impossible to say if all (or any) of them represent the true *L. biannularis*; in several the elytral rings are blue (not black, as stated in the description); and the posterior semilunate mark is scarcely of the same shape in any two specimens, it being more or less curved or straighter, and longer or shorter, in different individuals. The Chiriqui examples are much smaller, and have the elytral markings equally variable in shape. Clark gives Guatemala as the locality, whence, in spite of the very large amount of material at my disposal, I have not seen a specimen. If I were to treat those before me as distinct, I should have to describe half a dozen extremely closely allied and doubtful species. For the present I prefer to regard them as belonging to one variable and widely distributed species.

Lema bicincta (p. 7).

To the locality Mexico, add:—Jalapa, Colima city (*Höge*), Cuernavaca, Juquila (*Sallé*).

To judge from Lacordaire's description it is somewhat doubtful whether the specimens obtained from the above localities really represent this species or *L. lucublanda*, Lac.; I think that I rightly refer them to *L. bicincta*. In all our examples (with one exception) the first joint of the antennæ is black (of which Lacordaire says nothing); the anterior blue band of the elytra is rather deeply dentate at its posterior margin, and the posterior band is only half the width of the anterior one, and does not extend (as it is stated to do in *L. bicincta*) to the lateral margin. I am, however, unable to find any other difference, and it is quite possible that the bands of the elytra are subject to variation.

30 (A). **Lema chiriquensis.** (Tab. XXXV. fig. 18.)

Testaceous, the basal joint of the antennæ, the head, and the breast black; elytra strongly punctate-striate anteriorly, a broad transverse band at the base and another below the middle violaceous-blue.

Length $2\frac{1}{2}$–3 lines.

Hab. Panama, Volcan de Chiriqui (*Champion*), Colon (*Boucard*).

L. chiriquensis averages rather smaller in size than *L. bicincta*, and differs in having

an elytral depression near the suture below the base (this being absent in *L. bicincta*); the punctures within this depression are distinctly deeper and larger than the others, the latter gradually diminishing towards the apex, where the interstices are more or less convex. The posterior band of the elytra is as broad as the anterior one, and nearly straight (in *L. bicincta* it is strongly curved), and does not extend to the lateral margin. The ground-colour of the thorax and elytra of *L. chiriquensis* is generally paler than in *L. bicincta*; the antennæ extend to about half the length of the elytra; the thorax is but moderately constricted at the sides, the transverse basal groove is also not very deep, and a few fine punctures may be seen (under a strong lens) on the middle of the disc; the rest is as in *L. bicincta*. I have examined eighteen specimens, all agreeing in the above particulars.

30 (B). **Lema forreri.** (Tab. XXXV. fig. 16.)

Fulvous, the head, the basal joints of the antennæ, and the breast black; elytra very deeply punctate-striate, a transverse band at the base, and another below the middle, blue; posterior femora with a black spot.

Length $2\frac{1}{2}$–3 lines.

Head impunctate, black, the grooves round the eyes very deep; antennæ short and robust, not extending beyond the base of the elytra, fulvous, the basal joint black, the second and third joints very short and nearly equal; thorax reddish-fulvous, but moderately constricted at the middle, the basilar sulcation not very deep, the middle of the disc with several rows of minute punctures which disappear towards the base; scutellum black; elytra with a short depression below the base, very deeply, strongly, and closely punctured on the anterior portion, more finely so behind, the interstices convex towards the apex, the anterior blue band sinuate at its posterior margin near the suture, and extending to the extreme lateral margin, the posterior band of equal width, but not reaching to the margin; the underside and legs fulvous, the breast and a spot at the middle of the posterior femora black.

Hab. MEXICO, Presidio (*Forrer*).

The elytral pattern of this species is again similar to that of *L. bicincta* and several others; the deep punctuation of the elytra, however, in connection with the short and robust antennæ, separate *L. forreri* from any of its allies. The spot on the posterior femora is present in three out of the four specimens before me.

30 (C). **Lema cyaneo-fasciata.**

Head and thorax rufous, the antennæ and legs fulvous; elytra strongly punctate-striate, flavous, a transverse band at the base, and another below the middle, blue; breast black; abdomen flavous.

Length $2\frac{1}{2}$–3 lines.

Hab. MEXICO, Oaxaca (*Sallé*).

Although at first sight the present insect seems identical with *L. bicincta*, *L. forreri*, and other similarly-marked species, the colour of the head and of the antennæ does not allow of its identification with either. The two specimens before me, although obtained at the same locality, differ somewhat from each other—in one the antennæ are comparatively short and robust, and entirely fulvous, and the elytra are very strongly punctured anteriorly, but the punctuation gradually diminishes in depth towards the

apex, and the blue bands extend to the extreme lateral margin; in the other (which has unfortunately lost its antennæ) the punctuation of the elytra is much finer posteriorly, and the second band is widened at the lateral margin, and extends downwards along the suture to the apex. In both examples the thorax is subquadrate, and only moderately constricted at the sides, and impunctate; the elytra are scarcely depressed below the base, and the posterior margin of the anterior blue band is rather deeply indented at its middle, and the second band is of the same size, but more regular and slightly curved; and the legs are entirely fulvous or flavous, but with the claws nearly black.

Lema championi (p. 7).

To the locality given, add:—GUATEMALA, San Isidro, Cerro Zunil (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).

A few specimens have been obtained at the above localities which differ from the others in having a small fulvous spot placed within the blue basal band of the elytra. In *L. championi* the entire apical portion, as well as the central transverse band, of the elytra is fulvous or flavous.

32 (A). **Lema strigipennis.**

Fulvous, the head, the sides of the breast, and a spot on the four hinder femora black; thorax longitudinally punctured; elytra with a deep depression below the base, strongly punctate-striate, the interstices finely reticulate, fulvous, a transverse band at the base, and another near the apex, metallic greenish.

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

Head black, impunctate, the neck fulvous, the lateral grooves very deep; antennæ robust, scarcely half the length of the body, fulvous, the basal joint piceous; thorax not longer than broad, strongly constricted at the sides, the basal sulcation moderately distinct, the surface with three longitudinal rows of punctures on the middle of the disc and some scattered punctures near the anterior margin at the sides; scutellum black; elytra with a deep depression below the base, strongly and closely punctured anteriorly, less deeply so behind, the interstices costate towards the apex, finely reticulate, and punctured; below fulvous, the sides of the breast, a spot on the intermediate, and another on the outer side of the posterior, femora, black, the tibiæ and tarsi fulvous.

Hab. MEXICO, Ventanas (*Forrer*).

A single specimen. *L. strigipennis* seems to be nearest allied to *L. lucublanda*, from which it differs in the shorter antennæ, the punctured thorax, the finely reticulate elytral interstices, and the colour of the femora; it agrees with *L. lucublanda* in the elytra having the ninth row of punctures uninterrupted.

Lema bisbivittata (p. 8).

To the locality given, add:—GUATEMALA, Cerro Zunil (*Champion*).

I have already drawn attention to the mistake made by Clark in comparing this species with *L. signaticollis*. The author, moreover, gives the thorax as "punctatus,"

and states afterwards that "no traces of punctures are visible:" an examination of the type proves the thorax to be impunctate. Clark has further omitted to state that the knees are black in the example he described. One of the specimens obtained by Mr. Champion in Guatemala agrees very nearly with the type, but the other differs in having the abdomen and legs entirely fulvous; the latter doubtless represents a variety of the same species.

34 (A). **Lema clarki.** (Tab. XXXV. fig. 21.)

Black; antennæ pale fulvous; thorax reddish-fulvous, distinctly punctured on the disc and anteriorly; elytra fuscous, tinged with violaceous, a narrow subsutural and lateral longitudinal stripe, joined at the apex, flavous; legs fulvous, the knees, the apices of the tibiæ, and the tarsi, black.

Length 3–4 lines.

Hab. MEXICO, Ventanas (*Forrer*), Juquila, La Parada (*Sallé*).

Five specimens. The distinctly punctured thorax separates this species from *L. bisbivittata*, which in other respects it closely resembles. The base of the head is in several examples rufous (as is also the case in Clark's species); the thorax is rather broad and flattened, and has two rows of punctures on the middle of the disc and some other punctures near the anterior angles. The elytra are longitudinally costate, deeply punctured between the raised spaces, and here and there with traces of minute punctures on the costæ themselves; the subsutural flavous band occupies the space between the second and fourth row of punctures, but the lateral stripe is confined to the raised margin only.

34 (B). **Lema bella.** (Tab. XXXV. fig. 23.)

Fulvous, the head, antennæ (the two basal joints excepted), the breast, knees, and the apices of the tibiæ black; thorax finely punctured on the disc, fulvous; elytra deeply punctate-striate, the suture, and a broad longitudinal band (not extending to the apex) on the disc, metallic blue.

Length 4 lines.

Head impunctate, black; the eyes not very deeply notched; antennæ short, extending very little beyond the base of the elytra, black, the two basal joints fulvous; thorax broader than long, fulvous, the disc rather flat, and with two rows of fine punctures down the centre, the anterior angles also punctured, the basal sulcation distinct at the middle only and there forming a kind of fovea; scutellum black, depressed; elytra with the first four rows of punctures placed somewhat in pairs, the other rows very deeply impressed and with their interstices costate, the sutural blue stripe gradually narrowing and abbreviated at some distance from the apex and extending laterally to the second row of punctures, the extreme sutural margin piceous at the apex, the discoidal band widened posteriorly, not extending to the apex, and occupying the space between the fourth row of punctures and the lateral margin, the latter narrowly flavous; abdomen and femora fulvous, the breast, knees, tibiæ (their base excepted), and tarsi black.

Hab. MEXICO, La Parada (*Sallé*).

Of this handsome species only a single specimen is contained in the Sallé collection. The metallic blue colour of the elytral bands and the colour of the antennæ and abdomen sufficiently separate *L. bella* from *L. clarki* and *L. signaticornis*.

Lema varipes (p. 8).

To the locality given, add:—MEXICO, Vera Cruz (*Sallé*), Jalapa (*Höge*); COSTA RICA (*Van Patten*).

Lema nupta (p. 8).

To the localities given, add:—MEXICO, Tuxtla, Vera Cruz, Playa Vicente (*Sallé*), N. Yucatan (*Gaumer*); GUATEMALA, San Isidro (*Champion*).

It seems rather doubtful to me whether *L. nupta* and *L. varipes* are really distinct; apparently they only differ in the colour of the antennæ, these organs having the first six joints fulvous (instead of the first four) in *L. nupta*. I now possess specimens in which the five basal joints of the antennæ are fulvous; these agree in other respects with both *L. nupta* and *L. varipes*, thus showing that this colouring is subject to variation. The elytral spots are equally variable, some specimens being devoid of several, while others have them largely developed; intermediate degrees are also not wanting. *L. varipes* is stated by Lacordaire to be from Mexico; in speaking of *L. nupta* he says, however, that this species, as well as the preceding (*L. varipes*), is found in Colombia; several specimens of *L. nupta* having now been received from Mexico proves this locality to be the correct one.

36 (A). **Lema stigmula.**

Pale fulvous; antennæ (the first joint excepted), a spot on the vertex, another on the anterior part of the thorax, three spots on each elytron, placed triangularly, and the tibiæ and tarsi, black.

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

Head impunctate, with a small black spot on the middle of the vertex; eyes nearly entire; palpi robust; antennæ short and stout, gradually widened and flattened towards the terminal joints, black, the basal joint fulvous; thorax scarcely broader than long, moderately constricted at the sides, with a deep fovea near the base, the basilar sulcation nearly obsolete, the surface with two rows of punctures on the middle of the disc and a few fine punctures near the anterior margin, the latter with a small black spot in the middle; scutellum small, black; elytra of a paler colour than the thorax, very convex, robust, and without basal depression, distinctly punctate-striate, the interstices very minutely punctured, here and there somewhat wrinkled, and towards the apex becoming subcostate, the three spots placed thus—one at the shoulders, one near the suture before the middle, and one a little lower down near the lateral margin; underside fulvous, except a small black spot at the sides of the breast below the middle; tibiæ and tarsi black.

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

A single specimen. *L. stigmula* is distinguished from *L. varipes* and *L. nupta* by the broadly widened joints of the antennæ, and the position of the spots and the fine punctuation of the interstices of the elytra.

36 (B). **Lema regularis.**

Testaceous; antennæ black, the two basal joints fulvous; head with one spot, and the thorax with two lateral spots and a central line, black; elytra closely punctate-striate, a small spot at the shoulder, another

across the middle, and the sutural and lateral margins, black; tibiæ and tarsi and several spots on the breast, black.

Length 3¾ lines.

Of robust and convex appearance; the head impunctate, with the usual deep grooves, the vertex with a large triangular black spot; antennæ short and robust, gradually widened towards the apical joints, the latter not longer than broad, the first two joints fulvous, the rest black; thorax subquadrate, the anterior margin straight, the sides moderately constricted, the basal groove almost obsolete but impressed with a small fovea at the middle, the surface with some very minute punctures on the middle and anteriorly at the sides, the latter with two black spots placed one below the other, the disc with a narrow straight black central stripe which extends from the anterior margin nearly to the base; scutellum black; elytra convex, broad, with a scarcely visible depression below the base, strongly and closely punctate-striate anteriorly, the punctuation gradually diminishing in depth posteriorly, and with some very small punctures scattered between the larger ones, the interstices costate towards the apex; each elytron with a transverse black spot on the middle and an obliquely shaped one at the shoulder, the sutural and the lateral margins, from a little distance below the base to the apex, also deep black; the epipleuræ, underside, and femora pale fulvous, a spot on each coxa, another at the sides near the anterior coxæ, two spots (one anterior and the other posterior) on the parapleuræ of the breast, and the knees, tibiæ, and tarsi, black.

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

Of this well-marked species only one specimen has been received. On account of its general robust appearance and the structure of the antennæ *L. regularis* should be placed near *L. nupta* and *L. varipes*, from which the black margins and the position of the spots of the elytra will readily distinguish it.

36 (c). **Lema brunnea.**

Robust, convex, pale brownish, joints 6–10 of the antennæ, a central streak and two small spots on the sides of the thorax, the apices of the tibiæ, and the tarsi, black; elytra strongly punctured anteriorly and finely so posteriorly.

Length 3½ lines.

Head impunctate, entirely fulvous, the neck scarcely constricted, the usual grooves deep; antennæ short and robust, the terminal joints widened and flattened, the five basal joints and also the apical one fulvous, the others black; thorax slightly longer than broad, the sides somewhat deeply constricted, the posterior margin strongly rounded, the basal sulcation entirely obsolete, the surface smooth, shining, very minutely punctured on the disc, fulvous, with a narrow black longitudinal stripe (interrupted anteriorly and not extending to the base), and two small spots placed one below the other at the sides; elytra convex, without basal depression, strongly punctured anteriorly and very finely so from the middle to the apex; underside and legs fulvous, the extreme apices of the tibiæ and the tarsi black.

Hab. MEXICO, Tehuantepec (*Sallé*).

A single specimen, differing from *L. nupta* and *L. varipes* in the colour of the antennæ, absence of elytral spots, and unicolorous underside; it is, however, quite possible that *L. brunnea* is but a variety of *L. nupta*.

36 (d). **Lema immaculipennis.**

Obscure pale fulvous, the antennæ (the basal joint excepted), the knees, the apices of the tibiæ, the tarsi, and some small spots at the sides of the abdomen, black; thorax nearly impunctate; elytra convex, without depression, distinctly punctured at the base only.

Length 2½ lines.

Head strongly constricted behind the eyes, the latter deeply notched, the lateral grooves also very deep; labrum

piceous; antennæ half the length of the body, black, the basal joint fulvous, the third and following joints rather slender and each longer than broad; thorax rather longer than broad, the sides somewhat deeply constricted, the basal sulcation obsolete, the surface obscure fulvous, with some nearly obsolete longitudinal black spots at the sides, the disc impunctate; scutellum fulvous; elytra convex, subcylindrical, without any trace of a basal depression, the punctuation only well-marked anteriorly near the suture, the rest of the disc very finely and obsoletely punctured, the interstices flat; underside fulvous, the knees, the apical third of the tibiæ, the tarsi, and a small spot at the side of each abdominal segment, black.

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

A single specimen. On account of the filiform (not widened) joints of the antennæ I am unable to treat this insect as a variety of *L. varipes* or *L. nupta*; the upper surface immaculate, and the apices only of the tibiæ (instead of the middle portion, as in *L. intricata*) are black. In the sculpture and shape of the elytra this species very closely resembles *L. intricata*.

36 (E). **Lema modesta.**

Pale fulvous; labrum piceous; antennæ with shortened terminal joints; thorax longer than broad, impunctate; elytra convex, distinctly punctured towards the base only, the rest of the surface very finely punctate; underside and legs obscure fulvous, the abdomen lighter.

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

Hab. PANAMA, Bugaba (*Champion*).

This insect is closely allied to *L. immaculipennis*, but I believe distinct; it differs thus:—the antennæ are entirely fulvous, and the terminal joints (instead of being elongate) are short and gradually, but slightly, thickened; the thorax is longer, and the underside and legs are without black spots.

The elytra are shaped and sculptured exactly as in *L. immaculipennis*.

A single specimen only was obtained.

Lema atricornis (p. 9).

To the locality Mexico, add:—Playa Vicente (*Sallé*).

Lema sexnotata (p. 9).

To the locality Mexico, add:—Jalapa, Cordova (*Höge*), Vera Cruz (*Sallé*).

39 (A). **Lema intricata.**

Fulvous, the antennæ, four spots on the head, a spot on each side of the thorax, and the scutellum, black; elytra strongly punctate-striate, a spot at the sides before and another below the middle, and a sutural spot below the base, black; breast with two spots; legs black at the base, at the knees, and at the middle of the tibiæ.

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

Head impunctate, fulvous, the space round the eyes punctured, the vertex with a central black spot, the base with three spots placed transversely; antennæ less than half the length of the body, black, the basal joint fulvous; thorax not longer than broad, deeply constricted at the sides, the basal groove rather deep, the surface with a few minute punctures at the middle of the disc, the sides with a black spot at the middle

of the constriction; scutellum black; elytra deeply punctate-striate, the punctures indistinct below the middle, the ninth stria entire, the interstices rather convex at the apex, the three spots placed thus—one on the suture below the base, one, a little lower down, at the sides, and one below the middle at the centre of the disc; underside and legs fulvous, the breast with a spot in front and another behind at the sides, the femora at the base, the knees, a band at the middle of the tibiæ, and the tarsi, black.

Hab. MEXICO, Oaxaca (*Sallé*).

L. intricata may be recognized by the position of the elytral spots and by the black mark surrounding the tibiæ. The spots at the base of the head are occasionally absent, and of the elytral spots sometimes only the posterior ones are present; the legs, however, agree in coloration in all the specimens I have for examination. The uninterrupted ninth elytral stria and the system of coloration places the species near *L. sexnotata*.

39 (B). **Lema rugifrons.**

Elongate, subdepressed, black; above fulvous; the head with three tubercles; thorax subcylindrical, punctured anteriorly and on the disc; elytra strongly punctate-striate, the ninth row entire, fulvous, the suture to beyond the middle, and a spot on the shoulders, black.

Var. Elytra entirely fulvous.

Length $1\frac{3}{4}$ line.

Head reddish-fulvous, the space between the eyes occupied by irregularly shaped tubercles (two lateral and one central), the space between the tubercles irregularly rugose and clothed with some yellow pubescence; eyes distinctly notched; labrum and mandibles black; antennæ half the length of the body, gradually thickened towards the apical joints, entirely black; thorax longer than broad, subcylindrical, widened in front, the sides moderately constricted, the basal sulcation distinct and with a small central fovea at the middle, the surface with a row of punctures on the middle of the disc and some punctures near the anterior margin at the sides; scutellum obscure fulvous; elytra rather flattened, without basal depression, the punctuation deep and regular but shallower behind, the outer interstices costate towards the apex, the ninth row of punctures uninterrupted, the suture at the base, or to below the middle, black, the shoulders with a small black spot; the underside and the legs black.

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

On account of the sculpture of the head this very distinct species differs from all others of our region; it belongs to the division with the ninth stria of the elytra entire.

Lema nigromaculata (p. 9).

To the locality given, add:—GUATEMALA (*mus. Stuttgart*), Las Mercedes, Zapote (*Champion*).

The specimens obtained at the above localities differ from the type in the elytra being devoid of the sutural spot, and also of the transverse posterior band, so that only a small humeral and a small apical spot remain (a single specimen from Zapote is without any spots whatever); and in the underside being more largely marked with black. The chief characters for *L. nigromaculata* are the black sides of the breast and abdomen and the black upper margin of the femora in connection with the uninterrupted ninth row of punctures on the elytra. The Guatemalan specimens do not differ in any other way whatever from the type.

Lema godmani (p. 9).

To the locality given, add:—MEXICO, Toxpam, Tuxtla (*Sallé*); GUATEMALA, Senahu in Vera Paz (*Champion*).

Although the Mexican and Guatemalan specimens of this species, since received, are for the most part of larger size (3 lines) than the type from Nicaragua, they agree in all other respects with it; *L. godmani* no doubt represents a really distinct species amongst the several similarly coloured forms with uninterrupted ninth elytral stria. In one specimen the abdomen, as well as the sides of the breast, is black.

Lema hexastigma (p. 10).

Lema scutaria, huj. op. p. 10.

To the locality Mexico, add:—Oaxaca, Toxpam, Cordova, Vera Cruz, Puebla (*Sallé*), Orizaba (*F. D. Godman & H. H. Smith*).

This is a very variable species, of which Lacordaire had only the single specimen which served him for his type. From the material now before me I have come to the conclusion that *L. scutaria* must be considered a variety of *L. hexastigma.* I have, however, only seen a single specimen (from Puebla) entirely agreeing with Lacordaire's description; in all the others the neck is not marked with black, and in many the suture is entirely black, or black only at the base (as in the type of *L. scutaria*); the elytral spots vary greatly in size in the different specimens, being sometimes connected at the suture and forming almost transverse bands and sometimes very small, the several intermediate stages proving the variability of the species. In all our examples, however, the breast is entirely, or partially, black, and the base of the femora is fulvous. Lacordaire had a specimen before him which had no sutural black stripe. The deep depression at the base of the elytra (mentioned in the description of *L. scutaria*) is present more or less distinctly in all the specimens. It seems to me doubtful whether *L. hexastigma* itself is anything more than a variety of the North-American *L. sexpunctata,* Oliv., typical examples of which I have not seen.

45 (A). **Lema ancoralis.**

Testaceous, the breast black; thorax scarcely longer than broad; elytra indistinctly depressed below the base, deeply punctured, the ninth row interrupted, a spot at the shoulder, a subtriangular patch at the base, and a broad transverse band below the middle, connected at the suture, black; legs pale.
Var. *a.* Elytra with the suture, a small spot at the shoulder, one before and another below the middle, black.
Var. *b.* Elytra immaculate.
Length $1\frac{1}{2}$–$2\frac{1}{4}$ lines.

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

At first sight, *L. ancoralis* seems again to represent only another variety of *L. hexastigma,* and I regarded it as such at the first examination; but the nine specimens before

me agree so well in the differences pointed out below that I am compelled to treat the insect as specifically distinct. The head is not marked, either posteriorly or anteriorly, with black (thus differing from several species described by Lacordaire, e. g. *L. septem-punctata*, *L. septem-plagiata*, &c.); the antennæ are pale or pale fuscous (not black as in the allied species); and the elytra in the typical form have a black anchor-shaped patch connected at the suture with a broad posterior band (resembling in this respect *L. dorsalis*, *L. gracilis*, and allied forms, in which, however, these marks are blue). The principal difference between *L. ancoralis* and *L. hexastigma* and its varieties is to be found in the pale testaceous legs and tibiæ, this coloration being constant in all the specimens from Bugaba; and in the basal depression of the elytra being very shallow. The var. *a*. resembles closely in the markings of the elytra *L. hexastigma*, and can only be separated by the colour of the antennæ and legs; while var. *b*., although agreeing in every other way with the type, is entirely devoid of any black markings. In the costate apical interstices and the deep punctures of the elytra this species closely resembles *L. hexastigma*.

45 (B). **Lema laticollis.**

Testaceous, the antennæ, the lower part of the face, and the tibiæ black; thorax subquadrate; elytra strongly punctate-striate, the suture, a spot at the shoulder, another before the middle, and a third near the apex, black.

Var. Elytra with the suture black towards the base only; the two posterior spots obsolete.

Length 2 lines.

Hab. MEXICO, Cordova, Vera Cruz (*Sallé*).

Four specimens. *L. laticollis* cannot be treated as a variety of *L. hexastigma*, on account of the following differences:—The clypeus and the labrum are black; the thorax is less elongate (being slightly broader than long), and its sides are but very moderately constricted; the elytra (though marked and punctured in the same way as in *L. hexastigma*) have their basal depression shallower; the underside and the femora are entirely testaceous or flavous; and the posterior femora extend very nearly to the end of the abdomen. The ninth row of punctures on the elytra is, as in *L. ancoralis*, largely interrupted and costiform.

45 (C). **Lema palmeri.**

Black; antennæ very short, the apical joints obscure fulvous; thorax finely punctured, bi-impressed, the sides black, the rest of the surface testaceous; elytra testaceous, deeply punctured, the suture and a short humeral streak, black; legs testaceous, the femora with a black spot.

Length 2 lines.

Head impunctate at the vertex, black, the lower portion rugose, covered with pubescence; antennæ extremely short, not extending beyond the base of the thorax, all the joints short, the first and the terminal four joints fulvous, the others black; thorax subquadrate, testaceous, the sides black, the basilar sulcation well-marked, the surface with a double row of punctures on the disc, some scattered punctures near the anterior angles, and two short longitudinal foveæ near the anterior margin; scutellum black; elytra without basal depression, deeply and closely punctate-striate, the ninth row entire, the interstices slightly

costate near the apex, a narrow sutural stripe extending from the base to the apex, and a short streak at the shoulders, black; underside black; legs fulvous, all the femora with a black median spot.

Hab. MEXICO, near the city (*Dr. Palmer*).

Of this species, remarkable for its short antennæ and the rugose lower portion of the head, only a single specimen was obtained.

45 (D). **Lema insularis.** (Tab. XXXV. fig. 20.)

Fulvous, the head, antennæ (the last three joints excepted), and breast black; elytra testaceous, a short stripe at the shoulder, an elongate spot surrounding the scutellum, and a transverse band below the middle of each, bluish-black, the ninth row of punctures entire.

Length 4 lines.

Head impunctate, black, the neck fulvous; antennæ slender, half the length of the body, the three lower joints stained with fulvous, the three apical ones flavous, the others black, the fourth joint one half longer than the third; thorax slightly longer than broad, deeply constricted at the middle, the surface impunctate, the basilar sulcation shallow; elytra with a slight depression below the base, distinctly punctured anteriorly, almost entirely impunctate below the middle, the interstices very slightly convex towards the apex, the markings arranged thus—a humeral stripe extending to one third of the elytral length and widened at its lower extremity, a scutellar spot (common to both elytra) slightly shorter than the lateral one, and a posterior transverse band not quite extending to either margin; legs and abdomen fulvous.

Hab. PANAMA, Taboga Island (*Champion*).

Very closely allied to the Colombian *L. divalis*, Clark, and possibly only a variety of that species; it differs in having the last three (instead of the last four) joints of the antennæ flavous and in the fulvous (not black) legs. A single specimen only was obtained.

45 (E). **Lema incisa.** (Tab. XXXV. fig. 24.)

Piceous, the head and breast entirely, or partly, black; antennæ obscure fulvous; thorax deeply grooved at the base, the latter flavous; elytra depressed below the base, strongly punctate-striate, the anterior portion piceous, the posterior portion flavous, the ninth row of punctures entire.

Length $2\frac{1}{2}$–3 lines.

Head entirely impunctate, not constricted behind the eyes, piceous or black, the extreme base more or less fulvous, the space surrounding the eyes almost entirely impunctate; antennæ fulvous, the terminal joints sometimes darker, the third and fourth joints equal and each much longer than the second; thorax transverse, short, at least twice as broad as long, deeply constricted at the sides, the anterior angles slightly tuberculiform, the basilar groove very deep, the basal portion flavous, the anterior portion dark brown and with a few fine scattered punctures; scutellum brown at the base, black at the apex; elytra with a shallow depression below the base, the shoulders prominent, the punctuation rather deep anteriorly and diminishing gradually towards the apex, the ground-colour flavous, the anterior half occupied by a subquadrate piceous patch which does not extend to the shoulders nor to the lateral margins and is of a browner tint near the suture; the breast black, the abdomen piceous, the legs fulvous.

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

I know of no described species with which the present insect can be compared. The deep thoracic groove and the pattern and colour of the elytra will readily distinguish *L. incisa*.

45 (F). **Lema variegata.**

Head, the basal joints of the antennæ, the breast, and the tibiæ, black; thorax rufous; elytra pale yellow, a transverse band at the base, the suture narrowly, and a small spot below the middle, bluish-black, the ninth row of punctures entire.

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

Head black, impunctate, the space surrounding the eyes punctured; antennæ obscure fulvous, the basal joint entirely black, the three following joints blackish above, the third joint distinctly shorter than the fourth; thorax subquadrate, deeply constricted at the sides, rufous, the basilar groove not very deep, the middle of the disc with a few very fine punctures; scutellum black; elytra convex, without basal depression, the anterior third deeply, the rest very finely, punctured, the surface pale yellowish, the markings arranged thus—the base occupied by a transverse bluish-black band which does not extend to the lateral margin and has its posterior edge rather deeply bi-emarginate, the suture narrowly bluish-black, this colour slightly widened out at the middle into a lozenge-shaped mark, and below this is a small dark spot; the breast black, the abdomen and femora flavous, the tibiæ and tarsi black.

Hab. GUATEMALA (*coll. Jacoby*).

I possess a single specimen of this rather curiously-marked species, without more particular locality.

Lema discoidalis (p. 11).

To the locality given, add:—MEXICO, Cosamaloapam, Vera Cruz (*Sallé*).

It is probable that the specimen from Guatemala which served me for the type is somewhat immature, and that it represents a variety in which the two triangular elytral patches have united. The Mexican examples are reddish-fulvous and have the elytral markings more or less isolated (though sometimes connected by a narrow sutural stripe), and the punctuation finer and more regular; in other respects they agree with the type. *L. discoidalis* may be known from its allies by the blackish colour of the elytral markings, the immaculate humeri, and the entirely fulvous underside and femora.

46 (A). **Lema permutans.**

Rufous, the antennæ (the first joint excepted), the sides of the breast, the apices of the femora, and the tibiæ and tarsi black; elytra deeply depressed below the base, subfoveolate-striate, a large triangular spot at the base, and a small spot below the middle, black.

Var. The elytral spots small and of equal size.

Length 2 lines.

Head not constricted behind the eyes, impunctate; antennæ about half the length of the body, black, the basal joint fulvous; thorax rather broader than long, not very deeply constricted at the middle, the basilar groove well-defined, the surface with a few fine punctures; elytra with a deep depression below the base, the punctures very deep and large, the interstices near the base and within the depression swollen and somewhat irregular and towards the apex subcostate, the punctures distinct but becoming much finer behind, the ninth row largely interrupted at the middle; below fulvous, the sides of the breast, the upper edges of the four anterior and the apices of the posterior femora, and the tibiæ and tarsi, black.

Hab. MEXICO, Teapa, Vera Cruz (*Sallé*); NICARAGUA, Chontales (*Janson*).

L. permutans belongs to Lacordaire's twenty-eighth group, and on account of the deep punctuation of the elytra seems closely allied to the North-American *L. ephippium*;

it differs, however, from that species in its entirely fulvous head and in the shape of the elytral markings. From the other closely allied forms of the same group *L. permutans* may be known by the black (not blue) colour of the markings, the want of the humeral spot, and the deep punctures of the elytra, and other details pointed out in the above description. The variety differs from the type in the elytral spots being smaller—one is placed within the depression and the other below the middle; other differences I am not able to find.

47. **Lema exarata.**

Lema exarata, Clark, Cat. Phyt., App. p. 60[1].
Lema högei, huj. op. p. 11.

Hab. MEXICO, Vera Cruz, Cosamaloapam, Cordova (*Sallé*), Jalapa (*Höge*), Teapa[1].

Clark's species was unfortunately overlooked by me and described under a new name. It may be known from *L. maculipennis* by the much more coarsely punctured elytra and by the want of the black shoulder-spot. It is, however, not correct to say, as Clark does in his description, that the punctuation is "unarranged"—neither in the type nor in the other specimens before me is this the case; all that can be said is that the interstices within the deep fovea below the base of the elytra are rather swollen, the linear arrangement of the punctures (as in most other species of *Lema*) being perfectly clear. Some specimens have a black spot placed within the elytral depression, but in others this is absent. I am unable to find any trace of a fuscous spot at the sides of the thorax or of the similarly-coloured elytral punctures mentioned by Clark. The form with a single black spot within the elytral depression was described by me in the earlier part of this work under the name of *L. högei.*

49. **Lema sexpunctata.**

Lema sexpunctata, Oliv. Ent. vi. p. 738, t. 1. fig. 18[1]; Lacord. Monogr. in Mém. Soc. Liége, iii. p. 486[2].
Lema albini, huj. op. p. 12[3]; Lacord. loc. cit. p. 492[4].

Hab. NORTH AMERICA[1 2 3].—MEXICO[3 4], Cordova, Cosamaloapam, Totosinapan, Mirador (*Sallé*); GUATEMALA, San Isidro, Cerro Zunil, Las Mercedes, Volcan de Atitlan, Dueñas[3], San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*); COSTA RICA (*Van Patten*).

L. albini is evidently a very variable species and is considered by Crotch (Proc. Ac. Phil. 1873, p. 26) to be a variety of *L. sexpunctata*, Oliv., with which I am inclined to agree. The elytral spots are very variable in size and also in number: in the true *L. sexpunctata* there are three spots on each elytron; in *L. albini* these spots are larger—the sutural with the corresponding one on the opposite elytron is confluent (together forming a triangular patch), and the posterior one assumes the shape of a transverse band. In these forms of *L. albini* the sides of the breast and a spot on the first

abdominal segment are black; but examples with entirely fulvous underside are not rare. The legs in all, with the exception of the femora being fulvous at the base, are black. There are some specimens before me which have only one small black spot below the base of the elytra, but the other differences (if any) are so slight that I cannot treat these examples as representing distinct species; in this case, as in many other instances, it is almost impossible to draw the line between species and variety.

49 (A). **Lema pardalina.**

Fulvous, the antennæ (the fulvous basal joint excepted), the apices of the femora, and the tibiæ and tarsi black; elytra deeply and remotely punctate-striate, with a fovea below the base, the suture anteriorly, a spot on the shoulder, two spots placed obliquely below the base, and one below the middle, black.

Var. The sutural and humeral spots wanting.

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

Hab. MEXICO, Vera Cruz, Cordova (*Sallé*).

I cannot treat this as a variety of *L. sexpunctata*, to which, however, it is closely allied; the differences are as follows:—The thorax is slightly shorter; the elytra have their punctures deeper and more remotely placed, the fovea is situated close to the suture, the latter is black for a short distance near the base, and there is an extra black spot placed a little lower down than the one within the fovea (this spot is always absent in all the specimens I refer to *L. sexpunctata*) at the sides below the base. The entire underside is fulvous; and the elytral punctuation is very fine below the middle. The three specimens before me only differ from each other in the spot on the shoulder and suture of the elytra being obsolete in one of them.

49 (B). **Lema dugèsi.**

Lema dugèsi, de Borre, Ann. Soc. Ent. Belg. xxv. p. 13 (1881)[1].

Hab. MEXICO, Guanajuato[1].

This species was described from a single example and placed by the author near *L. helvola*, Lac.; it is unknown to me.

49 (C). **Lema flavipennis.**

Pale flavous, the antennæ, labrum, tibiæ, and tarsi black; thorax subquadrate, rather transverse; elytra very faintly depressed below the base, strongly punctate-striate, the ninth row interrupted; breast brownish.

Length 2 lines.

Of rather broad general shape; the head impunctate, with a short longitudinal groove between the eyes, the latter somewhat deeply indented; labrum and mandibles black; antennæ slender, two thirds the length of the body, black, the third and fourth joints equal; thorax almost broader than long, the sides very moderately constricted at the middle, the basilar groove not strongly marked (in one specimen with a central depression); elytra much broader than the thorax, rather flattened, almost imperceptibly depressed below the base, pale flavous, deeply and regularly punctate-striate anteriorly, the punctuation becoming more feeble behind, the interstices costiform towards the apex, the ninth row of punctures only visible on the apical third; breast brownish, covered with thin pubescence; posterior femora extending to the apex of the elytra; the tibiæ and tarsi black.

Hab. MEXICO, Toxpam (*Sallé*).

L. flavipennis seems to belong to Lacordaire's thirty-first group, and is no doubt closely allied to *L. simplex*, *L. ferrugata*, and *L. helvola*. It seems to differ, however, from all of these in the want of the basal depression of the elytra, the scarcely constricted sides of the thorax, and the entirely black antennæ. In one specimen the space surrounding the inner margin of the eyes is black. The space at the sides of the elytra occupied by a remnant of the ninth row of punctures is broad, smooth, and costiform.

49 (D). **Lema planipennis.**

Fulvous, the five basal joints of the antennæ, the labrum, the apices of the tibiæ, and the tarsi black; thorax with some fine punctures on the disc; elytra metallic green, flat, without basal depression, strongly and regularly punctured, the interstices costate at the apex, the ninth row of punctures interrupted.

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

Head with a short fovea between the eyes, the latter not very deeply notched, the space in front clothed with yellow pubescence; labrum black; antennæ about half the length of the body, the six apical joints fulvous, the others black; thorax very slightly longer than broad, scarcely constricted at the sides, the basal sulcation not very deep, the disc with two rows of fine punctures at the middle and some other punctures near the sides anteriorly; scutellum fulvous; elytra somewhat flattened, without basal depression, very regularly and deeply punctured throughout, the interstices at the apex and at the sides costate.

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

I have no doubt about the specific distinction of this insect, although I have only a single specimen for examination. The colour of the antennæ, the scarcely constricted thorax, the unimpressed base of the elytra, and their deeply impressed and regular striæ of punctures visible to the apex, form characters by which *L. planipennis* may be recognized with comparative ease.

49 (E). **Lema approximata.**

Flavous, the head, antennæ, tibiæ, and tarsi black; thorax subcylindrical; elytra testaceous, the apex greenish, subgeminate punctate-striate, a broad sutural and a broad lateral stripe, black, the ninth row of punctures interrupted.

Length 2 lines.

Head black, the neck fulvous; the vertex with a narrow central groove; eyes deeply notched, the lateral grooves deep; antennæ half the length of the body, entirely black; thorax subcylindrical, fulvous, slightly longer than broad, the sides moderately constricted, the basal sulcation distinct but not deeply impressed, the surface impunctate; scutellum black; elytra narrowed posteriorly, with a very obsolete depression below the base, the punctuation anteriorly arranged in double rows, the interstices towards the apex very broad and costate, the punctures nearly obsolete behind, the ninth row only distinct anteriorly, with a broad sutural and a broad lateral longitudinal black stripe, the latter at the shoulder widening into a subquadrate spot; underside entirely flavous, covered with fine silvery pubescence; tibiæ and tarsi black. the posterior tibiæ slightly curved.

Hab. GUATEMALA, Torola (*Champion*); PANAMA, Taboga Island (*Champion*).

This species seems closely allied to the Colombian *L. marginata*, Oliv.; the head and antennæ, however, are entirely black; and the elytra have their punctures somewhat arranged in double rows, and are more or less greenish towards the apex. In the female the antennæ are shorter than in the male.

49 (F). **Lema cinctipennis.**

Piceous, the head and antennæ (the first joint excepted) black; thorax fulvous, scarcely constricted at the sides; elytra flavous, deeply punctate-striate, without basal depression, a sutural and a sublateral longitudinal stripe, abbreviated at the apex, black; legs fulvous.

Length 2 lines.

Head entirely black, with a small central fovea; palpi fulvous; antennæ two thirds the length of the body, black, the first joint fulvous; thorax subquadrate, scarcely constricted at the sides, the basal sulcation obsolete, the surface impunctate, fulvous; scutellum piceous; elytra very deeply punctured, without depression, the interstices costate at the sides and at the apex, the ninth row of punctures interrupted, the suture narrowly and a broader sublateral stripe, both abbreviated before the apex, black; the underside piceous, covered with fine yellowish pubescence; legs fulvous.

Hab. MEXICO, Panistlahuaca (*Sallé*).

There is only a single specimen of this insect contained in the Sallé collection. From *L. approximata* it is sufficiently distinguished by the scarcely constricted thorax, the deep punctures and colour of the elytra, and the colour of the underside and legs; both species should be placed near *L. marginata*.

Lema longicornis (p. 12).

To the Mexican locality given, add:—Toxpam, Cordova (*Sallé*).

Lema dorsalis (p. 12).

To the localities given, add:—MEXICO, Vera Cruz (*H. H. Smith*); GUATEMALA, Cerro Zunil, Volcan de Atitlan, Torola, Tamahu (*Champion*); NICARAGUA, Chontales (*Janson, Belt*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

As already remarked, it is very probable that *L. longicornis* and the present species are not specifically distinct; at any rate I am not able to separate the numerous examples before me from the above localities in a satisfactory way. The elytral pattern is subject to great variation, the two large blue patches being often confluent and occupying nearly the entire disc. Guatemalan specimens differ from most of those received from Mexico in having the breast black, but Mexican examples also occur with the breast similarly coloured. All the specimens I refer to *L. dorsalis* agree, however, in the elytra being deeply depressed below the base, with the interrupted ninth row of punctures costate, and the patches of a metallic blue colour; and also in the femora being black at the apex and fulvous at the base. *L. dorsalis* and *L. longicornis* vary considerably in size and in the intensity of the punctuation.

Lema plumbea (p. 13).

To the localities given, add:—MEXICO, Cuernavaca (*Sallé*), Vera Cruz (*Sallé and H. H. Smith*), Jalapa (*Höge*), Orizaba (*H. H. Smith and F. D. Godman*); GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

Amongst the great number of specimens before me with fulvous head and thorax,

metallic blue elytra, and black underside, it is almost impossible to come to a conclusive opinion in regard to the number of species which they represent, or which of them may be the true *L. plumbea*, Lac. The examples I refer to *L. plumbea* have the under surface, antennæ, and legs (the base of the femora excepted) black; and the elytra violaceous-blue, with a feeble basal depression, and deeply punctured striæ. Some specimens lately obtained by Messrs. Smith and Godman at Orizaba are of a more greenish tint above, and are rather smaller and more narrowed posteriorly, and have the black colour of the lower portion of the head extending upwards between the antennæ; possibly these may represent another species.

54 (A). **Lema yucatana.**

Rufous, the labrum, antennæ (the first joint excepted), the apices of the tibiæ, and the tarsi black; thorax subquadrate, moderately constricted; elytra without basal depression, strongly punctate-striate, the ninth row entire.

Length 1½ line.

Head impunctate, constricted behind the eyes, the latter prominent and deeply notched; the labrum and mandibles black; antennæ half the length of the body, black, the basal joint fulvous; thorax scarcely longer than broad, moderately constricted at the sides, wider in front than behind, the surface with a few very minute punctures (only visible under a strong lens); scutellum black; elytra subcylindrical, without any trace of a basal depression, deeply and regularly punctate-striate, the ninth row uninterrupted, the interstices strongly costate towards the apex; the posterior femora strongly thickened, reaching nearly to the end of the abdomen.

Hab. MEXICO, Temax in N. Yucatan (*Gaumer*).

A single specimen. This species belongs to the first division of Lacordaire's monograph, it having the ninth row of elytral punctures uninterrupted. *L. yucatana* may be recognized by its small size, the anteriorly widened thorax, and the colour of the antennæ.

55. **Lema guatemalensis.**

Lema pudens, huj. op. p. 13 (nec Lacord.).

To the Guatemalan localities given, add:—Panajachel, Senahu (*Champion*).

The specimens referred by me (*ante*, p. 13) to *L. pudens* proving to belong to another species, I now describe it:—

Black, the extreme base of the femora, the upper portion of the head, and the thorax fulvous; the latter impunctate; elytra dark metallic blue, with a distinct oblique depression below the base, strongly punctured anteriorly, finely so posteriorly.

Length 2–2½ lines.

I am obliged to separate this species from *L. plumbea* on account of the very distinct basal depression and the different system of punctuation of the elytra, the punctures being less closely placed and much finer posteriorly. Lacordaire says nothing about a basal depression in *L. plumbea* or *L. pudens* and only speaks of the longitudinal groove within the shoulder, whereas in *L. guatemalensis* the elytra are distinctly depressed below

the base. The head in the latter is frequently marked with black between the antennæ. Some of the specimens before me, however, I am not able to refer with certainty to either species, and it is very doubtful whether the present insect is anything but a local variety of *L. plumbea*. Lacordaire gives Bahia as the locality for *L. pudens*.

55 (A). **Lema eremita.**

Rufous, the antennæ (the first joint excepted) black; thorax scarcely constricted at the sides, longer than broad; elytra distinctly depressed below the base, dark blue, strongly punctured, the interstices costate at the apex, the ninth row of punctures interrupted.

Length 2 lines.

Head not constricted behind, impunctate, rufous; the eyes not deeply notched; the labrum black; antennæ half the length of the body, black, the first joint rufous; thorax slightly longer than broad, the sides very little constricted at the middle, the basal sulcation moderately deep, the surface impunctate, rufous; scutellum rufous; elytra with a small but rather deep depression below the base, the punctuation very regular and more deeply impressed anteriorly than towards the apex, the interstices costate behind, the ninth row of punctures interrupted for a short distance below the middle; underside and legs rufous, the tibiæ slightly darker at the apex.

Hab. MEXICO, Tuxtla, San Miguel, Vera Cruz (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

It will be comparatively easy to distinguish *L. eremita* from other similarly-coloured species, on account of the feebly constricted thorax and the distinct basal depression of the elytra in connection with the rufous underside and legs. Amongst the small species with blue elytra *L. eremita* differs entirely in the shape of its thorax.

55 (B). **Lema illigeri.**

Rufous, the antennæ (the first two joints excepted) black; thorax subquadrate, slightly constricted; elytra without basal depression, dark metallic blue, strongly punctured, the ninth row slightly interrupted below the middle.

Length 2 lines.

Head impunctate, with a short central fovea, the lateral grooves deep, the eyes but slightly notched; antennæ about half the length of the body, fuscous, the lower two and the base of the third and fourth joints fulvous; thorax scarcely longer than broad, very slightly constricted at the middle, the basal groove distinct in the centre only, the surface impunctate; scutellum fulvous; elytra subcylindrical, without depression below the base, closely and coarsely punctate-striate, the interstices strongly longitudinally costate behind, the ninth row very slightly interrupted below the middle; underside and legs rufous, the apices of the tibiæ and the tarsi stained with fuscous.

Hab. MEXICO, Temax in N. Yucatan (*Gaumer*).

L. illigeri seems closely allied to *L. eremita*, but differs from this and several other similarly-coloured species in the want of an elytral depression below the base and in the not very distinctly interrupted ninth row of punctures. The last-named character, generally so well-marked in the species of *Lema* belonging to the second division of Lacordaire, is here very indistinct (the extent of the interruption being confined to about the length of two punctures); this character, therefore, in connection with the slightly constricted thorax and the deep punctures of the elytra, the latter without

depression, will enable *L. illigeri* to be more readily recognized. In a single specimen, also obtained in Yucatan, and which possibly represents another closely allied species, the posterior femora are strongly thickened and have a black streak on their inner side, the breast has (on one side) a black mark, and the head several black spots; but these markings are possibly abnormal.

55 (c). **Lema jalapensis.**

Reddish-fulvous, the clypeus, labrum, antennæ, and legs (the base of the femora excepted) black; thorax impunctate; elytra metallic blue, deeply impressed below the base, strongly punctured, the interstices flat, the ninth row of punctures interrupted.

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

Hab. MEXICO, Jalapa (*Höge*).

L. jalapensis has the general appearance of *L. eremita*; it differs principally in the thorax being deeply constricted at the sides, and the anterior portion diverging strongly outwards, and having (as in *L. sallæi* and *L. guatemalensis*) a small tubercle placed at the anterior angles. From the two last-named species *L. jalapensis* may be separated by the fulvous underside and base of the femora. The elytra have a deep (but small) depression below the base, the punctures are not very closely placed, and the interstices are flat. The antennæ are entirely black. From *L. guatemalensis* the species is distinguished by its larger size and the much deeper elytral depression.

55 (D). **Lema spectabilis.**

Black, the head, the basal joints of the antennæ, thorax, and legs fulvous; elytra metallic blue, the base with a short and deep depression, strongly punctured, the ninth row interrupted.

Length 2 lines.

Head entirely fulvous; the eyes somewhat deeply notched, the space surrounding them somewhat rugose; antennæ proportionately short, the third joint shorter than the fourth, the three or four lower joints (in one specimen nearly all the joints) fulvous, the others black; thorax not longer than broad, the sides moderately constricted, the basal groove distinct but not deep, the surface impunctate, fulvous; scutellum fulvous; elytra with a short but rather deep depression below the base, somewhat strongly punctured anteriorly and much more finely so towards the apex, the ninth row of punctures interrupted for a short distance; underside and legs entirely fulvous.

Hab. MEXICO, Cuernavaca (*Sallé*).

Two specimens. *L. spectabilis* may perhaps best be compared with *L. eremita*, on account of the thorax, though shorter, being feebly constricted at the sides; it also differs in the fulvous (not black) labrum, the colour of the antennæ (in one specimen the six, in the other the four, basal joints are fulvous), and the black (not fulvous) under surface.

55 (E). **Lema sallæi.**

Black, the head (the clypeus excepted) and thorax rufous; thorax with the anterior angles acute; elytra

dark blue or violaceous, deeply depressed below the base, strongly punctured anteriorly and finely so posteriorly, the ninth row interrupted.

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

Hab. MEXICO, Toxpam (*Sallé*), Jalapa, Cordova (*Höge*); GUATEMALA, Llano grande (*mus. Stuttgart*); COSTA RICA (*Van Patten*).

It is with considerable hesitation that I describe the present insect as new, it being extremely near to two of the species included by Lacordaire in his twenty-ninth group; yet I cannot identify it with either. In *L. sallæi* the antennæ are entirely black (the first two joints are sometimes slightly stained with fulvous below, but never above), the species differing in this respect from *L. dichroa*, *L. tricolor*, and others; the head is rufous (with the exception of the black epistome); the anterior margin of the thorax is acute at the sides, that is, a small pointed tubercle is visible when the insect is viewed from above (this is absent in most of the other similarly-coloured species); the elytra have a deep basal depression (absent in *L. plumbea*); and the legs are entirely black, with the exception of the extreme base of the femora being sometimes slightly stained with fulvous. *L. guatemalensis* has a similar tubercle at the sides of the thorax, but is smaller in size, and the elytra have the depression at their base shallower (the base itself in consequence less elevated) and their punctuation much stronger; the two species, however, are very closely allied, and it is possible that they may not be really distinct.

Numerous specimens.

59 (A). **Lema maculipennis.**

Lema maculipennis, Clark, Cat. Phyt., App. p. 54[1].

Hab. MEXICO, Tuxtla, Playa Vicente (*Sallé*), Teapa[1].

This species was overlooked by me in the earlier part of this work; it should follow *L. inquinata*, Lac. Clark makes no mention of a deep depression below the base of the elytra, within which the transversely shaped spot is placed. I have compared the two specimens in the Sallé collection with the type.

60 (A). **Lema foveipennis.**

Black; above metallic dark blue; antennæ long and slender; thorax deeply constricted at the middle, impunctate; elytra with a deep intra-humeral and a deep transverse basal depression, the base elevated, somewhat deeply punctured, the interstices costate at the apex.

Length $1\frac{1}{2}$–2 lines.

Head rather broad, constricted behind the eyes, the lateral grooves very deep; the vertex with two rounded tubercles, which are divided by a longitudinal groove; eyes slightly notched, very large and prominent, the space between them with a distinct fovea; antennæ nearly two thirds the length of the body, shorter in the female, black, the third and fourth joints equal; thorax slightly broader than long, deeply constricted at the sides, the basal sulcation also rather deep, the anterior angles rounded, the surface entirely impunctate; scutellum black; elytra with a deep longitudinal depression within the shoulders and an equally deep transverse depression below the base, the latter distinctly raised, the punctuation rather fine and

arranged in striæ, but becoming stronger towards the base, the ninth row of punctures interrupted, the interstices costate towards the sides and apex; underside black, finely clothed with greyish pubescence; legs with a slight bluish gloss; the femora rather feeble, extending to the end of the abdomen in the male.

Hab. MEXICO, San Miguel (*Sallé*); GUATEMALA, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

L. foveipennis approaches *L. fryi*, Clark, a species placed by me at the beginning of the genus, from which it is separated by the deep transverse elytral depression, long antennæ, and the want of the small rufous spots on the head. *L. violacea*, Lac., and *L. cærulea*, Lac., are larger, the former having more strongly developed femora, and the latter a differently shaped head; *L. lepida*, Lac., has the head rufous in front, and the eyes deeply notched. Many specimens from the State of Panama, but one only from Guatemala, and one from Mexico. This latter does not differ from the others, except in having (as is the case with so many other similarly-coloured species) two rufous spots behind the eyes, and in the more violaceous colour of the elytra; in the absence of other distinctive characters, I think it best to look upon the Mexican form as a variety of *L. foveipennis*.

60 (B). **Lema azureipennis?**

Lema azureipennis, Lacord. Monogr. in Mém. Soc. Liége, iii. p. 506[1].

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. Godman*), Toxpam, Vera Cruz, Cordova (*Sallé*); GUATEMALA, Volcan de Atitlan, Cerro Zunil (*Champion*); NICARAGUA, Chontales (*Janson*).—VENEZUELA, Caracas[1].

I am not able to refer with certainty the specimens before me from the above localities to this or to any one of the several closely allied species described by Lacordaire; all are apparently subject to a good deal of variation. They agree with the description of *L. azureipennis* in having the first two joints of the antennæ red, but in a few examples the first joint only is of that colour. The elytra are either metallic blue or violet, and have a deep basal depression; their punctuation is much finer than in most of the other similarly-coloured species of our region, the apex being almost impunctate, and the ninth row interrupted. In most specimens the colour of the underside is black, but in a few (which differ in no other way) it is fulvous: this variation prevents the certain identification of the species with any one of those included in Lacordaire's monograph. The present insect varies in size from $1\frac{1}{2}$ to 2 lines; and the legs vary in colour from black to fulvous, but are usually of the latter colour with the tibiæ darker; it has the third joint of the antennæ shorter than the fourth, and the elytral punctures are rather distantly placed.

60 (C). **Lema bisulcata.**

Black, the head rufous at the base; thorax finely punctured on the disc, sulcate in front and at the base; elytra metallic blue, with a deep basal depression, very strongly punctate-striate, the ninth row interrupted.

Length $1\frac{1}{2}$–2 lines.

Head constricted towards the base, rather elongate, impunctate; the eyes large and prominent, and somewhat deeply notched, bounded behind by a narrow transverse rufous band, and with a short longitudinal groove in the middle between them; antennæ half the length of the body, thickened towards the apical joints, black, the third joint slightly shorter than the fourth; thorax transverse, broader than long, the sides rather deeply constricted at the middle, with a transverse groove (more distinctly visible at the sides) in front of the anterior margin, and another (oblique at the sides) at some distance from the base, the middle of the disc impressed with a row of fine punctures; elytra slightly narrowed at the middle, deeply longitudinally depressed within the shoulders and also below the base, the punctures very deep and rather remotely placed, and those of the eighth row larger than the others, the ninth row interrupted in the middle, the interstices costate at the apex; the underside and legs black.

Hab. MEXICO, Jalapa (*Höge*).

L. bisulcata differs from the other species with blue elytra belonging to this division in the structure of the antennæ and the rufous band on the vertex, in connection with the black head and thorax, the anterior sulcation of the latter, and the deep depression and punctures of the elytra.

It cannot be mistaken for any other species with unicolorous upper surface.

60 (D). **Lema brevicornis.**

Black; above dark metallic blue; antennæ very short and robust; thorax minutely punctured and finely strigose; elytra without basal depression, very regularly punctate-striate, the ninth row of punctures interrupted.

Length 1½ line.

Head slightly constricted behind, the vertex impunctate; eyes moderately large, not deeply notched, bounded behind by a transverse groove, the latter with two ill-defined rufous elevations in the middle, the entire lower part of the face thickly covered with yellowish pubescence; antennæ scarcely extending beyond the base of the elytra, distinctly thickened towards the apex, all the joints robust and short; thorax transverse, distinctly widened in front, the sides rather deeply constricted, the basal groove distinct, the entire surface impressed with very fine punctures and strigæ, and of a bluish-green tint; scutellum black, its apex deeply emarginate; elytra rather cylindrical, the basal depression almost obsolete, very regularly and rather deeply punctured, the punctuation (as usual) becoming rather finer posteriorly, the ninth row broadly interrupted (the anterior punctures composing it strongly, the posterior ones very finely, impressed); underside covered with fine yellowish pubescence.

Hab. MEXICO, Salazar (*Höge*).

A single specimen obtained by Herr Höge during his second journey. This insect is apparently a close ally of *L. fryi*, Clark, but it cannot be identified with it. The very short and robust antennæ (which are similarly formed in *L. fryi*), in connection with the finely punctured and rugose thorax and the much smaller general size, will separate *L. brevicornis* from any other species of this division.

Lema mexicana (p. 14).

To the locality Mexico, add:—Puebla, El Mirador (*Sallé*).

In the description of this species I have omitted to mention that the sides of the head below the eyes are black: this seems to be a good and constant character by which *L. mexicana* may be separated from the allied forms with similar elytral pattern. In the four specimens before me the head is thus coloured.

61 (A). **Lema relucens.**

Fulvous, the antennæ and legs piceous or black; elytra without basal depression, deeply and regularly punctate-striate, the ninth row interrupted, a transverse band at the base, and another near the apex, metallic blue or green.

Length 1½–2 lines.

Head impunctate, the lateral grooves very deep; the eyes not very deeply notched; the clypeus and labrum black, the other parts fulvous; antennæ half the length of the body, piceous or black; thorax subquadrate, scarcely longer than broad, the sides moderately constricted, the basal groove not very deep, the surface with one or two rows of very minute punctures on the middle of the disc; scutellum fulvous; elytra without any basal depression, deeply and closely punctate-striate, the interstices costate at the apex, the ninth row of punctures interrupted at the middle, the transverse blue bands placed thus—one (extending to the sides and occupying about one fourth of the length of the elytra) at the base, and one (not extending to the sides, and widened at the suture) near the apex; underside fulvous, the legs piceous or black with a slight bluish gloss.

Hab. MEXICO, Ventanas, Presidio (*Forrer*), Cordova (*Sallé*), Vera Cruz (*H. H. Smith*).

L. relucens cannot be mistaken for *L. mexicana*, on account of the elytra being much more strongly and closely punctured, and without basal depression, and the underside and legs differently coloured. The species belongs, however, to the same division as *L. mexicana*, it having the ninth row of elytral punctures interrupted. The seven specimens before me agree in every way with each other.

63. **Lema dilaticollis.**

Obscure piceous or dark fulvous below; antennæ (the first joint excepted) black; head and thorax fulvous (both sometimes marked with fuscous); thorax widened anteriorly; elytra dark blue or greenish, strongly punctate-striate, the base without depression; legs fulvous, the femora with an obscure piceous spot.

Length 2 lines.

Head rather elongate; the clypeus piceous, the vertex generally stained with the same colour; eyes deeply notched; antennæ half the length of the body, black, the first joint, and sometimes the second also, fulvous; thorax rather broader than long, the sides somewhat deeply constricted at the middle, the anterior portion distinctly widened towards the apex, the basal groove rather strongly marked, the surface impunctate; scutellum fulvous; elytra narrowed towards the apex, with a scarcely visible depression below the base, the latter not raised, the punctuation deep and strong anteriorly, but very finely impressed towards the apex (where not more than six or seven rows are visible), the ninth row greatly interrupted at the middle; the underside obscure piceous, the sides of the breast and the middle of the abdomen more or less fulvous, clothed with fine silky pubescence; femora marked with an obscure fuscous spot at the middle, the posterior pair robust and extending to the end of the abdomen; tarsi sometimes stained with fuscous on their outer edge.

Hab. MEXICO, Cordova, Toxpam (*Sallé*), Jalapa (*Höge*); GUATEMALA, San Gerónimo, Cerro Zunil (*Champion*).

I am not able to satisfactorily identify this species with any of those included in the twenty-ninth group of Lacordaire's monograph. *L. dilaticollis* is distinguished amongst its allies by the rather elongate head and the black or dark epistome; in some specimens there is a dark marking on the vertex and two short longitudinal stripes on the thorax. The sides of the thorax from the middle to the apex are strongly divergent, so that the anterior margin is wider than the head (although the latter is not constricted

behind the eyes); the elytra have a scarcely visible basal depression; and all the femora have an obscure dark spot at the middle. One of the specimens from Guatemala differs in having fulvous antennæ and immaculate legs; but as it does not differ in any other way I treat it as a variety of the same species. The robust femora and the partly piceous and partly fulvous underside will assist in the recognition of *L. dilaticollis*.

65. **Lema æneipennis.**

Obscure piceous, the antennæ and the clypeus black; thorax fulvous, spotted with black, the disc punctured; elytra æneous, deeply and remotely punctured, the apical margin testaceous, the space in front of it thickened, the ninth row of punctures only indicated at the base and apex; legs testaceous, spotted with fuscous.

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

Head impunctate, obscure fuscous at the vertex; eyes not deeply notched, the space between them bounded by a deep transverse groove; labrum black, clothed with rather long whitish pubescence; antennæ two thirds the length of the body, black, the three or four basal joints testaceous at the base, the third and fourth joints equal; thorax rather transverse, short, deeply constricted at the sides, the basal sulcation also very deep, the surface obscure fulvous, with a greenish-æneous longitudinal band at the middle and a short similar marking at each anterior angle, and a distinct transverse groove on each side within the anterior margin, the middle of the disc and the sides anteriorly distinctly punctured; elytra with a distinct depression below the base, bronze-coloured, the punctures deep and distantly placed, those near the apex very fine and still more remote, the ninth row only indicated at the base and apex by a few punctures, the interspace near the lateral margin strongly swollen behind, the margin itself from the middle to the apex narrowly testaceous; underside piceous, the sides of the abdominal segments more or less fulvous; legs testaceous, the femora with a fuscous spot at the knees above.

Hab. GUATEMALA (*coll. Jacoby*).

Of this apparently very distinct species I have received a specimen from the Museum of Stuttgart.

Too late to be fully noticed in their proper place we have received a large number of examples of many species of *Lema* from Mexico. Amongst these are the following two new species:—

66. **Lema cæruleo-plagiata.**

Black; head usually more or less fulvous in front; elytra with a distinct basal depression, fulvous, a triangular mark at the base, and a transverse band below the middle, metallic blue.

Var. The elytral spots more or less confluent.

Length 2 lines.

Hab. MEXICO, Teapa in Tabasco, Atoyac in Vera Cruz (*H. H. Smith*).

Numerous specimens lately received from the above localities differ so much in coloration from *L. dorsalis*, *L. longicornis*, and several allied species, that I am obliged to separate them. In *L. cæruleo-plagiata* the head is either entirely black or has the front marked with fulvous to a greater or less extent; the antennæ and the thorax are entirely black, the latter being impunctate; the elytra are without a spot on the shoulders; and, lastly, the entire underside and the legs are black. In the variety the

entire elytral disc is occupied by the dark blue bands, the margin only being narrowly fulvous. *L. cæruleo-plagiata* should follow *L. dorsalis.*

67. **Lema fulvo-marginata.**

Fulvous; labrum black; thorax subquadrate, sometimes punctured on the disc; elytra with a deep basal depression, metallic blue or greenish, the extreme lateral and apical margins fulvous; legs entirely fulvous. Length 1½ line.

♂. Head slightly constricted behind the eyes, the space surrounding the latter remotely punctured and sparsely pubescent; labrum piceous; antennæ nearly as long as the body, the basal joints fulvous, the others slightly darker, the second to the fourth joints gradually increasing in length, the rest still more elongate and equal; thorax subquadrate, the sides but very moderately constricted, the anterior angles without tubercles, the basal sulcation distinct but not very deep, the surface with a double row of punctures on the middle of the disc and a few punctures near the anterior angles; scutellum fulvous; elytra subdepressed, with a short but deep impression below the base near the suture, strongly and not very closely punctured anteriorly, much more finely posteriorly, the interstices costate near the apex, the surface of a metallic greenish-blue colour, the lateral margin narrowly fulvous, this colour generally extending to the space between the interrupted ninth row of punctures and to the apex; underside and legs fulvous; the posterior femora extending to the apex of the abdomen.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

The typical form of *L. fulvo-marginata* is well distinguished from the numerous small species with metallic blue elytra by the narrow fulvous margin of the latter, this colour being, however, in some specimens confined to the apex. In the female the antennæ and the posterior femora are shorter than in the male. The intermediate joints of the antennæ are more or less stained with fuscous, and sometimes the anterior tarsi and the apices of the tibiæ also.

CRIOCERIS.

Crioceris viridis (p. 15).

To the locality given, add:—MEXICO, Almolonga, Jalapa (*Höge*), Orizaba (*Godman*), Cordova (*Sallé*); GUATEMALA, Sabo in Vera Paz (*Champion*).

There is a small, more or less distinct, fovea visible at the sides and near the middle of the elytra in all specimens; of this Lacordaire makes no mention.

Crioceris nitida (p. 15).

To the locality given, add:—GUATEMALA, Cerro Zunil (*Champion*).

Lacordaire places *C. nitida* amongst those species in which the prosternum is narrow but distinct, which is the case in the Guatemalan examples. The latter are much more shining than *C. viridis*, and are also more robust and generally larger; the thorax, instead of having fine transverse ridges, is sparingly and finely punctured; and the elytra are finely punctate-striate, and have (as in *C. viridis*) a distinct lateral fovea, and the interstices are elevated at the apex. There appear to be several very closely allied metallic green Central-American species which are not easy to separate. I have not seen any Mexican specimens of *C. nitida.*

Crioceris alternans (p. 15).

Crioceris costulata, Lac. huj. op. p. 15.

To the locality Mexico, add :—Queretaro (*Dr. Palmer*), Oaxaca, Yolotepec (*Sallé*).

An examination of a series of specimens subsequently received has proved to me that *C. costulata* is the female of *C. alternans*, Lac. The differences pointed out by Lacordaire are only sexual—thus in the male the punctuation of the elytra is closer and more or less confluent, while the raised costæ are less distinct than in the female; the posterior femora are, as usual, shorter in the female; and the abdominal tufts of hairs are nearly always present in the males of the Central-American species of *Crioceris*. The punctuation of the elytra in the present species is subject to a good deal of variation, and in one specimen (a female) the costæ are very strongly raised and smooth. In all other respects the two insects treated by Lacordaire as distinct are similar.

Crioceris smaragdina (p. 15).

The specimens from Zapote referred to *C. smaragdina* belong, I think, to the following closely-allied species. I have not seen any specimens which I can satisfactorily refer to Lacordaire's species.

8 (A). **Crioceris curvipes.**

Metallic green; the seven terminal joints of the antennæ dark blue; thorax finely transversely strigose; elytra very finely semipunctate-striate, the interstices finely rugose at the sides; femora very robust, the anterior and posterior tibiæ curved.

Length 3–4½ lines.

Head with a few fine punctures, and a deep longitudinal median groove, the space round the eyes strongly rugose; antennæ more than half the length of the body; the first four joints metallic green, the others dark blue; thorax slightly longer than broad in the male, the sides scarcely constricted, the surface transversely strigose throughout; scutellum finely punctured; elytra with a very shallow depression below the base and a more or less distinct lateral fovea, the surface very finely and rather indistinctly punctate-striate, with two rows of deeper punctures extending from the shoulder obliquely inwards, the sides irregularly rugose towards the apex, the apical interstices not raised; femora short and swollen, the tibiæ in the male (and to a less extent in the female) distinctly curved; abdominal segments in the male furnished with small tufts of whitish hairs at the sides.

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

C. curvipes may at once be separated from *C. nitida* and *C. smaragdina* by the tibiæ being distinctly curved, in connection with the finely rugose sides of the elytra; it also differs from *C. smaragdina* by the strigæ of the thorax. The prosternum is very narrow, but just visible; the femora in the female insect are less robust, and the tibiæ are not quite so much (though distinctly) curved.

8 (B). **Crioceris nitidicollis.**

Metallic green; thorax transverse, nearly impunctate, shining; elytra very finely and almost regularly punc-

tured, the interstices not costate at the apex; femora robust and incrassate, the intermediate and posterior tibiæ strongly curved.

Length 4 lines.

Hab. MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Zapote (*Champion*).

Although there are but two specimens of this species, I am obliged to separate them from *C. curvipes*. They resemble the latter in the incrassate femora and curved tibiæ, but differ in the almost impunctate and smooth thorax, and in the punctuation of the elytra. The head in *C. nitidicollis* is rather closely punctured on each side; the antennæ are coloured as in the allied species, but they have the third and fourth joints short and equal (in *C. curvipes* the fourth joint is longer than the third, and both are more slender); the thorax is scarcely constricted at the sides, and has several transverse shallow depressions (the transverse rugosities or strigæ are entirely absent, and very fine punctures are visible only under a strong lens); the elytra are rather closely and finely punctured, the punctures here and there arranged in lines, and the interstices are not costate, but at the extreme apex they are irregularly rugose; the legs resemble those of *C. curvipes*; and the prosternum is just visible.

The specimen from Tapachula seems to be a female with shorter posterior femora; it has the thorax rather more distinctly punctured, but resembles in other respects the Guatemalan insect.

8 (c). **Crioceris championi.**

Metallic green; antennæ dark blue; thorax short, almost imperceptibly wrinkled; elytra distinctly depressed below the base, each with a deep lateral fovea, the surface extremely finely punctured, the punctuation semi-regular; femora short, the tibiæ slightly curved.

Length 4–5 lines.

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

It will only be necessary to point out the differences between this and the preceding closely allied species. *C. championi* is of the same brilliant metallic green colour, but differs thus:—The thorax is very short and extremely finely wrinkled (the wrinkling only visible under a strong lens); the elytra have a distinct depression below the base (which is not visible in the allied species), the lateral fovea is deep and distinct, the punctuation is very fine and scarcely arranged in rows, and the interstices are flat, without costæ or rugosities, but with traces of pubescence; and, lastly, the femora are short and but slightly thickened, and the posterior tibiæ are scarcely curved. The prosternum is invisible between the coxæ. The male of *C. curvipes* has strongly incrassate and longer posterior femora; in the corresponding sex of *C. championi* the femora do not extend beyond the second abdominal segment. The abdomen in the latter has small white tufts.

Crioceris gemmans (p. 16).

To the locality Mexico, add:—San Andres, Cordova, Orizaba, Playa Vicente, Santecomapan (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*).

Crioceris nullicedo (p. 16).

To the localities given, add:—MEXICO, Sacatepec (*Sallé*), Tapachula (*Höge*); GUATEMALA, Cerro Zunil, Purula, Senahu, San Gerónimo (*Champion*).

As an aid to the separation of this species from *C. gemmans*, I may add that, in addition to the absence of the cupreous middle portion of the head, and the spot on the thorax and shoulder, the first cupreous band of the elytra is in nearly every instance obliquely shaped, the corresponding broader band in *C. gemmans* being always perfectly straight. The variety *callizona*, Clark, was also obtained in several of the above-mentioned localities.

Crioceris intermedia (p. 16).

To the localities given, add:—PANAMA, Volcan de Chiriqui (*Champion*).

This species is rather broader and more robust in appearance than *C. nullicedo*, and differs in the broad cupreous elytral bands, these being as broad as in *C. gemmans*. The last-mentioned character and the partly fulvous and partly metallic abdomen is the only difference between *C. nullicedo* and *C. intermedia*; it is therefore possible that the latter is but a local variety of *C. nullicedo*.

11 (A). **Crioceris flohri.** (Tab. XXXVI. fig. 1.)

Metallic cupreous; the sides of the head and the antennæ metallic green; thorax finely rugose, metallic green, the sides cupreous; elytra green, finely punctate-striate and pubescent, the basal margin and the shoulders reddish-cupreous.

Length 5–6 lines.

Head metallic green at the sides, the middle reddish-cupreous and with a deep longitudinal groove, distinctly punctured, the space surrounding the eyes strongly rugose and purplish in colour, the epistome cupreous; labrum and palpi metallic green; antennæ more than half the length of the body, the four basal joints bright metallic green, the following joints bluish and more opaque; thorax transverse, nearly twice as broad as long, the sides slightly constricted, the surface with some irregular depressions, finely and closely punctured and sparingly pubescent, the disc metallic green, the anterior angles reddish-cupreous; scutellum green or cupreous; elytra convex, without any trace of a basal depression, finely punctate-striate and still more finely and very closely punctured on the rest of the surface, clothed with fine whitish pubescence, metallic green, the extreme base and the shoulders reddish-cupreous; below and the legs cupreous, mixed with metallic green or blue, the sides of the abdominal segments fulvous or flavous.

Hab. MEXICO, Almolonga (*Flohr*); GUATEMALA, Purula (*Champion*).

Of this large and beautiful species Mr. Flohr has kindly sent me a single specimen; another was obtained by Mr. Champion. The latter, probably a female, is larger, and has the punctured striæ of the elytra scarcely visible, and the rest of the punctuation extremely fine, but agrees in all other respects with the Mexican insect.

The Guatemalan example is figured.

Crioceris sallæi (p. 17).

To the Mexican locality given, add:—Yolotepec (*Sallé*).

Crioceris scabrosa (p. 17).

To the locality Mexico, add:—Yolotepec (*Sallé*).

14. **Crioceris rugipennis.** (Tab. XXXVI. fig. 2.)

Obscure æneous, the head, antennæ, and thorax black; head rugosely punctured; thorax transversely strigose; elytra each with four rows of black irregular rugosities, closely rugose-punctate, the punctures obscure cupreous or æneous.

Length 4 lines.

Head rather elongate, rugose throughout, the interior of the rugosities furnished with very short silvery pubescence; antennæ extending a little beyond the base of the elytra, the terminal joints widened, the basal joint subquadrate, the third and fourth joints equal and more slender than the following ones; thorax scarcely longer than broad, subconical, the sides not, or scarcely, constricted, the surface impressed with fine transverse rugæ, the middle of the disc with a longitudinal groove, the groove clothed with very short silvery hairs; scutellum clothed with whitish pubescence; elytra without any basal depression or elevation, their entire surface impressed with pale reddish metallic punctures, the punctures clothed with very short silvery pubescence within (only visible in a certain light) and interrupted by four longitudinal rows of smooth black irregular elevations which are here and there transversely connected; underside and legs obscure metallic cupreous, clothed with very short silvery hairs.

Hab. Mexico, Almolonga (*Flohr*).

It is difficult to convey a correct idea of the sculpture of the elytra, it resembling to a certain extent that of certain species of Curculionidæ; to the naked eye the surface is dull, of a reddish-white colour, interrupted by black stripes; under a lens the pale metallic cupreous colour of the punctuation is at once to be seen. *C. rugipennis* is somewhat allied to *C. scabrosa*, Baly.

A single specimen of this interesting new species has been kindly sent me by Mr. Flohr.

15. **Crioceris rugicollis.** (Tab. XXXVI. fig. 3.)

Crioceris rugicollis, de Borre, Ann. Ent. Soc. Belg. xxv. 1881, p. 83[1].

Hab. Guatemala [1], Totonicapam 7000 to 10,000 feet (*Champion*).

This species is distinguished by the curious sculpture of the elytra, the posterior portion being striate, and the anterior portion irregularly punctured. A very large number of specimens were obtained by Mr. Champion in the Los Altos region of Guatemala.

16. **Crioceris merdigera.**

Chrysomela merdigera, Linn. Syst. Nat. ed. x. p. 375 (1758) [1].

Crioceris merdigera, Fabr. Ent. Syst. i. 2, p. 6; Lac. Monogr. in Mém. Soc. Liège, iii. p. 575 [2].

Lema merdigera, Fabr. Syst. Eleuth. i. p. 472 [3].

Chrysomela rubra liliorum, De Geer, Mém. Ins. vi. p. 339 (1775) [4].

Crioceris brunnea, Fabr. Ent. Syst. i. 2, p. 6; Suffrian, Stett. ent. Zeit. 1841, p. 18; Lac. loc. cit. p. 576 [5].

Crioceris cornuta, Fald. Nouv. Mém. Mosc. v. p. 323, t. 12. f. 2 [6].

Hab. Mexico, Presidio (*Forrer*).—Brazil; Europe [1 2 3 4 5 6]; India.

Of this well-known species, which has been recorded not only from Europe but from India and Brazil, two specimens have been received from Mr. Forrer: thus the geographical range of *C. merdigera* seems to be one of the most extended amongst the Coleoptera. It is impossible to say, however, whether the species is indigenous in all these different parts of the World, or has been introduced accidentally. The complicated synonymy of *C. merdigera* is given in full in Lacordaire's monograph, as well as in Gemminger and Harold's catalogue. It is probable that the species will eventually be found in North America.

MEGASCELIS (p. 17).

It has already been remarked by Lacordaire in his excellent monograph, and by myself in speaking of the genus, that the determination of the numerous species of *Megascelis* is extremely difficult; and that the best descriptions cannot always convey a correct idea of the minute specific differences which separate so many variable and closely allied forms. A comparison with the types can only settle the many doubts which arise in the determination of these insects. I have fortunately been enabled to examine many of Lacordaire's types, those of Baly, Bates, and Clark, contained in the British Museum, but only a few of the species from Central America have I been able to identify with these. In many cases I have been obliged to found species upon single specimens, often females, and it is therefore quite possible that eventually some of those described here may prove to be synonymous with others of Lacordaire. There is scarcely a single structural character to be pointed out which can be relied upon in the separation of the species; the elytra are very similarly sculptured in all, their colour variable, and the same is the case with the underside; and the differences in the shape and sculpture of the thorax, which seem to be of a more constant kind, are often so slight that it is impossible to convey a proper description by words. Under these circumstances it will always be more satisfactory to treat the different species according to their localities, or, in other words, to monograph those of a certain region.

When the earlier part of this work was published I had not a single representative of the genus from either Mexico or the State of Panama before me, and the additional species are in consequence very numerous.

Megascelis dilecta (p. 17).

This species seems only to differ from the following in the more narrow and regularly-shaped sutural stripe, and in the darker green upper surface. Had Clark read Lacordaire's description of *M. suturalis* the very close affinity of *M. dilecta* with it could not have escaped him; instead of that he compares *M. dilecta* with *M. amabilis* (of which a type specimen is contained in the British Museum), with which it has no affinity whatever, and the type, which Clark could never have seen.

1 (A). **Megascelis suturalis.**

Megascelis suturalis, Lac. Monogr. in Mém. Soc. Liège, iii. p. 258 [1].

Hab. MEXICO [1], Toxpam, Cordova, Playa Vicente (*Sallé*), Cerro de Plumas (*Höge*), Teapa in Tabasco (*H. H. Smith*).

This species was unfortunately overlooked by me in the earlier part of this work, and will find its place close to *M. dilecta.* It differs from the latter in the elytra being rounded at the apex, and in the fuscous sutural band (instead of being widened posteriorly) being widest anteriorly and gradually narrowed behind. The general colour of the upper surface of *M. suturalis* is a pale green, with the exception of the more or less broad fuscous sutural stripe; this stripe is described by Lacordaire as "nigricante," but specimens with so dark a stripe I have not seen.

A good many specimens have lately been received from Teapa; these vary considerably in size, but only a little in colour. In all the head is strongly rugose and the suture narrowly fuscous; the sutural stripe, however, is not (as usual) widened anteriorly, but is of equal width throughout or slightly widened towards the apex.

1 (B). **Megascelis minuta.**

Narrowly elongate, pale testaceous, above with a metallic green tint; terminal joints of the antennæ black; head distinctly punctured; thorax not longer than broad, closely punctured; elytra sparingly pubescent, strongly punctured, the interstices transversely rugose.

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

Head pale metallic green, distinctly and rather closely punctured, the epistome not separated from the face; mandibles black; antennæ two thirds the length of the body, black, the basal three or four joints testaceous; thorax not longer than broad, rather distinctly narrowed at the base, the sides rounded and widened, the surface with a shallow but distinct transverse groove across the disc, the latter closely impressed with distinct punctures which are a little larger than those on the head, the interspaces only very slightly rugose near the base; scutellum truncate at the apex, distinctly punctured; elytra narrowly parallel, pale fulvous with a more or less distinct metallic green gloss which is more intense at the shoulders, the latter prominent and acute, the surface strongly punctate-striate, the interstices transversely rugose and sparingly covered with short pubescence; underside pale piceous or testaceous; legs entirely testaceous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This small species is closely allied to *M. suturalis*, Lac., but differs apparently in the very pale colour of the upper parts and in the sculpture of the head; the latter (instead of being closely rugose) is impressed with single punctures, the interspaces being smooth. *M. minuta* may be known from *M. viridipallens*, Clark, by the much smaller size and several other differences, which will be seen by a comparison of the respective descriptions. *M. gracilis*, Lac., seems to be another close ally of *M. minuta.*

1 (C). **Megascelis lacertina.**

Megascelis lacertina, Lac. Monog. in Mém. Soc. Liège, iii. p. 257 [1].

Hab. MEXICO, Teapa (*Sallé*); GUATEMALA, San Gerónimo, Cubilguitz in Vera Paz

(*Champion*); NICARAGUA, Chontales (*Belt*); PANAMA, Volcan de Chiriqui, Caldera (*Champion*).—COLOMBIA [1].

Numerous specimens from the above localities agree so well with the description of this species that I must refer them to it. The elytra in all of them have their extreme apex subtruncate, and their inner angle produced into a small and more or less distinct tooth (Lacordaire says nothing of this tooth, which would place the insect in his first division), and the suture accompanied by a pale fuscous band which gradually widens posteriorly; this band is similar in shape in all the specimens before me, and it seems to distinguish *M. lacertina* from *M. suturalis*, Lac., in which the band is widened anteriorly.

Megascelis affinis (p. 18).

To the Guatemalan locality given, add:—Senahu in Vera Paz (*Champion*).

Several more specimens of this species are now before me. In these the underside varies in colour from metallic blue to testaceous; the upperside is very depressed and of a uniform metallic dark green or æneous; and the size varies from two to four lines.

Our insect agrees so well with Lacordaire's description of *M. affinis* that I have not hesitated to identify it with that species, though in the present genus only a comparison with the type can remove all doubt.

4. Megascelis vittatipennis.

Megascelis vittata, huj. op. p. 18 (nec Fabr.).

Fulvous or piceous; above metallic green, clothed with yellow pubescence; head and thorax finely rugose; thorax with a raised central line; elytra opaque, metallic green, with a broad subsutural fuscous or purplish stripe.

Length 2–2¼ lines.

Head metallic green, finely rugose, clothed with golden pubescence at the base, the epistome more coarsely punctured; antennæ nearly as long as the body, fuscous, the four or five basal joints testaceous; thorax scarcely longer than broad, slightly constricted at the base, transversely grooved at the middle, finely rugose, and clothed with golden pubescence, the disc with a raised longitudinal line in the middle, this line being furnished at some distance from the base with a small tubercle; elytra with the usual transversely-shaped punctures, the suture clothed with golden pubescence, and accompanied by a broad longitudinal fuscous or purplish band, followed by an equally broad metallic band occupying the rest of the sides; legs testaceous.

Hab. GUATEMALA, San Isidro, Zapote (*Champion*).

M. vittatipennis differs from *M. vittata* (Fabr.), in having the thorax much longer than broad and of more cylindrical shape, and the elytra, as well as their bands, more metallic. The present insect is of a rather opaque colour, caused by the golden pubescence; in all specimens the small tubercle placed on the dorsal carina of the thorax is present. This species was erroneously identified as *M. vittata* in the earlier part of this work.

Megascelis purpureicollis (p. 18).

To the locality given, add:—GUATEMALA, Panzos in Vera Paz (*Champion*); PANAMA, Caldera, Tole (*Champion*).

The example from which the original description was drawn is a female of large size (4 lines); amongst the specimens since received there are several males, which are, as usual, much smaller. *M. purpureicollis* may be known from most of its congeners by the elytra being of a dull, opaque, obscure greenish colour, with the suture and a very narrow lateral stripe (composed of closely arranged pubescence) yellowish; these stripes are not always distinct, and can only be seen in certain lights, although when present they are visible to the naked eye. The head and thorax are generally purplish, occasionally greenish, and covered with rather long but fine golden pubescence. The underside in all the specimens is dark fulvous with a more or less distinct metallic gloss, and clothed with short silvery pubescence. There are few species of the genus having the dull appearance of the present insect, this being partly due to the short yellow pubescence which covers the elytra; the last-named character and the reddish colour of the head and thorax will assist in the recognition of *M. purpureicollis*.

Megascelis stratiotica (p. 19).

The specimen from Capetillo which I doubtfully referred to this species belongs to the following. *M. stratiotica* must accordingly be erased from our list.

7. Megascelis spinipes.

Megascelis stratiotica, huj. op. p. 19 (nec Lacord.).

Obscure dark metallic green; below dark fulvous or piceous; the basal joints of the antennæ and the legs testaceous; thorax cylindrical, elongate, rugosely punctured, with a smooth central ridge; elytra transversely punctured, with some longitudinal depressions; posterior femora of the male with a long spine.

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

Head rugosely punctured; eyes notched; the epistome separated from the face by an indistinct groove, and more coarsely punctured; labrum fulvous; antennæ fuscous, the basal four joints testaceous; thorax longer than broad, cylindrical, narrowed from the middle to the base, the disc with a raised more or less distinct central ridge, the surface finely and rugosely punctured and clothed with fine golden pubescence; elytra rather flattened, with a more or less distinct short longitudinal depression near the scutellum and another along the suture, the surface of an obscure dark metallic green colour, the lateral margin dark fulvous or purplish, clothed (like the thorax) with golden pubescence, the punctures close and of transverse shape, the interstices slightly raised longitudinally; the underside piceous or dark fulvous, clothed with silvery pubescence, the breast more or less metallic greenish; legs testaceous; the posterior femora of the male strongly curved, rather slender at the base, and armed near the apex with a long stout spine.

Hab. MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Cubilguitz, El Tumbador, San Isidro, Capetillo (*Champion*).

So far as I am aware, there is only one species described by Lacordaire the male of which, like that of the present one, is distinguished by having a long femoral spine. From that insect (*M. stratiotica*) *M. spinipes* differs in being of a sombre and scarcely metallic green colour, the lateral margin alone being brownish or purplish; the thorax

(which in *M. stratiotica* is described as being finely transversely wrinkled and without punctures) is very distinctly and closely punctate; and the two longitudinal depressions on the elytra are rather distinct in the male, the one along the suture being bounded outwardly by a perceptible elevation of the third elytral costa. In two female specimens obtained at Cubilguitz the whole underside is metallic green; these specimens are larger, but do not seem to differ in any other way. *M. spinipes* is no doubt closely allied to *M. stratiotica*, but I cannot identify it with that species on account of the above-mentioned differences.

9. **Megascelis curta.**

Subdepressed, slightly widened posteriorly, below obscure greenish-æneous or piceous, above bright green, the first four joints of the antennæ and the legs testaceous; head and thorax rugosely punctured; elytra transversely punctate.

Var. The legs more or less metallic green.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Head closely rugose-punctate; the eyes broadly but feebly notched; epistome separated from the face by a triangular not very distinct groove, metallic green, very shining, deeply but not very closely punctured; palpi pale fulvous, the apical joint fuscous; antennæ about two thirds the length of the body, fuscous, the lower four joints testaceous; thorax scarcely longer than broad, slightly widened at the middle, with an indistinct transverse depression at the sides, the surface closely and deeply punctured, without longitudinal ridge, and very sparingly clothed with short silvery hairs; scutellum subquadrate; elytra more or less distinctly widened posteriorly, impressed throughout with transversely-shaped punctures, the interspaces scarcely raised, and sparsely clothed with short silvery hairs; underside dark greenish-piceous, more or less metallic, the abdomen paler and densely covered with silvery pubescence; legs testaceous or more or less metallic green.

Hab. Mexico, Cerro de Plumas (*Höge*), Juquila (*Sallé*).

M. curta is comparatively easy to recognize amongst its numerous congeners if the following details are considered:—In its general shape (instead of being narrow and parallel as is usually the case) it is slightly widened behind; the colour of the upper surface is a uniform bright green, without any tint of fulvous or testaceous, and not obscured by a fine pale pubescence; the underside is obscure piceous with a metallic gloss; and the eyes are largely (not triangularly) notched. *M. curta* seems to be closely allied to *M. smaragdula*, from which it differs in the coarsely punctured epistome, and the colour of the underside.

10. **Megascelis mexicana.** (Tab. XXXVI. fig. 4.)

Fulvous; the antennæ (the apical joints excepted), knees, tibiæ, and tarsi black; thorax subquadrate, rugosely punctured; elytra purplish or bluish, finely pubescent, strongly punctured, the interstices longitudinally costate.

Var. The abdomen and legs entirely black.

Length 3–4 lines.

Head rugosely punctured, fulvous; the space below the insertion of the antennæ rather deeply excavated on each side and very strongly rugose; the mandibles and the terminal joint of the palpi fuscous; eyes broadly but not deeply notched; antennæ about half the length of the body, black, the apical two joints more or less distinctly testaceous; thorax not longer than broad, slightly constricted at the base, fulvous, closely punctured at the sides and at the base, more sparingly so on the middle of the disc, the latter very sparsely pubescent; scutellum truncate at the apex, finely punctured, fulvous; elytra depressed, the

apex rounded, very sparingly clothed with yellowish pubescence, closely and strongly punctate-striate, the punctures often of transverse shape, the interstices longitudinally (but not strongly) raised; underside fulvous; the knees, tibiæ, and tarsi black; the posterior femora in the male extending to the apex of the abdomen.

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

This is one of the largest species of *Megascelis*; it may be known by the uniform dark purplish or bluish colour of the elytra, the fulvous underside without metallic gloss, and the black knees, tibiæ, and tarsi. The scutellum in some specimens is metallic green instead of fulvous. The black basal joints of the antennæ will further assist in the recognition of *M. mexicana*.

The variety (from Cordova) differs only in the colour of the abdomen and legs.

11. **Megascelis sallæi.**

Obscure fulvous; head and thorax darker fulvous with a purplish gloss, finely rugose; elytra obscure purplish, the shoulders and the sides metallic blue or greenish; legs testaceous.

Var. Elytra obscure fulvous with a greenish tint.

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

Head rugosely punctured throughout; the epistome not separated by a groove, more strongly punctured; antennæ two thirds the length of the body, fuscous, the basal four or five joints testaceous; thorax slightly longer than broad, narrowed at the base, with an almost obsolete transverse depression across the middle, the surface more strongly rugose-punctate than the head, with a slight indication of a dorsal carina, fulvous with a purplish gloss (like that of the head); elytra clothed with very short silvery pubescence, opaque, the middle of the disc purplish, the shoulders and sides metallic bluish.

Hab. MEXICO, Playa Vicente, Orizaba (*Sallé*).

M. sallæi is of rather broad and robust shape and of very sombre and dull appearance. Some specimens differ from the type in having almost the entire upper surface brownish, with a slight metallic green tint. The dorsal carina in most specimens shows a raised longitudinal tubercle near the base. The elytra have the interstices longitudinally raised, and the spaces between impressed with transversely shaped rugosities; their pubescence is very short, in the type whitish, in the varieties more fulvous. The underside varies in colour from piceous to testaceous. It is difficult to fix the limit of this species; but the dull opaque colour of the upper parts will perhaps best assist in the recognition of *M. sallæi*.

12. **Megascelis robusta.**

Broadly parallel, pale fulvous, the breast obscure greenish; above obscure metallic green; head and thorax finely rugose, clothed with fulvous pubescence; elytra transversely punctured, the interstices longitudinally costate.

Length 3 lines.

Head very finely rugose throughout, with a tubercle between the antennæ; eyes distinctly emarginate; antennæ fuscous, the base of each joint testaceous, the three or four basal joints entirely of that colour; thorax scarcely longer than broad, distinctly widened at the middle, with an obsolete transverse depression at the centre of the disc, the surface very finely rugose (like that of the head) and sparingly clothed with fulvous pubescence; scutellum finely punctured; elytra broad, robust, entirely covered with transverse rugosities, the interstices longitudinally raised, the colour a dull metallic green obscured by the

fulvous pubescence; underside clothed with fine silvery pubescence, the abdomen and legs fulvous, the breast with a tinge of pale metallic green; claws piceous.

Hab. MEXICO, Panistlahuaca (*Sallé*).

Of this rather large-sized *Megascelis* there are two female specimens before me which I cannot satisfactorily identify with any described species of similar size. The very finely rugose head and thorax, the dull colour of the upper parts, and the costate interstices of the elytra will assist in the determination of *M. robusta*.

13. **Megascelis tibialis.**

Metallic blue; above obscure dark green or purplish; the antennæ, tibiæ, and tarsi black.
Length 2–2½ lines.
Head metallic green or blue, deeply and closely punctured; the epistome separated by a more or less distinct triangular groove, very coarsely rugose-punctate; labrum testaceous; palpi fulvous; antennæ almost entirely black, the basal joints sometimes fulvous below; thorax about one half longer than broad, distinctly narrowed below the middle, deeply and closely punctured, the interspaces towards the base transversely rugose, the surface clothed with thin fulvous pubescence, and without central ridge; elytra dull greenish or purplish, clothed with whitish pubescence, deeply and closely punctured, the interstices transversely wrinkled; underside metallic blue or green; the femora fulvous, the knees, tibiæ, and tarsi black.

Hab. MEXICO, Toxpam, Cordova, Orizaba (*Sallé*), Oaxaca (*Höge*).

From all the species of the genus, with the exception of two or three, *M. tibialis* may be known by the metallic underside in connection with the dull coppery or greenish colour of the upper surface. From the Brazilian *M. exilis* and *M. anguina*, Lac., the present insect is separated by the black colour of the knees, tibiæ, and tarsi. The four specimens before me show no difference in the above particulars.

14. **Megascelis collaris.**

Fulvous; the breast black or piceous; head and thorax very finely punctured, the latter deeply transversely grooved; elytra metallic blue, the suture narrowly purplish.
Var. The elytral suture narrowly fulvous.
Length 2 lines.

Hab. GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Caldera in Chiriqui (*Champion*).

I can only compare *M. collaris* to *M. amabilis* or *M. frenata*, Lac., of Colombia, with which it agrees in size and, partly, in colour. In the present species the head and thorax are fulvous, with a pale metallic green tint; the head is very finely and sparingly punctured (in which *M. collaris* differs from most other known species); the antennæ are black, with two or three of the basal joints fulvous; the thorax is of the same colour as the head, rather closely and distinctly punctured at the sides, less closely in front, without any transverse rugosities, the anterior portion being rather strongly swollen, and bounded behind by a deep transverse depression (in *M. amabilis* the thorax is of similar colour and punctuation, but the anterior portion is far less strongly developed, and the groove is shallower); the elytra are impressed with the usual transverse

rugosities, and punctured on the interstices, sparingly clothed with fulvous pubescence, and generally of a dark metallic-blue colour, with the sutural and lateral margins narrowly purplish. In some specimens all the colours are paler, but perfectly recognizable. Usually the underside, as well as the legs, is fulvous, and the breast nearly black; in one or two examples, however, the underside is altogether darker. *M. frenata* has the elytra similarly coloured, except that the suture is more broadly purplish; and the thorax much longer and with a less distinct transverse groove. The variety only differs in colour; it is from Chontales.

15. **Megascelis championi.**

Pale testaceous; above pale metallic green; head remotely, the thorax more closely, punctured; the latter strongly narrowed posteriorly, and with a distinct transverse groove; elytra sparingly pubescent, the suture pale testaceous, the basal and lateral margins purplish or blue.

Length $1\frac{1}{2}$–2 lines.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Caldera in Chiriqui (*Champion*).

The general colour of the upper surface is similar to that of *M. quadrisignata*, except that there are no spots, a pale metallic green covering a testaceous ground-colour; the head is remotely punctured, and the punctures are much deeper anteriorly than at the base (the distant punctuation is therefore one of the characters by which *M. championi* may be known from most of its allies); the thorax is not longer than broad, more closely punctured than the head, almost without transverse wrinkles, the surface of the same testaceous colour as the head, with a similar pale green metallic gloss, and with a distinct transverse groove; the scutellum is also of the same colour as the thorax; the elytra are of a brighter metallic green, the basal and the lateral margins more or less distinctly blue or purplish and the suture pale fulvous or testaceous, and the punctuation is distinct and less interrupted by transverse strigæ than usual; and the antennæ are black, with pale basal and (in one specimen) apical joints. *M. championi* resembles in the shape, colour, and punctuation of the thorax *M. collaris*; and it is quite possible that the former is only a pale variety of the last-named species. I have, however, three specimens before me which agree with each other in the colour of the elytra (it is dark blue in *M. collaris*); and in the absence of intermediate specimens I cannot look upon them as varieties.

16. **Megascelis quadrisignata.**

Testaceous or fulvous; above pale metallic greenish; thorax closely punctured, with a raised longitudinal central line; elytra covered with very short pubescence, each with a spot at the base and another below the middle purplish-blue.

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

Head not very closely but distinctly punctured, light metallic green; antennæ black, the four basal joints testaceous; thorax not longer than broad, widened at the middle, with a transverse central depression, closely punctured, without transverse strigæ, the disc with a central longitudinal ridge, the punctures larger anteriorly than at the base; scutellum deeply punctured; elytra with the usual transverse strigæ,

clothed with short fulvous pubescence, testaceous with a pale metallic green gloss, each with a subquadrate purplish or bluish spot at the base and a smaller one below the middle; underside and legs fulvous.

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

This pretty little species, of which there are two specimens before me, greatly resembles in the elytral markings *M. quadrimaculata*, Bates, from the Amazon region. The latter, however, differs from the Panama insect in the nearly impunctate head and in its generally larger size; it also has the thorax much less closely and finely punctured.

MASTOSTETHUS (p. 19).

Mastostethus balteatus (p. 19).

Mastostethus nigrocinctus, huj. op. p. 20.

To the locality given, add:—MEXICO, Cordova, Capulalpam (*Sallé*), Jalapa (*Höge*), Cuernavaca (*H. H. Smith*); GUATEMALA, San Gerónimo, Coban, Panima, San Juan, Cubilguitz, Purula and Chacoj in Vera Paz, Las Mercedes (*Champion*); COSTA RICA (*Van Patten*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

After comparing carefully more than fifty specimens I can only come to the conclusion that *M. nigrocinctus* is a variety of *M. balteatus*. The two insects in question have been separated merely by slight differences in coloration, which cannot be considered a character of distinction, as the many varieties enumerated by Lacordaire of *M. nigrocinctus* prove. *M. balteatus* is most variable, and specimens occur which are, with the exception of the underside, entirely fulvous. The punctuation of the elytra does not furnish a distinctive character between the two so-called species.

Mastostethus cingulatus (p. 20).

M. cingulatus is undoubtedly nothing but an immature form of either *M. balteatus* or *M. bilobus*; I have several specimens agreeing with the type and also intermediate degrees in coloration before me, and as no structural character has been pointed out by Lacordaire, and the species is a most variable one in regard to colour, I do not think it any advantage to retain it as distinct.

Mastostethus bilobus (p. 20).

To the localities given, add:—GUATEMALA, Yzabal (*Sallé*), Panzos, Teleman, and San Juan in Vera Paz, El Reposo (*Champion*); PANAMA (*Boucard*), San Lorenzo (*Champion*).

It seems to me also doubtful whether *M. bilobus* should be looked upon as anything but a variety of *M. balteatus*, from which it does not differ except in the colour of the thorax and underside. There are several specimens before me which show intermediate stages of variation in this respect, and scarcely two are exactly alike; structural differ-

ences I am unable to find. In the Panama examples the elytral black spots are enlarged into elongate triangular patches occupying the principal portion of the disc; in these examples the thorax is almost entirely black, with the exception of the anterior angles and the posterior margin, and the sides of the breast and the legs are entirely black. All the Panama specimens are thus marked, and if I had not intermediate forms from other localities before me I should have looked upon them as a distinct species. Examples from Panzos have entirely fulvous antennæ and legs.

Mastostethus duplocinctus (p. 20).

To the locality Mexico, add:—Cordova (*Sallé*).

Mastostethus tricinctus (p. 20).

To the localities given, add:—Guatemala, Zapote (*Champion*); Panama, Volcan de Chiriqui (*Champion*), Colon (*Boucard*).

Mastostethus salvini (p. 21). (Tab. XXXVI. fig. 5, var.)

To the locality given, add:—Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Panamá Bugaba, Volcan de Chiriqui (*Champion*).

The specimens since obtained in the State of Panama differ from the type in being smaller in size, and in having the black portion of the elytra reduced, so that the testaceous ground-colour occupies a greater space; the elytra may therefore be described as testaceous, with a subquadrate black patch at the base, not extending to the suture, and a transverse band below the middle extending to either margin. *M. salvini* differs from *M. rogersi* in the less narrow and attenuate general shape, in the colour of the head, and in the impunctate thorax. *M. duplocinctus*, Clark, is a much broader insect, and has the head, antennæ, and legs black, and the elytral bands different in shape and position. Lastly, *M. salvini* may be known from several allied species of somewhat similar pattern by the testaceous apex of the elytra. An example from Bugaba is figured.

8 (A). **Mastostethus cordovensis.** (Tab. XXXVI. fig. 7.)

Testaceous, a band on the head, the antennæ, the disc of the thorax, the scutellum, and the legs, black; elytra testaceous, a triangular spot at the base, and a broad transverse band at the middle, black; sides of the breast and of the abdominal segments black.

Length 4 lines.

Head fulvous, punctured near the eyes, the base and a central longitudinal band black; antennæ entirely black; thorax narrowed in front, about one half broader than long, the sides nearly straight, the surface impunctate, black, the sides narrowly fulvous; elytra rather strongly but not very closely punctured, with a triangular black spot at the base, surrounding the shoulders, but not extending to the sides, and a black band at the middle extending to the sides, the anterior edge of the latter straight, the posterior edge strongly concave; below testaceous, the parapleuræ and sides of the breast, and the sides of the first abdominal segments, black.

Hab. Mexico, Cordova (*Sallé*).

The elytral pattern of *M. cordovensis* agrees nearly with that of *M. salvini*; but the colour of the head, thorax, and legs and the shape of the elytral spots are different. The three specimens obtained do not differ from each other, except in the broader shape of the transverse elytral band in one example; the flavous or testaceous apical portion of the elytra forms a large ovate spot. *M. duplocinctus* has a similar elytral pattern, but is a much broader insect; it has the head entirely black, and the shape of the elytral black band is quite different. From other somewhat similarly-coloured species *M. cordovensis* may be known by the flavous apex of the elytra; from *M. rogersi* by the colour of the head, thorax, and legs; and from *M. chontalensis* by the triangular shape of the humeral spot, and the position and shape of the posterior band, also by the different coloration of the underside and legs. *M. zonatus*, Klug, from Brazil, is another closely allied species; but in this the head has a transverse (not longitudinal) black band, the elytral fascia is narrower and of different shape, and the colour of the legs is not entirely black, but fulvous and black.

8 (B). **Mastostethus gracilenta.** (Tab. XXXVI. fig. 6.)

Testaceous, a transverse band on the head, the antennæ, two spots on the thorax, the upper edge of the anterior femora, the tibiæ, and the sides of the breast, black; elytra very closely and strongly punctured, testaceous, a narrow transverse band at the base, and a broad band at the middle, black.

Length 3 lines.

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

In coloration this species closely resembles *M. salvini* and its allies, but it differs from them all in the strong and close (almost rugose) punctuation of the elytra. The head is black at the base and between the eyes, the black markings being connected together in one of the specimens, and enclosing two small fulvous spots. The thorax is rather broad, and entirely impunctate; and has two large subquadrate black spots on each side, joined in one specimen at its base. The elytra are rather narrow and somewhat convex, and have a slight depression below the base at the suture; the band at the base is narrowed at the suture; the posterior band is broad, slightly curved, and extends to the sides, leaving the apex largely flavous, its anterior edge is nearly even, the posterior one slightly irregular. The femora are testaceous, the two anterior pairs streaked with black above. The underside is flavous or testaceous, with a spot near the anterior coxæ, and the sides of the breast (more widely so in front) and of the metasternum, black.

Mastostethus rubricollis (p. 21).

To the locality Mexico, add:—Toxpam, Cordova (*Sallé*), Jalapa (*Höge*).

The thorax in all the specimens before me has either a black transverse band or two more or less distinct spots on the middle of the disc.

Mastostethus championi (p. 21).

To the locality given, add:—MEXICO, Toxpam (*Sallé*); GUATEMALA, Sabo, San Gerónimo (*Champion*).

Mastostethus stålii (p. 22).

To the locality Mexico, add:—Cordova (*Sallé*).

Mastostethus vicinus (p. 22).

To the locality Mexico, add:—Toxpam (*Sallé*).

A single specimen from the above locality agrees well with Lacordaire's description of this species. It has the antennæ entirely black, and the elytral bands are slightly different in shape from those of *M. rubricollis*.

Mastostethus rogersi (p. 22).

To the locality given, add:—MEXICO (*coll. Jacoby*).

Mastostethus chontalensis (p. 22).

To the locality given, add:—PANAMA, Bugaba (*Champion*).

The specimen since received from the State of Panama only differs from the Nicaraguan type in its smaller size, and in the larger black basal band of the elytra, the intermediate flavous band being thus reduced to half its size.

15 (A). **Mastostethus femoratus.** (Tab. XXXVI. fig. 8.)

Black, the sides of the thorax and the first abdominal segments flavous; elytra finely punctured, flavous, a narrow transverse band at the base, a broader one at the middle, a spot near the apex, and the suture at the same place, black.

♂. The posterior femora robust and triangularly widened at the apex, and the posterior and intermediate tibiæ strongly curved.

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

Of elongate, slightly convex and posteriorly narrowed shape; the head black, rather closely punctured between the eyes, deeply transversely grooved below the insertion of the antennæ; the anterior margin of the clypeus and that of the labrum and the apical joint of the palpi fulvous; antennæ black, the lower four joints shining, the rest opaque, dilated from the fifth joint; thorax nearly twice as broad as long, the posterior margin nearly straight, the anterior angles somewhat prominent and bounded by a groove within, the surface black, impunctate, the lateral margins narrowly flavous, a small black spot immediately below them; scutellum black; elytra finely and not closely punctured, the punctuation scarcely visible near the apex, the black basal band narrow, not extending to the lateral margin, its posterior margin uneven, the band at the middle broader, straight, and extending to the sides, the suture below this band black, the black not extending to the apex, and slightly widened behind, and a roundish spot at the sides near the apex, also black; underside black, the first two abdominal segments flavous.

Hab. GUATEMALA, Purula (*Champion*).

M. femoratus almost exactly resembles in coloration *M. stålii*, but is larger and more

robust; the elytra have the transverse black band at the middle narrower, and the apical spot smaller; and the male differs in the structure of the posterior femora.

Mastostethus phaleratus (p. 23).

To the localities given, add:—Mexico, Tuxtla (*Sallé*), Cordova, Jalapa (*Höge*); Guatemala, San Gerónimo (*Champion*).

Mastostethus hieroglyphicus (p. 23).

To the locality Mexico, add:—Etla, Oaxaca (*Sallé*), Morelia in Michoacan (*Höge*), Cuernavaca (*H. H. Smith*).

Mastostethus novem-maculatus (p. 23).

To the locality Mexico, add:—Cordova, Panistlahuaca, Vera Cruz, Cuernavaca, Tehuantepec (*Sallé*), Oaxaca (*coll. Jacoby*).

23. **Mastostethus modestus.** (Tab. XXXVI. fig. 13.)

Black; the head punctured near the eyes; thorax with a few very fine punctures; elytra pale brownish, sparingly pubescent and strongly punctured, the base and a sublateral longitudinal narrow stripe on each black.

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

Head black, rather strongly punctured near the eyes; the anterior margin of the clypeus and that of the labrum fulvous; antennæ scarcely extending to the base of the thorax, entirely black; thorax twice as broad as long, the sides slightly rounded before the middle, a transverse groove near the anterior margin, the latter rather closely punctured, the disc with a few very fine punctures; scutellum black, punctured, and with some fulvous hairs; elytra depressed, rather elongate and narrowed posteriorly, the basal margin narrowly black, the black deeply indented in front of the shoulders, and connected with the narrow longitudinal black stripe, this latter being placed close to the lateral margin, and abbreviated just before the apex; underside and legs entirely black, clothed with fulvous pubescence.

Hab. Mexico (*Sallé, ex coll. Sturm*).

A single specimen, labelled "*Megalopus modestus*," is contained in the Sallé collection.

24. **Mastostethus panamensis.** (Tab. XXXVI. figg. 9, 10.)

Depressed, narrowed posteriorly, flavous, the base of the head, the antennæ, the disc of the thorax, and the tibiæ, black; elytra finely punctured, black, the basal margin obliquely flavous.

Var. Elytra with the apex, as well as the base, flavous.

Length $3\frac{1}{2}$–4 lines.

Head black to the insertion of the antennæ, the lower portion flavous, the space near the eyes closely punctured, the indented portion of the eyes obscure testaceous; antennæ black, the lower four joints shining, the rest opaque and transversely flattened; thorax with the sides straight, narrowed in front, the surface with a few minute punctures, the sides flavous, the disc occupied by a transverse black band, which is rather deeply indented at the sides; scutellum black; elytra depressed, finely and rather closely punctured, with an obsolete oblique depression below the base, black, the depression (in the shape of a narrow transverse band) flavous; underside and femora flavous, the tibiæ black, the two anterior pairs strongly curved, the tarsi black.

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

M. panamensis seems to be somewhat allied in coloration to the South-American

M. curvipes (Fabr.), but differs in the colour of the antennæ and in the shape and position of the elytral markings. In the specimens which have the greater part of the elytra and their apex black, the narrow fulvous basal margin is of a more oblique shape than in those which have the apex to a greater or less extent flavous; in these dark-coloured examples the anterior edge of the black portion is straighter.

25. **Mastostethus imitans.** (Tab. XXXVI. fig. 11.)

Flavous; the base of the head, the antennæ, a large spot on the thorax, the elytra (the basal margin excepted), the apices of the tibiæ, and the tarsi, black.
Length 4 lines.

Hab. PANAMA, Bugaba (*Champion*).

M. imitans so exactly resembles the preceding species in coloration that it will only be necessary to point out the differences:—The thorax in *M. imitans* is a little more distinctly and closely punctured on the disc, and the sides of the black patch are but slightly sinuate, not deeply dentate; the scutellum in three specimens is flavous (in one it has a small black spot); and the elytra show no postbasal oblique depression—they are black with a narrow, mesially widened, flavous basal margin, as in *M. panamensis*, and are also punctured as in that species, but the lateral margin is accompanied by a narrow, smooth, impunctate space, bounded within by an impressed stria which extends to the apex (this being altogether absent in the allied species); and the tibiæ, instead of being black, have only their extreme apex of that colour. These characters are constant and not sexual, as an examination has proved; in all other respects *M. imitans* agrees with *M. panamensis*.

26. **Mastostethus humero-notatus.** (Tab. XXXVI. fig. 12.)

Flavous, a transverse band on the head, the antennæ, the disc of the thorax, the scutellum, tibiæ, and tarsi, black; elytra fulvous, a small spot on the shoulder, and the greater part of the disc, black.
Length 3½ lines.

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

M. humero-notatus again closely resembles *M. panamensis* and *M. imitans*, but differs from both in the small triangular additional humeral spot, as well as in other particulars. The head is fulvous and has a black spot at the extreme base, and a transverse black band between the eyes, and near the inner margin of the latter are some distinct punctures. The antennæ are black. The thorax agrees in shape and coloration with that of the two preceding species, and shows no trace of punctures; the middle of the disc is occupied by a broad black band which extends from the base to the anterior margin, the sides of this band being nearly straight and without indentation. The scutellum is black, and smaller than in *M. imitans*. The elytra have no postbasal depression, and are rather more strongly punctured than in the two preceding species; the lateral margin is not accompanied by a smooth narrow space as in *M. imitans*; the shoulder is occupied by a triangular-shaped black spot, and the black portion of the

disc commences a little below the base and ends at some distance from the apex (if the black is taken for the ground-colour, the elytra may be described as having a narrow oblique transverse band at the base and the apex fulvous, with the extreme lateral margin also of this colour). The underside is flavous, with the exception of a small black spot on the sides of the thorax, and another on the side-pieces of the meso- and metasternum. The femora are flavous, the two anterior pairs streaked with black above; the tibiæ and tarsi are entirely black. The metasternum, as in the preceding species, is raised into a conical projection.

Four specimens, all agreeing in the above particulars.

27. **Mastostethus octomaculatus.** (Tab. XXXVI. fig. 14.)

Testaceous, the base of the head, the basal joints of the antennæ, the scutellum, the sides of the breast, and the tibiæ, black; thorax with a black basal band; elytra remotely punctured, black, each with a round spot at the base, a transverse one at and another below the middle, and a small spot at the sides of the base, flavous; femora strongly dentate.

Var. Thorax without black band, the two anterior elytral spots confluent, the femora spotted with black.

Length 4–4½ lines.

Head rather closely punctured, flavous, the upper portion, labrum, and mandibles black; antennæ comparatively long, extending beyond the base of the thorax, the four basal joints and the upper surface of the following three joints black, the rest fulvous; thorax twice as broad as long, the sides straight, the surface with some fine punctures, obscure testaceous, the basal margin with a narrow black stripe which does not extend to the sides; scutellum black; elytra distinctly and rather remotely punctured, each with three large spots (a round one at the base, a similar but larger spot near the apex, and one of more transverse shape at the middle), a small spot also being placed on the lateral margin at the sides of the shoulders, the spots divided from each other by narrow black bands of the ground-colour; below fulvous, the middle portion of the anterior femora, the tibiæ, and the sides of the breast, black, the posterior femora also streaked with black above, the latter armed with a strong tooth near the apex in the male, the tarsi black.

Hab. PANAMA, Bugaba (*Champion*).

M. octomaculatus may be known from its allies by the elytra having six (three on each) large testaceous or flavous spots, and also a small lateral one at the base. The variety has the two anterior spots on the disc joined into a somewhat pear-shaped single spot; in this specimen the posterior femora have their outer half entirely black, but the narrow black band on the thorax is absent. *M. sexguttatus*, Lac., from Guiana, seems to be a closely allied species; but differs in the absence of the small shoulder-spot, and in the thorax having a black discoidal band, as well as in other particulars. A typical example is figured.

AGATHOMERUS (p. 24).

Agathomerus rufus (p. 24).

To the locality Mexico, add:—Ventanas (*Forrer*), Puebla, Cuernavaca, Panistlahuaca, Oaxaca, Tuxtla, Tehuantepec (*Sallé*).

There are some specimens contained in the Sallé collection in which the head has a small black spot on the vertex and the thorax a similar one on the disc; these examples

thus resemble *A. sallæi*, from which they differ, however, in the elytra being entirely fulvous and also in the smaller size.

Agathomerus dubiosus (p. 24).

To the locality Mexico, add:—Cuernavaca (*Sallé*).

In the typical specimens contained in my collection the scutellum is black; in the example from Cuernavaca it is fulvous. *A. dubiosus* differs from *A. rufus*, to which it is otherwise closely allied, in the lower surface of the femora and the underside being black; but it is possible that these differences may be due to variation.

MEGALOPUS (p. 26).

2. **Megalopus violaceo-fasciatus.** (Tab. XXXVI. fig. 15.)

Elongate, testaceous, the base of the head and the breast black; thorax with two transverse grooves, impunctate; elytra very finely and remotely punctured, each with a triangular spot at the base, a transverse one before the middle, and a large ovate spot near the apex, dark violaceous; legs spotted with black.

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

Head broad, punctured near the eyes, the upper portion to the antennæ black, the lower portion flavous; antennæ extending to the base of the elytra, pale fulvous, the lower joints entirely, and the following three or four joints partly, black; thorax about one half broader than long, somewhat convex, the sides slightly rounded at the middle, the surface with a narrow, transverse anterior, and a similar posterior groove, impunctate, obscure testaceous; scutellum partly black and partly testaceous; elytra narrowed posteriorly, the base slightly raised, the surface remotely and finely punctured, testaceous, a triangular-shaped basal spot, a transverse oblique one before the middle, and a large subtriangular spot near the apex of each, dark violaceous-blue; below testaceous, a spot near the anterior coxæ, the breast, the four anterior femora above, the outer edges of the tibiæ, and the tarsi, black.

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

A single specimen. The elytra have the shoulders very prominent, their anterior margin in the shape of an acute oblique ridge; the two anterior spots are placed close together, but the posterior ones are divided by a larger space; neither of the spots extend to the lateral margin.

3. **Megalopus armatus.**

Megalopus armatus, Lac. Monogr. in Mém. Soc. Liège, iii. p. 700[1].

Hab. PANAMA, Volcan de Chiriqui 4000–6000 feet (*Champion*).—COLOMBIA[1]; VENEZUELA (*coll. Jacoby*).

Many specimens, which agree perfectly with Lacordaire's description. The small testaceous spot visible in the type near the apex of the elytra in the male is, however, absent in all the examples before me. All the females have three oblique testaceous bands on the elytra, as described by Lacordaire; the males possess only a very narrow single band, placed at the middle, the rest of the surface being black. The posterior tibiæ in the male are very strongly curved, in the female much less so. In some specimens the elytra are entirely black in the male.

TITUBŒA (p. 26).

Titubœa mutabilis (p. 27).

To the localities given, add:—MEXICO, La Noria in Sinaloa, Ventanas in Durango, Acapulco, Iguala, Chilpancingo in Guerrero (*Höge*), San Miguel, Playa Vicente, Oaxaca, El Cameron, Cordova, Juquila (*Sallé*), Atoyac in Vera Cruz, Cuernavaca (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Capetillo (*Champion*).

In some specimens from Mexico the black colour of the elytra predominates to such an extent as to leave only the shoulders and a small apical spot fulvous; all the specimens from Yucatan are smaller in size.

Titubœa rufifrons (p. 27).

To the Mexican locality given, add:—El Cameron (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*).

As already remarked, *T. rufifrons* and *T. mutabilis* may be but varieties of the same species; even the additional material since received does not enable me to separate these insects satisfactorily, the different specimens varying considerably in coloration and also in punctuation. The male of *T. rufifrons* differs from that of *T. mutabilis*, as a rule, in general colour and in the want of the transverse elytral band; but the females of both are alike and cannot be separated. I may further add that the œdeagus of the male in the two insects is similar.

Titubœa sphacelata (p. 27).

To the locality Mexico, add:—Cuernavaca (*Sallé*).

Titubœa sanguinipennis (p. 27).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Escuintla, Capetillo, Panzos, Teleman (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

It is quite possible that the specimen figured as the male of this insect (Tab. II. fig. 16) in reality represents a closely allied but distinct species. Several other males, as well as a good many females, since received seem at first sight to be totally different in coloration to the typical form of *T. sanguinipennis* (Tab. II. fig. 17); and I should regard these as certainly distinct, if I had not intermediate examples before me which it is impossible to refer with certainty to either of the two forms. In nearly all the specimens from Panzos, the city of Guatemala, and Zapote, and in the one from Chontales, the upper surface is pale fulvous; the thorax has either a transverse black basal band or spots; the elytra have one or two basal spots of variable size and a narrow black band (generally constricted at the suture) below the middle; and the

underside and legs are usually fulvous, but specimens occur with black underside. The other or more typical form is well represented in fig. 17, all the specimens obtained at Tapachula, as well as a single male at Escuintla (which certainly seems to better represent this sex of *T. sanguinipennis* than the figure given of the variety), being thus coloured; this male has a narrower and entirely black thorax, agreeing in that respect with the females of *T. sanguinipennis*. I have, however, received Guatemalan specimens from the Museum of Stuttgart which are intermediate between these two forms, these specimens having the thorax of the paler form and the elytra of the darker red variety, and the legs either black or fulvous. It seems to me that all these examples must be referred to one and the same species: they cannot be separated on such variable characters as the colour and markings of the upper surface and the sculpture of the thorax.

6. **Titubœa brevilineata.** (Tab. XXXVI. fig. 18.)

Black; the basal joints of the antennæ and the labrum fulvous; thorax fulvous, impunctate; scutellum black; elytra finely and semiregularly punctured, the suture, a marginal stripe at the middle, and an abbreviated stripe on the disc, black.

♂. Thorax with two small black spots; legs fulvous, the tarsi black.

Length 3½–4 lines.

♂. Head finely rugose between the eyes, the vertex smooth and shining, black, with a small fulvous spot near each eye; anterior margin of the clypeus deeply concave-emarginate, fulvous, as well as the labrum and mandibles, the extreme apex of the latter black; antennæ not extending to the base of the thorax, the fifth and following joints strongly serrate, black, the lower four joints fulvous, the third joint moniliform and not longer than the second; thorax more than twice as broad as long, the sides strongly rounded, the posterior margin but slightly produced at the middle, the surface with some very minute punctures, fulvous, with a small obscure spot on each side; scutellum black, its apex raised, the base pubescent; elytra finely and closely punctured, testaceous, the sutural margin narrowly black, a narrow black stripe occupying the lateral margin from before to below the middle, and another narrow, slightly curved, black line (parallel to the lateral stripe, and not extending to the base or apex) being placed at the middle of the disc; legs fulvous, the anterior tibiæ partly, and the tarsi entirely, black.

Hab. Mexico, Refugio in Durango, Durango city, Jalapa (*Höge*).

T. brevilineata seems closely allied to *T. sphacelata*, from which it differs in the narrow longitudinal discoidal stripe of the elytra, this being constant in the four specimens before me. In the female insect the legs are sometimes fulvous, sometimes black; the thorax is, as usual, less transverse and more shining than in the male.

7. **Titubœa högei.** (Tab. XXXVI. fig. 16.)

♂. Pale fulvous; elytra opaque, pale testaceous, finely punctured; anterior legs elongate, the tibiæ curved; sides of the breast darker.

♀. Underside black; elytra more strongly punctured.

Length 3–3½ lines.

♂. Head fulvous, the vertex smooth, the lower portion finely strigose, the epistome separated from the face by a distinct triangular groove; the anterior margin of the clypeus deeply concave-emarginate in the middle and on each side; the apex of the mandibles black; antennæ black, the lower four joints fulvous, the third joint moniliform, the fifth and following joints strongly transversely serrate; thorax more than twice as broad as long, the sides strongly rounded, the surface with a few minute punctures and some

irregular depressions, of which a more strongly marked one is placed near the anterior angles; scutellum fulvous; elytra narrower than the thorax, very pale testaceous, opaque, with indistinct rows of fine punctures, the interstices sparingly clothed with short fulvous hairs; below and the legs fulvous, the breast black; anterior legs much longer than the others, their tibiæ strongly curved at the apex, their tarsi piceous and with the first joint as long as the two following ones together.

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

This species, of which only one male and three females were obtained, may be at once known from its allies by the absence of any dark markings above, the whole upper surface being pale fulvous. The females (in which, as usual, the thorax is less transversely-shaped) have the entire underside black and clothed with yellowish pubescence; and the elytra much more strongly punctured and the punctuation arranged near the suture in double rows.

8. **Titubœa guatemalensis.**

Fulvous, the terminal joints of the antennæ, the anterior tibiæ and tarsi, and the breast, black; elytra testaceous, almost imperceptibly punctured, the interstices sparingly clothed with short black erect hairs.
Length $3\frac{1}{2}$ lines.

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

Only a single male specimen of this species, which I must separate from the preceding, is before me. Like *T. högei*, the colour of the upper surface is pale fulvous, but the elytra are almost impunctate and their pubescence is black and only visible in certain lights; two very small obscure spots (which may be the remnants of a band) are visible below the middle of the latter; the anterior tibiæ are entirely black, and not so strongly curved as in the male of *T. högei*; and the general shape of the body is much broader and more robust. *T. guatemalensis* may, however, be only a local form of *T. högei*.

9. **Titubœa villosa.** (Tab. XXXVI. fig. 17.)

Black, pubescent; the labrum fulvous, spotted with black; elytra fulvous, clothed with short pubescence, a broad transverse band below the middle, extending upwards along the suture, black.
Length 3–$3\frac{1}{2}$ lines.

Hab. MEXICO, San Miguel, Etla (*Sallé*).

This species exactly resembles in colour *T. mutabilis*, and can only be separated from it by the short greyish pubescence which covers the entire upper surface. The head is either entirely black or has two fulvous spots at the sides; the three basal joints of the antennæ are generally fulvous, but sometimes the first joint is black; the thorax is entirely black in some specimens, or margined with flavous in others; and the broad elytral band varies as much in width and length as it does in *T. mutabilis*. The single male specimen before me is larger and has, as usual, a more transversely-shaped thorax, and the four anterior femora fulvous below. In all examples the elytra are finely margined with black at the apex and at the posterior portion of the suture.

GYNANDROPHTHALMA (p. 28).

Gynandrophthalma agilis (p. 28).

To the locality Mexico, add :—Tuxtla, Cordova, Teapa (*Sallé*), Acapulco in Guerrero (*Höge*).

This species varies much in regard to the amount of the fulvous colour of the thorax ; the size is equally variable.

Gynandrophthalma aviculus (p. 29).

To the locality given, add :—MEXICO, Peras (*Sallé*).

4 (A). **Gynandrophthalma ruatanensis.**

Fulvous, pubescent below, the terminal joints of the antennæ, the tarsi, and breast, black; thorax and elytra shining, fulvous, the latter strongly and semirugose-punctate.

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

Head rather flattened, impunctate, shining; the terminal joints of the palpi black; antennæ extending to the base of the thorax, the four or five lower joints fulvous, the rest black, strongly flattened, the second and third joints very small; thorax three times broader than long, the sides rather deflexed, widened towards the base, the surface impunctate, the posterior margin only with some punctures; scutellum broadly triangular, strongly pointed at the apex, impunctate; elytra convex, subcylindrical, strongly and rather closely punctured, the punctures near the suture arranged in somewhat regular rows; underside clothed with fulvous pubescence, the breast black; the tibiæ sometimes fuscous, but generally fulvous, the tarsi black.

Hab. HONDURAS, Ruatan Island (*Gaumer*).

The entirely fulvous and shining upper surface, the absence of any markings, and the strongly punctured elytra distinguish *G. ruatanensis* from any of its congeners inhabiting our region.

4 (B). **Gynandrophthalma panamensis.**

Obscure fulvous or fuscous, densely covered with silvery pubescence below; head black; thorax fulvous, impunctate; elytra finely punctured, fulvous, a triangular spot at the shoulder (prolonged inwards), a transverse band below the middle, and the apex, black.

Length 2–$2\frac{3}{4}$ lines.

Head black, impunctate, with a triangular groove between the eyes; the anterior margin of the clypeus deeply concave at the middle; labrum obscure fulvous; antennæ black, the four basal joints fulvous, the terminal joints strongly flattened; thorax nearly three times broader than long, fulvous, the anterior margin narrowly black at the middle, the surface impunctate; scutellum black at the base, its apex fulvous and acute; elytra rather remotely and finely punctured, fulvous, with a short subtriangular or subquadrate band at the shoulder (which extends inwards towards the suture but does not touch it), a transverse band of variable width below the middle (extending to the sutural but not to the lateral margin), and the apex and part of the apical margin, black; underside and the legs black, the base of the femora more or less fulvous; abdomen obscure fulvous, like the breast densely covered with silvery pubescence.

Hab. PANAMA, Bugaba 1000 feet (*Champion*).

Two specimens, one of which is nearly double the size of the other, were obtained by Mr. Champion. This species differs from all others described in this work in the pattern of the elytra.

Gynandrophthalma leucognatha (p. 29).

To the locality Mexico, add:—Pachuca in Hidalgo, Juquila (*Höge*), Guanajuato, La Parada, Oaxaca (*Sallé*).

Although none of the specimens received from the above localities quite agree with Lacordaire's description of *G. leucognatha*, I do not think it advisable to describe them as new, taking into consideration the great variability of the species of the present family; and I am not even sure whether these Mexican specimens may not equally well be varieties of *G. quadripartita*, this latter species having been described by Lacordaire from one female specimen only. In the examples from the above-mentioned localities, the head and thorax agree with Lacordaire's description of *G. leucognatha*, but the elytra differ in having black (instead of bluish) markings; the sutural band is very narrow and of equal width (not wider anteriorly); there is only a small spot (instead of a large triangular one) at the middle of each elytron, this spot not being connected with the black lateral margin; the basal margin and a spot on each shoulder are black; and the punctuation is very strong and continued to the apex. The colour of the legs agrees with the description of that author. In one specimen the posterior spot of the elytra is subquadrate and in the shape of a transverse band, and the sutural band is widened posteriorly; another has the entire posterior half of the elytra black.

It will be seen, therefore, that in a species so variable no reliance can be placed on colour or pattern, and that differences in this respect cannot be considered specific.

MEGALOSTOMIS (p. 29).

Megalostomis pyropyga (p. 30).

To the localities given, add :—Mexico, Ventanas (*Forrer*), Oaxaca, Capulalpam, Vera Cruz, Etla, Cuernavaca, Puebla, Tehuantepec (*Sallé*), Matamoros Izucar, Huetamo in Michoacan, Guadalajara in Jalisco, Chilpancingo in Guerrero, Acapulco (*Höge*); Salvador (*Sallé*); Nicaragua, Chontales (*Belt*).

Many specimens obtained by Herr Höge. This species is distinguished by the metallic cupreous anterior margin of the thorax, as well as by the similarly-coloured apical spot of the elytra, although this latter is sometimes very obscure and even absent.

2 (A). **Megalostomis metallica.** (Tab. XXXVI. fig. 19.)

Black, densely pubescent below; above metallic purplish or greenish; thorax sparingly and finely punctured elytra more closely and distinctly punctate, the basal and sutural margins metallic green.

Length 3 lines.

Of rather depressed, posteriorly narrowed shape; the head impunctate, with the exception of a row of deep punctures near the inner margin of the eyes, the latter distinctly notched, the surface obscure greenish, variegated with purplish; the anterior margin of the clypeus deeply concave-emarginate; labrum fulvous; antennæ bluish-black, the lower three joints fulvous, the first stained with metallic green above; thorax twice as broad as long, the sides strongly deflexed anteriorly, narrowed in front, the posterior margin broadly rounded and produced at the middle, the surface with some very fine and distantly placed punctures and an oblique transverse depression on each side, where the punctures are much deeper than on the disc, the latter obscure greenish-æneous or purplish; scutellum very broad, subpentagonal, purplish or greenish, impunctate; elytra rather flattened, gradually narrowed behind, with a short depression below the shoulder, dark purplish, finely and rather closely punctured, the punctures arranged near the suture in irregular rows; underside covered with dense greyish pubescence; legs obscure fulvous, with a slight metallic gloss.

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

This species is not difficult to distinguish, on account of its metallic colour, which changes from purple to greenish according to the way the specimens are viewed.

2 (B). **Megalostomis affinis.**

Subdepressed, narrowed behind, below black and densely pubescent, above dark greenish-æneous; thorax finely and sparingly, the elytra more closely, distinctly, and semiregularly, punctured.
Length 4 lines.

Hab. GUATEMALA, Panima in Vera Paz 1500 feet (*Champion*).

M. affinis, of which only a single specimen was obtained, is no doubt closely allied to *M. metallica*, but differs sufficiently from that species, as well as from *M. splendida*, to be regarded as specifically distinct. In general shape *M. affinis* agrees with the preceding species; but it is rather larger, the head is more strongly and closely punctured (especially near the eyes), the clypeus is bright metallic green, bordered with cupreous above, and the antennæ do not extend further than the middle of the thorax and are black with the exception of the first three joints, these being æneous; the thorax is similar in shape to that of *M. metallica*, and has a narrow green and cupreous basal margin; the scutellum is metallic green, its base cupreous; the elytra are of the same obscure dark greenish colour as the thorax, and have a very narrow bright metallic green sutural border, their punctuation being more strongly impressed than is the case in *M. metallica*, and the punctures are placed rather regularly in lines; and the legs are nearly black. *M. affinis* may principally be distinguished from *M. metallica* by its larger and more robust shape, the dark green (not purplish) colour, and the more strongly punctured elytra.

Megalostomis notabilis (p. 30).

To the locality Mexico, add:—Acapulco, Iguala in Guerrero (*Höge*).

M. notabilis is of more cylindrical and posteriorly less narrowed shape than *M. dimidiata*, which it otherwise much resembles. The fulvous portion of the elytra extends to about one third their length; and the pygidium is furnished with a distinct conical tubercle near the apex, this being absent in *M. dimidiata*.

Megalostomis dimidiata (p. 30).

To the localities given, add:—MEXICO, Monclova in Coahuila (*Dr. Palmer*), Ciudad in Durango 8100 feet (*Forrer*), Durango city, Zapotlan, Colima city, Guadalajara in Jalisco, Chilpancingo in Guerrero, Irapuato, Matamoros Izucar in Puebla, Tacambaro in Michoacan (*Höge*), Oaxaca, Capulalpam, Cuernavaca, Guanajuato, Vera Cruz (*Sallé*).

Numerous additional specimens have been received from Mexico; these vary in the pattern of the elytra, that is in regard to the amount of fulvous and black. In the variety figured (Tab. II. fig. 14) the black colour is absent; in the normal form the anterior half of the elytra is fulvous. The more conical, posteriorly narrowed, shape and the absence of the conical tubercle on the pygidium (instead of which a narrow denuded space with a raised central ridge is visible) principally distinguish *M. dimidiata* from *M. notabilis*.

Megalostomis tomentosa (p. 30).

To the localities given, add:—MEXICO, Oaxaca, Cuernavaca (*Sallé*), Colima city, Acapulco, Iguala in Guerrero, Matamoros Izucar, Tehuantepec (*Höge*); GUATEMALA, Las Mercedes (*mus. Stuttgart*); PANAMA, Bugaba (*Champion*).

The additional material, since received, enables me to add some more particulars in regard to this species:—The antennæ vary in length according to the sexes, and extend in some specimens quite to the middle of the thorax; the black posterior portion of the elytra often varies considerably in extent, and assumes in some examples the shape of a narrow transverse band, leaving the apex fulvous. *M. tomentosa* is not more than half the size of *M. dimidiata*, and the elytra are always very finely rugose and transversely wrinkled. In the original description I have omitted to state that the tibiæ are more or less fulvous and densely pubescent and the tarsi black. The individuals obtained in the State of Panama are all of small size (3 lines), and some are so densely clothed with white pubescence as to nearly obscure the colour of the upper parts; but I am unable to detect any other difference between these specimens and those from Mexico.

5 (A). **Megalostomis femorata.** (Tab. XXXVI. fig. 20.)

Subcylindrical, parallel, black, pubescent; thorax twice broader than long, finely punctured and pubescent; elytra finely rugose-punctate and pubescent, fulvous, the posterior portion of the disc and the suture black; posterior femora dentate.

Length 3 lines.

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

The single male specimen obtained by Herr Höge during his second expedition differs so much from the corresponding sex of the preceding species in the shape of its thorax and in the tooth near the apex of the posterior femora that I must separate it, although the general system of coloration is exactly similar. The thorax in *M. femorata* is much less transverse than is the case in *M. tomentosa*, and its lateral margin (instead

of being rounded at the middle) is rounded anteriorly and distinctly narrowed or constricted at the base; the median lobe of the posterior margin is not rounded, but straight; and the pubescence on the disc is very long. The elytra scarcely vary in punctuation from those of *M. tomentosa*, and the black portion does not extend to the lateral nor to the apical margin. The legs are obscure fulvous; the posterior femora are dilated into a distinct tooth near the apex; and the tarsi (as well as the antennæ) are black.

Megalostomis flavipennis (p. 31).

To the locality given, add:—PANAMA (*Boucard*), Bugaba, Volcan de Chiriqui (*Champion*).

In some of the Panama specimens the tibiæ and tarsi are flavous; in all, the elytra (instead of being flavous as in the type) are fulvous, and in one specimen there is a small black spot placed on the shoulders.

7. **Megalostomis punctatissima.** (Tab. XXXVI. fig. 22.)

Subcylindrical, convex, black, finely pubescent; thorax extremely finely and closely punctured; elytra very closely but distinctly punctured, finely pubescent, fulvous, a spot on the shoulders, and the posterior two-thirds, bluish-black.

Length 4 lines.

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

This species, of which we have received but a single specimen, at first sight might easily be mistaken for *M. dimidiata*, as the coloration is exactly similar; the differences are, however, as follows:—The thorax in *M. punctatissima* is distinctly more narrowed in front and less transverse, and its punctuation (instead of being distinct as in *M. dimidiata*) is extremely close and fine, so as to be scarcely visible, and the colour is not black but bluish; the elytra also have their dark portion with a distinct bluish gloss, and the punctuation is like that of the thorax and finer than in the allied species, and the fulvous colour of the anterior third is narrowed at the suture, the black portion extending upwards nearly to the scutellum; the head is punctured like the thorax; and the antennæ are black, with the third joint only fulvous.

8. **Megalostomis fulvipes.** (Tab. XXXVI. fig. 21.)

Subcylindrical, black, pubescent, the sides of the thorax and the legs fulvous; elytra rather strongly and closely punctured, a large subtriangular band at the shoulder, and a spot at the apex, fulvous.

Length 3 lines.

Head very finely and closely punctured, finely pubescent; the anterior margin of the clypeus semicircular; labrum black; eyes notched; antennæ fuscous, the basal joint black, the following two joints fulvous thorax subcylindrical, extremely closely and finely punctured and pubescent, the sides slightly narrowed towards the base, fulvous, the rest of the surface black; elytra subcylindrical, strongly punctured and finely transversely rugose, black, the fulvous spot surrounding the shoulder and extending downwards

nearly to the middle, and ending in a blunt point near the suture, the one at the apex of rounded shape; legs fulvous, pubescent, the tarsi black.

Hab. SALVADOR (*Sallé*).

A single specimen, differing entirely from all its allies in the system of coloration, especially in the broad fulvous sides of the thorax and in the similarly-coloured legs.

9. **Megalostomis anachoreta.** (Tab. XXXVI. fig. 23.)

Megalostomis anachoreta, Lacord. Monogr. in Mém. Soc. Liége, v. p. 537 [1].

Hab. PANAMA (*Boucard*), Bugaba, David in Chiriqui, Taboga Island (*Champion*).—COLOMBIA [1]; VENEZUELA (*coll. Jacoby*).

The Panama specimens and those from Venezuela contained in my collection agree so well with Lacordaire's description that I must refer them to this species. The male is furnished with very robust and long mandibles, the right and larger one of which is strongly bidentate. A male specimen from Taboga Island is figured.

10. **Megalostomis amazona.** (Tab. XXXVI. fig. 24.)

Megalostomis amazona, Jac. P. Z. S. 1876, p. 809 [1].

Hab. PANAMA, Bugaba (*Champion*).—AMAZONS [1].

Two specimens, agreeing in every respect with the type in my collection.

In a collection of Coleoptera just received from Guatemala there is an interesting new species of *Megalostomis*:—

11. **Megalostomis viridifasciata.**

Dark cupreous, the base of the head and the posterior margin of the prothorax metallic green; elytra closely and rather strongly semipunctate-striate, the suture and a short transverse band at the middle metallic green.

Length 3–4 lines.

Head irregularly punctured near the eyes, dark cupreous, the base and the anterior margin of the epistome metallic green; antennæ as long as the thorax, black, the basal joints cupreous; thorax strongly narrowed in front, the sides straight, the base sinuate on either side of the median lobe, the surface finely and very remotely punctured on the disc, much more strongly and subrugosely so at the sides, the latter with a more or less distinct transverse depression towards the base; scutellum metallic green, its base cupreous; elytra rather strongly depressed below the shoulders, the latter very prominent, the surface strongly and closely (but not very regularly) punctate-striate, the suture very narrowly (more broadly so just before the apex) metallic green, the disc of each elytron with a short and narrow metallic green transverse band at the middle; underside and legs cupreous, closely covered with whitish pubescence.

Hab. GUATEMALA, Coban in Vera Paz (*Conradt*).

M. viridifasciata agrees almost entirely with *M. splendida* in its system of coloration,

but in its shape, size, and sculpturing it approaches *M. metallica*. In the last-named species the thorax is, however, less straight at the sides and subangulate near the base; the elytra are more finely and much less regularly punctured and devoid of the green metallic band; and the legs are fulvous.

Five specimens, captured in April 1888.

COSCINOPTERA (p. 31).

Coscinoptera cribrata (p. 31).

To the locality Mexico, add:—Presidio (*Forrer*), El Camaron (*Sallé*), Cordova, Zapotlan in Colima, Cuernavaca, Matamoros Izucar, Chilpancingo in Guerrero (*Höge*), Temax in North Yucatan (*Gaumer*).

2. Coscinoptera æneipennis.

Coscinoptera æneipennis, Lec. Journ. Ac. Phil. iv. p. 26 (1858)[1]; Crotch, Proc. Ac. Phil. 1873, p. 28[2].

Hab. North America, California[1], Texas[2].—Mexico, Pachuca in Hidalgo (*Höge*), Guanajuato (*Sallé*).

The Mexican specimens before me agree entirely with those from North America contained in my collection. The thorax in this species is longer than in *C. cribrata*, and has a smooth narrow central line; the elytra are almost regularly punctate-striate*; and the general size of the insect is much larger than that of *C. cribrata*.

3. Coscinoptera dominicana.

Clythra dominicana, Fabr. Syst. Eleuth. ii. p. 34[1]; Oliv. Entom. vi. p. 864, t. 2. f. 28[2].

Coscinoptera dominicana, Lac. Monogr. in Mém. Soc. Liége, v. p. 515[3]; Crotch, Proc. Ac. Phil. 1873, p. 29[4].

Hab. North America[1 2 3 4].—Mexico, Northern Sonora (*Morrison*).

The Sonoran specimens are considerably smaller than those from North America in my collection.

4. Coscinoptera purpurea. (Tab. XXXVI. fig. 25.)

Obscure purplish, densely pubescent below, more finely pubescent above; antennæ and legs fulvous; thorax twice as broad as long, finely punctured as well as the elytra.

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

Hab. Panama (*Boucard*), Bugaba, David, Tolé (*Champion*).

C. purpurea seems to differ from the preceding and other species of the genus by the upper surface being dark purplish in colour and clothed with very fine whitish pubes-

* In Crotch's description the elytra are stated to be "subseriate, impunctate," instead of "subseriate-punctate."

cence. The antennæ have the basal joint blackish, the others fulvous, the second and third joints being very small. The labrum is generally fulvous. The thorax is at least twice as broad as long (which separates *C. purpurea* from *C. desmiphora*, Lac., in which the thorax is stated to be nearly as long as broad); its punctuation is very close and fine, while that of the elytra, although as fine, is more rugose in appearance. The specimens before me, however, vary in the intensity of the punctuation and also in size; but, judging from examples collected together in the same localities, I believe them to represent one and the same species.

5. **Coscinoptera quadrillum?**

Coscinoptera quadrillum, Lac. Monogr. in Mém. Soc. Liége, v. p. 514[1].

Hab. Mexico (*Sallé*).—Brazil[1].

A single specimen contained in the Sallé collection agrees very nearly with the description of *C. quadrillum*, a species said to come from Brazil. Most of the species of this and the following genus are, however, so closely allied that they can hardly be identified for certain without comparison with the type. In the Mexican example before me the thorax is obscure æneous, very finely and closely punctured and pubescent, and about twice as broad as long; the elytra are black, scarcely more strongly punctured than the thorax, and have a subquadrate red humeral patch (extending inwards to the middle of the base and downwards to a fourth of the elytral length, and reaching to the lateral margin); and the antennæ, femora, and tibiæ are fulvous, and the tarsi black.

EURYSCOPA (p. 31).

Euryscopa pilatei (p. 32).

Lacordaire compares this species with *E. pulchella*, and says that it resembles it entirely in form; he, however, describes the thorax of *E. pulchella* as "scarcely one fourth broader than long," while in *E. pilatei* (and in most other species of *Euryscopa*) the thorax is at least twice as broad as long. It is therefore difficult to account for Lacordaire's statement in his otherwise excellent descriptions; and it is not likely that he referred to another species, as all the other particulars agree entirely with *E. pilatei*, of which correctly-named specimens are also contained in the collection of M. Sallé and that of Mr. Baly.

Euryscopa scapularis (p. 32).

To the locality Mexico, add:—Cuernavaca, La Parada, Guanajuato, Izucar (*Sallé*), Iguala in Guerrero, Irapuato, Colima city, Huetamo (*Höge*), Temax in North Yucatan (*Gaumer*); Guatemala, San Gerónimo (*Champion*), Llano grande (*mus. Stuttgart*).

E. scapularis differs principally from *E. pilatei* in its black and longer thorax. It

varies considerably in size; and the scutellum is clothed with white hairs (not smooth as in *E. pilatei*). Lacordaire describes the second to the fifth joints of the antennæ as fulvous; in all the specimens I have examined the second and third joints only are of that colour.

5. **Euryscopa nigritarsis.** (Tab. XXXVII. fig. 1.)

Broadly subcylindrical, black; legs fulvous, the tarsi black; thorax sparingly punctured on the disc; elytra distinctly punctured anteriorly, very finely so below the middle, the anterior third and a round spot near the apex fulvous.

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

Hab. PANAMA, Bugaba (*Champion*).

E. nigritarsis, of which a single female specimen only is before me, seems closely allied to *E. carnifex* and *E. specularis*, Lac., without agreeing sufficiently to identify it with either of these species. The thorax in the Panama insect is at least twice as broad as long, finely and closely punctured and pubescent at the sides, nearly smooth and impunctate at the middle of the disc. The scutellum is much broader than long, and closely punctured. The elytra, which are scarcely, if at all, narrowed posteriorly, are distinctly, but not very strongly, punctured anteriorly and very finely so from the middle downwards; the basal third is occupied by a perfectly regular fulvous band of even width, which extends to the lateral and sutural margins and includes the humeral callus; and there is an oval spot close to the apex of each.

E. nigritarsis differs, therefore, from *E. carnifex* by the broad thorax and the black tarsi; and from *E. specularis* by the smaller eyes, the differently punctured red thorax, and the fulvous band of the elytra occupying the entire base. The antennæ are short, and their second and third joints are fulvous; the prosternum is rather broad and of even width.

6. **Euryscopa mexicana.** (Tab. XXXVII. fig. 2.)

Broadly ovate, subcylindrical, black; head and thorax finely pubescent and closely punctured; elytra deeply punctate-striate, with a broad transverse fulvous band at the base, the band not quite extending to the suture nor to the humeral callus.

Length 4 lines.

Head longer than broad, much flattened between the eyes, finely punctured and closely pubescent, the disc piceous; labrum fulvous; antennæ not quite extending to the base of the thorax, black, the third joint fulvous; thorax slightly broader than long, the sides strongly narrowed anteriorly and very much deflexed, the median lobe perfectly straight, the surface very closely and rather finely punctured, clothed at the sides with long whitish pubescence, the disc very sparsely covered; scutellum pubescent and punctured; elytra broad at the base, gradually and slightly narrowed posteriorly, the punctuation very deep anteriorly and fine towards the apex, the fulvous basal band occupying rather more than the anterior third and not quite extending to either the basal or sutural margins, the humeral callus remaining of the black ground-colour and in the shape of a small spot; underside and legs thickly pubescent, black, the tibiæ obscure fulvous, the last abdominal segment with a deep fovea.

Hab. MEXICO, Cuernavaca (*Sallé*).

A single specimen, apparently a female. *E. mexicana* may be known from its allies by its large size and by the broad fulvous band of the elytra.

7. **Euryscopa cingulata.**

Clythra cingulata, Latr. in Humb. & Bonpl. Obs. Zool. i. p. 208, t. 22. figg. 6, 7 (1811)[1].
Euryscopa cingulata, Lac. Monogr. in Mém. Soc. Liége, v. p. 508[2].
Megalostomis cingulata, Dej. Cat. 3rd edit. p. 440.

Hab. PANAMA (*Boucard*), Bugaba, Volcan de Chiriqui, Caldera, San Feliz, Tolé, Taboga Island (*Champion*).—COLOMBIA [2]; ECUADOR, Guayaquil [1].

Many specimens were obtained by Mr. Champion of this apparently not uncommon and handsome species. Examples occur in which the posterior band of the elytra occupies the entire apical portion. Lacordaire, in his excellent description, does not mention that the apical margin of the elytra as well as the suture is narrowly black.

8. **Euryscopa fulvilabris.**

Subcylindrical, black; labrum fulvous; thorax with a longitudinal central ridge, pubescent; elytra strongly punctate-striate, each with a subquadrate red humeral spot enclosing the callus.
Length 2 lines.

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

Closely allied to *E. scapularis*, Lac., but at once separated by the bright fulvous labrum, the longer antennæ (which extend to the base of the thorax), and the distinctly raised longitudinal line in the centre of the thorax. The scutellum is pubescent, as in *E. scapularis*; but the red humeral spot is quite different in shape, it being nearly square (instead of elongate) and surrounding the callus (this part is always black in *E. scapularis*, and its inner margin is oblique at the base).

A single specimen.

9. **Euryscopa villosa.** (Tab. XXXVII. fig. 3.)

Subcylindrical, black, pubescent; labrum, the basal joints of the antennæ, and the tibiæ fulvous; elytra each with an oblique red spot, finely pubescent, semiregularly and extremely closely punctured, the interstices irregularly rugose.
Length 3 lines.

Head very finely punctured and closely pubescent; labrum fulvous; antennæ dentate within from the third joint, the second, third, and fourth joints fulvous, the rest black, pubescent; thorax about twice as broad as long, closely and finely punctured, clothed with rather short white pubescence, the middle of the disc with a distinct smooth longitudinal line, the median lobe slightly widened and scarcely produced; scutellum with a few punctures and hairs; elytra cylindrical, crowded with larger and smaller punctures, which are irregularly arranged in lines, the interstices sparingly pubescent and slightly convex, the red spot commencing below the humeral callus, gradually narrowing behind, and obliquely extending nearly to the suture; tibiæ fulvous, the femora and tarsi black, pubescent like the underside.

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

The close and irregular punctuation of the elytra and their fine pubescence at once separate this species from its allies.

10. **Euryscopa semistriata.** (Tab. XXXVII. fig. 4.)

Subcylindrical, black, finely pubescent; elytra closely and rather irregularly punctured, with longitudinal rows of larger punctures, finely pubescent, a subquadrate spot at the shoulders reddish-fulvous.

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

Hab. Mexico, Durango city (*Höge*).

Like *E. villosa*, the present species (of which only a single example was obtained) has the elytra finely pubescent and the punctures closely and rather irregularly placed; the punctuation is, however, finer than in *E. villosa*, and interrupted by more regular rows of closely placed deeper punctures; the red shoulder-spot is very small, almost quadrate, and occupies the humeral callus. In all these details *E. semistriata* differs from *E. villosa*. The size is also smaller; the antennæ do not extend to the base of the thorax, and have, as usual, the second and third joints fulvous; the thorax is twice as broad as long, finely punctured, and clothed with long white pubescence; and the legs are entirely black. The punctuation of *E. semistriata* does not seem to me to be irregular enough to place the species in *Coscinoptera*.

11. **Euryscopa longicollis.** (Tab. XXXVII. fig. 5.)

Narrowly elongate, black; head, thorax, scutellum, and underside densely pubescent; elytra each with a small red humeral spot, closely and strongly punctate-striate, the interstices longitudinally costate.

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

Head elongate, closely and finely punctured, and clothed with long white pubescence; eyes moderately large; the labrum and mandibles black; antennæ extending only to the middle of the thorax, black, the second and third joints fulvous; thorax elongate, about one half broader than long, subcylindrical, the sides strongly deflexed, the surface very closely and rather finely punctured, clothed (like the head) with long white pubescence; scutellum pubescent; elytra narrowed posteriorly, with closely-arranged rows of transversely-shaped punctures, the interstices narrowly but distinctly costate (especially near the apex), the shoulder with a small subquadrate red spot; femora black, the apex of the tibiæ obscure fulvous.

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

This species and *E. parvula* were both labelled *E. lecontei* by Morrison, although certainly quite distinct from each other as well as from *E. lecontei*; Crotch, in his short description of the latter, says that the thorax is coarsely punctured. In *E. longicollis* the thorax is decidedly elongate; the interstices of the elytra are costate, and the punctures transverse; and the red shoulder-spot only extends to the third stria, and leaves the callus black: these characters, together with the narrowly elongate and comparatively large size, will assist in the recognition of the species.

Only a single specimen was sent.

12. **Euryscopa fulvipes.**

Black; head and thorax closely pubescent, finely punctured; elytra each with a large oblique red humeral spot surrounding the callus, deeply punctate-striate, the interstices convex; legs fulvous.
Length 2–2½ lines.

Hab. MEXICO, Presidio (*Forrer*), Sayula in Jalisco (*Höge*).

The thorax is twice as broad as long, very finely punctured, and rather more sparingly pubescent than in *E. longicollis*. The elytra are impressed with very closely placed deep round punctures, and have slightly convex interstices; the humeral spot extends obliquely downwards nearly to the middle, and to the third row of punctures from the suture—this spot (unlike the corresponding one in *E. longicollis*) occupies the humeral callus as well as the lateral lobe. The legs and the second and third joints of the antennæ are entirely fulvous.

The female is much larger than the male. In the four specimens received the humeral spot is similarly shaped, and the legs are fulvous in colour.

13. **Euryscopa regularis.** (Tab XXXVII. fig 6.)

Robust, subcylindrical, parallel, black, the second and third joints of the antennæ and the tibiæ fulvous; thorax finely punctured and pubescent, the sides obscure reddish; elytra very closely punctate-striate, each with a narrow transverse red band below the shoulder.
Length 2 lines.
Head finely rugose at the vertex, pubescent; labrum black; antennæ extending nearly to the base of the thorax; the latter twice as broad as long, very closely punctured, the sides finely pubescent, of an obscure reddish-fulvous colour, and obsoletely depressed, the disc with a narrow obscure smooth central line; scutellum broad, glabrous; elytra nearly parallel, the basal margin distinctly raised near the scutellum, the punctures deep and slightly transverse in shape, more finely impressed posteriorly, each elytron with a narrow transversely-shaped red band, the band extending as far as the third stria from the suture, but not reaching the humeral callus.

Hab. GUATEMALA, near the city 5000 feet (*Champion*).

The single, apparently female, specimen before me differs sufficiently from any of its allies to justify its being treated as distinct; the thorax is extremely closely punctured, especially at the sides, where the punctures are partly confluent and the ground-colour obscure reddish; the elytral band commences in front of the humeral callus, and after extending downwards to about a third of the length of the elytra, turns nearly at a right angle inwards towards the suture, and the posterior margin of the band is nearly straight, the anterior one slightly curved. The shape of the elytral band, the punctuation of the thorax and its colour, and the rather long antennæ will help to distinguish *E. regularis*.

13. **Euryscopa parvula.** (Tab. XXXVII. fig. 7.)

Narrowly elongate, black; head and thorax densely pubescent, finely and closely punctured; elytra strongly punctate-striate anteriorly, finely so posteriorly, the shoulder with a red subquadrate spot.
Length 1¼ line.

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

This is a very small species which I cannot identify with any *Euryscopa* yet described, although it may be identical with one or the other of the North-American forms described by Crotch. The labrum is black; the antennæ are black, but with the second and third joints obscure fulvous. The thorax is much longer than in *E. pilatei* (being about one half broader than long), finely and rather closely punctured, and clothed (like the head) with long white pubescence. The scutellum is glabrous, and impressed with a few punctures. The elytra are rather strongly narrowed posteriorly; the punctuation is strong anteriorly, but much finer towards the apex, and the punctures are not very closely placed; the red shoulder-spot is of an elongate-subquadrate shape, extending inwards to the middle and downwards to less than a third of the elytral length, the humeral callus itself remaining of the black ground-colour. The legs are entirely black. Crotch's description of *E. lecontei* is too short and superficial to distinguish that species from the many closely allied and similarly-coloured forms; the author describes the thorax as "coarsely punctured" (so that *E. lecontei* cannot be identical with *E. parvula*), but he does not even mention the colour of the elytra.

14. **Euryscopa** —— ?

Black; labrum fulvous; head and thorax pubescent; elytra regularly punctate-striate, glabrous, a quadrate spot at the shoulder fulvous.

Length 2 lines.

Hab. MEXICO, Hacienda de Bleados in San Luis Potosi (*Dr. Palmer*).

The single example obtained seems closely allied to *E. fulvilabris*, but differs from it in some minor details: the thorax is more finely punctured, and (instead of having a central raised line) has a broader smooth longitudinal space down the middle; the scutellum is pubescent (as in *E. fulvilabris*); the elytra are rather more finely punctured, and the fulvous humeral spot (although not larger and similarly occupying the callus) is almost quadrate in shape, its inner edge being straight and not oblique. In the absence of further material I have, at present, only pointed out the differences between this insect and *E. fulvilabris*.

PROCTOPHANA (p. 32).

Proctophana basalis (p. 32).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).

These localities extend considerably the geographical distribution of this species.

2. **Proctophana fulvicollis.** (Tab. XXXVII. fig. 8.)

Broadly subquadrate, purplish-black; thorax fulvous, pubescent at the sides; elytra punctate-striate, a large transverse band at the base, and an elongate spot at the apex, fulvous.

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

♀. Head dark purplish, the vertex swollen, impunctate, the lower portion closely and strongly punctured near the eyes, the latter slightly notched; antennæ not quite extending to the base of the thorax, black, the second and third joints obscure fulvous, the latter smaller than the preceding joint, the others strongly transversely serrate; thorax more than twice as broad as long at the base, the sides perfectly straight though rapidly converging, the disc fulvous, the anterior and posterior margins black, the surface strongly but irregularly punctured, obsoletely depressed at the sides, the latter pubescent, the posterior margin strongly oblique at the sides, its median lobe straight at the middle; scutellum black, triangular, impunctate; elytra broad, not very evenly, but rather strongly, punctate-striate (each elytron with ten rows of punctures), the interstices slightly transversely wrinkled (when viewed in a certain way), the fulvous portion surrounded by the black margins and interrupted at the middle by a broad mesially widened dark purplish band; femora fulvous at the base, the tibiæ more or less fulvous, closely pubescent; last abdominal segment with a deep fovea.

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

A single female specimen. *P. fulvicollis* forms the third known species of the genus *Proctophana*; it has the humeral callus very prominent and the elytral lobe strongly developed: this latter is closely and irregularly punctured.

DACHRYS (p. 33).

Dachrys bipartita (p. 33).

To the locality given, add:—PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

The Panama examples do not seem to differ from the typical form from Nicaragua except in size, our specimens varying from one to two lines in length. *D. bipartita* seems to be closely allied to *D. pusilla*, Lac., but differs from it in the anterior fulvous portion of the elytra being quadrate in shape and not prolonged suturally.

BABIA (p. 33).

Babia pudica (p. 33).

According to Lacordaire's description the red basal spot of the elytra commences below the shoulders; I have seen no species of *Babia* from Central America thus coloured.

Babia magnicollis (p. 34).

Though the two specimens before me from Juquila do not quite agree with Lacordaire's description, I must refer them to *B. magnicollis*, the thorax being comparatively long (in one specimen, however, it is decidedly broader than long, in the other nearly as long as broad, the latter agreeing with the description). In these examples the head is extremely finely granulate; the thorax (which, according to Lacordaire, shows no trace of punctuation even under the strongest lens) is extremely minutely

punctured, when seen under a high magnifying-power; and the elytra have the interspaces between the two or three inner striæ closely and finely punctured (of which Lacordaire says nothing). In other details our insect agrees with Lacordaire's description; the long thorax is, however, the characteristic peculiarity of *B. magnicollis*.

Babia stabilis (p. 34).

To the locality Mexico, add:—Iguala and Acapulco in Guerrero, Cuernavaca in Morelos, Huetamo in Michoacan (*Höge*).

Specimens lately received from Herr Höge agree well with the description of this species. These have the antennæ dentate from the fifth joint; the thorax almost impunctate (under a very strong lens minute punctures are visible); and the elytra finely and closely punctate-striate, their interstices being also minutely punctured. These characters and the shape of the red spots of the elytra, as well as the small size of the insect, agree with the author's description.

Babia pulla (p. 34).

To the locality Mexico, add:—Northern Sonora (*Morrison*).

The Sonoran specimens agree so well with Lacordaire's description of *B. pulla* that I refer them to that species. Crotch (Proc. Ac. Phil. 1873, p. 27) treats the latter as a variety of *B. quadriguttata* (Oliv.); but as I have no North-American specimens of either species for examination I am unable to form an opinion on this point, and I am inclined to believe that the two species in question are really distinct. The specimens obtained by the late Mr. Morrison are all smaller in size than *B. quadriguttata*: they have the thorax very finely (instead of distinctly and closely) punctured, but the punctures are only visible under a strong lens; and the elytral striæ regular and plainly visible, and not obscured by very similar punctures on the interstices as in the allied species (although Lacordaire does not mention a difference in this respect between the two insects). The Guatemalan examples do not seem to differ in any important way from the others, but they vary considerably in size amongst themselves.

4 (A). **Babia distinguenda.**

Subquadrate, black; pubescent below; thorax almost imperceptibly punctured; elytra rather strongly punctate-striate, the interstices also distinctly punctured, a humeral and an apical spot reddish-fulvous. Length $1\frac{1}{2}$–$2\frac{1}{2}$ lines.

Hab. MEXICO, El Cameron, Cordova (*Sallé*), Oaxaca (*Höge*); GUATEMALA, San Gerónimo (*Champion*), Las Mercedes (*mus. Stuttgart*).

This species is closely allied to *B. quadriguttata*, but differs from it as follows:—The thorax is microscopically, but the elytra are much more strongly and closely, punctured; and the anterior red spots of the latter are of a different shape, these (instead of having their posterior margin rounded as in *B. quadriguttata*) being concave

behind and extending downwards a little distance along the lateral margin. In *B. distinguenda* the head is either impunctate or extremely minutely punctured; the antennæ are dentate within from the fifth joint; the thorax is at least twice as broad as long (but agrees in shape with that of *B. quadriguttata*); and the elytra have so many extra punctures placed between the more regular striæ that the latter are difficult to define, all the punctures being of nearly equal size, and also a shallow (but distinct) transverse depression below the base. In the Sallé collection this species bears the name of *B. pudica*, Lac., with which I cannot identify it; Lacordaire says (as above remarked) that the humeral spot commences below ("sous") the shoulder, and that the punctuation of the elytra is scarcely visible, while, on the contrary, in the present species it is more strongly impressed than usual. The fifteen specimens received from the above localities agree very nearly with each other; in all, the humeral spot is transversely-subquadrate in shape (extending to the basal and lateral, but not to the sutural, margins), and its posterior margin concave.

4 (B). **Babia amplicollis.**

Babia amplicollis, Deyr. in litt.; Gemm. & Harold, Cat. Col. xii. p. 3298[1].

Oblong, widened posteriorly, black; thorax finely punctured, the sides narrowly flattened; elytra finely punctate-striate, a quadrate humeral and a round apical spot, flavous.
Length 2 lines.

Hab. MEXICO[1], La Parada, Toxpam, San Miguel (*Sallé*).

B. amplicollis although closely allied to *B. quadriguttata* seems to differ sufficiently to justify its separation. It is much larger and more widened posteriorly. The thorax is strongly transverse, and has a narrow but distinctly flattened and much rounded lateral margin (which is not the case in *B. quadriguttata*); and its surface is very closely (though finely) punctured. The elytra have their anterior spots nearly square (that is, their posterior margin, instead of being rounded, is slightly concave or straight), the striæ distinct, and between the first row and the suture a number of irregularly arranged punctures. The specimens contained in the Sallé collection are labelled as above; another, formerly in the collection of Sturm, is labelled *B. consentanea*.

4 (C). **Babia parvula.**

Obscure fulvous below; above black; head punctured near the eyes; thorax extremely finely punctured; elytra widened towards the middle, strongly punctate-striate, the interstices minutely punctured, a subquadrate spot at the base of each, and the apex, rufous.
Length 1 line.

Hab. GUATEMALA, Mirandilla (*Champion*); PANAMA, Caldera, David, San Lorenzo (*Champion*).

This very small species also seems to be closely allied to *B. quadriguttata*, but differs from it in several particulars. The general shape of *B. parvula* is ovate and widened

posteriorly. The head is distinctly impressed with rather elongate punctures near the eyes; the antennæ extend to the base of the thorax and are black, with the exception of the two or three basal joints, which are fulvous. The thorax agrees with that of *B. quadriguttata*, and is finely and sparingly punctured. The elytra are, however, quite different in shape and punctuation, the latter being much stronger and the interstices also are punctured; the humeral fulvous spot extends nearly to the suture and is narrower at the base than at its extremity; and the posterior spot is round and placed at the extreme apex. The legs and under surface are more or less distinctly fulvous. The Guatemalan specimen differs from those from the State of Panama in having the head impunctate, and the basal joint of the antennæ and the legs black; but as I cannot find other differences, I treat it as a variety of the same species.

Babia costalis (p. 34).

To the locality Mexico, add :—Oaxaca (*Sallé*).

This species may be known from its allies by having only a single humeral fulvous mark, the usual hinder spot being absent; the thorax is more or less distinctly punctured at the sides, nearly impunctate on the disc. The species seems to be rare, as I have only seen two specimens as yet.

6. **Babia mexicana.**

Black; the second and third joints of the antennæ fulvous; head and thorax distinctly punctured; elytra strongly punctate-striate, the interstices subconvex, a quadrate humeral and an apical spot on each, fulvous.

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

Head closely and somewhat rugosely punctured; antennæ robust, the fourth and following joints transverse; thorax more than twice as broad as long, the sides but moderately deflexed, the lateral margins rounded, the anterior margin moderately produced, the median lobe of the posterior margin scarcely produced and straight, the surface rather closely and finely punctured; elytra with a slight basal transverse depression, regularly and strongly punctate-striate, the interstices each with a single row of smaller punctures and slightly convex, the shoulders with a subquadrate small fulvous spot, the apex with a round one.

Hab. MEXICO, Cuernavaca (*Sallé*).

B. mexicana may be known from any of the other species of the genus inhabiting our region by the elytra being strongly punctate-striate and with the interstices also punctured; the humeral spot is subquadrate in shape and occupies about half the width of each elytron at the base. The four specimens received agree entirely with each other.

7. **Babia chiriquensis.** (Tab. XXXVII. fig. 9.)

Ovate, convex, black; thorax transverse, impunctate; elytra convex, finely punctate-striate, reddish-fulvous, a broad band across the middle (widened at the suture) black.

Length 2–$2\frac{1}{2}$ lines.

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

B. chiriquensis is a small species of rather convex and subcylindrical shape; it

exactly resembles *Urodera crucifera*, Lac., in the elytral pattern, except in the non-prolongation of the black band along the suture. The thorax is twice as broad as long; its anterior margin is strongly produced in front, but the posterior margin is nearly straight at the sides and but feebly lobed (in which the species differs therefore from the genus *Urodera*); the surface is entirely impunctate, and in some specimens of a bronze tint; and the lateral margin is also impunctate (and not rugose, as is generally the case). The broad black elytral band does not extend in some specimens to the sides, and the anterior margin of this band is concave near the suture. The prosternum is extremely narrow.

B. chiriquensis differs from *B. distinguenda* in the uninterrupted fulvous basal band of the elytra, this band extending to the suture in the present species.

STEREOMA (p. 34).

Stereoma anchoralis (p. 34).

To the locality given, add:—BRAZIL (*coll. Jacoby*).

I think it is somewhat doubtful whether the locality, "Mexico," given by Lacordaire is the true habitat of this species. Amongst the very large amount of material from Central America I have had for examination, not a single example of this proportionately large-sized insect has been found; some years ago, however, I received from Herr F. Baden of Altona a single specimen answering perfectly to Lacordaire's description of the variety of *S. anchoralis*, and this was labelled "Brazil."

URODERA (p. 34).

Urodera crucifera (p. 35).

To the locality given, add:—MEXICO, Ventanas in Durango, Monterey in Nuevo Leon, Tacambaro, Huetamo in Michoacan, Chilpancingo, Iguala in Guerrero, Tapachula in Chiapas (*Höge*), Oaxaca, Etla, Vera Cruz (*Sallé*), Cuernavaca (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); NICARAGUA, Chontales (*Belt*).

A long and careful examination of great numbers of specimens has convinced me that no single character can be pointed out to distinguish with certainty *U. crucifera* from *U. chevrolati* and *U. höpfneri*, Lac.; and I much doubt whether the two latter are anything more than varieties of the first-mentioned species. If the extreme forms with differently-shaped thorax and elytral markings are placed side by side, they may be supposed to represent distinct species; but an examination of the intermediate varieties proves the inutility of separating them. Our examples vary to such a degree that they might with equal propriety be referred to either of the three above-named species described by Lacordaire; neither the more or less transversely-shaped thorax nor the narrower or wider elytral band is a guide for specific separation. I provisionally retain Lacordaire's species as distinct; but the real specific limit of these insects can only be satisfactorily settled by a study of their life-history.

Urodera höpfneri (p. 35).

According to Lacordaire the thorax of *U. höpfneri* is scarcely wider than long: specimens with the thorax thus formed I have not seen, although nearly a hundred from different localities in Mexico are before me. The Guatemalan examples in Sallé's collection labelled *U. höpfneri* I am unable to distinguish from *U. crucifera*.

Urodera chevrolati (p. 35).

To the locality Mexico, add:—Pinos Altos in Chihuahua (*Buchan-Hepburn*), Ventanas in Durango (*Höge*), Almolonga (*Flohr*), Oaxaca, Cordova, Vera Cruz, Etla (*Sallé*).

The specimens I provisionally refer to this species have the thorax more transversely shaped than in *U. crucifera*, and the elytra fulvous, with a narrow oblique transverse black band placed at the middle (this band being generally twice as wide as it is in the examples I identify with *U. crucifera*); but the elytra are sometimes entirely fulvous, or have each a small black lateral spot placed before the middle.

5. Urodera dilaticollis.

Black; thorax much broader than long, with flattened sides, impunctate; elytra fulvous, finely punctate-striate, a central transverse band (angulate at the sides), and the margins narrowly, black.

Var. Elytra with a small black anterior spot.

Length $2\frac{1}{2}$–3 lines.

Somewhat widened posteriorly; the head very shining and impunctate, with the exception of a few punctures near the inner margin of the eyes; antennæ with the third joint fulvous, the other joints black; thorax strongly transverse, the sides flattened and rounded, the median lobe moderately produced, the surface very shining and impunctate; scutellum rather broader than long; elytra narrowed at the base, extremely finely punctate-striate, fulvous, narrowly margined with black, and with a narrow transverse black band at the middle, this band widened at the suture and laterally angulate.

Hab. Mexico, Santa Clara in Chihuahua, Refugio in Durango (*Höge*).

Five specimens. *U. dilaticollis* might at first sight easily be mistaken for *U. crucifera* or *U. chevrolati*; but it differs very considerably from both in the shape of the thorax and elytra. The thorax in the present insect is very shining and smooth, without trace of punctures, and only the flattened sides show the usual fine rugosities; it has the sides rounded and flattened to a much greater degree than in any of our numerous examples of the two above-named allied species; in these latter its sides do not project beyond the elytra. The elytra are distinctly narrowed at the base, giving a posteriorly widened shape to the insect (in opposition to the more narrowed appearance of *U. crucifera*); and the band, instead of being straight as in *U. crucifera*, is angulate at the sides. In the variety, which was obtained at Refugio, the elytral band is replaced by a small black spot; but the structure of the thorax and of the elytra agrees exactly with that of the typical form. *Babia undabunda*, Lac., seems to agree in the markings of the elytra with *U. dilaticollis*; but Lacordaire does not mention the shape of the thorax in that species, which, moreover, inhabits Brazil.

6. **Urodera quadrisignata.**

Urodera quadrisignata, Lac. Monogr. in Mém. Soc. Liége, v. p. 464[1].

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA (*Boucard*).—COLOMBIA [1].

The single specimen from Guatemala agrees well with the author's description, and with examples from Colombia contained in my own collection. In the Guatemalan specimen the thorax is scarcely one half broader than long, finely and closely punctured, and has two distinct oblique depressions close to the basal lobe; the elytra are rather strongly punctate-striate, with a transverse almost regular red basal band (not extending to the suture) and a similarly-coloured small apical spot; the tibiæ are short, strongly dilated, and with an acutely raised lateral and frontal ridge; and the first joint of the anterior tarsi is greatly widened in the male.

Two specimens obtained by M. Boucard at Panama also agree with Lacordaire's description of *U. quadrisignata.*

7. **Urodera inflata** (?).

Urodera inflata, Lac. Monogr. in Mém. Soc. Liége, v. p. 462 [1].

Hab. PANAMA (*Boucard*).—COLOMBIA [1].

It is with some doubt that I refer our Panama specimen to *U. inflata*, so many closely allied forms (some of which are probably mere varieties) having been described. This example differs from the two from the same locality referred by me to *U. quadrisignata,* in having a broader thorax (though agreeing in the punctuation), and in the red basal band of the elytra being connected with a similarly-coloured narrow lateral band which extends quite to the sutural angle. The first-mentioned specimen agrees well with Lacordaire's description of *U. inflata*; the two others may represent a variety of the same species.

SAXINIS (p. 36).

The members of this genus seem to vary amongst themselves to a very great degree, scarcely two specimens agreeing perfectly with each other; and the true limits of the species are at present, I think, very unsatisfactory and doubtful. The division into two sections, as adopted by Lacordaire, of the species with a rounded and the species with a subangulate lateral lobe of the elytra does not give much assistance, as there are several others that are intermediate in this respect. Each sex seems again subject to considerable variation.

Saxinis basilaris (p. 36).

To the Mexican locality given, add:—Oaxaca (*Höge*).

The specimens which I refer to this species agree in the punctuation of the thorax

with Lacordaire's description, these having the middle of the disc very finely and sparingly punctured, the reverse being the case in most of the allied species. Here again, as in many other instances, the shape of the thorax as given by the author seems to be incorrect. The thorax in *S. basilaris* is described as about one third broader than long; in our specimens it is twice as broad as long (which indeed is the shape of the thorax of most of the species of *Saxinis*, if the width of the base is compared with the greatest length across the middle). The elytra in our insect are rather strongly and regularly punctate-striate, the punctuation becoming finer towards the apex and the punctures themselves being somewhat transverse in shape, and there are traces of transverse wrinkles near the base (I cannot say, however, that the interstices are finely alutaceous as given by Lacordaire—they are, on the contrary, shining and with a few fine punctures here and there). In our specimen from Orizaba the humeral spot extends to half the length of the elytra; in those from Oaxaca this spot is shorter (in one specimen, however, extending much nearer to the suture than in the other). In the Sallé collection the name of *S. basilaris* is attached to the Orizaba specimen, but, as may be seen, all doubt is not removed as to the proper identification of the species.

Saxinis quadrina (p. 36).

To the localities given, add:—GUATEMALA, Dueñas (*Champion*), Zapote (*mus. Stuttgart*).

A specimen of this species labelled in Lacordaire's handwriting is contained in the British Museum; I am therefore enabled to give a more detailed description of *S. quadrina* after having carefully compared the specimens from the above localities. These examples are all of a very dark bronze colour or entirely black (like the variety mentioned by the author). The thorax is stated by Lacordaire to be scarcely broader than long, but this only applies to the male insect, the female having a considerably broader thorax; the disc in both sexes is very finely and not very closely punctured, the punctuation becoming, however, very close at the sides. The elytra may be described as rather regularly punctate-striate, the striæ consisting of single rows of punctures which diminish gradually in size towards the apex; the interstices are more or less convex (but not strongly so) and impunctate; and the red humeral mark is of nearly quadrate shape, with its posterior margin perfectly straight. *S. quadrina* varies from $1\frac{1}{2}$–$2\frac{1}{2}$ lines in length.

2 (A). **Saxinis sonorensis.** (Tab. XXXVII. fig. 10.)

Bluish-green; head rugosely punctured; thorax closely and distinctly punctate; elytra closely punctate-striate, the interstices more finely punctured, the shoulders with a rounded reddish-fulvous spot.

Length $1\frac{3}{4}$–2 lines.

Head very closely punctured, with longitudinal raised strigæ; antennæ with the joints transverse from the

fourth outwardly, the basal joint metallic bluish, the third joint fulvous; thorax one third broader than long in the male, distinctly broader in the female, very closely and distinctly punctured on the disc, a little more strongly but less closely so at the sides, the anterior margin strongly produced at the middle; elytra with closely approached rows of rather deep punctures, the interstices also closely and finely punctured and more or less transversely rugose.

Hab. MEXICO, Northern Sonora (*Morrison*), Juquila, Oaxaca, La Parada (*Sallé*).

I cannot treat *S. sonorensis* as a variety of *S. quadrina* or refer it to any of the species described by Lacordaire, the fifteen specimens received being constant in the above-mentioned particulars. The insect averages larger in size than *S. quadrina*, and is of a bluish-green colour. The thorax instead of being very finely and rather remotely punctured is very closely and much more strongly punctate on the disc. The elytra are very differently punctured to those of *S. quadrina*, the punctures being so closely arranged below each other as to form almost continuous striæ, and the interstices are also closely but finely punctured; and the humeral spot (which in *S. quadrina* is quadrate) has its posterior margin rounded—it extends inwards to half the width and downwards to not quite half the elytral length. A certain number of specimens, also obtained in Northern Sonora, differ from the type in the much less closely punctured thorax, and in the rather smaller red humeral spot; but I cannot find any other characters of importance by which to separate them (they may still be distinguished from *S. quadrina* by the dark bluish or greenish colour, and the punctuation of the elytra and their more rounded red spot). The other Mexican examples agree in the punctuation of the thorax and in that of the elytra, but they differ in the form of the humeral spot (this being shaped as in *S. quadrina*); it is therefore impossible to say with certainty whether these specimens represent another closely allied species or a variety of *S. sonorensis*, the latter being the most probable.

2 (B). **Saxinis irregularis.**

Metallic dark blue; thorax shining, rather remotely punctured; elytra strongly and irregularly punctured anteriorly, each with a subquadrate fulvous humeral spot.

Length 1½ line.

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

The thorax in this species is not closely and rather evenly punctured throughout, very shining, and of a metallic dark blue colour; it is about one half broader than long, but more transverse in the female. The scutellum is closely and strongly punctured. The elytra are very strongly and closely punctured, the punctures being all of similar size and not intermixed with smaller ones and scarcely showing a trace of a linear arrangement; this punctuation extends also to the fulvous humeral spot, the latter being similar in shape to that of *S. quadrina*. *S. irregularis* is therefore principally distinguished amongst its allies by the punctuation of the thorax being remote and that of the elytra irregular; in most of its congeners the thorax is more closely punctured at the sides than on the disc, which in the present insect is not the case.

Saxinis saginata (p. 36).

To the locality Mexico, add:—Cuernavaca (*Sallé*), Oaxaca (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

This is the largest species of the genus and it has the lateral lobe of the elytra distinctly angulate; the elytra themselves are very deeply but not very regularly punctate-striate. According to Dr. Horn, *S. saucia*, Leconte, is synonymous with the present insect.

3 (A). **Saxinis högei.** (Tab. XXXVII. fig. 11.)

Metallic greenish-blue; antennæ black; head closely punctured; thorax closely and strongly punctured at the sides; elytra very strongly punctate-striate, the interstices impunctate and rather convex, a subquadrate spot on the shoulders rufous.

Length $1\frac{1}{2}$–2 lines.

Of somewhat posteriorly narrowed shape, the head closely and strongly rugose-punctate, the vertex strigose, the labrum and palpi black; antennæ not quite extending to the base of the thorax, black, the second and third joints obscure fulvous; thorax twice as broad as long, the sides but slightly rounded, the disc remotely, the sides closely and strongly, punctured; scutellum deeply punctured; elytra flattened, but not visibly depressed below the base, very deeply and closely punctate-striate, the interstices smooth and shining, subcostate, the lateral lobe rather rounded and moderately produced, the shoulders with the usual subquadrate fulvous or rufous spot.

Hab. MEXICO, Ventanas in Durango, Tupataro in Guanajuato (*Höge*), Amula and Xucumanatlan in Guerrero (*Smith*).

In its metallic-blue colour *S. högei* most nearly resembles *S. sonorensis*, though differing from that insect and most of its allies in the impunctate and rather convex interstices of the elytra. *S. saginata* is a very closely allied species, but is larger and more robust. The numerous examples obtained all agree in the above particulars, and although they may possibly represent only a small variety of *S. saginata*, I must consider them at present as distinct, no intermediate specimens having come under my notice.

6. **Saxinis hirtipennis.**

Dark greenish-blue; head strigose-punctate; thorax shining, closely punctured at the sides; elytra more opaque, closely punctate-striate and clothed with short pubescence, each with a subquadrate fulvous humeral spot; below densely pubescent.

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

Of broad and flattened shape, metallic greenish-blue, the head very closely longitudinally strigose and finely punctured, the eyes reniform; antennæ extending to the base of the thorax, black, the basal joint obscure metallic blue, the third joint slender and more elongate, the following joints strongly transverse; thorax twice as broad as long, the sides evenly and strongly rounded, the anterior angles produced into a blunt point, the surface transversely convex, very deeply and closely punctured at the sides, more remotely and finely so on the disc; scutellum strongly and closely punctured; elytra slightly depressed below the scutellum, flattened on the disc, distinctly and regularly, but not very strongly, punctate-striate, the interstices finely transversely rugose, sparingly punctured, and clothed with a very short whitish pubescence, the shoulders occupied by a subquadrate fulvous spot extending inwards to the sixth row of

punctures and downwards to the lower part of the strongly produced lateral lobe; underside and legs densely covered with grey pubescence.

Hab. MEXICO, Ventanas in Durango, La Noria in Sinaloa (*Höge*).

This species is easily distinguished from its congeners by the pubescence of the elytra.

ISCHIOPACHYS (p. 37).

Ischiopachys proteus (p. 37).

To the localities given, add:—MEXICO, Cosamaloapam, Cordova, Oaxaca, Tehuantepec (*Sallé*), Chilpancingo in Guerrero (*H. H. Smith*), Cerro de Plumas, Tapachula in Chiapas (*Höge*), Temax in North Yucatan (*Gaumer*); GUATEMALA (*Sallé*).

Several specimens from the above localities are of an entirely metallic blue or green colour, and answer to Lacordaire's varieties C and D.

MONACHUS (p. 38).

We have now to add no less than twelve additional species to this genus, nine of which are described as new. In addition to these, numerous single examples are left undetermined for want of sufficient material.

Monachus guerini (p. 38).

To the localities given, add:—MEXICO, Presidio, Ciudad in Durango (*Forrer*), Yautepec in Morelos, Colima city (*Höge*); GUATEMALA, Rio Maria Linda, Pantaleon, Rio Naranjo (*Champion*), Yzabal (*Sallé*).

Monachus scaphidioides (p. 38).

To the localities given, add:—MEXICO, Colima city (*Höge*), Acaguizotla and Amula in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

In my diagnosis of this species I accidentally omitted to mention the transverse red band of the elytra which does not quite extend to the suture.

Monachus guatemalensis (p. 38).

Var. Elytra reddish-fulvous, the apex only purplish.

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

A single specimen obtained by Mr. Champion in Chiriqui agrees entirely with the type except in the colour of the elytra, the anterior two thirds of which are fulvous and the rest purplish.

Monachus lacertosus (p. 39).

To the Mexican locality given, add :—Atoyac, Teapa (*H. H. Smith*).

We have recently received many specimens of this species from the lower part of the Atlantic slope of the cordillera of Mexico.

Monachus bimaculatus (p. 39).

To the localities given, add :—PANAMA, Bugaba, Caldera, David (*Champion*).

Var. Abdomen entirely pale fulvous.

The numerous specimens from the State of Panama, with one exception, have the entire abdomen as well as the pygidium fulvous. In the type this colour is restricted beneath to the last ventral segment; but as a similarly-coloured specimen was also obtained in the State of Panama, it is probable that the species varies in this respect occasionally. In every other particular the Panama specimens agree with those from Guatemala. *M. basilaris*, Suffr., from Colombia, seems to be very closely allied to *M. bimaculatus*, but to differ, according to the description, in the absence of punctuation below the middle of the elytra, which, on the contrary, is very distinct to the apex in *M. bimaculalus*.

Monachus bicruciatus (p. 40).

To the localities given, add :—MEXICO, Cuernavaca, Etla (*Sallé*), Cerro de Plumas, Oaxaca (*Höge*); GUATEMALA, Dueñas (*Champion*).

Monachus nigritulus (p. 40).

To the localities given, add :—GUATEMALA, Cerro Zunil, San Isidro, San Gerónimo, Senahu (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).

I have already remarked that Central-American specimens are somewhat doubtfully referred to *M. nigritulus*, Suffr.; they agree with the description of the author, however, in the main points, but they have the elytra more strongly punctured. In the male insect the entire head, with the exception of the vertex, and the apices of the tibiæ and the tarsi are fulvous; in the female the head is bluish-black, the labrum only being fulvous; and the colour of the prosternum seems to vary in the different sexes in the same way. In any case, the differences between the Central-American and the Brazilian examples seem to me to be of too slight a character to justify their separation. Specimens from San Gerónimo differ in having the antennæ almost entirely fulvous and the elytra more strongly punctured; but these details vary in the different individuals.

Monachus semipunctatus (p. 41).

To the localities given, add:—Mexico, Cordova (*Sallé*).

Monachus sculptilis (p. 41).

To the Mexican locality given, add:—Orizaba (*Sallé*), Tupataro in Guanajuato (*Höge*).

Herr Höge obtained about twenty specimens of this species during his second expedition. *M. sculptilis* may be known from the allied forms by its entirely opaque upper surface, this part being of a very dark bluish colour; the elytra, which are strongly punctured to the apex and have the interstices at the sides strongly convex, differ further from those of other similarly-coloured species in the more strongly transversely rugose and minutely punctured spaces between the punctures; the legs and antennæ are entirely black, with the exception of the basal two joints of the latter, which are fulvous; the underside is black, with a slight greenish tint; and the prosternum is finely punctured and much broader than long.

12. **Monachus bicolor.**

Clythra bicolor, Fabr. Syst. Eleuth. ii. p. 40[1].
Monachus bicolor, Suffr. Linn. Entom. xv. p. 104[2].

Hab. Panama, Bugaba, Volcan de Chiriqui, Taboga Island (*Champion*).—Brazil [1 2].

The thirty specimens obtained by Mr. Champion at the above localities agree almost entirely with the description given by Suffrian of Fabricius's species, with the exception of the colour of the head; the latter in all the Panama specimens is (as Fabricius states) fulvous like the thorax, instead of blue as described by Suffrian. I cannot, however, find the slightest difference in any other respect between the Panama specimens and Suffrian's description of *M. bicolor*; and it is probable that specimens occasionally occur in which the head is bluish instead of fulvous.

13. **Monachus panamensis.**

Black, the lower part of the head, the base of the antennæ, the thorax, and prosternum fulvous; thorax microscopically punctured; elytra greenish-black, strongly punctate-striate, the interstices finely punctured.

Length $\frac{3}{4}$ line.

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

This small species is no doubt closely allied to *M. gemellus*, Suffr., and *M. bicolor* (Fabr.), without agreeing sufficiently well to be identified with either or with any other *Monachus* described by Suffrian. The head above is generally bluish-black, and the lower part more or less fulvous (in one specimen the entire head is fulvous); the

antennæ, which extend to the base of the thorax, have their terminal joints gradually thickened, and are black, with the basal two or three joints generally fulvous. The thorax is fulvous and opaque, strongly transverse, and (when viewed under a strong lens) closely covered with minute punctures, the extreme posterior margin having, as usual, a deeper row of punctures, the margin itself being black. The elytra are distinctly narrowed at the apex, strongly punctate-striate, and blackish-green or bluish in colour; the striæ commence at a little distance below the base and the punctures composing them gradually become smaller towards the apex; the interstices are extremely finely wrinkled and punctured, and the ninth is distinctly convex. The underside is black, with the exception of the prosternum, the latter being stained with fulvous. The legs are black, the tibiæ slightly stained with fulvous.

M. panamensis differs therefore from *M. gemellus* in the black colour of its upper surface, in the absence of the spots on the thorax, and in the fulvous prosternum and almost black legs. The nearly black colour of the elytra, the punctuation of the thorax, and the fulvous prosternum separate the species from *M. bicolor* (Fabr.). Suffrian, who described the last-named species at length, says nothing about the sculpture of the thorax; but he certainly would have mentioned the colour of the prosternum if it differed from that of the rest of the underside. The seven specimens obtained agree in all the above details.

14. **Monachus puncticollis.**

Black, the head, the base of the antennæ, and the thorax dark fulvous; thorax deeply and closely punctured, opaque; elytra dark greenish, almost imperceptibly punctured except at the base.

Length 1 line.

♀. Head finely rugose, entirely rufous; eyes large, with a narrow and short indentation at the middle; antennæ very short, not extending beyond the middle of the thorax, black, the basal three joints fulvous; thorax twice as broad as long, the sides but slightly narrowed in front, nearly straight, the surface of an opaque reddish-fulvous colour, and closely covered with deep punctures at the middle of the disc and near the base, the anterior portion and the sides much more finely punctured; scutellum not longer than broad, black; elytra dark greenish, but slightly shining, the punctures only distinct at the base and very fine and gradually becoming obsolete posteriorly, the interstices minutely granulate and also sparingly punctured; pygidium black, closely punctured; underside and legs black, shining; prosternum fulvous, much broader than long.

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

The single female specimen obtained differs from any other species from our region in the deeply and closely punctured thorax in connection with the green and scarcely punctured elytra; the thorax is very broad and proportionately long. *M. cribricollis*, Suffr., from Ega, seems to be closely allied, but has a much longer scutellum (nearly twice as long as broad), and the elytra black and shining.

15. **Monachus semiviridis.**

Black, the basal joints of the antennæ and the thorax fulvous, the latter finely rugose-punctate; elytra greenish-æneous, distinctly punctate-striate, the apex nearly impunctate.
Length $\frac{3}{4}$ line.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Very closely resembling *M. puncticollis*, but apparently distinct. The single specimen obtained is a male; nevertheless, the differences shown between this specimen and the female of *M. puncticollis* do not seem to me to be sexual. In the present insect, which is much smaller and more parallel than *M. puncticollis*, the head is obscure piceous; the antennæ are black, with the exception of the basal four joints, these latter being fulvous; the thorax is of the same shape and sculpture as in *M. puncticollis*, although the punctures are proportionately finer, but the elytra are differently punctured, the punctuation being very distinct to below the middle, and the interstices are not finely granulate but shining; and the prosternum is black (instead of fulvous) and not so transverse. In this genus the female insect is, as a rule, more strongly sculptured than the male, and I believe, therefore, that *M. semiviridis* is really distinct from *M. puncticollis*.

16. **Monachus sordidulus.**

Monachus sordidulus, Suffr. Linn. Entom. xv. p. 151[1].

Hab. PANAMA, Taboga I. (*Champion*).—BRAZIL, Bahia[1].

This is the smallest species of *Monachus* known to me from our region, and it agrees in every respect with Suffrian's description; the general colour of the insect is pale flavous. Numerous examples were captured by Mr. Champion.

17. **Monachus simplex.**

Fulvous; antennæ (the basal joints excepted) black; thorax finely but distinctly punctured; elytra very finely punctate-striate, the punctures strongly impressed at the base, fulvous, the extreme basal margin blackish; tarsi piceous.
Length 1 line.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui, Caldera, David (*Champion*).

The nearest allied species to *M. simplex* is apparently *M. sordidulus*, Suffr., which is, however, a much smaller insect, being one of the smallest of the genus, and differs also in several other details. *M. simplex* may be known by its unicolorous fulvous upper and under sides. The basal three or four joints of the antennæ are of the same colour, the other joints being black and distinctly thickened. The thorax is at least twice as broad as long, but rather strongly narrowed in front, the sides slightly rounded; the surface is somewhat closely impressed with rather elongate punctures, the interstices being minutely granulate; and the basal margin is furnished with the usual deeper

row of punctures. The elytra are narrowed towards the apex; the punctures are strongly impressed immediately below the base only, the punctuation becoming very fine beyond and disappearing altogether near the apex; the colour, like that of the thorax, is fulvous, with the exception of the extreme basal margin, the latter being nearly black. The pygidium is finely and closely punctured and also fulvous. The underside shows scarcely any trace of punctuation; the prosternum is nearly twice as broad as long. The tarsi are more or less piceous. A single specimen from Chontales does not seem to differ from the others, except in the breast and the anterior portion of the abdomen being black, which may probably be due to local variation.

18. **Monachus longicornis.**

Piceous or black, the head, antennæ, thorax, and legs fulvous or flavous; antennæ proportionately long; elytra piceous or black, strongly punctate-striate.
Length $\frac{3}{4}$ line.

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

In this small species the antennæ are long and entirely fulvous, and in the male insect extend to beyond the middle of the elytra; the head is flavous and impunctate, and the eyes nearly meet at the vertex; the thorax is fulvous and entirely impunctate, about twice as broad as long, and has the anterior and lateral margins sometimes very narrowly pale flavous; the scutellum is narrowly elongate and raised; the elytra are more or less dark piceous or entirely black, strongly and regularly punctate-striate, the punctures visible to the apex, with the interstices more or less swollen posteriorly and at the sides; and the legs and prosternum are entirely fulvous, the latter being broader than long. The four specimens before me differ but little from each other; but in one the terminal joints of the antennæ are stained with fuscous. The length of these organs will distinguish *M. longicornis* from any similarly-coloured species here enumerated from our region.

19. **Monachus teapensis.**

Black, the head, the basal joints of the antennæ, the sides of the thorax, and the tarsi fulvous; thorax impunctate, opaque; elytra finely punctate-striate, the outer interstice convex.
Var. Head and elytra obscure bluish.
Length $\frac{1}{2}$–$\frac{3}{4}$ line.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

I cannot identify this insect, of which very many specimens have been received, with any of the species described by Suffrian, although it is no doubt very closely allied to several of them, in particular to *M. nigritulus* and *M. scrobiculatus*. It will suffice, therefore, to point out the differences:—In most specimens of *M. teapensis* the head is fulvous, but in some it is bluish-black, the labrum, however, always remaining fulvous; the antennæ have their basal two or three joints fulvous, the others being

black; the thorax has no trace of punctuation, even when seen under a very strong lens, and the middle portion of the disc is occupied by a larger or smaller black patch which sometimes extends nearly to the lateral margins, and there is no row of deep punctures to be seen at the posterior margin (this being very distinct in several closely-allied species); the elytra are generally black, sometimes bluish, with prominent shoulders, and they are strongly and regularly punctate-striate, the punctures, although becoming gradually finer posteriorly, being distinct to the apex, the ninth row consisting of larger punctures, and the following space distinctly raised; the underside and legs are black, but the anterior femora (as well as the base of the two other pairs) are frequently, and the tarsi entirely, fulvous.

If this description is compared with those given by Suffrian of several closely allied forms, it will be seen that *M. teapensis* differs either in coloration or sculpture from any of them. *M. orbicularis*, from Caracas, has a finely punctured thorax, and *M. obscurellus* and *M. scrobiculatus* have yellow legs. In *M. nigritulus* (the thorax of which is not marked with flavous at the sides), as well as in *M. umbrosus*, the punctuation becomes obsolete towards the apex of the elytra.

About 100 examples of *M. teapensis* have been received, all from the Mexican State of Tabasco.

20. **Monachus elegans.**

Black, the head, abdomen, and pygidium flavous; elytra with a broad triangular basal band, narrowed at the suture, red.

Var. Thorax with the anterior and lateral margins narrowly fulvous; elytra red, with a transverse black band below the middle.

Length $1\frac{1}{4}$–$1\frac{3}{4}$ lines.

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

Closely allied to *M. bimaculatus*, but differing in the following particulars:—The head (in most specimens) is entirely flavous, and the eyes in the male insect meet at the top of the vertex; the elytra are similarly punctured, but their anterior half is occupied by a red transverse band which greatly narrows towards the suture, though extending to it. The fulvous portion of the abdomen seems to vary in extent; the pygidium, however, is always of that colour. In the variety the anterior and lateral margins of the thorax are also narrowly fulvous, and the red colour of the elytra predominates, it being interrupted behind the middle by an irregular transverse black band which extends narrowly upwards along the suture to the base. *M. elegans* also differs from *M. bimaculatus* in its larger size, and in the more transversely shaped and less conical thorax. All the specimens agree in having the large red basal band of the elytra extending quite to the suture.

21. **Monachus quadriplagiatus.** (Tab. XXXVII. fig. 12.)

Narrow, subcylindrical, black or fulvous, the basal joints of the antennæ, the thorax and legs fulvous; elytra dark bluish, a spot at the middle, and the apex, fulvous.

Length $\frac{3}{4}$ line.

Of cylindrical and parallel shape; the head impunctate, fulvous; antennæ comparatively long and slender, the lower five joints fulvous, the others black and more or less thickened; thorax about one and a half times broader than long, fulvous, entirely impunctate; scutellum triangular, raised; elytra dark bluish, distinctly punctate-striate, the sixth and seventh rows only indicated by a few punctures, all the striæ obliterated near the apex, the lateral interstices more or less raised, an elongate fulvous spot of variable size at the middle, and a more rounded one at the extreme apex; prosternum broader than long.

Hab. British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Tamahu in Vera Paz (*Champion*); Panama, Bugaba, David in Chiriqui (*Champion*).

Of this small and cylindrically shaped insect five specimens have been received; these, although differing in the colour of the underside and legs, and in the size of the elytral spots, are apparently referable to one and the same species. In one or two of them the pygidium, underside, and legs are fulvous, and in others these parts are nearly black; while in the specimen from British Honduras the median spot of the elytra is nearly connected with the apical one, so as to form a broad lateral band.

22. **Monachus flavipennis.** (Tab. XXXVII. fig. 13.)

Metallic greenish-black, the basal joint of the antennæ fulvous; thorax finely punctured; elytra flavous, strongly punctate-striate, the interstices minutely punctured.

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

Comparatively broad and robust; the upper portion of the head sparingly punctured, brassy-green, the lower part black; labrum dark fulvous; antennæ very short, not extending beyond the middle of the thorax, black, the first joint fulvous, the terminal joints thickened; thorax about two and a half times broader than long, the sides straight, deflexed in front, the surface finely and rather closely punctured, the punctures rather stronger at the base than anteriorly, with a shallow oblique depression on each side near the scutellum; scutellum elongate, acutely pointed; elytra broad, scarcely narrowed posteriorly, the disc somewhat swollen near the scutellum, the surface bright flavous, rather strongly and regularly punctate-striate, the punctuation distinct to the apex, the interstices also impressed with a single row of fine punctures; underside and legs black with a brassy tint; prosternum much broader than long.

Hab. Panama, Volcan de Chiriqui (*Champion*). A single male specimen.

Evidently allied to the Venezuelan *M. hemichlorus*, Suffr., but quite distinct. The thorax is brassy-green, and the underside and legs are also brassy in tint.

23. **Monachus peccator?**

Monachus peccator, Suffr. Linn. Entom. xv. p. 146 [1].

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, San José (*Champion*); Panama, Volcan de Chiriqui (*Champion*).—Venezuela, Caracas [1].

I can only refer doubtfully the three specimens from Central America to Suffrian's species, as they agree in the principal points with his description; but they also show some differences amongst themselves. The general colour of the upper and undersides

is fulvous, the legs also being of this colour in one specimen, in the others the latter are piceous. The thorax in the San José example has two small piceous spots (as in the type); in the others these spots are wanting, and the punctuation is scarcely, if at all, visible. The elytra have the base narrowly margined with piceous, this colour in one specimen extending downwards for a short distance along the suture; the punctures are finer posteriorly, but they do not disappear (as stated by Suffrian). It will be seen, therefore, that without more specimens for comparison it would be inadvisable to describe the present insect as new.

CRYPTOCEPHALUS (p. 42).

In this as in so many other genera of Phytophaga, the separation of specimens into species is very often connected with insuperable difficulties, these insects being subject to great variation; and there is little doubt that many of the species at present regarded as distinct will be found to be mere varieties. Even the punctuation of the elytra, a character used by Suffrian to divide the species into a large number of groups, offers no certain guide; for example, in the same species the transverse smooth space which frequently interrupts the lateral striæ behind the shoulders is present in one, and absent in another specimen, while the striæ themselves do not always run in the same direction in the different individuals. Leeonte has briefly described many North-American species; but short diagnoses in the Cryptocephalidæ, a family represented by so many closely-allied species, even in the same localities, are of no assistance to a monographer, and it is therefore quite possible that some of the species treated as new in this work may prove to be identical with some already described. There are, however, I believe, but few species common to North America and our region, and I have, as far as possible, avoided describing from single or doubtful specimens. Very many additional species have now to be added to our list.

Cryptocephalus abruptus (p. 42).

To the locality Mexico, add:—Santa Clara in Chihuahua, Tupataro in Guanajuato (*Höge*).

I refer two specimens from the above localities to *C. abruptus*. *C. maculipennis*, Suffr., is very probably a variety of this species; it seems only to differ from it in having the elytral bands broken up into spots. Both insects were obtained at Tupataro. Suffrian says nothing about the punctuation of the elytra being arranged in pairs, a character common to both *C. abruptus* and *C. maculipennis*, between which the brown bands are placed; the latter are, without doubt, subject to interruption in various ways.

Cryptocephalus hirtus (p. 42).

To the Mexican locality given, add:—Ciudad in Durango (*Forrer*), Ventanas, Las Vigas (*Höge*), La Parada (*Sallé*), Xucumanatlan in Guerrero (*H. H. Smith*).

Cryptocephalus alternans (p. 42).

To the locality Mexico, add:—Near the city, Tupataro in Guanajuato (*Höge*).

The two specimens obtained by Herr Höge agree very closely with Suffrian's description, and only differ from it in having the sixth and seventh rows of punctures (which according to Suffrian are entirely wanting) indicated by some impressions below the shoulder; the short sixth row is united, however, below the shoulder with the seventh in a hook-like manner. In one specimen the three elytral stripes are strongly marked and black; in the other they are only indistinctly indicated, so that the punctures between which the stripes are placed are here more distinct and blacker than the interstices; in the last-mentioned example the formation of the sixth row of punctures is especially plain, it being obscured in the other by the black colour. The thorax is proportionately very short, and is better described as yellow, with a V-shaped central black mark. The specimen from Tupataro also has a small black spot placed near the lateral margin of the thorax (thus agreeing with Suffrian's description); in the other this spot is enlarged into a hook-like transverse line which divides the yellow colour of the sides. The underside and legs also vary in the amount of black and yellow.

Cryptocephalus semimarginatus (p. 43).

To the Mexican locality, add:—La Parada, Etla (*Sallé*).

It is possible that this insect is only a variety of *C. gemellatus*, Suffr.

Cryptocephalus flavonotatus (p. 43).

To the locality Mexico, add:—Ventanas and Ciudad in Durango (*Höge*).

I refer the three specimens obtained in the State of Durango to this species; they might, however, be almost equally well referred to *C. circumflexus*, Suffr., which is probably nothing more than a variety of *C. flavonotatus*. The Ventanas specimens are large-sized insects ($3\frac{1}{4}$ lines) and agree with the description of the author, with the exception of the colour of the legs, the femora in our examples being yellow with a brown central spot (not yellow with paler knees). The elytra are deeply punctured, and have three transverse dentate brown bands (more plainly visible when seen without a lens). The male insect is unknown to me; Suffrian also only speaks of the female. The example obtained at Ciudad differs considerably from the Ventanas specimens in having the head and thorax entirely dark brown without yellow markings; it also has the thorax shorter and narrower, but similarly punctured, and the elytra marked

exactly as in the type, but with the punctures finer, and the striæ at the sides still more irregularly placed and difficult to trace, although the general arrangement is indicated as in the typical form.

6 (A). **Cryptocephalus difficilis.** (Tab. XXXVII. fig. 14, ♀.)

Dark or yellowish-brown; antennæ (the basal joints excepted) black; thorax smooth (♂), or finely punctured (♀), the margins and two spots at the base bright yellow; elytra deeply punctate-striate, flavous, with three broad transverse brown bands.
Length 2 lines.

Hab. MEXICO, Las Vigas (*Höge*).

Of this species, which is doubtless closely allied to *C. flavonotatus*, if not a variety of that insect, two specimens were obtained by Herr Höge during his second expedition. The ground-colour in the male is bright flavous. The head is finely and sparingly punctured, its middle portion, as well as the disc of the labrum, dark brown; the antennæ are nearly black, with the two basal joints dark fulvous. The thorax is about twice as broad as long, rather strongly narrowed in front, with long and acutely-pointed posterior angles; the surface is shining and scarcely visibly punctured in the male, more distinctly so in the female; the dark brown colour of the disc is interrupted by the narrow anterior and the broadly lateral flavous margins and at the base by two narrow and widely-separated oblique flavous spots which are connected by the narrow similarly-coloured portion of the posterior margin. The elytra have the transverse brown bands much more pronounced than they are in *C. flavonotatus*; the punctures are not so closely placed, and the interstices are much flatter; the fifth row (which in *C. flavonotatus* forms an acute angle below the middle, and is joined at that place to the posterior end of the sixth row) is in part broken up and irregularly arranged, the punctures being placed in two rows (indicating the fifth and sixth rows), but is continued anteriorly to the shoulder; the seventh and eighth rows, which are joined at the apex (as in *C flavonotatus*), form each below the middle a short transverse angle, and enclose between them a smooth, slightly raised transverse space, immediately above which there is another similar transverse space. The underside of the male is much lighter in colour than that of the female, the latter also having the legs entirely brown, the femora in the other sex being marked with a yellow spot at the base. *C. difficilis* differs, therefore, from *C. flavonotatus* in the thorax being less closely punctured and more shining, and in having the brown and yellow colours sharply divided, and also in the different system of punctuation of the elytra. The female insect is figured.

6 (B). **Cryptocephalus dissolutus.**

Pale flavous or fulvous, the terminal joints of the antennæ black; thorax extremely finely punctured, flavous, a lozenge-shaped spot at the middle, fulvous; elytra flavous, a transverse band at the base, two spots below the middle and one at the apex, dark brown.
Length 3 lines.

Hab. MEXICO, La Parada (*Sallé*); GUATEMALA, Dueñas (*mus. Stuttgart*).

C. dissolutus closely resembles *C. flavonotatus*, and, to a less degree, *C. difficilis*; it seems, however, to differ sufficiently from both to justify its separation, if characters derived from colour and elytral punctuation are considered of any specific value. It will be sufficient to point out the differences between the present and the allied species:—In *C. dissolutus* the thorax is nearly impunctate on the disc, and has a fulvous lozenge-shaped spot (this spot in the Guatemalan specimen is almost obsolete). The elytra have only two bands (each broken up into two spots), and a small spot at the apex placed between the third and fourth, and the seventh and eighth rows; these rows are, as usual, connected posteriorly, as are also the shorter fifth and sixth; the seventh and eighth rows are only distinct anteriorly near the shoulder, and below this they are connected by a few transversely placed punctures which surround a smooth transverse space. The underside and legs are entirely fulvous. Two specimens, both females.

6 (c). **Cryptocephalus separatus.**

Obscure flavous, the antennæ (the basal joints excepted) black; thorax impunctate; elytra flavous, strongly punctate-striate, the striæ not interrupted by a raised space, a spot on the shoulder, an angular transverse band at the base, another band below the middle, and a spot at the apex, dark brown.

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

♀. Head depressed, finely punctured, the middle stained with fulvous; antennæ two thirds the length of the body, black, the lower four joints fulvous; thorax twice as broad as long, widened at the middle, the sides rounded, the surface entirely impunctate, obscure flavous; scutellum flavous, its apex truncate; elytra robust, cylindrical and parallel, the punctured striæ strong and regular, the fifth and sixth rows abbreviated and connected before the apex, the seventh row represented anteriorly by a few remotely-placed punctures only, but complete posteriorly, and there joined to the eighth row, the interstices finely transversely rugose, the ground-colour flavous (brighter than that of the thorax), the extreme basal margin black, a spot on the shoulder, a transverse band of angulate shape at the base, a similarly shaped band below the middle extending to the lateral margin, an obscure spot at the junction of the striæ near the apex, and the extreme lateral margin posteriorly, dark brown; underside obscure flavous, the breast darker and clothed with yellowish hairs; legs obscure fulvous.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

C. separatus somewhat resembles *C. sordidus* in coloration, but differs from that species in having the dark bands of the elytra strongly marked, and their punctuation finer and differently arranged; there is an entire absence of a transversely raised space and the rows of punctures are nearly all distinct. *C. dissolutus* is a still more closely allied species of almost exactly similar markings, but that insect has the lateral rows of punctures on the elytra interrupted by a comparatively broad impunctate space, and the interspaces smooth (not finely rugose); it is, however, possible that *C. separatus* may only be a local form of *C. dissolutus*. A single female example, captured in July 1888.

Cryptocephalus plagiatus (p. 45).

To the Mexican locality given, add:—Ciudad in Durango (*Forrer*), Xucumanatlan, Chilpancingo, Amula in Guerrero (*H. H. Smith*), Cerro de Plumas (*Höge*).

It seems to me almost impossible to refer with certainty several species with nearly similar and equally variable elytral pattern to either of those described by Suffrian, notwithstanding the large amount of material now available for examination. The descriptions of *C. plagiatus*, *C. patheticus*, and *C. rhombeus*, Suffr., agree only partially with some of the Central-American specimens; and, if the necessary allowance is made for variation, our examples might equally well be referred to either of them. In *C. plagiatus*, for example, to which I refer the specimens from the above-mentioned localities, the thorax is described as black, with yellow interrupted anterior and lateral margins, and two similarly-coloured basal spots. In our specimens, however, the anterior margin of the thorax is entirely yellow and not interrupted; and the elytra, instead of having eight, have only seven yellow spots (the small basal spot on the lateral margin being connected with the large one below it), and the spot near the scutellum (which is described as being the largest of the three) is in several examples the smallest. As our insect agrees in its other characters with Suffrian's description, I prefer to point out these differences, and to look upon them as varietal rather than specific.

10 (A). **Cryptocephalus godmani.**

Black; the head, the anterior and lateral margins of the thorax, as well as two spots at the base of the latter, yellow; elytra black, each with seven or eight more or less interrupted yellow spots, deeply punctate-striate, the punctures interrupted laterally; legs spotted with black and yellow.

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

Head bright yellow, with a central longitudinal and sparingly punctured black stripe, the rest of the surface impunctate; labrum and mandibles obscure piceous; antennæ as long as the body, black, the lower five joints fulvous; thorax more than twice as broad as long, the sides nearly straight, and narrowed in front the surface entirely impunctate, black, the anterior margin narrowly, the anterior and posterior angles broadly, a central short stripe anteriorly, and two oblique spots at the base (sometimes preceded by two other small yellow spots), yellow; scutellum black; elytra cylindrical, strongly punctate-striate, the fifth to the eighth rows interrupted anteriorly and posteriorly by several transverse smooth and raised spaces, an elongate spot near the scutellum, an angular narrow stripe at the middle of the base, the lateral margin to the middle, the raised transverse spaces, and three spots placed triangularly (the two upper ones each consisting of three elongate short stripes, separated by the black punctures, and the hinder one transversely shaped and composed of two markings) near the apex, bright yellow; below black, the anterior coxæ, the prosternum, and a quadrate spot at the base of the first ventral segment, yellow; legs dark fulvous, the apex of the femora with a yellow spot margined with black; pygidium black, with two yellow spots.

Hab. Mexico, Omilteme and Chilpancingo in Guerrero (*H. H. Smith*).

C. godmani is no doubt somewhat closely allied to *C. plagiatus*, Suffr., but shows, I think, sufficient differences to be considered distinct. The black disc of the thorax is divided anteriorly by a narrow yellow stripe, which is connected with the similarly-coloured anterior margin. The elytra are more deeply punctured, and the rows at the sides are interrupted by three, partly united, transverse raised spaces, which form the largest of the yellow spots; these latter are also differently shaped to those of *C. plagiatus*; and the lateral margin is yellow from the base to the middle. The

femora have a yellow spot margined with black near the apex. The three specimens lately received agree in these particulars in both sexes.

Cryptocephalus patheticus (p. 45). (Tab. III. fig. 17.)

To the localities given, add :—GUATEMALA, Zapote, Guatemala city, San Gerónimo, Chacoj (*Champion*), Chinautla (*Salvin*), Llano grande (*mus. Stuttgart*); PANAMA, Bugaba (*Champion*).

As already remarked on p. 45 this species is subject to great variation, and it cannot be separated from *C. ocellatus* by its colour only; the elytra have a few or many yellow spots which are arranged as in *C. plagiatus* and *C.* 14-*pustulatus*. *C. patheticus* may, however, be distinguished by the punctured striæ being interrupted laterally, and separated by a transverse smooth space, a character peculiar to many species of *Cryptocephalus*. The thorax seems invariably to have the sides marked with flavous and the two basal spots more or less plainly visible; but the underside varies from black or partially black to flavous. A single specimen from Bugaba, which I refer somewhat doubtfully to *C. patheticus*, has the thorax dark brown, with two lateral subquadrate yellow spots, and the two usual ones at the base very strongly marked, and the elytra with eight well-developed spots.

By an oversight the reference to the Plate was omitted on p. 45. The Guatemalan examples referred by me to *C. rhombeus* (p. 52) prove to belong to this species.

11 (A). **Cryptocephalus affinis.**

Flavous; thorax impunctate, fulvous, the sides and spots at the base obscure flavous; elytra strongly punctate-striate, with a transverse lateral smooth space, each with eight large flavous spots (3 . 2 . 2 . 1) divided by dark brown narrow bands.

Var. The elytral dark bands only indicated by short markings.

Length 1-2 lines.

Hab. MEXICO, Iguala, Acapulco (*Höge*), Tepetlapa in Guerrero (*H. H. Smith*); GUATEMALA, Chacoj in Vera Paz (*Champion*).

At first sight, *C. affinis* seems only to be a colour-variety of *C. patheticus*; but as all the specimens of both sexes obtained by Herr Höge agree with each other in the following details, I am obliged to separate them from *C. patheticus* and *C. plagiatus*. The head is flavous, with the usual darker central line at the vertex, and nearly impunctate; the antennæ extend to beyond the middle of the elytra, and have their basal six joints fulvous, the others darker. The thorax is quite impunctate, in the male scarcely twice as broad as long, and has the sides strongly deflexed; the posterior angles are acute, but not prolonged; the disc is darker or paler fulvous, with a trace of the usual lighter margins and basal spots; and the posterior margin is narrowly edged with black. The elytra in the well-marked specimens have similarly-placed and the same number of spots as in the allied forms; the eighth row of punctures

forms an angle before the middle and is connected with the fifth row, above which a narrow transverse space is bounded by a similar transverse row of punctures connecting the commencement of the sixth and seventh rows. These last-mentioned characters are nearly the same as in *C. patheticus*; but in the present insect there are no black markings on the underside or on the pygidium, these parts in all the specimens being entirely fulvous. The elytral markings are better defined in some examples, the others having only a few darker spots in place of the bands; the interstices are apparently more convex in the male than in the female. Specimens of the last-mentioned sex from Iguala are twice the size of the males from Acapulco, and are of a bright flavous colour. A single example from Guatemala is apparently referable to the same species.

11 (B). **Cryptocephalus testudineus.**

Flavous or fulvous; antennæ as long as the body, black, the basal joints fulvous; thorax impunctate, the sides and two obscure spots at the base yellowish; elytra with eight large flavous spots divided by narrow fulvous bands, the interstices more or less convex.

Length 1½ line.

Hab. MEXICO, Oaxaca (*Höge*); GUATEMALA, near the city (*Champion*), Coban in Vera Paz (*Conradt*).

C. testudineus resembles in the pattern of the elytra *C.* 14-*pustulatus*, *C. ocellatus*, and several other species; but I cannot identify it with either of these, the antennæ being very long and extending quite to the apex of the elytra. The head is entirely fulvous, and the space between the eyes on the vertex is somewhat rugosely punctured; the antennæ are black, with the basal four joints fulvous. The thorax is entirely impunctate, strongly convex, and proportionately long; fulvous in colour, with the margins and the usual two basal spots very obscurely flavous. The elytra have each eight large flavous spots in the same position as the allied species (3 . 2 . 2 . 1), these spots, however, being divided by the rows of closely placed dark brown punctures into short longitudinal stripes; the eighth row is interrupted before the middle by two short transverse rows of punctures which enclose between them a raised and smooth space, a character common to many species of this genus; the interstices are also longitudinally raised; and, moreover, there is a rather distinct transverse depression before the middle. The underside and legs are entirely flavous or fulvous. The four male specimens received do not vary from each other in any marked degree. The transversely raised smooth space at the sides of the elytra would place *C. testudineus* near *C. patheticus* and other species of Suffrian's eleventh group, from all of which it differs in the long antennæ and in the deep punctuation and interrupted flavous spots of the elytra. The brown colour of the elytral bands is much more intense in the specimen from Mexico.

Cryptocephalus porosus (p. 46).

To the locality Mexico, add :—Juquila (*Sallé*), Las Vigas (*Höge*).

Cryptocephalus loratus (p. 46).

To the locality Mexico, add :—Xucumanatlan and Amula in Guerrero (*H. H. Smith*), Cuernavaca (*Sallé*).

In this species the dark elytral bands are apt to join each other, or, on the contrary, to become obsolete; it is the two outer ones which generally unite. The thorax is entirely impunctate, and the outer rows of punctures on the elytra are more or less distinctly interrupted before and below the middle.

Cryptocephalus rimosus (p. 46).

To the Mexican localities given, add :—Ventanas in Durango (*Höge*).

Cryptocephalus octodecimpunctatus (p. 46).

To the Mexican localities given, add :—Temax in North Yucatan (*Gaumer*).

Cryptocephalus quaternarius (p. 47).

To the Guatemalan locality given, add :—Sinanja (*Champion*), Coban in Vera Paz (*Conradt*).

20 (A). **Cryptocephalus forreri.** (Tab. XXXVII. fig. 15.)

Broad and robust, fulvous; head finely, the thorax more strongly and closely, punctured; elytra flavous, strongly subgeminate-punctate, the fifth row deeply indented in two places, each elytron with about five brown spots placed between the striæ.

Length 3 lines.

♀. Head finely rugosely punctured at the vertex, the parts of the mouth piceous; antennæ entirely fulvous, extending to the middle of the body; thorax twice as broad as long, strongly narrowed anteriorly, the sides nearly straight, the posterior angles strongly produced, the posterior margin finely serrate, and, like the lateral margins, narrowly black, the surface closely and somewhat rugosely punctured, fulvous, with a small almost obsolete piceous spot at the sides, the disc with an indistinct oblique depression on each side near the base; scutellum flavous, margined with piceous; elytra broad, scarcely narrowed behind, flavous, strongly punctured, the scutellar row consisting of five widely placed punctures, the other rows arranged in pairs, the first and second confluent below the middle, the third and fourth near the apex, the four following rows interrupted below the shoulder (the seventh and eighth united) and bounded lower down by a transverse row of punctures connecting the fifth with the eighth row (the fifth row curved abruptly inwards in two places and joining the eighth near the apex), the markings arranged thus—at the junction of the first and second rows a brown spot is placed, and similar spots occupy the middle of the following two rows, the junction of the fifth and sixth striæ, the humeral callus, and the ends of the two middle pairs of punctures, another spot is also visible below the first curve of the fifth row, and the punctures themselves are also dark brown; pygidium rugosely punctured, fulvous, like the rest of the finely pubescent underside and legs.

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

The single female specimen received differs too much from any of its allies of Suffrian's eleventh group, with angulate fifth row of punctures, to identify it with either of these. *C. forreri* is a large and robust species, which may be known by the finely and rugosely punctured thorax and the other details mentioned above. When viewed without a lens, the elytra seem to have about eight small brown spots, caused by the deeper coloured interior of the punctures, the latter uniting here and there.

Cryptocephalus insolidus (p. 48).

To the locality given, add:—GUATEMALA, Calderas (*Champion*).

No specimen from Mexico has come under my observation; the one obtained by Mr. Champion in Guatemala agrees sufficiently well with Suffrian's description of *C. insolidus* to be identified with it.

Cryptocephalus maculipennis (p. 48).

To the Mexican localities given, add:—Durango city, Iguala and Amula in Guerrero, Tupataro in Guanajuato, Yautepec in Morelos (*Höge*).

As already remarked when speaking of *C. abruptus* (Suppl., p. 99), there seems but little to distinguish *C. maculipennis* from that species. The elytra in the present insect are also punctured in pairs (not mentioned by Suffrian); and, instead of the three black bands, have three rows of short brown longitudinal spots placed between the punctures, if counted longitudinally or transversely.

23 (A). **Cryptocephalus subcurvatus.** (Tab. XXXVII. fig. 16.)

Fulvous; thorax impunctate, the margins and two spots near the base obscure flavous; elytra strongly punctate-striate, the eighth row joined to the sixth anteriorly, flavous, a spot at the shoulders, another at the apex, a semilunate band at the base, and a transverse band below the middle, black.

Length 2–2½ lines.

Head punctured on the vertex, the latter of a darker brown tint than the lower portion of the face; labrum piceous; antennæ black, the three or four basal joints fulvous; thorax subcylindrical, narrowed in front, entirely impunctate, with an obsolete oblique depression on each side, fulvous, the margins (the anterior one narrowly) and two oblique spots near the base flavous; scutellum black; elytra rather regularly and deeply punctate-striate, the sixth row abbreviated before the middle and joined by a transverse row of punctures to the eighth, the seventh and eighth rows also only visible just below the shoulder, the third and fourth and the fifth and eighth rows united at the apex, the surface flavous with the following black markings—a semilunate band at the base, the ends of which extend to the fourth row of punctures and upwards to the basal margin, a slightly oblique band below the middle, dentate in the centre and a little widened at the suture, and a small spot on the shoulder and a larger one at the junction of the united striæ at the apex; the underside and legs dark fulvous.

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

The curved elytral band surrounding the scutellum principally separates *C. subcurvatus* from its allies. The interrupted striæ form in some specimens a smooth transverse

space which in others is almost entirely absent, thus proving that reliance cannot always be placed on the sculpture of the elytra as a specific character; there is sometimes a black streak placed along the suture near the apex. *C. subcurvatus* is somewhat closely allied to *C. atrofasciatus*, Jac.

Cryptocephalus irroratus (p. 49).

To the localities given, add:—MEXICO, Villa Lerdo in Durango, Colima city, Cuernavaca, Acapulco in Guerrero, Jalapa (*Höge*), Teapa (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, San Miguel in the Pearl Islands (*Champion*).

C. irroratus is a comparatively short and robust species, strongly narrowed posteriorly, with a greatly developed and somewhat gibbous thorax. The coloration seems to be subject to great variation. Suffrian describes the elytra as brown, with three sinuate, obscure, transverse, flavous bands (this does not altogether answer to the insects referred by me to *C. irroratus*), a definition I would rather give as yellow, with three more or less distinct brown transverse bands; these bands are frequently broken up into spots, but where they are more connected they separate well the yellow colour, which does not at all appear obsolete (as Suffrian states in his diagnosis); the punctuation is very deep, widely placed, and partly irregular in both sexes, the punctures being frequently connected by transverse wrinkles, and there is no trace of any arrangement in pairs; and frequently the first brown band is only indicated by a sutural spot. *C. irroratus* may principally be known by the very coarse and distant punctures of the elytra; the specimen from Panistlahuaca mentioned on p. 49 represents, I think, a closely allied but distinct species.

Cryptocephalus trizonatus (p. 49).

To the localities given, add:—Acapulco, Las Vigas, Tapachula in Chiapas (*Höge*), Atoyac in Vera Cruz (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, El Reposo, San Gerónimo, San Joaquin (*Champion*); COSTA RICA (*Van Patten*), Cache, Irazu (*Rogers*); PANAMA, Volcan de Chiriqui, Caldera, David, Peña Blanca, Taboga I. (*Champion*).

Nearly all the numerous specimens received from the State of Panama belong to a pale variety in which the brown bands of the elytra are separated into spots or even only indicated. *C. trizonatus* may be better described as having the elytra yellow, with two transverse brown bands, and the thorax with a similar band at the middle; this band on the thorax in some specimens is connected with the base by a narrow streak on each side. The punctuation of the elytra also varies, the punctures being placed more closely in some examples than in others. *C. trizonatus* proves to be a widely distributed and common insect in Central America.

Cryptocephalus guatemalensis (p. 49).

To the localities given, add:—MEXICO, Presidio, Ventanas (*Forrer*), Durango city, Guadalajara in Jalisco (*Höge*); GUATEMALA, Chimaltenango (*Conradt*).

Cryptocephalus xanthospilus (p. 50).

To the locality Mexico, add:—Colima city (*Höge*), Tepetlapa in Guerrero (*H. H. Smith*), Panistlahuaca (*Sallé*).

I give a renewed description of this species, that of Suffrian being no doubt based upon insufficient material:—

Dark brown; thorax finely rugose, the anterior margin narrowly and the lateral margins broadly, as well as two narrow spots at the base, bright yellow; elytra coarsely and closely punctate-striate, the basal margin, a narrow central transverse band, and the apex (two small brown spots excepted) yellow.

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

Head punctured at the vertex, brown, a narrow transverse space between the eyes flavous; antennæ more than two-thirds the length of the body, the basal five joints fulvous, the others nearly black; thorax about one half broader than long, very strongly narrowed in front, the sides rounded, the surface finely rugosely punctured throughout, dark brown, the anterior margin very narrowly, the lateral margins broadly, yellow, the base with a short oblique yellow stripe on each side, the stripes not connected with each other; scutellum brown; elytra slightly narrowed posteriorly, the punctures very deep and closely placed, but interrupted in the centre by the transverse flavous band (across which the fifth and seventh rows form short oblique rows of three punctures each) and again at the apex (so that only the remnants of the fourth and fifth and sixth and tenth rows of punctures, joined posteriorly, are visible); the under-side and legs dark brown, a spot at the side of the breast above the epipleuræ and a narrow margin to the ventral segments yellow.

Specimens from the above localities agree very closely with Suffrian's description. The elytral punctuation varies somewhat in our specimens, these having a short, strongly oblique row of three or four punctures intersecting the central yellow band, a character not mentioned by Suffrian. The elytra may be described as yellow, with two transverse regular bands, one before, the other below the middle, and two small spots within the apex of each, brown.

27 (A). **Cryptocephalus complicatus.** (Tab. XXXVII. fig. 17.)

Flavous, variegated with brown; thorax dark brown, with eight large yellow spots placed transversely; elytra coarsely subgeminate-punctate-striate, flavous, this colour separated by longitudinal and transverse irregular stripes; femora brown, with a large yellow spot near the apex.

Length 2–$2\frac{1}{2}$ lines.

Head flavous, a spot on the vertex, a short central line, and the base of the antennæ brown; antennæ two-thirds the length of the body, the basal five joints fulvous, the others black; thorax more than twice as broad as long at the base, greatly narrowed in front, the posterior angles acutely produced, the surface almost imperceptibly punctured, dark brown, with four flavous spots placed along the anterior and four others along the posterior margin, the base with a short but distinct depression on each side near the scutellum; scutellum dark brown; elytra with the rows of punctures arranged in pairs, and placed in dark brown striæ below the middle, the fifth row connected at the apex with the eighth, but in front of this making a wide turn inwards (so that it closely approaches the preceding rows and then turns back again towards the shoulder), the broader space caused by this change of direction of the fifth row having some

few brown punctures, the eighth row interrupted near the middle by a smooth raised yellow transverse space, the complicated markings may be described thus—three transverse brown bands, one before and one below the middle (both widened at the suture), and one near the apex, these bands separating the yellow colour into differently-shaped spaces (five, more or less irregular, placed transversely across the base, four at the middle, six, longitudinal in shape, below the middle, and one, in the shape of a transverse spot, at the apex); pygidium yellow, with the margins and a central stripe brown; the underside entirely flavous, or with the sides of the breast and the ventral segments spotted with brown; femora flavous, marked with a piceous ring at the middle, their apices, as well as the tibiæ and tarsi, brown.

Hab. PANAMA, Bugaba (*Champion*).

C. complicatus, of which male and female specimens were obtained by Mr. Champion, seems to be closely allied to *C. maculipennis* and *C. irroratus*; but may be at once known from either by the thorax having eight yellow spots—four placed along the anterior margin and four along the posterior margin. The pattern of the elytra will be best understood from our figure.

Cryptocephalus quatuordecimpustulatus (p. 51).

To the localities given, add:—MEXICO, Acapulco, Tapachula in Chiapas (*Höge*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, Zapote, Calderas, San Gerónimo, Purula, Chacoj, Sinanja, San Juan in Vera Paz (*Champion*); COSTA RICA, Cache (*Rogers*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Upon again comparing the specimens referred by me to *C.* 14-*pustulatus* with Suffrian's description, I find that they do not at all agree with it in the sculpture of the elytra. Yet I cannot be mistaken as to the identity of the present species, it being the only one from Mexico so marked which reaches the length of $2\frac{1}{2}$ lines. Specimens contained in the collection of M. Sallé are labelled *C. tesseratus* (a synonym of *C.* 14-*pustulatus*); and another in the same collection, from that of Sturm, which is quoted by Suffrian, is labelled, in Sturm's handwriting, *C.* 14-*pustulatus*.

In the thirty specimens before me the elytra are punctured as follows:—The first subsutural row (not counting the short abbreviated sutural row) extends to below the middle, where it ends, the second row is joined near the apex to the ninth, the third and fourth and the fifth and eighth also being joined at the apex, the sixth and seventh are only indicated anteriorly by a few punctures, the eighth is interrupted below the shoulders and near the middle by a short row of transversely-placed punctures, which between them leave a smooth slightly raised transverse space, and the third, fourth, and fifth rows are closely approached at the middle, so that the other interstices appear much wider; of all this Suffrian says nothing, this author merely stating that *C.* 14-*pustulatus* may be separated from other allied species by the very finely punctured and regular striæ, and by the want of a smooth transverse space ("Querunzel") below the shoulder. All the specimens from the State of Panama differ again from those from Mexico in having regularly-punctured striæ (that is, the striæ are not interrupted by a

transversely raised space) and a M-shaped thoracic mark; they agree in other respects, but the elytra have frequently only seven instead of eight spots. It is quite possible that these Panama examples represent a distinct species (perhaps another of Suffrian's). *C.* 14-*pustulatus* is placed by its author in a division in which the elytra have a deep transverse depression below the shoulders: this depression is visible in most specimens, though not to a very marked degree; the punctuation, however, in these examples, does not accord with Suffrian's description. *C. guttulatus*, Oliv., is a closely allied North-American species; but Suffrian's description of this insect does not agree so well with the specimens from our region. *C. guttulatus* is, moreover, distinguished from *C.* 14-*pustulatus* by the prosternum being anteriorly produced, a character not shared by the Mexican insects.

This species is figured on Tab. III. fig. 7 under the name of *C. tesseratus*.

Cryptocephalus ocellatus (p. 51).

To the localities given, add:—Mexico, Oaxaca, Cerro de Plumas (*Höge*), Teapa (*H. H. Smith*).

In most of the specimens which have come under my observation, notably in those from Teapa, there are not more than five or six spots visible on each elytron, that is to say, that five or six broad spaces are separated by narrow brown lines in the same manner as in *C.* 14-*pustulatus*. Suffrian gives the number of these spots as eight; but specimens so marked are probably rare. *C. ocellatus* is distinguished amongst its allies by the deep and regular punctuation and the raised interstices of the elytra; the specimens from Teapa are of a very pale flavous colour.

Cryptocephalus rhombeus (p. 52).

The Guatemalan localities quoted, and my remarks on the Guatemalan specimens and on the one from Zapote figured, refer to *C. patheticus*. *C. rhombeus* must be considered as a very doubtful species, it having been described from a single female example. *C. patheticus*, on the receipt of a large amount of additional material, proves, like many of its allies, to be a very variable insect.

32 (A). **Cryptocephalus decemplagiatus.** (Tab. XXXVII. fig. 18.)

Dark brown, the head, the anterior and lateral margins of the thorax, and two spots at the base of the latter, flavous; elytra finely punctate-striate, the punctures interrupted at the sides, brown, a spot near the scutellum, three others placed triangularly at the apex, and a large oblique spot at the sides, yellow.

Length 1–1½ line.

Head scarcely visibly punctured, flavous, the vertex dark, the lower part of the face paler brown; antennæ two-thirds the length of the body, dark fulvous, the apical joints darker; thorax subcylindrical, entirely impunctate, dark brown, the anterior margin at the middle, the lateral margins broadly, and two roundish spots at the base, flavous; scutellum dark brown, with a fovea at the base; elytra nearly cylindrical, finely punctate-striate, the scutellar row only indicated by a few punctures below the yellow spot, the

first and second rows united below the middle, the third and fourth and the fifth and eighth rows joined at the apex, but interrupted before the middle, the other rows only distinct at the base, the five yellow spots placed thus—one near the scutellum, one, large and somewhat pear-shaped, occupying the middle of the lateral margin (commencing at the shoulder, surrounding the humeral callus, and extending downwards to below the middle), a smaller one beyond this at the sides and another at the apical angle, and one near the suture before the apex; underside brown, the pro- and mesosternum, and the first ventral segment and the apex of the last, yellow; the pygidium yellow with a brown central line and margin, or brown with two yellow spots.

Hab. PANAMA, Boquete in Chiriqui 3000 feet (*Champion*).

C. decemplagiatus may be compared in coloration to certain varieties of *C. rhombeus*, Suffr.; but is perfectly distinct from that species. It may be known from it by the distinct yellow markings of the thorax and the fine punctuation of the elytra, and also by the large yellow lateral spot of the elytra only showing a few punctures at its lower end; the antennæ are also much longer than in *C. rhombeus*. The dozen specimens obtained show scarcely any variation except in size.

Cryptocephalus militaris (p. 53).

To the localities given, add:—MEXICO, Tonila in Colima, Chilpancingo, Iguala, and Acapulco in Guerrero, Matamoros Izucar in Puebla, Tacambaro and Huetamo in Michoacan, Cuernavaca (*Höge*), Rinçon, Acaguizotla, and Amula in Guerrero (*H. H. Smith*); HONDURAS (*Sallé*).

In some of the additional specimens now before me the elytra want the red apical spot, and also differ considerably in sculpture from the typical form; in the latter they are impressed with very deep subfoveolate and not closely arranged punctures, the interspaces of which form strongly raised transverse rugosities, while in the variety without the apical spot they are much more regularly and more closely punctate-striate, the punctures being shallower and the interstices longitudinally costate at the sides and at the apex. Both forms (♂, ♀) were, however, obtained in various localities. In another variety, specimens of which were obtained at Cuernavaca, Amula, and Chilpancingo, the punctuation of the elytra is closer, shallower, and regularly placed, the interspaces being scarcely, if at all, transversely raised, and the basal spot is interrupted at the suture.

Cryptocephalus basalis (p. 53). (Tab. IV. fig. 6, var.)

To the localities given, add:—MEXICO, Ciudad and Milpas in Durango (*Forrer*), Ventanas and Refugio in Durango, Huetamo in Michoacan, Acapulco and Chilpancingo in Guerrero (*Höge*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

I have already remarked that in my opinion *C. cruentatus* is only a colour-variety of *C. basalis*; this opinion is further strengthened by a male specimen of *C. basalis* now before me, which has all the structural peculiarities (raised prosternum and dilated and

curved posterior tibiæ) pointed out by Suffrian as distinguishing the male of *C. cruentatus*. Both forms vary much in size and very greatly in colour; the pubescent upper surface will, however, help in the recognition of *C. basalis*.

The reference to the insect figured on Tab. IV. fig. 6 was omitted on p. 53; it represents the variety *cruentatus*, Suffr.*

36 (A). **Cryptocephalus smithi.**

Black; head pubescent; thorax finely wrinkled, the margins and two spots at the base reddish-fulvous; elytra deeply and closely punctate-striate, fulvous, a quadrate sutural spot at the base, a transverse band below the middle, and a spot near the apex, black.

Var. Thorax fulvous, with three black spots; elytra with the markings less distinct; legs fulvous.

Length 2–2½ lines.

Head closely punctured, sparingly clothed with whitish pubescence; antennæ nearly as long as the body in the male, black, the lower four joints fulvous; thorax twice as broad as long, the sides moderately rounded, narrowed towards the front, the surface finely wrinkled and punctured, black, the anterior and posterior angles rather broadly, the anterior margin narrowly, and two rather obscure spots at the base, fulvous; scutellum black, raised, subquadrate; elytra cylindrical, closely and deeply impressed with somewhat transversely-shaped punctures, the interstices transversely wrinkled at the sides, the first and second, the third and fourth, and the eighth and ninth rows joined at the apex, the surface reddish-fulvous, with a quadrate sutural spot at the base, a narrow transverse band below the middle, not extending to the sides, and a small spot placed at the end of the rows of punctures, black; underside and legs black, finely pubescent.

Hab. MEXICO, Omilteme and Chilpancingo in Guerrero (*H. H. Smith*).

Allied to *C. sordidus*, but differing in the black thorax and legs, and the strongly marked black pattern of the elytra; the female is more robust. In the variety the fulvous colour predominates, and the elytra have only some small black spots in the same position as the bands in the type.

C. dolorosus is more finely punctured, and differs in the design of the elytra.

Cryptocephalus lævipennis (p. 55).

To the localities given, add:—GUATEMALA, Dueñas (*mus. Stuttgart*).

An extremely variable species in regard to colour, scarcely two specimens being alike; the elytra are sometimes almost entirely black, with two yellow spots only at the apex, and the thorax is equally variable in this respect.

Cryptocephalus inconspicuus (p. 56).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Cerro de Plumas (*Höge*).

Several examples of this comparatively large species have also been recently obtained by Herr Conradt at Panzos, and another is contained in the Stuttgart Museum. None

* In the figures of both the typical form and the variety (Tab. IV. figg. 4, 6) our artist has omitted to show the characteristic pubescence of this species.

of the specimens vary to any perceptible degree; the regularity of the elytral striæ, with only an indication of the seventh row at the shoulder, the raised interstices, and the absence of any markings (a small brown spot at the shoulder excepted), as well as the uniformly flavous or pale fulvous colour, will help to distinguish *C. inconspicuus*.

Cryptocephalus zapotensis (p. 56).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, San Isidro, Chacoj (*Champion*).

Cryptocephalus auratus (p. 57).

To the localities given, add:—MEXICO, Saltillo in Coahuila (*Dr. Palmer*), Xucumanatlan and Chilpancingo in Guerrero (*H. H. Smith*), Orizaba (*Sallé*); PANAMA, Volcan de Chiriqui, Peña Blanca (*Champion*).

42 (A). **Cryptocephalus amulensis.**

Black, above dark metallic blue, the basal joints of the antennæ and the tibiæ and tarsi obscure fulvous; thorax impunctate; elytra finely punctate-striate, with two tubercles below the shoulders, the interstices convex at the sides.

Length 1 line.

Head with its lower portion rather deflexed, obscure piceous, the space near the eyes marked with flavous, the intraocular space impressed with a distinct longitudinal groove; antennæ with the three or four basal joints flavous beneath, piceous above (the last five joints wanting); thorax twice as broad as long, convex, the sides rounded, the surface entirely impunctate; scutellum slightly longer than broad, without basal fovea; elytra cylindrical, of a lighter blue tint than the thorax, finely and regularly punctate-striate on the disc, the rows of punctures interrupted below the shoulders by a short transverse tubercle, the latter followed by a short, oblong, strongly raised ridge, the outer interstices also longitudinally costate; prosternum longer than broad, its posterior margin produced at each angle into a point.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

Although only a single female specimen of this insect was obtained, the curious and almost unique sculpture of the elytra will readily distinguish *C. amulensis*; the punctures are plainly visible on the middle of the disc, but very obscure at the sides, and the short and more elongate tubercles are isolated and strongly marked.

45. **Cryptocephalus cœlestinus.**

Below black, above metallic blue, the base of the antennæ, the anterior tibiæ, and the base of the femora flavous; thorax extremely finely punctured; elytra finely punctate-striate, the sixth and seventh striæ obsolete.

Length $\frac{3}{4}$ line.

Head depressed between the eyes, dark blue, the labrum fulvous, the clypeus much broader than long; antennæ scarcely half the length of the body, the lower five joints fulvous, the others black, the terminal joints distinctly widened; thorax twice as broad as long, the sides nearly straight, narrowed in front, the posterior angles acutely produced, the surface extremely minutely punctured (the punctures only visible under a strong lens) and with a narrow and obsolete transverse groove in front of the basal lobe; scutellum not raised, as broad as long, dark blue; elytra finely and rather regularly punctured, the sixth and

seventh rows only indicated by a few punctures, the interstices between the eighth and following rows convex; underside black; the anterior legs, the base of the posterior femora, and the tibiæ and tarsi, flavous.

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

The bright metallic blue colour, the finely punctured thorax, and the colour of the legs distinguish *C. cœlestinus* from several small metallic species inhabiting South America.

46. Cryptocephalus sculptilis.

Flavous; thorax closely punctured, the disc obscure piceous; elytra very closely and deeply punctured, the interstices convex, the space between the fifth and eighth rows also deeply and irregularly punctured, all the punctures piceous.

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

Head closely and strongly punctured, with a central darker mark; antennæ two-thirds the length of the body, entirely fulvous; thorax at the base twice as broad as long, of half the width anteriorly, the posterior margin finely serrate and very narrowly black on the extreme edge, the surface closely and finely, but somewhat irregularly, punctured, piceous, the margins flavous; scutellum flavous, margined with black; elytra flavous, the punctures very deep and closely placed, piceous, the first row joined to the second below the middle, the third and fourth rows united at the apex, the fifth row curved outwards near the apex and there joined to the eighth, the intervening space impressed with transversely placed and other deep punctures and above the middle by another transverse row of punctures which interrupts the short sixth row below the shoulder, the seventh row entirely absent, the interstices longitudinally costate; underside finely pubescent, flavous, the breast darker; the legs fulvous, the femora with a flavous spot at the apex.

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

From the large-sized pallid unicolorous species inhabiting our region *C. sculptilis* differs in the sculpture of the elytra, the punctures being deep, closely placed, and of rather transverse shape, and the interstices longitudinally convex; the space between the fifth and eighth striæ is also closely punctate.

In the last-mentioned character *C. sculptilis* differs from all other species of the genus known to me.

47. Cryptocephalus graphipterus.

Piceous; thorax fulvous, the margins and two spots at the base pale yellow; elytra flavous, strongly punctate-striate, a sutural stripe, narrowed posteriorly, piceous.

Var. Elytral stripe dark metallic green.

Length $\frac{3}{4}$ line.

Head flavous, a central stripe between the eyes and the parts of the mouth brown; antennæ black, the basal four joints flavous, the terminal joints slightly thickened; thorax twice as broad as long, the surface finely punctured, fulvous, the margins narrowly and two small oblique spots at the base flavous; scutellum elongate, raised; elytra with uninterrupted and strong rows of punctures, the sixth row consisting of a few punctures only; the seventh row entirely absent, the interstices at the sides convex, the surface flavous, a small spot at the shoulders, a stripe along the suture (pointed at the apex) and the lateral margins, piceous; underside fulvous, in one example stained with piceous; legs fulvous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This small species is of cylindrical shape, and may be known from its allies by the piceous or greenish sutural stripe, which in one specimen, however, is very obscure. Only two examples were obtained.

48. **Cryptocephalus juquilensis.** (Tab. XXXVIII. fig. 1.)

Broadly ovate, short and robust, fulvous; thorax black, with five large fulvous spots, minutely punctured; elytra finely punctate-striate, black, a large transverse band at the middle and the apex flavous.

Length 2 lines.

Head fulvous, impressed with a few fine punctures and a short central groove, the clypeus rather deflexed and darker; labrum flavous, raised; eyes widely separated; antennæ with the basal four joints fulvous (the other joints broken off); thorax at the base nearly two and a half times broader than long, convex and widened at the middle, the sides slightly rounded, the surface extremely minutely granulate and punctured (or finely wrinkled, when seen under a strong lens), black, the middle portion of the anterior margin, the sides, and two spots at the base, pale fulvous (or pale fulvous, the disc occupied by a large M-shaped black mark from each side of which a branch extends upwards to the anterior margin); scutellum scarcely longer than broad, black, stained with fulvous in the middle, and with the usual groove at the base; elytra broad, not very convex, slightly narrowed posteriorly, the punctuation fine, the punctures (as well as the rows themselves) widely separated, but becoming much closer near the apex, the eighth row interrupted for a long distance near the middle (the impunctate space, however, not raised nor bounded by transversely placed punctures), the black portion interrupted by a broad transverse flavous band at the middle (not quite extending to the suture and constricted in the centre by a protruding point of the black band separating it from the apical spot), and the apex occupied by a large round flavous spot (surrounded by the narrow black apical margin); underside and legs fulvous; the prosternum flavous, produced anteriorly in the middle and very strongly so at the posterior angles into an acute point.

Hab. MEXICO, Juquila (*Höge*). A single specimen.

49. **Cryptocephalus septempunctatus.** (Tab. XXXVIII. fig. 2.)

Pale fulvous, the antennæ (the basal joints excepted), the apices of the femora, and the tibiæ and tarsi black; thorax closely punctured, with a central black spot; elytra finely punctate-striate, fulvous or flavous, each with two spots at the base and one below the middle, black, the striæ interrupted below the shoulder.

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

Head impunctate, pale fulvous, the eyes closely approached, the clypeus wedge-shaped, the mandibles black; antennæ slender, two-thirds the length of the body, the basal four joints obscure fulvous; thorax scarcely twice as broad as long, the anterior portion scarcely, the sides but moderately, deflexed, the latter straight at the base, but little rounded, and narrowed in front, the surface with a rather deep transverse groove in front of the anterior margin, rather strongly and closely punctured, and with a central rounded black spot; scutellum not longer than broad, without a basal fovea, fulvous, margined with black; elytra distinctly punctate-striate, the first stria extending to beyond the middle, the sixth and seventh striæ interrupted below the shoulder by a transverse row of punctures and a little lower down by a similar row (including a transverse, but not raised, smooth space), all the striæ more finely impressed below the middle, the interstices also impressed with minute punctures, the black spots arranged thus—two at the basal margin, placed transversely (one at the shoulder, the other near the scutellum), and a similar one immediately below the middle (halfway between the lateral and sutural margin); pygidium and underside flavous or pale fulvous; legs black, the femora fulvous at the base; prosternum longer than broad.

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

50. **Cryptocephalus tricostatus.**

Obscure fulvous or testaceous, the apical joints of the antennæ fuscous; thorax entirely impunctate, subopaque,

the disc obscure piceous; elytra strongly punctured, the interstices and a spot on the shoulders more or less piceous, the three outer interstices costate.

Length 1 line.

Head not visibly punctured, slightly depressed between the eyes, obscure fulvous; antennæ extending to about half the length of the elytra, fulvous, the five apical joints more or less fuscous; thorax twice as broad as long, not very convex, the sides narrowed in front, the posterior angles acutely produced, the surface impunctate (extremely minutely granulate when seen under a strong lens) and only slightly shining; scutellum not longer than broad, nearly black; elytra rather regularly and strongly punctate-striate, the second and third and the fifth and eighth striæ joined at the apex, the sixth and seventh indistinct and interrupted near the middle by a short raised smooth space, the remainder of the sixth and the two outer interstices strongly costate; the breast more or less piceous, the rest of the underside and the legs fulvous; prosternum subquadrangular, its posterior margin slightly concave.

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

C. tricostatus varies in colour, some examples being nearly unicolorous testaceous and others spotted with black at the shoulders and between the punctures (assuming the shape of an obscure longitudinal band near the suture). The principal characters by which the species may be recognized are the entirely impunctate and minutely granulate thorax and the costate lateral interstices of the elytra, the sixth interstice being interrupted before the middle by the tubercular smooth raised short space which limits the punctures below the shoulders; the extreme basal margin of the elytra is narrowly black.

51. **Cryptocephalus laterifasciatus.**

Black, the head, the base of the antennæ, and the thorax fulvous, the disc of the latter black and nearly impunctate; elytra greenish-black, deeply punctate-striate, the fifth and sixth interstices and the apex flavous; legs fulvous.

Var. Thorax not marked with black on the disc.

Length $\frac{3}{4}$–1 line.

Head with a longitudinal depression between the eyes, flavous, the eyes closely approached; antennæ half the length of the body, the lower four joints flavous, the other joints black and distinctly thickened; thorax strongly narrowed in front, the sides rounded, the surface extremely finely punctured, fulvous, with a blackish-green spot at the middle of the disc; scutellum strongly raised, scarcely longer than broad, blackish-green; elytra cylindrical, with distinct rows of punctures, the lateral interstices longitudinally costate but interrupted below the shoulders by a short transverse smooth space which is bounded above and below by a few deep punctures, the surface metallic greenish-black, the sides with a narrow flavous longitudinal stripe which is connected by a very narrow streak with the flavous marking at the apex; pygidium black, with two obscure flavous spots at the sides; legs fulvous.

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

In its peculiar coloration, this small species has no near ally amongst its many congeners from our region. Some specimens have the thorax fulvous, with the margins paler; in others the disc is very obscurely marked with fuscous. In the male the sixth elytral interstice is very distinctly interrupted below the shoulder; in the female the corresponding transverse space is broader and less deeply bounded by punctures, but still very plainly visible. The flavous stripe is confined at the base and near the apex to a single

interstice (extending to two interstices at the middle), and the flavous spot at the apex is of transverse shape.

52. **Cryptocephalus dolorosus.** (Tab. XXXVII. fig. 19.)

Black, the basal joints of the antennæ and the anterior and lateral margins of the thorax fulvous; thorax finely rugose; elytra deeply punctate, with anteriorly uninterrupted striæ, fulvous, a spot at the shoulder and a large subquadrate discoidal patch, black.

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

Head closely and rather irregularly punctured, black; labrum fulvous; eyes not closely approached; antennæ more than half the length of the body, black, the basal two or three joints sometimes fulvous; thorax more than twice as broad as long, but moderately narrowed in front, very closely punctured, the interspaces slightly rugose, black, shining, the anterior margin narrowly (more widely at the middle) and the lateral margin reddish-fulvous, this colour widening at the anterior angles into a subquadrate spot; scutellum short, black; elytra subcylindrical, scarcely narrowed posteriorly, the punctures deep and regular, the ten rows present, the fifth and sixth abbreviated at some distance from the apex and, as well as the second and third and the seventh and eighth rows, joined at their ends, the interstices slightly transversely wrinkled, the surface of a bright reddish-fulvous colour, a small spot at the shoulder, and another (in one specimen) near the apex, black, the middle of the disc occupied by a large common subquadrate anteriorly-divided black patch which extends downwards to or beyond the middle, but does not quite reach the base; underside and legs black, finely pubescent, the tarsi obscure fulvous; prosternum not produced anteriorly, much longer than broad, the posterior margin produced into a short and blunt tooth on each side.

Hab. Mexico, Las Vigas (*Höge*).

The very regularly punctured striæ and the colour of the upper surface seem to place *C. dolorosus* in Suffrian's seventeenth group; the colour of the thorax and the marking of the elytra will separate this species from any of its allies.

53. **Cryptocephalus flavofasciatus.** (Tab. XXXVII. figg. 20; 21, var.)

Metallic dark blue; thorax impunctate, the anterior and lateral margins yellow; elytra regularly and deeply punctate-striate, metallic blue, a lateral longitudinal band, narrowed posteriorly, bright yellow.

Var. Entirely blue or with indications only of the lateral band.

Length 2–$2\frac{1}{2}$ lines.

Head entirely blue, depressed between the eyes, closely and finely punctured; antennæ two-thirds the length of the body, black, the basal joint more or less fulvous beneath; thorax twice as broad as long, narrowed in front, the posterior angles not much produced, the posterior margin only slightly concave at the sides, the surface extremely finely punctured, with a slight oblique depression on each side at the base, the anterior margin and the posterior half of the lateral margin very narrowly bright flavous, this colour greatly extended at the anterior angles; elytra cylindrical, deeply and closely punctured, the third and fourth and the seventh and eighth rows united at the apex, the yellow lateral stripe is formed thus—it commences at the middle of the base and extends to the apex, but its posterior is only half the width of its anterior portion, so that the lower half of the lateral margin and a small humeral spot remain of the ground-colour; underside and legs metallic blue, the sides of the breast finely pubescent; prosternum longitudinally depressed, its posterior margin straight.

Hab. Mexico, Ciudad in Durango (*Höge*, *Forrer*).

Of this handsome *Cryptocephalus* many specimens were obtained by Herr Höge, not only of the type but of the variety also; in the latter there are generally more or less distinct traces of the flavous colour at the sides of the thorax and of the elytra, but in some examples the flavous colour is obliterated and the insect is entirely dark blue.

In the female the oblique impression on each side of the base of the thorax is much more strongly marked than in the male.

54. **Cryptocephalus flavomaculatus.** (Tab. XXXVIII. fig. 3.)

Black; the head, the anterior and lateral margins of the thorax, and two spots at the base of the latter, yellow; elytra deeply punctate-striate, black, each with five yellow spots (1.2.1.1), the two apical ones transverse; femora yellow beneath.

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

Head with a few punctures, the vertex black and impressed with a longitudinal groove, the rest of the surface (except round the base of the antennæ) yellow; labrum piceous; mandibles black; antennæ black, the lower four joints flavous; thorax twice as broad as long, black, the anterior margins narrowly, the lateral margins broadly (but interrupted at the middle by a short transverse black streak), flavous, the base with two transversely-shaped yellow spots, the surface with a few scarcely visible punctures, the posterior margin finely serrate; scutellum rather short, its apex truncate; elytra with very deep and closely placed punctures, the sixth and seventh rows interrupted below the shoulder by a smooth transverse space, the lateral interstices strongly costate, the yellow markings arranged thus—a spot at the middle of the base, two spots, more transversely-shaped, at the middle (the outer one extending upwards along the lateral margin to the base), and a short band near and another at the apex, the latter surrounded by the narrow black margin; pygidium yellow, with a black central band; underside black, a spot above the anterior coxæ, another at the sides of the last ventral segment, and the prosternum flavous; legs black, the entire under surface of the femora yellow.

Hab. Mexico, Ventanas in Durango (*Höge*). A single specimen.

In this brightly-marked species the elytra have well-defined yellow spots, the posterior spots being divided by the black punctures of the striæ. These spots are placed as in *C. plagiatus* and several other species, but are fewer in number; the elytral punctuation is much stronger and deeper than in the allied forms, it being well visible to the naked eye.

55. **Cryptocephalus multipunctatus.** (Tab. XXXVII. fig. 22.)

Fulvous; the head and thorax finely and closely rugose-punctate; elytra deeply, closely, and regularly punctured, all the interstices strongly costate.

Length 2 lines.

♀. Head closely punctured at the vertex; antennæ entirely fulvous, the apical joints slightly darker; thorax quite twice as broad as long, fulvous, narrowly margined with piceous, the surface closely and finely rugose, the interspaces finely punctured; elytra each with ten closely-approached rows of deep punctures divided only by narrow costæ, the costæ still more strongly raised at the apex, and here and there connected by transverse wrinkles.

Hab. Mexico, La Parada (*Sallé*).

This *Cryptocephalus* is entirely fulvous in colour and only represented by a single female specimen. The sculpture of the elytra is, however, very different from that of any other species of our region: all the punctures are extremely closely placed, the rows divided by strongly raised costæ, of which the sixth and seventh are joined at a little distance from the apex, and connected behind by a short stem or branch with one of the preceding and one of the following rows, which are also posteriorly united and form a ridge parallel to the apical margin; the punctures and costæ are nowhere inter-

rupted, although here and there running into each other, causing broader and irregular smooth spaces.

56. **Cryptocephalus nigrofasciatus.**

Black, the basal joints of the antennæ and the legs fulvous; above flavous; thorax with a M-shaped black mark; elytra with a lateral transverse smooth space, strongly punctate, flavous, a broad irregular longitudinal band on the disc, constricted at the middle, and a subapical spot, black.

Var. The elytral band almost obsolete.

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

Head fulvous, sparingly punctured between the eyes, with a distinct central fovea; eyes but slightly sinuate, widely separated; clypeus triangular; antennæ about half the length of the body, the lower four or five joints fulvous, the other joints black; thorax rather more than twice as broad as long, scarcely visibly punctured, flavous, with a large M-shaped black mark, or black with the lateral and anterior margins and two spots at the base yellow; scutellum black; elytra rather strongly and regularly punctate-striate, the first (subsutural) row of punctures abbreviated below the middle and closely approaching the second row, this latter apparently joined at the apex to the two following rows, the fifth row turned outwards below the middle, limiting a smooth transverse space, and beyond this parallel and eventually joining the eighth, the sixth and seventh rows interrupted below the shoulder, the colour very variable—in well-marked specimens the disc almost entirely occupied by a broad black band which is strongly constricted at and abbreviated below the middle, this band being followed by a spot of variable size (placed at the junction of the striæ), the lateral margin also narrowly black; underside black, with the sides of the ventral segments more or less testaceous; legs entirely fulvous; prosternum flavous, the posterior angles thickened and of blunt triangular shape.

Hab. GUATEMALA, Quiche Mountains 8000 feet, Totonicapam 10,500 feet (*Champion*).

The elytral pattern of this species is only well defined in one or two specimens: it is, no doubt, subject to great variation, as in the variety the black bands are indistinct. The North-American *C. incertus*, Oliv., seems to be somewhat closely allied, but differs in the coarsely punctured thorax and in having three bands on the elytra.

57. **Cryptocephalus undecimplagiatus.** (Tab. XXXVII. fig. 23.)

Black, the head, antennæ, and legs fulvous; thorax impunctate, black, the anterior and lateral margins in part and two large spots at the base obscure fulvous; elytra scarcely visibly punctate, each with two spots at the middle, and one at the apex, pale fulvous.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head impunctate, obscure fulvous; mandibles black; antennæ two-thirds the length of the body, entirely fulvous; thorax subconical, twice as broad as long, the sides strongly narrowed in front, greatly deflexed, and obliquely and very rapidly converging from the base, the posterior margin finely serrate, the surface quite smooth, fulvous, with a black M-shaped mark (or, if the black is taken for the ground-colour, with five large fulvous spots—these consisting of a broad patch on the anterior margin and the still broader one along the lateral margins and two large oblique spots at the base); scutellum longer than broad, with a fovea at the base; elytra scarcely twice as long as the thorax, broad, the punctures very minute (only visible under a strong lens) and placed widely apart, the sutural stria, and the ninth also, more deeply punctured, the surface black, with two large spots placed transversely across the middle of the disc (one lateral and one near the suture), and a round spot at the apex, obscure fulvous; legs, prosternum, and last ventral segment obscure fulvous, the rest of the underside black.

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

C. undecimplagiatus is well distinguished from its allies by the elytra being very faintly punctured and with the spots of a dull flavous or fulvous colour.

58. **Cryptocephalus problematicus.** (Tab. XXXVII. fig. 24.)

Reddish-fulvous, the sides of the breast, the apex of the femora, and the tibiæ piceous; thorax impunctate; elytra strongly punctured, each with two spots at the base and another at the apex, and a short transverse band below the middle, black.

Length 1½–2 lines.

Head fulvous, with a deep longitudinal depression on the vertex, the lower portion with a few punctures, the space between the points of insertion of the antennæ with a deep transverse groove, the eyes rather closely approached; antennæ black, the basal four joints fulvous; thorax nearly three times wider than long, the sides finely marginate and rather distinctly rounded, the surface entirely impunctate, fulvous; scutellum scarcely longer than broad, foveolate at the base, fulvous, margined with piceous; elytra broad, not very convex, slightly narrowed posteriorly, the punctured striæ deep and regular and rather wide apart, the third, fourth, and fifth a little closer together than the others, the sixth and seventh only indicated by a few separate punctures, the lateral lobe feeble, each elytron with four black spots—one at the shoulder, a more transversely-shaped one near the scutellum, a smaller one at the junction of the fifth and eighth striæ, and a short transverse band, not extending to either margin, below the middle; the knees, tibiæ, and tarsi black, the breast more or less piceous and strongly punctured; prosternum strongly produced anteriorly into a cup-shaped protuberance.

Hab. Mexico, Cerro de Plumas (*Höge*).

Somewhat allied to *C. quaternarius*, Suffr., but differing from that species in its reddish colour and in the number and position of the elytral spots.

59. **Cryptocephalus admirabilis.** (Tab. XXXVII. fig. 25.)

Fulvous, the apical joints of the antennæ, the apex of the tibiæ, and the tarsi, black; above dark brown; thorax extremely finely longitudinally strigose; elytra with all the interspaces between the rows of coarse punctures very strongly longitudinally costate.

Length 1¼ line.

Head fulvous, not visibly punctured; the eyes contiguous at the vertex, the space between the points of insertion of the antennæ with a depression; mandibles black; antennæ slender, extending to the end of the elytra*, black, the lower four joints fulvous, the third and following joints very elongate; thorax more than twice as broad as long, the sides rounded, very distinctly margined, and with a fovea placed at some distance within the margin at about the middle, the base with a deep oblique depression on each side near the scutellum, the disc (when viewed under a strong lens) extremely closely and finely longitudinally strigose (giving the surface a silky gloss with whitish reflections); scutellum very narrowly elongate; elytra narrowed posteriorly, castaneous, the interspaces between the rows of coarse punctures occupied by strongly raised longitudinal costæ which are interrupted for a little distance below the shoulder, the punctures often connected by transversely raised spaces.

Hab. Panama, Bugaba (*Champion*).

Of this most interesting species only a single specimen was obtained by Mr. Champion. It belongs, without doubt, to Suffrian's seventeenth group, being evidently allied to the Brazilian *C. lar*, Fabr., and *C. carneolus*, Perty; it differs, however, from both these in having the thorax extremely finely strigose (instead of punctured) and of a somewhat purplish-brown colour with light reflections. The elytral costæ are here and there interrupted, but are for the most part joined near the apex: our figure will give a better idea of their shape.

* These organs are incorrectly drawn in our figure.

60. **Cryptocephalus constricticollis.**

Entirely pale fulvous or flavous; thorax impunctate, deeply obliquely grooved at the sides; elytra strongly punctate anteriorly, the interstices at the sides and the one within the shoulders strongly costate.

Length 1–1¼ line.

Head impunctate, flat, pale flavous, the eyes closely approached, the labrum brownish; antennæ flavous, two-thirds the length of the body in the male, the basal two joints strongly swollen, the following four joints slender and elongate, the terminal ones slightly widened; thorax twice as broad as long, of nearly equal width, the sides straight at the base, rounded in front, and strongly deflexed, the surface impunctate, with a very deep oblique groove on each side near the base, the groove not reaching the lateral margin but extending shallowly across the base; scutellum narrowly elongate, strongly pointed; elytra slightly wider at the base than the thorax, nearly parallel, transversely depressed below the base, deeply punctured anteriorly, more feebly so posteriorly, the fourth row of punctures divided into two branches below the shoulder and followed by a short, oblique, strongly raised costa, the lateral interstices also strongly costate; underside and legs flavous; prosternum nearly quadrate, its posterior margin straight.

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

This small *Cryptocephalus* is of peculiar shape, and in the form of the thorax it resembles some species of the genus *Scolochrus*; it differs, however, from *Scolochrus* and the allied genera in the form of the prosternum. *C. constricticollis* resembles *C. esuriens*, Suffr., from Pará, in the uniform flavous colour; but it has the thorax transversely subquadrate, with the lateral groove deeply impressed (more deeply so than in any species of the genus known to me) and extending shallowly across the entire base, giving the anterior portion a swollen appearance. The sculpture of the elytra is again peculiar, there being a short oblique costa within the shoulder; the seventh row of punctures is entirely absent, and the interstices which follow are strongly costate; all the rows of punctures are abbreviated at some distance from the apex, the latter in consequence being entirely smooth and impunctate.

Many specimens.

STEGNOCEPHALA. (To precede the genus *Scolochrus*, p. 58.)

Stegnocephala, Baly, Trans. Ent. Soc. Lond. 1877, p. 32.

This genus is stated by its author to differ from *Monachus* in the different structure of the prosternum, large size, larger eyes, longer antennæ, &c.; and from *Cryptocephalus* in its broader form, widely separated hind coxæ, and more strongly produced lateral lobe of the elytra. The species hitherto included in *Stegnocephala* are from Tropical South America; one of these extends northwards to the State of Panama, whence two additional species are now added.

1. **Stegnocephala perplexa.**

Cryptocephalus perplexus, Suffr. Monogr. in Linn. Entom. xv. p. 194[1].

Hab. PANAMA, Bugaba, David (*Champion*).—GUIANA, Surinam[1]; AMAZONS[1] (*coll. Baly, Jacoby*).

The differences, if any, between the Panama specimens and one from the Amazons

region contained in my collection are too trivial to be regarded as specific. In *S. perplexa* the head, thorax, underside, and legs are flavous or fulvous, and the elytra metallic blue or violaceous.

2. **Stegnocephala costata.** (Tab. XXXVIII. fig. 4.)

Broadly ovate, robust, fulvous, the apical joints of the antennæ and the scutellum black; thorax scarcely perceptibly punctured; elytra dark metallic blue, strongly punctured, the interstices strongly longitudinally costate.

Length 1½ line.

Head impunctate; eyes closely approached; antennæ scarcely half the length of the body, black, the lower four joints fulvous; thorax strongly deflexed at the sides, the latter much narrowed in front and rapidly and obliquely converging from the base, the surface finely and very obsoletely punctured; scutellum elongate, triangular, black, impunctate; elytra raised at the base, the shoulders very prominent and tuberculate, the punctures deep and closely placed, the interstices strongly costate throughout; epipleuræ black, produced at the base, and coarsely punctured.

Hab. PANAMA, Bugaba (*Champion*).

S. costata, of which only a single specimen was obtained, differs from *S. perplexa* in the strongly costate elytral interstices.

3. **Stegnocephala longicornis.** (Tab. XXXVIII. fig. 5.)

Subcylindrical, robust, black; antennæ long and filiform, the basal joints fulvous; thorax deeply depressed at the base, finely punctured; elytra reddish-fulvous, strongly punctate-striate, a sutural spot below the middle black.

Length 1½ line.

Head finely granulate; the eyes very closely approached in the female, touching at the vertex in the male; the epistoma bounded by a transversely raised ridge between the antennæ; the anterior edge of the labrum and the palpi fulvous; antennæ two-thirds the length of the body, filiform and slender, the lower four joints fulvous, the others black; thorax more than twice as broad as long at the base, much narrowed in front, the sides with a very narrow margin, the posterior margin strongly oblique, the surface rather closely and finely punctured, with a deep transverse depression in front of the scutellum, the depression rather strongly punctured; scutellum elongate, pointed, with a fovea at its base; elytra convex, subcylindrical, scarcely narrowed posteriorly, the shoulders very prominent, the lateral lobe strongly subangularly produced, the surface very deeply punctured, the punctures more finely impressed posteriorly, the interstices slightly convex and minutely punctured, the surface of a bright reddish-fulvous colour, with a common black ovate spot placed across the suture below the middle and slightly prolonged into a point upwards; underside and legs piceous; prosternum much broader than long, rugosely punctured, the posterior margin but slightly concave, the angles acute.

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

If the antennæ and the prosternum of the present insect are examined, it will be seen that *S. longicornis* cannot find its place in either *Cryptocephalus* or *Monachus*, and that it agrees much better with *Stegnocephala*; but even from the last-named genus the entirely filiform antennæ seem to separate it. Suffrian has described several species of *Monachus* which have a similarly depressed or posteriorly grooved thorax, and are also somewhat allied in their system of coloration to the present insect; *S. longicornis* cannot, however, be possibly mistaken for any true species of *Monachus*.

SCOLOCHRUS (p. 58).

If the diagnoses of the genera *Scolochrus* and *Metallactus* are compared it will be seen, as their author states, that no differences of importance exist, although they differ slightly in the form of the prosternum &c. In my opinion it matters not whether the two genera in question are maintained or united into one, as it will always be necessary to compare Suffrian's descriptions of the numerous species of either genus (and indeed of *Pachybrachys* also) when the determination of any is in question: for the present I have placed all those from our region in *Scolochrus*. The separation of these into species is frequently very difficult and doubtful, owing to the great variability they are subject to; I have, however, been enabled to compare them with many of Suffrian's types contained in the British Museum.

We have now to add no less than eighteen additional species to our list, fifteen of which are described as new, the majority of these latter being from the State of Panama.

Scolochrus purpurascens (p. 58).

To the localities given, add:—MEXICO, Acapulco in Guerrero (*Höge*), Juquila (*Sallé*); COSTA RICA, Cache (*Rogers*); PANAMA, Volcan de Chiriqui (*Champion*).

Var. *a*. Entirely dark purplish.
Var. *b*. Elytra flavous.

S. purpurascens apparently varies as much in colour and punctuation as *S. albilabris*, and it is difficult to find two exactly similar specimens. The former is chiefly distinguished by the thorax being rather suddenly narrowed in front, and having a purplish and very finely punctured surface. In the Mexican specimens the black transverse band of the elytra extends upwards along the suture to a greater or less degree; in those from Panama, however, the band is regular in shape and the suture remains of the red ground-colour. The legs vary from red to black, and the punctuation of the elytra is also very variable, so that almost every specimen might be treated as a distinct species, if too much importance is attached to these variations. The sides of the thorax are often reddish in colour and clothed with hairs; these latter are sometimes entirely absent. Specimens also occur in which the red colour of the elytra is replaced by violaceous or purplish (var. *a*), or even by yellow (var. *b*). The varieties were all obtained in Chiriqui in company with normally-coloured forms.

Scolochrus albilabris (p. 59).

To the localities given, add:—MEXICO, Acapulco and Chilpancingo in Guerrero, Tacambaro and Huetamo in Michoacan, Tupataro in Guanajuato (*Höge*), Rincon, Dos Arroyos, and Amula in Guerrero (*H. H. Smith*); NICARAGUA, Chontales (*Belt*).

The two specimens obtained by Herr Höge at Tupataro must, no doubt, be included

among the numerous varieties of *T. albilabris*. In one of these examples the thorax is black, with the anterior and lateral margins, a narrow central longitudinal band extending to the middle, and two spots at the base, flavous, and the tibiæ and the greater part of the femora also flavous; in the other the thorax has the disc black, the central band only just indicated, and the basal spots absent. In these two specimens, as well as in those obtained at Huetamo, the scutellum and the entire pygidium are likewise flavous, thus answering partly to Suffrian's description of *S. suturalis*.

Scolochrus zonatus (p. 59).

I think it very probable that *S. zonatus* is but another variety of *S. albilabris*; the differences pointed out by Suffrian do not seem to be important enough to separate it from *S. albilabris*, which is one of the most variable species of the genus.

4 (A.) **Scolochrus pallipes.** (Tab. XXXVIII. figg. 6, 7, var. *b*.)

Black, the scutellum, legs, pygidium, and sides of the abdomen pale yellow; head, and the anterior margin of the thorax, rufous; elytra finely punctate-striate, rufous, a transverse band across the middle, and a humeral spot, black.

Var. *a*. Thorax black, the sides and two spots at the base flavous; elytra black, with an oblique basal transverse red band.

Var. *b*. Thorax and elytra entirely black.

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

♀. Head entirely rufous, with a few punctures at its lower portion; eyes distant, very large and triangularly notched; labrum flavous; mandibles black; antennæ extending only to the base of the elytra, black, the basal joint flavous, the following four joints marked with flavous at the base only, shining, the terminal joints widened, the fourth twice as long as the preceding joint; thorax three times broader than long, the sides strongly and rather suddenly narrowed in front, the disc with a few fine punctures, the sides a little more strongly and closely punctured and with an oblique moderately deep depression, the surface black, the anterior margin (more widely so at the middle), a spot in front of the scutellum, and the extreme posterior angles fulvous; scutellum yellowish-white, smooth; elytra scarcely narrowed behind, the basal margin strongly raised, the punctures fine and rather regular and distinct to the apex, bright red, with a spot at the shoulders, the middle of the disc, and a transverse band (narrowed at the suture and not extending to the sides, its anterior margin strongly convex, its posterior one concave between each alternate row of punctures), black; underside black, the closely punctured prosternum, the sides of the last ventral segments, the pygidium, and the legs, nearly white; the upper portion of the anterior femora and their tibiæ light brown.

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

At first sight this species might easily be mistaken for one of the numerous varieties of *S. albilabris*. It differs, however, from *S. albilabris*, not only in colour, but in the shape of the thorax (which resembles that of *S. purpurascens*) and in the much finer elytral punctuation. *S. pallipes* seems to be subject to the same amount of variation as *S. albilabris*, the five specimens received being all somewhat differently coloured. In the var. *a* the thorax, instead of having the anterior margin fulvous, has the sides of that colour, and the elytra marked as in some varieties of *S. albilabris*; while in the var. *b* the thorax and elytra are entirely black. But in all these forms the sides of the

abdomen and the pygidium, as well as the legs, remain pale yellowish. We figure two examples, one of the typical form and one of the var. *b*.

Scolochrus suffriani (p. 60).

Var. ♀. The anterior edge of the thorax narrowly flavous; elytra black, with a quadrate whitish sutural spot at the base.

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

I must refer a female example of a *Scolochrus* lately received to *S. suffriani*, with the type of which, a male, it agrees in its principal characters, although differing from it in colour. The eyes in this female specimen are, as usual, more widely separated than those of the male, while the thorax is shorter and more transversely shaped; the latter is coloured exactly as in the type, with the exception of having the anterior edge narrowly flavous; the elytra are more regularly punctured than in the male, and the black portion predominates to such an extent as to leave only a whitish quadrate sutural patch at the base; and the pygidium and the abdominal segments are yellowish, as in the type. It is probable that *S. suffriani* is as variable in colour as most of the species of *Scolochrus*. In the allied *S. cazicus* the pygidium is black.

Scolochrus decoratus (p. 61).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*); GUATEMALA, Panzos (*Conradt*).

Another variety of this species has been received from Yucatan, this having the elytra entirely black. Entirely fulvous specimens, as well as normally coloured or spotted ones and the black variety, were received from Mr. Gaumer.

13 (A). **Scolochrus panamensis.** (Tab. XXXVIII. fig. 8.)

Black; thorax finely punctured, the sides red and closely and more strongly punctate; elytra closely punctate-striate, a quadrate spot at the shoulders, and the apex, red; abdomen, pygidium, and the underside of the femora yellowish-white.

Length 2 lines.

♀. Head entirely black, very finely and rather closely punctured; antennæ slender, black, the terminal joints not thickened; thorax about two and a half times broader than long, narrowing from the middle to the apex, the disc black and closely and finely punctured, the sides broadly red, strongly punctured, and with a shallow oblique depression; scutellum black, very finely punctured; elytra slightly narrowed posteriorly, the punctures strong and closely placed in rows, those near the suture irregularly arranged, black, a large quadrate spot occupying the shoulders and the entire lateral lobe, and a round spot at the apex, red; underside finely pubescent, the entire abdomen and the pygidium almost white; legs black, with the exception of the underside of the four posterior femora and the base of their tibiæ.

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

S. panamensis, of which two female specimens only were obtained, may be distinguished from *S. purpurascens* by the thorax being glabrous at the sides and also differently

coloured; from *S. albilabris* and its varieties by the close punctuation in connection with the different colour; and from *S. fœtens* by the colour of the thorax and the elytral pattern. It is, however, not improbable that *S. panamensis* is a variety of *S. fœtens*; but, taking into consideration the great variability to which these insects are subject, additional specimens are required to come to a more definite conclusion.

Scolochrus fœtens (p. 63).

To the locality Panama, add:—Taboga I. (*Champion*).

A male of this species, which sex was unknown to Suffrian, was obtained by Mr. Champion; it agrees in most respects with the female, but the red colour is replaced by yellowish-red, the eyes are contiguous, and the thorax is finely and rather closely punctured.

Scolochrus sulcipennis (p. 63). (Tab. IV. fig. 4.)

To the locality Panama, add:—Volcan de Chiriqui, David, Caldera, Taboga I. (*Champion*).

Many specimens of this species were obtained by Mr. Champion in Chiriqui. It proves to be more constant in coloration than is usually the case in this genus; amongst these Chiriqui examples, however, are some in which the sutural portion of the elytra is more or less yellowish-white. *S. sulcipennis* has the upper surface entirely opaque.

The reference to the Plate was accidentally omitted on p. 63.

16. **Scolochrus maculicollis.** (Tab. XXXVIII. fig. 9.)

Piceous, the head and a spot on the anterior part of the thorax black, the latter finely punctured; elytra strongly subgeminate punctate-striate, the sutural and lateral margins, a narrow transverse band at the base and another below the middle, black.

Var. The thoracic spot obsolete; elytra fulvous, with the margins and a spot at the shoulders black.

Length 2 lines.

Head black, sparingly punctured; the labrum and oral organs fulvous; eyes (♀) not closely approached; antennæ black, the lower joints stained with fulvous at their base; thorax narrowly transverse, strongly narrowed from the middle to the apex, the surface very finely but not very closely punctured, the punctures a little coarser at the sides, the latter with an obsolete transverse depression near the base, pale fulvous, the disc with a smaller or larger black spot placed at the middle of the anterior margin and a short piceous stripe in the centre; scutellum black; elytra with distinct striæ of punctures, the striæ placed somewhat in pairs, the interstices also impressed with scattered punctures (those near the suture very closely approached in pairs), the surface fulvous, a narrow transverse band at the base and another below the middle, widened at the sides and connected along the lateral and sutural margins with each other, black; the pygidium and the sides of the abdomen nearly white; legs fulvous, the femora more or less darkened or stained with piceous, the posterior tibiæ often paler.

Hab. Panama, Bugaba, David in Chiriqui (*Champion*).

S. maculicollis is very similar in coloration to *S. fœtens*, Suffr.; but differs from it in the punctuation of the elytra. In *S. fœtens* the thorax is crowded with small punctures

and the elytra are almost equally closely punctured; while in the present insect the striæ of the elytra are subgeminate and the interstices broad and with only a few punctures. The male of *S. maculicollis* is unknown to me, but of *S. fœtens* we have examples of both sexes. In the variety the anterior portion of the thorax is only obscurely stained with piceous, and the elytra are without bands, the extreme apex of the latter being whitish and the margins very narrowly black, a small black spot being also placed on the shoulders.

17. **Scolochrus quinque-maculatus.** (Tab. XXXVIII. fig. 10.)

Pale flavous, the antennæ, the underside (partly), and the legs black or piceous; thorax minutely punctured, with two large black spots; elytra finely punctate-striate, a subtriangular sutural spot at the middle, a small spot at the sides, and the lateral margins posteriorly, black.

Length 2 lines.

Head flavous, finely and closely punctured at its lower portion, the vertex more or less stained with fuscous; antennæ half the length of the body, the lower five joints obscure fulvous, the rest black; thorax nearly three times as broad as long, strongly narrowed in front, the surface remotely and finely punctured at the sides and still more sparingly so at the disc, testaceous, with a large anteriorly-pointed piceous spot on each side, the spot touching the base but not extending to the anterior margin, the sides with a shallow oblique depression; scutellum pale piceous, finely punctured, its apex truncate; elytra slightly narrowed posteriorly, the striæ distinct and rather regular, those at the sides a little more irregularly placed, the surface bright flavous with a subtriangular sutural spot at the middle, the point of which extends upwards nearly to the base, and a small spot below the middle on the lateral margin, black; pygidium and the sides of the abdominal segments pale flavous, the rest of the underside and the legs black, the femora more or less stained with fulvous at the base.

Hab. Panama, David in Chiriqui (*Champion*).

Of this pretty and well-marked species fifteen specimens were obtained; these show no perceptible variation. The eyes in the male insect are, as usual, more approximate than in the female; the elytral spots, of which the sutural one is the largest, are placed transversely, the smaller and lateral one being rather lower down, and there is also a very small one (sometimes absent) on the shoulder.

18. **Scolochrus yucatanus.** (Tab. XXXVIII. fig. 11.)

♂. Black, a spot between the eyes, the base of the scutellum, the last abdominal segment, and the apex of the posterior femora whitish; thorax finely punctured; elytra finely and regularly punctate-striate, red, with a black triangular sutural spot.

♀. Head and scutellum entirely black.

Length $2\frac{3}{4}$–3 lines.

Head black, nearly impunctate; the eyes rather closely approached, but separated by a distinct space; a quadrate spot between the antennæ yellowish; labrum fulvous, with a black spot; antennæ black, the basal joint at the apex and the second joint also flavous; thorax about two and a half times broader than long, strongly narrowed in front, the sides obsoletely angled at the middle, the surface entirely black, remotely and finely punctured on the disc, the sides more strongly and closely punctate and with an obsolete transverse oblique depression; scutellum black, the base flavous; elytra with regular and finely punctured striæ, the interstices very minutely granulate, red, the apical and sutural margins very narrowly, and a triangularly-shaped acutely-pointed spot at the middle across the suture, black; below black, clothed with silky white pubescence, a spot between the posterior coxæ, the last abdominal segment, and the lower margin of the four posterior femora and tibiæ yellowish-white.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

This is a large-sized and robust species of which one male and five female examples have been received. The entirely black and finely punctured thorax, the design of the elytra, and the regular and fine punctuation of the latter, separate *S. yucatanus* from the preceding species.

19. **Scolochrus duodecim-guttatus.** (Tab. XXXVIII. fig. 12.)

Dark brown, the thorax with the sides and three spots placed triangularly on the disc flavous; elytra strongly punctured, the brown portion interrupted by six flavous spots (3 . 2 . 1); pygidium, abdomen, and legs pale flavous.

Length 2–2½ lines.

Head closely punctured throughout, flavous, more or less stained with brown, the middle with a dark impressed longitudinal line; antennæ flavous, the apical joints darker; thorax more than twice as broad as long, narrowed from the middle to the apex, irregularly but distinctly punctured, the sides with an oblique depression, the lateral and anterior margins, a small spot at the middle, and two oblique elongate spots at the base (all sometimes nearly obsolete), yellow; scutellum fulvous, margined with brown; elytra with strongly punctured striæ distinctly arranged in pairs, the fifth and sixth and the eighth and ninth rows interrupted before the middle, the dark portion consisting of narrow bands which surround the yellow spots, the six spots placed thus—one near the suture at the base, of elongate shape, its lower portion turned inwards, a similar one surrounding the shoulder and nearly meeting the sutural one at its apex, another, less elongate in shape, at the middle of the basal margin, two others of more quadrate shape, one across the suture, the other at the sides but not extending to the margin, and a transverse one at the apex; pygidium, abdomen, and legs pale flavous, the breast obscurely piceous and finely pubescent.

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

S. 12-*guttatus*, although evidently allied to *S.* 17-*guttatus*, Suffr., differs from it in the shape and position of the flavous elytral spots; of these latter the outer and inner of those at the base are subcrescentiform and bounded above by a similarly-shaped narrow brown band, which in its turn includes the third spot. The design of the thorax is in some specimens very obscure; that of the elytra, however, is constant in the nine specimens obtained.

20. **Scolochrus septemdecem-guttatus.** (Tab. XXXVIII. fig. 13.)

Scolochrus 17-*guttatus*, Suffr. Monogr. in Linn. Entom. xvi. p. 99 [1].

Hab. PANAMA, David in Chiriqui (*Champion*).—VENEZUELA [1].

Numerous specimens of a *Scolochrus* obtained by Mr. Champion in Chiriqui agree so well in their main points with Suffrian's description of *S.* 17-*guttatus* that I must refer them to that species. There are, nevertheless, some slight differences present in all these examples: the bands which surround the flavous spots are not brown but black; the punctuation of the elytra, instead of being entirely obsolete below the middle (as stated by Suffrian), is visible nearly to the apex; and the underside and legs are not brown-yellow, but nearly black (the sides of the abdomen excepted). In one or two instances, however, these last-mentioned parts are paler, and it is possible that

Suffrian had only such specimens for his type. All other characters and the pattern of the thorax and elytra agree with the author's description, and the Panama specimens are, no doubt, local varieties of *S.* 17-*guttatus.*

21. **Scolochrus robustus.** (Tab. XXXVIII. fig. 14.)

♀. Broad and robust, dark fulvous, the labrum and scutellum, the abdomen partly, and the legs flavous; thorax very sparingly punctured; elytra finely punctate-striate.

Length 4 lines.

Hab. GUATEMALA, Panzos in Vera Paz (*Conradt*).

In general shape this species is very broad and robust. The head is impressed with a few fine punctures on the vertex and some deeper ones at its lower portion; the antennæ are black, the lower three joints fulvous. The thorax is suddenly narrowed from the middle to the apex, and very minutely and sparingly punctured on the disc; the sides are impressed with a rather deep oblique groove which is more strongly punctured than the rest of the surface; and at the base are two obscure flavous spots. The scutellum is entirely flavous. The elytra are entirely dark fulvous; the region round the scutellum is distinctly raised, this elevation being followed by a transverse depression, and there are two other deep depressions on the basal margin; the punctures are fine but distinct to below the middle, and deeper within the different depressions. The pygidium and the abdomen are flavous, the intermediate segments of the latter and the breast being brown. The anterior femora are brown, and have a flavous spot at the apex; the rest of the legs and the prosternum are also flavous.

22. **Scolochrus brunneo-fasciatus.**

♀. Broad and robust, flavous; head pale, the thorax dark fulvous, both minutely punctured; elytra very finely punctate-striate, yellow, with a broad transverse dark brown band at the middle, the band surrounding the shoulders; underside clothed with short golden pubescence.

♂. *Var.* Smaller, entirely fulvous, the base of the elytra paler.

Length 3 lines.

♂. Head closely punctured below the eyes, the latter approximate; antennæ with the basal two joints fulvous, the following three joints piceous, shining, the rest black, opaque; thorax three times as broad as long, abruptly narrowed from the middle to the apex, the surface finely and not very closely punctured; elytra finely punctate-striate, the striæ rather regular and distinct below the middle; the underside clothed with short golden-yellow pubescence.

♀. Broader; the elytra flavous, with a broad transverse central brown band, the anterior edge of this band angulate near the middle, the posterior edge straight.

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

The two specimens received differ much *inter se*, though they evidently represent the sexes of the same species. The male example is, no doubt, a variety in which the basal margin of the elytra only remains yellow. In punctuation and in the golden-yellow pubescence of the under surface the two specimens agree. The lower part of the head in the male is also clothed with golden pubescence. *S. brunneo-fasciatus*

seems to be allied to *S. flavo-fasciatus*, Suffr., in coloration; the finely punctured thorax and elytra and the uniformly pubescent under surface will, however, sufficiently distinguish it from that species.

23. **Scolochrus imitans.** (Tab. XXXVIII. fig. 15.)

♀. Flavous, the head, the disc of the thorax, and the breast fulvous; elytra strongly punctate-striate, flavous, the middle occupied by a broad transverse dark brown band which extends to the shoulders.

Length 2 lines.

Hab. Panama, David in Chiriqui (*Champion*).

Closely resembling the typical form of *S. brunneo-fasciatus* in colour, but differing considerably from it in sculpture. The head is closely punctured throughout, especially on the vertex, its colour dark brown, the disc being stained with flavous; the labrum is testaceous; the antennæ are black, with the five basal joints flavous. The thorax is remotely but more distinctly punctured than in *S. brunneo-fasciatus*, and has the lateral margin broadly flavous. The elytra are coloured exactly as in *S. brunneo-fasciatus*, but the punctures are deep and strongly impressed, the yellow apical portion, however, being impunctate; the first row of punctures (following the short sutural one) extends to half the length of the elytra and joins the suture, its anterior portion closely approaching the second row; the following two rows are also arranged in pairs anteriorly, while the rows at the sides are only intact towards the base and interrupted lower down, the ninth row being again entire. The underside and legs are flavous, clothed with short silvery pubescence; the breast is darker.

From the corresponding sex of *S. brunneo-fasciatus* the present insect differs, therefore, in the closely punctured head, the broad flavous sides of the thorax, and the strong elytral punctuation, and also in its much smaller size and less robust form.

24. **Scolochrus minutus.** (Tab. XXXVIII. fig. 16.)

Black, a small spot below the eyes, the lateral margin of the thorax, the sides of the abdomen and of the pygidium, and the tibiæ, partly, yellowish-white; thorax finely and closely punctured; elytra finely punctate-striate, the anterior half fulvous, the posterior half black.

Var. Thorax entirely black, the elytra fulvous.

Length 1–1$\frac{1}{4}$ line.

In this species, one of the smallest of the genus, the upper and lateral portions of the head are almost entirely occupied by the large eyes (these being contiguous in the male), the lower portion being remotely punctured and having a transverse yellowish spot; labrum yellowish-white; antennæ two-thirds the length of the body, black, the lower three joints yellowish beneath; thorax two and a half times as broad as long, the sides rounded at the middle, with an oblique depression at the base, and strongly punctured, the rest of the surface very finely and closely punctate. the interspaces extremely minutely aciculate and wrinkled, the lateral margin narrowly flavous, the disc black; scutellum yellowish; elytra regularly punctate-striate, the space near the scutellum almost impunctate, the anterior half fulvous, the posterior half black; pygidium whitish, with a central black band; legs black, the base of the posterior femora and their tibiæ to a greater or less degree, as well as the tarsi and the sides of the abdomen, yellowish-white.

Hab. Panama, Bugaba, David in Chiriqui (*Champion*).

This very small species seems to be somewhat allied to *S. memnonius*, Suffr., but to differ from it in several particulars. *S. minutus* is apparently subject to a good deal of variation, not one of the five specimens obtained agreeing perfectly with each other; in one the pale lateral margin to the thorax is almost entirely absent and the fulvous colour of the elytra extends to two-thirds their length, and in the variety noticed above the black colour of the elytra has entirely disappeared. The small pale spot below the eyes is present in all the specimens, and the strong punctuation at the sides of the thorax only is also constant. The prosternum is strongly punctured and its apex is subtriangular.

25. **Scolochrus cordovensis.** (Tab. XXXVIII. fig. 17.)

Fulvous, the antennæ (the basal joints excepted) black; thorax sparingly punctured; elytra moderately strongly punctate-striate, two spots at the base, placed transversely, and a narrow band below the middle of irregular shape, black.

Length $1\frac{3}{4}$–2 lines.

Head fulvous, impunctate, the eyes almost contiguous in the male, more distant in the female, the intermediate space impressed with a narrow central longitudinal groove; labrum flavous; antennæ black, the two or three basal joints fulvous; thorax about two and a half times as broad as long, the sides rounded and widened at the middle, the surface very finely and rather closely punctured, the lateral portion more strongly punctate and with a rather deep transverse oblique depression; scutellum flavous; elytra with rows of rather deep punctures, the punctures at the sides and near the suture more irregularly and closely placed, the extreme apex impunctate, each elytron with a spot on the shoulder, a rather larger spot near the scutellum, a transverse band below the middle (not touching either margin and widened towards the suture), and the lateral margin very narrowly, black; underside entirely fulvous, clothed with very short yellowish pubescence.

Hab. Mexico, Cordova (*Sallé*).

S. cordovensis differs in its elytral design from any other species of our region; specimens of both sexes of it are before me.

26. **Scolochrus gamma.** (Tab. XXXVIII. fig. 18.)

Flavous, the breast piceous; thorax closely punctured and finely rugose, with a **Y**-shaped central brown mark; elytra opaque, distinctly punctured, the interstices finely wrinkled, a spot at the shoulder, two others below the middle, placed transversely, and a semicircular band surrounding the scutellum, piceous.

Var. The elytral spot fulvous, divided, and small.

Length 2–$2\frac{1}{2}$ lines.

♂. Head closely and rather strongly punctured, the entire sides occupied by the large and contiguous eyes; labrum bright flavous; antennæ entirely flavous, extending beyond the middle of the elytra, the basal five joints shining, the following joints finely pubescent, opaque, and slightly widened; thorax about two and a half times as broad as long, rather suddenly narrowed from the middle to the apex, the disc with the usual oblique depression on each side, closely and strongly punctured, the interspaces finely rugose and aciculate, flavous, with a piceous spot placed within the lateral depression and a similarly-coloured very distinct **Y**-shaped central mark; scutellum flavous; elytra regularly and rather strongly punctate-striate, the space surrounding the scutellum with a few punctures only placed near the suture, and bounded laterally by the short first row of punctures, the following four rows placed at nearly equal distances from each other, but followed by a wider space, the eighth and ninth rows closely approached, the colour similar to that of the thorax, the interstices closely and finely wrinkled and opaque, the pattern in the plainly-marked specimens consisting of a semicircular narrow dark band extending across the suture below the base and another band below the middle, the latter being nearly semicircular in shape, but

opposed to the anterior band in its convexity, and often composed of two nearly-connected spots, the sutural and lateral margins also narrowly dark brown; underside and legs flavous, the breast piceous.

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

S. gamma might almost be mistaken for one of the varieties of *S. decoratus*, from which, as well as from the other species of the genus, it differs in its finely rugose thorax and elytra and opaque appearance. I have taken for the type the specimen with the darkest markings, the colour in the other examples being dark fulvous, and the markings frequently represented by spots only; the Y-shaped mark of the thorax in all is plainly and clearly visible. The female has, as usual, the eyes separated, but in the male they are absolutely approximate. Nine specimens.

27. **Scolochrus fallax.** (Tab. XXXVIII. fig. 19.)

Scolochrus fallax, Suffr. Monogr. in Linn. Entom. xvi. p. 207 [1].
Pachybrachys humeralis, Stål, Öfv. Vet.-Ak. Förh. xvi. p. 61 [2].

Hab. PANAMA, Volcan de Chiriqui, David (*Champion*).—COLOMBIA [2], Cartagena [1]; BRAZIL (*coll. Jacoby*).

This species is one of the most variable of the genus *Scolochrus* in regard to colour, and one of which Suffrian has described no less than ten varieties. The Panama specimens agree in having a fulvous head, thorax, and legs (the latter alone being sometimes darker), and black elytra, the anterior part of the lateral margin excepted (a single male, however, has a white apical spot on each elytron, and a small pale central spot on the left one only); but they differ slightly in sculpture from Suffrian's description, this author stating that "the male insect has the elytral punctures very closely placed between the suture and the shoulder, and that scarcely any arrangement of rows is perceptible at that portion"—in the Panama male specimens all the rows are distinctly separated, and visible below the middle as well as at the base, while the females agree with the author's description in having the rows indistinct below the middle. The narrow white lateral margin to the basal portion of the elytra and the similarly-coloured pygidium and sides of the abdomen are exactly as in the type; and I think that the above-mentioned differences in regard to the punctuation are probably local.

An example from David is figured.

28. **Scolochrus modestus.** (Tab. XXXVIII. fig. 20.)

Black, the labrum, the sides of the thorax, the pygidium, and the sides of the abdomen white; thorax strongly, the elytra closely and distinctly, punctured, the basal margin of the latter with a yellowish spot.

Length 1 line.

♂. Of about the same small size as *S. minutus*. The head black, punctured at its lower portion only; the eyes divided by a very narrow space; two small spots below the eyes, placed transversely, and the labrum, yellowish; antennæ black, the basal joints more or less piceous; thorax nearly three times as broad as long, with a deep and broad oblique depression on each side, the lateral margins narrowly yellowish-white, this colour also extending along a part of the anterior margin, the rest of the surface black, strongly and

irregularly punctured, more closely so within the depressions and anteriorly, the posterior margin perfectly straight at its middle; scutellum scarcely longer than broad, impunctate, black; elytra strongly and comparatively closely punctured, the striæ rather irregular, the first row running nearly parallel with the suture throughout its entire length, the two or three following rows more irregular and confused together, those at the sides regular and scarcely interrupted, the interstices almost imperceptibly granulate, the entire disc black and shining, the base with a small yellowish spot on each side near the scutellum; the pygidium and the sides of the abdomen white, the rest of the underside black; legs fulvous, the apices of the femora obscure piceous.

Hab. PANAMA, Bugaba in Chiriqui (*Champion*). A single specimen.

29. **Scolochrus equestris.**

Cryptocephalus equestris, Oliv. Ent. vi. p. 804, t. 5. f. 70[1].
Scolochrus equestris, Suffr. Monogr. in Linn. Entom. vii. p. 122[2].

Hab. NORTH AMERICA[1 2].—GUATEMALA, Petapa (*coll. Jacoby*).

Of this, according to Suffrian, extremely rare species I have lately received a specimen from the Stuttgart Museum. The description given by Suffrian agrees in all particulars with this example, except in some differences in colour. In the Guatemalan specimen the pygidium is not black but yellow, and is without spots. The underside is flavous, with the exception of the middle and sides of the breast and the centre of the intermediate abdominal segments. The elytra are deeply and closely punctured, the punctures rather regular at the sides and a little more confused and scattered on the disc; they have the lateral margin at its posterior two-thirds, as well as three spots (2 . 1), black, but there is no other mark placed near the sides (as Suffrian mentions in his description). The thorax is deeply and remotely punctured, and has two black spots placed near the middle.

30. **Scolochrus geometricus.** (Tab. XXXVIII. fig. 21.)

Flavous, the breast and legs fulvous; thorax sparingly punctured, with a central and lateral brown mark; elytra with brown or black punctured double striæ, the interstices near the suture swollen and angularly widened, and, like the apex, pale flavous.

Var. Elytra dark fulvous, the flavous spots smaller.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head pale, a triangular spot at the vertex, and some narrow stripes round the eyes, dark brown; the latter very large and subapproximate; the lower portion of the face with a few dark punctures; antennæ rather more than half the length of the body, black, the basal joint and part of the second fulvous; thorax very short, at least three times as broad as long, the sides nearly straight, the disc rather sparingly punctured, more closely so near the anterior margin, the surface with a deep transverse sublateral depression, pale flavous, the sides with a longitudinal and the disc with a more or less distinct triangularly-shaped brown band; scutellum raised, its apex truncate, pale brownish; elytra with deep and closely-placed double rows of punctures, the punctures surrounding smooth and raised pale flavous spaces, these latter defined and placed thus—a short one immediately below the scutellum, not extending to the middle, followed by a large, elongate, and triangular space extending to below the middle, and other similar but smaller spaces (one, elongate in shape, extending from the middle of the base as far as the first sutural space, one, broader and more rounded, below the middle, and one small and triangular, near the centre of the lateral margin), the entire apex and the basal and lateral margins also raised and smooth;

pygidium flavous; the underside more or less fulvous, the sides of the abdomen, and a spot near the apex of the femora, yellowish-white; prosternum flat, broadly rounded posteriorly.

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

This species may be easily distinguished by its curious sculpture, something like that of several species of *Pachybrachys* (from which genus the differently-shaped prosternum separates it), and its pale general coloration and small size. All the specimens obtained seem to be females; the male probably has the eyes contiguous. One example differs from the others in having deep black and partly confluent punctured striæ, the striæ forming dark bands and surrounding the smooth yellow spaces. The apical portion of the elytra for some distance upwards is smooth, and interrupted only by the joined ends of the subsutural and sublateral punctured striæ. In some specimens the fulvous colour of the elytra is much more extended, the flavous spots being thus greatly reduced in size.

31. **Scolochrus quadrimaculatus.** (Tab. XXXVIII. fig. 22.)

Black, some spots on the head, the labrum, and the lateral margin of the thorax yellow; thorax rugose-punctate; elytra closely punctate-striate at the sides, black, a large subquadrate humeral, and a round apical spot, yellow; three spots on the pygidium, the sides of the abdomen, and part of the femora, yellow.

Length 2 lines.

Head closely punctured, black, a small spot on each side of the vertex, the indented portion of the eyes, a spot at the middle, and the labrum, flavous; antennæ black, the lower five joints fulvous; thorax rather more than twice as broad as long, the sides evenly rounded at the middle, but slightly narrowed at the base and apex, the disc with an oblique obsolete depression on each side, closely and rather strongly rugose-punctate, black, the lateral margins narrowly flavous; scutellum black; elytra rather flattened on the disc, scarcely more strongly punctured than the thorax, the punctuation irregular near the suture, but arranged in close rows on the rest of the surface, the interstices scarcely raised, finely wrinkled, and but little shining, the surface black, a humeral spot not extending to the suture, and a round apical spot, bright flavous; below black, the anterior coxæ, a spot in front and a streak at the sides of the breast, the sides of the abdomen, and the greater part of the four posterior femora beneath, yellow, the base of the tibiæ also more or less flavous; prosternum with the apical margin yellow, and broadly rounded.

Hab. MEXICO, Juquila (*Sallé*). A single specimen.

This species would doubtless have been included by Suffrian in the genus *Metallactus*; but for reasons already stated I prefer to place all the allied Central-American forms in the one genus *Scolochrus*. Several of Suffrian's species of *Metallactus* approach the present insect very closely, though none of them come near enough to be identified with it. Of these *M. lubricus* is, perhaps, nearest allied to *S. quadrimaculatus*; the latter differs from *M. lubricus*, however, in the thorax being rugosely punctured, in the elytra being distinctly punctured nearly to the apex (instead of having the punctures almost obsolete below the middle), and in the pygidium being black, with yellow (not white) spots.

PACHYBRACHYS (p. 64).

Most of the American species of this genus are so inconstant in size, shape, sculpture, and colour that unless the limit of their variation is known and understood it is almost impossible to separate them; and many of those described by Suffrian are, no doubt, nothing more than varieties of one or the other of these variable forms. It is the same as in the genus *Colaspis* amongst the Eumolpidæ and *Disonycha* amongst the Halticidæ. Fortunately, we have received long series of specimens of many of the Central-American species, so that I am enabled to come to a definite conclusion in several instances.

1 (A). **Pachybrachys pubescens.**

Cryptocephalus pubescens, Oliv. Ent. vi. p. 820, t. 6. f. 91[1]; Suffr. Monogr. in Linn. Entom. vii. p. 148[2].

Cryptocephalus morosus, Haldem. Journ. Ac. Phil. 2nd ser. i. p. 260 (1849)[3].

Hab. North America[1 2 3].—Mexico, Northern Sonora (*Morrison*).

This species seems to have a rather wide distribution, and is said to be not uncommon in different parts of North America. Suffrian has given a detailed description; but several specimens obtained by the late Mr. Morrison amongst others of the normal form show some very obscure red markings at the sides of the thorax and on the elytra. Examples thus coloured resemble *P. hæmatodes*, from which they differ, however, in shape and other details; this red coloration seems to be peculiar to a greater or less degree to the few pubescent species of *Pachybrachys* at present known.

1 (B). **Pachybrachys thoracicus.** (Tab. XXXVIII. fig. 23.)

Cylindrical, black, pubescent; thorax finely punctured, the posterior half of the sides bright red; elytra strongly punctured, the interstices subcostate near the apex.

Length 2 lines.

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

The only, apparently female, specimen I have for examination differs sufficiently from *P. pubescens* to treat it as distinct. *P. thoracicus* is of an entirely black colour, with the exception of a narrow basal margin to the elytra and the posterior half of the sides of the thorax (in the shape of a broad triangular space extending inwards to the middle of the base), these parts being red; the surface of the thorax is closely and finely rugose-punctate and clothed with long whitish hairs; the elytra are similarly pubescent, but much more strongly and less closely punctured, the punctures being arranged here and there in indistinct rows, the interstices being also minutely punctured and becoming slightly convex towards the apex; the underside and legs are black and pubescent, the tibiæ at the base being very obscurely stained with fulvous. In *P. pubescens* the elytral punctuation is much finer and shows no trace of regular arrangement. *P. analis*, Lec., seems to be an allied species, but is stated to have a red margin to the elytra.

1 (c). **Pachybrachys semibrunneus.** (Tab. XXXIX. fig. 1.)

Black; above obscure fulvous, finely pubescent; thorax very closely and finely punctured, clothed with silvery pubescence; elytra similarly pubescent, and as closely but more strongly punctured, the interstices subrugose; legs with yellow spots.

Length 1½ line.

Head closely punctured, and clothed with silvery pubescence, blackish, a narrow stripe near the eyes, and some spots below the middle, obscure fulvous; antennæ extending to beyond the middle of the elytra, black, the lower five joints more or less fulvous; thorax about twice as broad as long, scarcely narrowed in front, the sides rather strongly deflexed, the disc very closely and rather strongly punctured, clothed with comparatively long silvery hairs; scutellum black; elytra subcylindrical, more deeply and strongly punctured than the thorax, the interstices irregularly rugose, but with scarcely any traces of longitudinal costæ, the surface obscure fulvous, and pubescent like the thorax, the shoulders with a black spot; pygidium black, with two yellow spots; underside black, clothed with long whitish hairs, the last abdominal segment with a yellow spot on each side; legs black, the femora with the base and an apical spot, and the base of the tibiæ, fulvous.

Hab. MEXICO, Durango city (*Höge*).

Narrower and more cylindrical in shape than *P. pubescens* (Oliv.); the entire upper surface very obscure fulvous (in certain lights, however, some darker spots are visible on the elytra). A single specimen.

Pachybrachys rubronotatus (p. 65).

To the Mexican locality given, add:—Zacualtipan in Hidalgo (*Höge*).

The single specimen, a female, obtained by Herr Höge does not differ much from the type, except in colour; the thorax is more transversely shaped and the red colour prevails along the entire anterior margin as well as at the sides, and the punctuation is rather stronger; the elytra are entirely black, with the exception of the basal margin near the scutellum; and the femora are only fulvous at their extreme base and have no apical spot. The close and deep punctuation of the elytra is interrupted here and there by longitudinal irregular raised costæ as in the type.

Pachybrachys varicolor (p. 65).

To the locality Mexico, add:—Ciudad in Durango (*Höge*).

Herr Höge obtained ten specimens of this apparently rare and variable species. In most of these the black colour of the elytra predominates; but sometimes the elytra are flavous, the punctures only being black and arranged in close longitudinal rows; the extreme apex is always flavous, and generally the two marginal interstices also. Specimens with yellow elytra frequently have the thorax spotted with that colour.

Pachybrachys bajulus (p. 66).

To the Mexican locality given, add:—Ventanas in Durango, Acapulco (*Höge*), Amula in Guerrero, Orizaba (*H. H. Smith*); GUATEMALA, San Joaquin in Vera Paz, Calderas (*Champion*).

P. bajulus being evidently a very variable species, I have ventured to refer all the specimens from the above localities to it, more especially as they have most of the principal characters in common. The thorax has a semiangular (not rounded) lateral margin and a closely punctured surface, the punctures interrupted by small yellow spots which often form themselves into two more or less distinct yellow lateral stripes and a shorter central one. The elytral sculpture it is almost impossible to describe, scarcely two specimens being alike in this respect, and in some cases one elytron is differently punctured to the other; as a rule, however, the entire lateral portion is impressed with black semiregular rows of punctures, and between these short yellow spots and stripes are visible, amongst which a small raised spot is particularly prominent near the suture at the middle. The underside and legs are generally black. The pygidium has four yellow spots, and the last abdominal segment is entirely of that colour. Specimens occur in which the black punctures and lines of the upper surface are replaced by brown.

6 (A). **Pachybrachys minutus.** (Tab. XXXIX. fig. 2.)

Black; thorax closely punctured, flavous, with three broad black bands, the middle one divided anteriorly; elytra flavous, this colour interrupted by deep black punctured irregular striæ; pygidium black, with four yellow spots; underside and legs black, the last abdominal segment and the femora spotted with white.

Length $\frac{3}{4}$–1 line.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

This very small species, of which several specimens were obtained, seems to be most nearly allied to *P. bajulus*; it differs from it, however, in the entirely black antennæ, the differently-marked thorax, different sculpture of the elytra, and the much smaller general size. The head is black, very closely punctured, and has six bright flavous spots, of which two, obliquely shaped, are placed on the vertex, two in front of the eyes, and two others within their emargination; the lower portion of the epistome is also more or less flavous. The antennæ extend to about two-thirds the length of the elytra, and are black, with the exception of the lower joints, which are slightly tinged with piceous beneath. The thorax is rather closely and strongly punctured, with evenly rounded sides, and the bright flavous ground-colour is divided by a black band at the sides, including a small yellow spot, and a central band divided anteriorly by a narrow flavous stripe; the basal margin has a narrow flavous stripe in front of the scutellum, the latter being entirely black. The elytra seem to differ from those of *P. bajulus* in having more yellow longitudinal raised interspaces, which are even visible at the base between the shoulder and the scutellum; the deep black punctured striæ interrupt in many places the yellow portion, dividing it into unequal stripes, and they often unite to form spots near the apex and at the sides. The underside is entirely black, with the exception of a yellow spot at the sides of the last abdominal segment. The legs do not

seem to differ in colour from those of *P. bajulus*. The markings of the head and thorax are exactly similar in the three specimens obtained.

Pachybrachys scenicus (p. 66).

To the locality Mexico, add:—Cuernavaca, Juquila (*Sallé*), Amula, Omilteme, Chilpancingo, Xucumanatlan in Guerrero (*H. H. Smith*).

P. scenicus is not easy to distinguish from the darker varieties of *P. labyrinthicus*, and the two species seem to me to be somewhat doubtfully distinct. Both have an elongate-triangular, raised, smooth space at the suture near the middle, this space being rather shorter in the present insect than in *P. labyrinthicus* (this in itself is of no importance); the thorax does not seem to differ much in the two species, and is similarly marked in both (the markings being often obsolete in the paler specimens of *P. labyrinthicus*); but the sculpturing of the elytra seems certainly to differ considerably. In *P. scenicus* the black punctured striæ are much more irregular and often interrupted by smooth yellow narrow spaces, so that it is almost impossible to convey a correct impression by a description of their direction. Suffrian gives the elytra as black and speaks of yellow spots; but it would be better to describe the elytra as yellow with black punctured striæ, the latter placed thus:—two short curved striæ surrounding the scutellum, the outer one connected with the third and ninth stria at the apex and including an elongate-triangular smooth space near the suture, and both abbreviated behind; the fourth and fifth striæ closely approached and shorter than the preceding ones; the next pair of striæ interrupted at and below the middle; the outer one parallel to the lateral margin, at some distance from it, and enclosing a smooth yellow space which extends from the shoulder to the apex, and is continued to the suture. These black striæ are often united, forming elongate black markings here and there; the underside for the greater part is black; the legs are fulvous, the femora with a black mark. *P. labyrinthicus* is generally much paler; it also has the elytral striæ more regular (although nearly similar in direction to those of *P. scenicus*), and the triangular smooth sutural space longer and carried lower down. I also refer some smaller specimens from Omilteme and Xucumanatlan to the present species; some of them have the thorax much more closely punctured, but others are intermediate in this respect.

7 (A). **Pachybrachys inclusus.** (Tab. XXXIX. fig. 3.)

Black; above yellow; the thorax with three black, elongate, partly divided, stripes; elytra with closely approached deep-black striæ, often connected, forming three distinct black spots at the sides, and enclosing a rounded smooth yellow space near the suture at the middle; pygidium yellow, scarcely spotted; legs fulvous, the femora with a dark spot.

Length $1\frac{3}{4}$–2 lines.

Hab. MEXICO, Cuernavaca (*Sallé*), Chilpancingo, Soledad in Guerrero (*H. H. Smith*).

P. inclusus is closely allied to *P. scenicus* and its allies, but it cannot well be regarded as a variety of either, the eight specimens I have for comparison all agreeing in the following particulars:—The thorax is rather more strongly punctured (though the black markings are very similar); the elytra have the black striæ more frequently united, forming black markings, the elongate-triangular space near the suture replaced by a nearly round one (similar to that present in *P. irregularis*), the striæ at the sides united in three places, forming three deep black spots, the striæ below the scutellum frequently joined, by which another black mark is formed, and the immediate space surrounding the scutellum often closely and irregularly impressed with black punctures; and the pygidium (its lower edge excepted) and the sides of the last abdominal segments are yellow. The legs agree in colour with those of *P. scenicus*. *P. inclusus* is a larger and more robust insect than *P. irregularis*, and has the markings of the thorax and of the elytra deep black and the striæ more frequently united; our figure, which is taken from a specimen with the pale spots rather more conspicuous than in the others, will convey a better idea of the differences between the two species.

Pachybrachys irregularis (p. 67).

To the localities given, add:—MEXICO, Colima city (*Höge*), Tepetlapa, Chilpancingo, and Amula in Guerrero, Orizaba (*H. H. Smith*); GUATEMALA, Cerro Zunil, San Isidro (*Champion*).

This seems to be a most variable species, of which it is difficult to fix the limit. Suffrian describes the thorax as being closely punctured, the space surrounding the scutellum irregularly, the rest of the elytral surface rather regularly, punctured; the elytra with a more or less ovate (not elongate), smooth, and raised space near the suture at the middle of each (this space being more rounded in shape than in *P. labyrinthicus*); the underside for the greater part black; and the pygidium and legs more or less fulvous. The author speaks further of a transverse black spot near the apex of the elytra, which in the otherwise typical specimens that have come under my observation is absent. The description, however, if carefully compared, agrees very well with the specimens obtained in Mexico; but nearly all those received from Guatemala differ in the following particulars:—They are smaller; the thorax is much less closely punctured, and has on each side a nearly smooth, slightly raised space; and the elytra have the space surrounding the scutellum generally with two short curved rows of impressions (not irregularly punctured), and the rest of the punctuation regular (but the punctures much more distantly placed than in the typical specimens), and have also a small nearly black shoulder-spot, and frequently a dark transverse band of variable width near the apex (which agrees with Suffrian's description).

I would certainly have looked upon these Guatemalan specimens as distinct from *P. irregularis*, if we had not several examples with an intermediate form of sculpture.

8 (A). **Pachybrachys forreri.** (Tab. XXXVIII. fig. 24.)

Black; thorax very closely punctured, the sides, and three spots placed triangularly, yellowish-brown; elytra closely punctured, the posterior portion costate, the base and the apex, and two spots placed transversely at the middle, yellowish.

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

Head very closely punctured, black, a narrow margin surrounding the eyes, a spot at the middle, and the labrum, dark yellow; antennæ more than two-thirds the length of the body in the male, black, the lower five joints fulvous; thorax rather convex, with strongly rounded sides, extremely closely punctured, the interspaces here and there rugose, with a more or less distinct central longitudinal raised line, the surface black, with the lateral margins broadly, part of the anterior margin, the raised middle line (sometimes widened into a triangular space), and two small spots at the sides, dark yellow; scutellum with a few punctures, black, its apex truncate; elytra with deep and very closely arranged punctures, the interstices in part longitudinally costate, much more regularly so towards the apex than at the base, a smooth rounded space placed below the middle near the suture, the base (in the shape of a broad transverse band extending downwards at the sides), a spot at the apex, another at the sides below the middle, and the raised space near the suture, dark yellow; pygidium yellow, with the margins and a central longitudinal line black; underside and legs black, the femora with the base and a spot at the apex, and the last abdominal segment, yellow.

Hab. Mexico, Ciudad in Durango (*Forrer*), Ventanas in Durango (*Höge*).

This is a well-marked and somewhat easily recognized species, quite distinct from any other known from our region. The amount of yellow on the thorax varies (in one specimen the middle spot occupies a broad triangular space), but is regularly placed. If the yellow of the elytra is taken for the ground-colour, the black forms a broad common subquadrate patch, which sends a short branch upwards and two longer branches sideways, the latter extending to the lateral margin; the arrangement of the punctures in rows is very indistinct owing to the close punctuation.

8 (B). **Pachybrachys durangoensis.** (Tab. XXXVIII. fig. 25.)

Subcylindrical, dark brown or obscure fuscous; thorax extremely closely and finely punctured, lighter brown with obscure darker markings; elytra flavous, closely impressed with dark brown punctures irregularly placed, the interstices finely wrinkled; legs light brown, with dark markings.

Length 2–$2\frac{1}{2}$ lines.

Hab. Mexico, Ventanas in Durango (*Höge*).

This *Pachybrachys*, of which we have received two specimens, may be recognized by its opaque obscure fuscous colour and extremely closely punctured head and thorax, and by the absence of all longitudinal costæ to the elytra. The head has the usual paler rings round the eyes, and some flavous spots on the lower portion; the antennæ (♀) do not extend to the middle of the elytra, and are dark fulvous, with the terminal joints darker. The thorax is about twice as broad as long, the sides being rounded at the base but distinctly narrowed towards the apex; the surface is extremely closely punctured, and very sparingly clothed with grey pubescence, and is light brown in colour, with an obscure ᗰ-shaped brown mark on the middle of the disc. The ground-colour of the elytra is flavous, as well as the extreme and narrowly-raised basal margin; almost the entire surface is irregularly impressed with

dark brown punctures, which only at the extreme apex show traces of arrangement into rows; the interstices are finely wrinkled throughout, the wrinkles very slightly raised above the punctures; from the basal margin two very narrow and indistinct flavous raised lines extend a little way downwards. The pygidium is dark brown, and clothed with long greyish pubescence. The underside and legs are pale brownish, and the femora have a piceous ring-shaped mark.

8 (c). **Pachybrachys maculicollis.** (Tab. XXXIX. fig. 4.)

Black; above yellowish-brown; the head with four, the thorax with five partly connected black spots; elytra strongly and rather irregularly punctured, the punctures black, the interstices scarcely raised, three spots at the sides, and three others near the suture, black; pygidium and legs spotted with yellow.

Length 2 lines.

♀. Head flavous, finely punctured, the vertex, an elongate-triangular spot at the middle, and two small spots at the base of the antennæ, black; antennæ scarcely half the length of the body, the lower six joints fulvous, the others black; thorax about twice as broad as long, the sides narrowed towards the apex, the surface rather irregularly and finely punctured, but with some smooth yellow spaces here and there, and with three spots placed triangularly at the middle of the base and one on each side (which, if connected, form the usual ᗰ-shaped mark), black; scutellum black; elytra pale brownish like the thorax, the punctures black and irregularly distributed, but forming here and there double rows, of which one may be distinguished near the suture and two others at the sides, the outer row connected with the three black lateral spots (one placed at the shoulder, one at the middle, and one near the apex), the spots near the suture more or less elongate in shape and placed slightly lower than the lateral ones, the disc and the sides with a single longitudinal costa; pygidium black spotted with yellow, this colour extending to the last abdominal segment; legs fulvous, the femora having the usual black mark, followed by a bright yellow spot.

Hab. Mexico, Milpas in Durango (*Forrer*).

In this species, females only of which are before me, the elytra are devoid of the numerous longitudinal raised costæ found in most *Pachybrachys* at the sides and apex, two only being visible; and this form of sculpture places *P. maculicollis* in Suffrian's fifth group. From the closely allied species described by Suffrian it may be known by its yellowish-brown upper surface, the five distinct spots on the thorax, and the irregular elytral sculpture. If the latter is carefully examined, three double rows of punctures may be seen, between which the interstices are slightly raised; the outer rows of these punctures are united at a little distance from the apex; the other portion of the surface is irregularly impressed with black punctures; the black lateral and discoidal markings are plainly visible to the naked eye, forming three irregular, transverse, broken bands as in *P. scenicus*, *P. irregularis*, and others. *P. maculicollis*, however, differs from these species in having the lateral rows of punctures much more regular, and the thorax is marked with bands, not spots.

Pachybrachys labyrinthicus (p. 67).

To the locality Mexico, add:—Ciudad in Durango (*Forrer*), Chilpancingo, Amula, Xucumanatlan, and Acapulco in Guerrero (*Höge*, *H. H. Smith*), Mexico city (*Flohr*).

An examination of the numerous specimens since received from the above localities

seems to prove the validity of *P. labyrinthicus.* The colour is pale yellowish above; the thorax has the usual markings much less conspicuous than is generally the case, a small dark brown spot in front of the scutellum alone being prominent; and the elytra have the smooth subsutural space drawn out into an elongate triangle (this space not being ovate or rounded as in *P. irregularis*). *P. labyrinthicus* seems to be constant in colour and sculpture, and it differs also from *P. irregularis* in having a short double row of punctures surrounding the scutellum (instead of the corresponding space irregularly punctured as in the allied species). The specimens from Ciudad are much darker, and have the interstices between the punctures marked with streaks of black, the punctured rows themselves often becoming nearly united; these examples cannot be satisfactorily separated from *P. labyrinthicus.*

Pachybrachys punctatissimus (p. 68).

To the Mexican localities given, add:—Jalapa (*Höge*).

To the description of this species I may add that the interspaces between the punctures of the thorax are unevenly rugose or wrinkled, and, therefore, the sculpture is quite different from that of most other species of the genus; the thorax also has a more or less distinct narrow raised central ridge extending from the anterior to the basal margin; the elytra are nearly white, and everywhere impressed with brown punctures, which near the suture and apex aggregate and form short stripes, and are without longitudinal striæ or costæ.

Pachybrachys umbraculatus (p. 69).

To the Mexican locality given, add:—Saltillo in Coahuila (*Dr. Palmer*).

This is evidently a good species, of which our figure is a good representation. The sixteen specimens received from Saltillo scarcely show any variation; the thorax is proportionately longer than in most other species of the genus, and its markings are nearly always only indicated by obscure dark fulvous or piceous spots.

14 (A). **Pachybrachys flavescens.** (Tab. XXXIX. fig. 5.)

Broad and robust, pale flavous, the sides of the breast darker; thorax irregularly and subremotely punctured; elytra with regular rows of dark and deep punctures, the space between the second and fourth rows triangularly widened.

Length 2 lines.

Head entirely pale flavous, finely but not very closely punctured; the eyes widely separated; antennæ nearly as long as the body, flavous, the apical two joints more or less black; thorax scarcely twice as broad as long, of about half the length of the elytra, the sides obliquely narrowed from below the middle to the apex, the disc irregularly but not very closely punctured, entirely flavous; scutellum flavous, margined with piceous; elytra of the same colour as the thorax, with eleven nearly regular rows of large black or brown punctures—of these three short rows are placed round the scutellum, the first row straight, the second and third rounded, the latter after curving round towards the suture at the middle running parallel

with it and forming with the following row a very elongate triangularly-widened space, the fifth and sixth rows abbreviated before the apex, the following rows nearly regular and parallel, and their interstices but moderately convex; pygidium and the underside pale flavous, the sides of the breast and the abdominal segments more or less dark brown; legs pale fulvous, the femora with a whitish spot; the female with a narrow triangular fovea on the last abdominal segment.

Hab. Mexico, Rincon in Guerrero (*H. H. Smith*).

Of this rather large and plain species two specimens, apparently male and female, were obtained by Mr. Smith. Except for the occasionally confluent punctures of the elytra, which form short brown streaks here and there, the upper surface is entirely of a uniform flavous colour; in one example the sixth, seventh, and eighth rows of punctures are interrupted by a raised smooth space at the middle, which may be accidental, as it is absent in the other. *P. flavescens* agrees with *P. umbraculatus* in the arrangement of the elytral punctuation; but differs in the much more robust and broader shape, the more evenly punctured thorax, and the colour of the underside, and also in the almost entirely flavous antennæ.

16 (A). **Pachybrachys brunneo-maculatus.** (Tab. XXXIX. fig. 6.)

Head and thorax testaceous, the latter very finely punctured and obscurely spotted with brown; elytra with finely impressed, partly geminate, rows of punctures, flavous, the interstices spotted with brown, the brown markings forming short longitudinal bands; underside and legs dark brown, spotted with flavous.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head entirely testaceous, or obscurely spotted with fulvous on the vertex, sparingly impressed with small and at the middle closely-approached punctures; eyes widely separated in both sexes (rather more contiguous in the male); antennæ nearly as long as the body in the male, the basal two joints fulvous, the others pale at their base; thorax proportionately short, more than twice as broad as long, still broader in the female, the sides with an oblique depression, the surface finely and rather closely punctured, pale flavous or testaceous, a **V**-shaped obscure brown mark on the disc and a spot on each side; scutellum raised, flavous, its apex truncate; elytra with the basal portion slightly raised, bounded on each side behind by a transverse oblique depression, the basal margin strongly thickened (especially round the scutellum), the punctures dark brown and rather regularly but distantly placed in more or less distinct double rows, which are joined at some distance from the apex, and somewhat interrupted by irregular punctures placed within the oblique postbasal depression, the rows at the sides often sinuate and interrupted by extra punctures, the apex entirely impunctate, the interstices forming longitudinal stripes, partly flavous and partly dark brown, the short dark brown stripes being generally more distinct at the suture below the scutellum, at the middle of the base, on the shoulder, and within the oblique depression, some other brown markings being visible below the middle and along part of the punctured striæ; pygidium flavous, with a darker margin; underside and legs brown; abdomen more or less flavous at the sides; prosternum longitudinally depressed in the middle, its base broadly subtriangular.

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

The punctuation of the elytra in *P. brunneo-maculatus* resembles somewhat that of *P. regularis*, but it is not so clearly defined. The elytra have also a similar transverse depression extending across the middle, so that the basal portion appears to be raised; besides this, the basal margin, especially the part surrounding the scutellum, is strongly thickened; the space below this is irregularly punctured, but the rest of the surface is impressed with rather regular rows of punctures which are, however, often closely

approached, the interstices thus appearing narrower in places. The entire surface of the elytra is varied with longitudinal flavous or brown markings, a character that will principally distinguish *P. brunneo-maculatus* from its allies. The ten specimens obtained do not show any variation of importance.

16 (B). **Pachybrachys juquilensis.** (Tab. XXXIX. fig. 7.)

Dark brown below; above flavous; thorax extremely closely and finely punctured, with obscure flavous lateral and central markings; elytra with deep and regular rows of punctures at the sides, the interstices costate, a spot on the shoulder, two short transverse bands at the sides, and a spot near the scutellum, dark brown or black; pygidium flavous; legs fulvous, spotted with pale yellow.

Length $1\frac{3}{4}$ line.

Hab. MEXICO, Juquila (*Höge*).

P. juquilensis seems most nearly allied to *P. brunneo-maculatus*, from which it differs in the thorax being very closely punctured and also devoid of the oblique lateral groove (distinctly visible in *P. brunneo-maculatus*). The entire upper surface is opaque and of a pale flavous colour. The fine and pale brown punctures of the thorax are arranged in such a way as to leave at the base (in plainly-marked specimens) a narrow lateral flavous line and a short central similar stripe. The elytra are very regularly and deeply punctured almost throughout, only a small sutural space being (as usual) more irregularly punctate; the three lateral transverse spots and an oblique mark surrounding the scutellum are very distinct and of dark brown or nearly black colour, these markings being much more decided and plainly visible than in any other species of the genus known to me. The pygidium is flavous (sometimes with an obscure central stripe), the underside is brown, and the femora are fulvous with the usual whitish spots.

The distinct spots of the elytra being placed on a pale opaque ground-colour and the closely and finely punctured thorax will assist in the recognition of the present insect, of which both sexes were obtained by Herr Höge at Juquila.

Pachybrachys cribellatus (p. 70).

Pachybrachys uniformis, huj. op. p. 70.

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

A close examination of many more specimens lately received seems to prove that *P. uniformis*, Jac., cannot be considered as distinct from *P. cribellatus*, Suffr. The species varies much in size; the male insect, which was unknown to Suffrian, does not differ materially from the female. The thorax of *P. cribellatus* is stated to be "rather closely punctured": I must apply the term "extremely closely" to our insect, which in all other respects agrees with Suffrian's description.

19 (A). **Pachybrachys sallæi.** (Tab. XXXIX. fig. 8.)

♀. Black; above reddish-brown; thorax strongly transverse, very closely punctured, with a central and two

obscure lateral marks flavous; elytra irregularly punctured, with two indistinct discoidal costæ and a narrow sublateral one flavous, the disc with two, the sides with three, indistinct brown spots.

Length $1\frac{3}{4}$–2 lines.

Hab. MEXICO, Oaxaca, La Parada (*Sallé*).

The sculpture of the elytra of *P. sallæi* would seem to place the insect in Suffrian's sixth group, the nearest allied species being, apparently, *P. cribellatus*. From this latter *P. sallæi* differs in the colour of the underside and in several other particulars. The head is closely covered with brown punctures, but with a narrow margin round the eyes bright flavous; the antennæ do not extend to the middle of the body, and are black with the basal four or five joints fulvous. The thorax is strongly transverse in shape, and the sides are much deflexed, so that the lateral margins cannot be seen when the insect is viewed from above; these latter are somewhat prominent behind the middle but oblique towards the apex; the surface is crowded with brown punctures, which leave one central and two obscure lateral marks of the flavous ground-colour (these markings are very obscure and better seen without a lens). The scutellum is black or brown. The elytra are more strongly punctured than the thorax, and the punctuation for the most part is irregular; two raised longitudinal narrow flavous spaces are visible between the shoulder and the suture, and there is a similar costate space near the lateral margin; the interior of all the punctures is dark brown in colour, although the ground-colour may be described as flavous; and there are about five very obscure brown spots, of which three are placed along the sides and two on the disc. The pygidium is yellow, with its basal margin black; the underside is black (in some specimens of a dark brown colour), spotted with yellow at the sides of the abdominal segments; the legs are dark fulvous, with the apex and base of the femora more or less flavous.

The absence of well-defined longitudinal costæ on the posterior portion of the elytra (these being present in so many species of *Pachybrachys*) will make *P. sallæi* comparatively easy of recognition; and the rusty-brown colour of the upper surface, interrupted by the obscure paler spots, the very closely punctured thorax, and the dark underside and fulvous legs will further assist in its determination.

Female examples only have been received.

Pachybrachys hepaticus (p. 71).

To the localities given, add:—MEXICO, Amula and Tepetlapa in Guerrero (*H. H. Smith*); GUATEMALA, Las Mercedes, Cerro Zunil (*Champion*).

P. hepaticus seems subject to so much variation in colour and in the pattern of the elytra that it is somewhat doubtful whether all the specimens from the above localities are really referable to it. Suffrian's description of Melsheimer's species does not agree with most of the Guatemalan examples, these being rather more robust and cylindrical,

of darker colour, and different elytral sculpture; we have, however, some few intermediate specimens, which show that no great stress can be laid on these differences. The elytra in the Guatemalan insects, and also in one from Amula, have a nearly black round spot placed across the suture near the apex, this spot being bounded above by a narrow zigzag flavous spot (which sometimes extends laterally or is composed of several spots partly united), and they have other bright and raised flavous spots placed below the shoulder at the sides and round the scutellum; in the type their entire surface is paler, the flavous stripes and spots are less prominent (of a round dark sutural spot Suffrian says nothing), and the surface more evenly punctured. In the Guatemalan specimens the elytral punctuation is also partly arranged in double rows and interrupted in front of the flavous spots, and the thorax is mottled with flavous and dark brown; it is possible that these are really specifically distinct from *P. hepaticus*, but in the absence of sufficient material for comparison it is better to treat them as a local variety.

20 (A). **Pachybrachys mexicanus.** (Tab. XXXIX. fig. 9.)

Black below; above pale greyish, closely punctured throughout; elytra without longitudinal interspaces, a spot on the shoulder, two or three others placed obliquely near the apex, and an elongate spot near the suture below the middle, black.

Length $\frac{3}{4}$–1 line.

Hab. MEXICO, near the city (*H. H. Smith*).

P. mexicanus although very closely allied to *P. hepaticus* differs from that species in the following details:—The general shape is less cylindrical and robust, which is especially apparent in the elytra; the latter are evenly and closely punctured throughout, without any traces of smooth longitudinal spaces except at the lateral margin, this part remaining narrowly impunctate and nearly white in colour, and the spots are also different in shape and position. The eyes are unusually widely separated in both sexes; the intraocular space is very closely and deeply punctured, and pale greyish in colour with some obscure dark markings. The antennæ extend a little beyond the base of the thorax in the male, and resemble those of *P. hepaticus*. The thorax is less cylindrical than in *P. hepaticus*, narrowed at the sides, with an obscure lateral depression above, and extremely closely punctured. The elytra are rather flattened along the suture, and a little less closely punctured than the thorax (especially near the apex); near the apex and close to the suture is an elongate blackish spot, and at the sides are three others (more or less distinct) placed obliquely above each other, a similar spot being placed at the shoulder and sometimes another near the scutellum; the lateral margin is accompanied by a narrow smooth whitish space. The underside and legs are blackish, with a yellowish spot on the last abdominal segment and another at the apex of the femora. The four specimens obtained agree closely with each other.

20 (B). **Pachybrachys marmoratus.** (Tab. XXXIX. fig. 10.)

Obscure fulvous, mottled with black, pubescent; thorax very finely and closely punctured, with four very obscure black bands; elytra finely and semiregularly punctate-striate, pubescent, with two obscure longitudinal black bands.

Var. Thorax and elytra nearly black, the sides and apex of the latter obscure flavous.

Length 2 lines.

Head closely punctured, fulvous, a spot at the middle and the vertex, partly, black; antennæ short, the lower six joints fulvous, the two basal ones stained with black above, the terminal joints entirely black; thorax twice as broad as long, the sides nearly straight and gradually narrowed in front, the posterior angles acutely pointed, the surface closely impressed with fine but deep oblong punctures, leaving a smooth central slightly raised line, and pale fulvous or ferruginous in colour, a longitudinal band on each side and another near the middle black, these bands partly obsolete and forming a **M**-shaped mark; scutellum narrowly transverse, fulvous, margined with black; elytra with irregular rows of fine punctures—the three nearest the suture more widely separated, the others closely approached in threes,—the interstices minutely punctured, the surface opaque, pale fulvous, and clothed with short pubescence, the sides and the disc with a broad obscure black band of unequal width; pygidium flavous; underside black, the abdomen more or less fulvous at the sides; legs fulvous, the femora with a black spot, the tibiæ more or less black at the apex.

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

It is possible that this insect is closely allied to or even identical with *P. analis*, Lec.

20 (C). **Pachybrachys immaculatus.**

Black; above pale yellowish-grey; head and thorax rather closely punctured, the latter with obsolete pale brownish bands; elytra semiregularly punctured, without markings; pygidium and last abdominal segment pale yellowish; femora darker in the middle.

Length 1 line.

Hab. MEXICO, near the city (*H. H. Smith*), La Parada (*Sallé*).

I cannot refer the two specimens obtained by Mr. Smith and a third from the Sallé collection to *P. posticus*, *P. hepaticus*, or *P. pinguis*, Suffr.: in these species the antennæ scarcely extend beyond the base of the thorax, and their apical joints are thickened; in *P. immaculatus* they are of half the length of the body, and their apical joints although slightly thickened are elongate, not short. The thorax is punctured in such a way as to leave two narrow pale divisions between the darker portions in the shape of yellowish basal spots; the elytral punctuation is arranged, except near the suture, in semiregular rows almost throughout, and the entire surface is of a pale greyish or greenish-yellow colour without any spots. These differences will help to distinguish *P. immaculatus* from its allies, including *P. mexicanus*; the latter has much more closely and irregularly punctured elytra than *P. immaculatus*.

Pachybrachys bifasciatus (p. 71).

Var. Elytra black, a spot near the basal margin, the lateral margin anteriorly, two spots placed transversely across the middle, and the apex, flavous.

Hab. MEXICO, Cordova (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*).

This variety, at first sight, seems to be referable to another species, as its system of coloration is totally different from the banded type; I am, however, unable to find any

other characters of separation. *P. bifasciatus* might perhaps have been placed equally well in *Scolochrus*, with some of the small species of which it quite agrees in shape and sculpture. The variety differs from the type in having the elytra black with five or six fulvous spots (the remnants of the light-coloured raised spaces of the type); of these the middle ones are placed obliquely and transversely across the centre and a larger one at the apical angle of each elytron.

Pachybrachys laticollis (p. 72).

To the Mexican localities given, add:—Chilpancingo (*Höge*), Amula in Guerrero (*H. H. Smith*).

P. laticollis is apparently a rather doubtful species. The description was taken from a male specimen from San Gerónimo, this having the terminal joint of the antennæ distinctly elongate and widened; and other examples of the same sex, obtained subsequently at Chilpancingo, also possess this character, which seems to be a constant one. The thorax, which is proportionately wide and rather strongly rounded at the sides at the middle (forming a continuous outline with the sides of the elytra), is extremely closely punctured, and is either black with the margins narrowly and an irregular number of small spots flavous, or brown with similar pale spots and three darker longitudinal bands; the elytra are flavous, mottled with dark brown, irregularly and closely punctured near the suture, and longitudinally costate at the sides and apex. The female has simple antennæ. Specimens from Vera Cruz are entirely obscure dark brown above; but being all females I am not able to say whether they belong to this or to an allied species. *P. laticollis* can therefore at present only be distinguished from its allies by the structure of the antennæ in the male sex, and the broad and extremely closely punctured thorax; the pygidium has four yellow spots.

23 (A). **Pachybrachys femoratus?**

Cryptocephalus femoratus, Oliv. Ent. vi. p. 810, t. 5. fig. 78[1].
Pachybrachys femoratus, Suffr. in Linn. Entom. vii. p. 173[2].
Cryptocephalus sparsus, Newm. Entomol. 1841, p. 79[3].
Pachybrachys sparsus, Haldem. Journ. Ac. Phil. 2 ser. i. p. 261[4].

Hab. North America[1 2 3 4].—Mexico, Acapulco in Guerrero (*Höge*); Guatemala, near the city, Dueñas, Capetillo, San Gerónimo (*Champion*), Petapa, Llano grande (*mus. Stuttgart*); Nicaragua, Chinandega, Granada (*Sallé*); Panama, Volcan de Chiriqui, Boquete, Caldera, David, San Lorenzo, Tolé, Peña Blanca (*Champion*).

It is impossible to refer the numerous specimens from the above localities with certainty to the present or to either of the numerous similar closely-allied species described by Suffrian without comparing the types. This author's description of *P. femoratus* seems, however, to agree best with the insects before me; they almost

entirely resemble *P. laticollis*, but are for the most part smaller, and the male differs from the corresponding sex of that species in the apical joint of the antennæ not being dilated, and also in the thorax being less broadly shaped. The colour is extremely variable, either the brown, black, or flavous predominating; the thorax is crowded with small punctures and irregularly marked with very small flavous spots, and generally has three broad obsolete dark bands placed at the sides and middle (as in so many other species of the genus) which sometimes occupy almost the entire disc; the elytra have the sutural portion to below the middle and laterally to half their width irregularly punctured, the rest of the surface (especially towards the apex) being impressed with sinuous longitudinal rows of punctures between which the interstices rise as narrow flavous spaces; the pygidium is yellow, with the margins and a central stripe darker; the underside varies from dark brown to nearly black, with the last abdominal segment generally flavous; the base and apex of the femora are flavous, the rest of the legs nearly black. *P. spumarius*, Suffr., from North America, seems to be almost identical with *P. femoratus*. In regard to the elytral punctuation of *P. femoratus*, or rather to that of the specimens I refer doubtfully to this species, I may add that in all our examples the irregularly punctured area near the suture is bounded below by a small smooth transversely-shaped space which interrupts the first two rows of punctures (of this Suffrian makes no mention).

27. **Pachybrachys pectoralis.**

Cryptocephalus pectoralis, Melsh. Proc. Ac. Phil. iii. p. 171 [1].
Pachybrachys pectoralis, Suffr. Monogr. in Linn. Entom. vii. p. 187 [2].
Pachybrachys sobrinus, Haldem. Journ. Ac. Phil. 2nd ser. i. p. 262 [3].

Hab. North America [1 2 3].—Guatemala, Zapote (*mus. Stuttgart*).

Two specimens from Guatemala received from the Stuttgart Museum agree so well with the description given by Suffrian of *P. pectoralis* that I must refer them to that species. It may be distinguished by the closely approached eyes in the male, in connection with the one central and two lateral flavous stripes of the thorax (common to so many species of the genus); the elytra have very conspicuous bright yellow spots or spaces placed between the black or dark brown striæ—of these spots, four, especially prominent, are placed transversely below the middle, and a single spot above them and four below them, transversely placed, as well as the flavous apex, may be distinguished; the underside is brown, spotted with pale flavous at the sides of each abdominal segment, the breast being darker.

28. **Pachybrachys pallidipennis.**

Pachybrachys pallidipennis, Suffr. Monogr. in Linn. Entom. xii. p. 406 [1].

Hab. North America, Texas [1].—Mexico, near the city [1].

Suffrian gives both the above localities for this species, which was overlooked by me in the earlier portion of this work. No *Pachybrachys* from Central America agreeing with the author's description has come under my observation.

29. **Pachybrachys livens?** (Tab. XXXIX. fig. 11.)

Pachybrachys livens, Lec. Proc. Ac. Phil. 1858, p. 84[1].

Hab. North America, California[1].—Mexico, Northern Sonora (*Morrison*).

The specimens obtained in Sonora by the late Mr. Morrison and named by himself *P. livens* agree nearly, but not entirely, with Leconte's description; and I can only therefore refer them doubtfully to his species. The Sonoran examples are of a very pale testaceous colour (in which they agree with the description); the thorax and elytra are very closely and irregularly punctured, the latter with scarcely any arrangement of the punctures in rows, except at the posterior portion, where traces of striæ are visible (Leconte says that the rows are regular but closer than usual and confused near the suture); the breast and sometimes part of the abdominal segments are usually darker (of which Leconte says nothing); and of an occasional testaceous spot on the middle of the thorax (as mentioned in the description) there is no trace in any of the twelve specimens before me.

30. **Pachybrachys sonorensis.**

Black; above dull flavous; thorax very closely punctured, mottled with dark brown; elytra closely and irregularly punctured almost throughout, without longitudinal costæ, the sides and the disc with some obscure spots; pygidium black, with two yellow spots; legs fulvous, spotted with black and white.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

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

Of this, somewhat doubtful, species we have received two specimens, which, owing to the almost entire absence of elytral costæ, I cannot well refer to any yet described. The head has the usual black vertical and central mark, and is closely punctured; the antennæ (♀) extend to about half the length of the body, and are black with the basal joints fulvous. The thorax is short, nearly three times as broad as long, with rounded sides and a rather closely punctured disc, the latter having the usual obscure dark lateral and central bands. The elytra are everywhere impressed with black punctures which are arranged here and there in ill-defined rows, but the interstices show no trace of longitudinal costæ, either laterally or near the apex; they are of a dull opaque fuscous colour, interrupted by three obscure flavous spots near the lateral margin, the apex being of the same colour (if viewed under a lens, the flavous ground-colour is everywhere visible between the punctures). The pygidium is entirely black, closely pubescent, and has two small yellow spots near the apex; the underside is also entirely black, with a more or less distinct yellow spot on the last segment. The nearest allied species to *P. sonorensis* seems to be *P. maculicollis*; but this latter is of entirely different

colour, and although the elytra are only furnished with two costæ they have the punctures much more closely placed and forming distinct rows at the sides; the thorax of *P. maculicollis* has also well-defined spots. There are but few species from our region which are devoid of elytral costæ, therefore *P. sonorensis* is rather more easy to recognize than most of its congeners.

31. **Pachybrachys longicollis.** (Tab. XXXIX. fig. 12.)

Dark or lighter brown, finely pubescent beneath; thorax proportionately elongate, very closely and finely punctured, with the usual scarcely perceptible darker markings; elytra irregularly punctured, the sides more or less distinctly longitudinally costate; pygidium flavous; legs fulvous, with or without black marks on the femora.

Length 2 lines.

Hab. Mexico, Cordova (*Sallé*).

P. longicollis is well distinguished from the numerous allied forms by its elongate thorax, the latter being half the length of the elytra in the male and but slightly shorter in the female. The antennæ are scarcely half the length of the body in the male, and still shorter in the female. The head is finely and closely punctured, pale brownish, with a dark central line which is widened at its apex. The thorax is very closely and finely punctured, pale brown, very obscurely spotted with darker brown at the sides and middle (the usual darker bands to be found in many other species of the genus being indicated). The scutellum is flavous, margined with dark brown. The elytra are pale brown, with the interior of the punctures nearly black, the punctures somewhat differently arranged in the two sexes—in the male they are more widely separated and form very irregular rows, even on the space near the suture, the outer portion being, as usual, more regularly punctured and with the interstices slightly costate; in the female they are very closely placed, very irregularly so on the sutural space, and the lateral costæ are much more distinctly raised; each elytron is also very obscurely but distinctly marked with two or three dark spots near the sides and two others near the suture, one below the other. The pygidium is entirely flavous; the underside and legs in the female are fulvous, and the femora have a dark ring at the middle which is absent in the male.

32. **Pachybrachys brevicollis.**

Pale yellowish-white; the breast and part of the abdomen black; thorax with the sides nearly straight, not closely punctured, the disc with a pale brown M-shaped mark; elytra with semiregular lines of brown striæ, the sutural two enclosing a wider interstice.

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

Head nearly white, with a narrow brown central stripe which diverges anteriorly into two branches; the clypeus with a few brown punctures, the rest of the surface impunctate; antennæ half the length of the body, the lower joints fulvous, the rest black; thorax very short, the sides but slightly rounded, the surface finely punctured on the darker portion, the latter pale yellowish-brown and occupying the usual position, the lateral spot including a small whitish one; scutellum yellowish-white; elytra with three

double rows of brown punctures, the sutural two more separated and enclosing a narrow elongate space, the portion near the scutellum with some irregularly distributed punctures and bounded by a more regular short row of punctures within, the interstices at the sides swollen but here and there interrupted by extra punctures; underside and legs pale yellowish; the breast (a spot at the sides excepted), and the middle of the abdomen, black.

Hab. GUATEMALA, Zapote, Dueñas (*mus. Stuttgart*).

The present insect, of which we have received two specimens from the Stuttgart Museum, very nearly agrees with Suffrian's description of *P. abdominalis* (Say), but differs thus:—The upper surface is not yellowish-grey, but nearly white, the darker portions and markings of the head and thorax being pale brownish (instead of black); the thorax, in both specimens, has a M-shaped marking (of which Suffrian says nothing); and the elytral striæ enclose strongly raised and shining interstices.

Both examples have the breast black, and they are, no doubt, mature.

33. **Pachybrachys nigrofasciatus.** (Tab. XXXIX. fig. 13.)

Black; legs obscure fulvous; thorax closely and strongly punctured, with three longitudinal black bands, the middle one divided anteriorly; elytra deeply and regularly punctate-striate, the suture and two longitudinal bands on the disc black.

Length 1½ line.

Hab. MEXICO, Saltillo in Coahuila (*Dr. Palmer*).

The presence of two longitudinal black bands on each elytron places *P. nigrofasciatus*, of which only a single specimen has been received, in a group containing about six species, from all of which it seems quite distinct. The head is closely punctured at its lower portion, fulvous, with the vertex, an elongate spot in the centre (widened at its middle), and a spot at the base of each antenna black; the antennæ extend to a little beyond the middle of the body, and are black with the lower joints fulvous beneath. The thorax is not more than twice as broad as long, transversely convex, and strongly and closely punctured on the black portion, less so on the fulvous interspaces; the broad black lateral bands are suddenly narrowed at the apex and extend nearly from the basal to the apical margin; the central band is widened anteriorly and divided by a narrow fulvous stripe to its middle. The scutellum is black. The elytra are flavous, and very regularly punctate-striate; the suture is narrowly black and accompanied by a row of punctures for its entire length, this row being joined anteriorly to a short oblique one and followed by a subsutural row which curves outwards from the middle to the base; the discoidal black band is occupied by three rows of punctures, and is followed by a narrow costate flavous interspace placed between the next row and another black band occupying the next three rows of punctures; the flavous lateral space accompanying the margin is again impressed with a single row of punctures; the posterior portion of the lateral margin is black, the anterior portion flavous. The pygidium and the last abdominal segment are flavous, the rest of the underside black; the legs fulvous. *P. litigiosus*, Suffr., differs from *P. nigrofasciatus* in the sculpture and

form of the spots on the thorax and also in the shape of the elytral bands; *P. dubiosus*, Lec., is described as having a diverging central thoracic band; *P. othonus* (Say) has a much more transversely-shaped thorax.

34. **Pachybrachys decoratus.** (Tab. XXXIX. fig. 14.)

Black; the thorax closely punctured, the sides, and three spots in front and two at the base, obscure flavous; elytra almost regularly punctate-striate, black, two spots at the base, two at the sides, three below the middle, and one at the apex pale flavous.

Length 1 line.

Head flavous, the vertex and a central stripe black; the lower portion of the face strigose-punctate, the upper portion finely punctured; antennæ extending a little beyond the base of the thorax, flavous, the three or four terminal joints distinctly thickened and darker; thorax subcylindrical, transversely convex, the sides evenly rounded, the surface closely covered with deep and somewhat elongate punctures, the sides, the anterior margin (the extreme edge excepted), three short stripes in front, and an oblique spot on each side at the base flavous; scutellum black; elytra convex, with regular rows of punctures, the interstices flat, except at the sides, where two broader raised spaces are visible, the surface black, with seven pale flavous spots placed thus:—a round one near the scutellum, an elongate one within the shoulder, followed by two larger elongate spots placed close together, three shorter ones placed triangularly below the middle, and a transversely-shaped one at the sutural angle, and in front of this latter spot and close to the lateral margin is another very narrow short stripe; the pygidium has the sides flavous and the last abdominal segment is of the same colour; legs fulvous, the femora with a black spot.

Hab. MEXICO, Juquila (*Höge*).

Of this well-marked species, differing in the sculpture and elytral pattern from any of its allies, only a single specimen was obtained. The two bright yellowish-white spots placed below the shoulder at the sides are the largest and are rather strongly raised; the flavous-coloured anterior margin of the thorax is encroached upon by the black markings on the disc, which in front assume the shape of teeth.

35. **Pachybrachys eburifer.**

Pachybrachys eburifer, Suffr. Monogr. in Linn. Entom. xvi. p. 394[1].

Hab. GUATEMALA, Paso Antonio (*Champion*); PANAMA, David, Caldera, Tolé (*Champion*).—GUIANA, Cayenne[1].

This is a small-sized species, some examples of which are less than one line in length. I cannot separate our specimens from one contained in the British Museum and named by Suffrian, whose description, except as regards the colour of the pygidium and underside, agrees very nearly with the Central-American insect. In the latter the pygidium is yellow, with a central black, posteriorly pointed, stripe and narrow similarly-coloured margins (Suffrian describes it as brown with paler lower margin); the sides of all the abdominal segments are yellow (the underside of the type is described as black with the last abdominal segment pale); and the legs are pale brown, with the apex of all the femora pale yellow. The sculpture of the upper surface agrees entirely with that of the type, and the above differences are probably due to local variation. The specimens from Caldera and David are nearly all larger and of more uniform coloration, but agree in other respects.

DIASPSIS (p. 74).

The opinion expressed by myself that the presence of a second scutellum in this genus might be due to the imperfect closing of that part of the elytra is erroneous; it is certain, however, that the second scutellum is not always so plainly visible as in the case of *D. paradoxus*, and that it is sometimes represented by a very narrow ridge.

Diaspis mœstifica (p. 75).

To the Mexican localities given, add:—Acapulco in Guerrero, Huetamo in Michoacan (*Höge*).

The Mexican specimens I refer to this species have two very distinct scutella; they are of an obscure dark æneous colour and devoid of the dark velvet-like discoidal mark mentioned by the author; the elytra have the tubercles nearly all isolated, and they are distributed as follows—one at the middle of the base, three placed in an oblique line from the shoulder to the suture, four near the latter towards the apex, and three or four others near the lateral margin, the interstices being very finely strigose, and having some deep, remotely placed punctures; the form of the thorax agrees with the description given by Lacordaire.

Diaspis memnonia (p. 75).

To the Mexican localities given, add:—Northern Sonora (*Morrison*), Acapulco (*Höge*), Omilteme in Guerrero (*H. H. Smith*), Juquila (*Sallé*).

The second scutellum in *D. memnonia* is very narrow and sometimes only just visible; there are some true species of *Chlamys* found in Mexico and Guatemala which almost exactly resemble the present one, but differ in having red tarsi. The Guatemalan locality Zapote given for *D. memnonia* on page 75 is erroneous, and refers to the species of *Chlamys* (*C. punctipennis*) mentioned above. *D. memnonia* is a broader and posteriorly less narrowed insect than *D. mœstifica*, and has not so many tubercles on the elytra; the latter have an elevated irregular ridge running from the shoulder nearly to the suture, and then extending upwards to the base, this ridge surrounding a distinct blackish space. The specimens from Sonora do not seem to differ from those obtained at the other localities, and were received from Morrison under the name of *Chlamys polycocca*; they certainly agree very nearly with Lacordaire's description of that species, but the double scutellum and the different and more tuberculate structure of the thorax readily distinguish *C. polycocca* from *D. memnonia*.

CHLAMYS (p. 75).

1 (A). **Chlamys godmani.** (Tab. XXXIX. fig. 16.)

Head (the vertex excepted), the antennæ, legs, and underside ferruginous; above finely pubescent; thorax

x 2

greenish-plumbeous, opaque, finely punctured, without elevations; elytra with the basal portion blackish and finely rugose, the rest bluish and finely punctured and shining.

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

Of subquadrate, robust, and very convex shape; the head minutely punctured, the vertex with an opaque greenish spot, the rest ferruginous; mandibles black; antennæ not extending to the base of the thorax, dentate from the third joint, entirely fulvous; thorax transversely convex, the convexity even, without callosities, the basal margin on either side of the median lobe strongly oblique, and thence to the posterior angles sinuate, the surface dark greenish, velvety in appearance, impressed with minute punctures, and clothed with very short silvery hairs; elytra very convex towards the middle, the apex of each broadly rounded, the basal portion finely rugose, rather closely punctured, blackish, and opaque, the posterior portion metallic bluish or purplish, more remotely punctured, and finely pubescent, a very short transverse ridge (only visible in certain lights) at the middle near the suture; pygidium rugosely punctured, ferruginous, with a large transverse greenish spot; prosternum gradually narrowed posteriorly.

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

This species may be distinguished from *C. amœna* by its robust shape and different punctuation; the elytra have their posterior portion metallic, and some small, more shining, metallic spaces along the basal margin. One specimen.

Chlamys pavonina (p. 76).

To the locality given, add:—MEXICO, Cordova (*Sallé*), Jalapa (*Höge*); GUATEMALA (*mus. Stuttgart*).

Chlamys cinerea (p. 76).

To the localities given, add:—MEXICO, Chilpancingo, Juquila in Guerrero, Jalapa (*Höge*), Teapa in Tabasco (*H. H. Smith*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

Lacordaire, in describing this species, says that the head has a subquadrate æneous spot, and that the antennæ are of half the length of the body: in more than twenty specimens which I have examined the head is entirely fulvous or ferruginous, without any trace of a spot, and the antennæ do not extend beyond the base of the thorax, but are even much shorter. The examples from British Honduras are almost entirely black above, but they do not differ in other respects from those from Mexico.

3 (A). **Chlamys militaris.** (Tab. XXXIX. fig. 17.)

Head fulvous; thorax non-tuberculate, metallic greenish, finely punctured and pubescent, the posterior angles more or less fulvous; elytra finely punctured and pubescent, with two narrow tubercles near the suture, fulvous, the sides with a broad longitudinal metallic green band; pygidium, legs, and underside fulvous, spotted with greenish.

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

Hab. GUATEMALA, Las Mercedes (*mus. Stuttgart*).

It is not improbable that this curiously-marked *Chlamys* is only a variety of *C. cinerea*; the three specimens, however, before me agree with each other and no intermediate forms have come under my notice. *C. militaris* is comparatively shorter than *C. cinerea*,

from which it scarcely differs except in coloration. The thorax is fulvous at the sides behind, or has a small fulvous spot at the middle of the basal margin; the elytra may be described as metallic greenish, with the suture and the apex fulvous, this colour extended on either side of the suture towards the base and occupying the inner half of the basal margin.

Chlamys episcopalis (p. 77).

To the Mexican localities given, add:—Jalapa, Iguala in Guerrero (*Höge*).

Chlamys maculipes (p. 78).

To the localities given, add:—MEXICO, Cosamaloapam, Playa Vicente (*Sallé*), Acapulco and Chilpancingo in Guerrero, Matamoros Izucar in Puebla (*Höge*, *H. H. Smith*), Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Llano grande (*mus. Stuttgart*), San Gerónimo (*Champion*).

8 (A). **Chlamys maculifrons.**

Obscure dark greenish, opaque, pubescent; the head, the base of the antennæ, a short central stripe in front of the thorax, the sides of the pygidium and of the abdomen, and the legs in great part, ferruginous; elytra with four or five short tubercles, four discoidal and one subsutural near the apex.

Length $1\frac{3}{4}$–2 lines.

Hab. MEXICO, Ventanas in Durango, Tapachula in Chiapas (*Höge*); GUATEMALA, Zapote (*Champion*).

Closely allied to *C. maculipes*, but differing in the much longer and more slender antennæ and in the shape and colour of the thorax. The thorax (if looked at sideways) is depressed anteriorly, and is not so convex and evenly rounded as in the allied species; the two small bare spots at the sides, very distinct in *C. maculipes*, are absent, and a narrow ferruginous longitudinal stripe extends from the centre of the anterior margin to about the middle, the anterior margin itself being narrowly ferruginous. The elytra are of a very dull opaque greenish-black, rather remotely punctured, and clothed with extremely short pubescence (this being more scattered than in *C. maculipes*); the tubercles are very similar to those of *C. maculipes*. About a dozen specimens were obtained, all but one being from Mexico.

8 (B). **Chlamys semilutea.** (Tab. XXXIX. fig. 15.)

Below ferruginous, above obscure dark olive-green; thorax finely punctured, its sides ferruginous, the elevation with a lateral ridge; elytra distinctly punctured, opaque, with longitudinal and short transverse ridges.

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

Head bright ferruginous, indistinctly punctured, the vertex with a small elongate obscure blackish spot which is divided at its apex; antennæ with the fourth and following joints transverse, fuscous, the lower four joints fulvous; thorax minutely and closely punctured, the disc gradually raised into a strong elevation (this being nearly perpendicular behind and furnished above with an acute oblique ridge which runs halfway

down the elevation), the sides ferruginous (but the edge of the darker portion strongly dentate near the base, so that the two colours are not divided by a straight line); elytra very slightly narrowed posteriorly, rather flattened, of a very opaque dark greenish colour, more strongly punctured than the thorax, with the following prominences—an elongate tubercle near the suture before the middle, another, but shorter, one at the middle of the base, two rows of tubercles, placed one below the other and extending obliquely downwards from the shoulder to the middle of the suture, a strongly raised conical tubercle close to the suture near the apex, and a smaller tubercle at the sides; pygidium ferruginous, with two dark greenish spots near the apex; legs ferruginous, the tibiæ with the apex more or less black or greenish.

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

C. semilutea is well distinguished by its peculiar coloration, and cannot be mistaken for *C. maculipes* or its allies, owing to the absence of pubescence from the upper surface and the presence of rather numerous tubercles on the elytra; it seems somewhat allied to the Brazilian *C. corrugata*, Lac. Two specimens.

Chlamys insularis (p. 78). (Tab. XXXIX. fig. 19, var.)

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui, David, Caldera (*Champion*).

We now figure a Chiriqui specimen of one of the varieties of *C. insularis*, in which the thoracic and elytral tubercles are more strongly prominent than in the type. The general colour of the upper surface is either black with more or less fulvous tubercles, fulvous with the tubercles black, or entirely brownish-æneous; the amount of the fulvous colour of the thorax also varies; the legs are more or less spotted with fulvous.

Chlamys frontalis (p. 79). (Tab. V. fig. 12 *a*.)

The reference to the Plate was accidentally omitted on page 79.

11 (A). **Chlamys fulvomaculata.** (Tab. XL. fig. 1.)

Subquadrate, narrowed posteriorly, black; the head, thorax, abdomen, and legs spotted with fulvous; thoracic elevation divided, each division trituberculate; elytra metallic bluish, æneous, or black, strongly tuberculate at the base and apex, the disc with a high oblique ridge; pygidium carinate, nearly smooth.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Evidently very variable in colour and also to some extent in sculpture; head black spotted with fulvous, or entirely fulvous, rather sparingly punctured; antennæ fulvous, the apical joints darker; thorax with a moderate elevation, the latter divided into two portions each of which is furnished with three tubercles placed triangularly, the lateral portion finely punctured and with one or two very obscure tubercles, the anterior portion almost entirely fulvous or only spotted with that colour; elytra with a large tubercle at the middle of the base and two others near the apex, and an oblique more or less interrupted ridge extending from the shoulder towards the suture, where it forms a strongly raised transverse ridge; pygidium sparingly punctured, rather smooth, with a longitudinal central ridge; legs fulvous, more or less spotted with fuscous; abdomen with some fulvous spots.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, near the city (*mus. Stuttgart*).

In the single example from Mexico the thorax shows at the apex of each division of the elevation an oblique ridge, in front and also at the side of which a small round

tubercle is placed; in the Guatemalan specimens this ridge is scarcely perceptible and of a more tuberculate shape, three tubercles being visible when the thorax is looked at in a certain way. One of the Guatemalan specimens has the elytra of an obscure purplish colour; in the other they are slightly æneous and the tubercles partly fulvous. *C. fulvomaculata* is allied to *C. frontalis*, but is more narrowed posteriorly and also differs in the form of the thorax; the latter in *C. fulvomaculata* is sparingly punctured and has no reticulations, while in *C. frontalis* it is very closely punctured and finely rugose, and has two short oblique ridges behind only.

11 (B). **Chlamys collaris.** (Tab. XXXIX. fig. 20.)

Subcylindrical, black, opaque; the head, antennæ, a small spot near the anterior margin of the thorax, and the four anterior legs fulvous; thorax finely punctured and reticulate, with a rounded elevation; elytra with longitudinal and transverse ridges, the interstices foveolate and reticulate.

Var. The thorax with the anterior portion and some small spots flavous.

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

Head closely and finely punctured, fulvous, a small elongate spot at the middle of the vertex, and two smaller spots above the base of the antennæ black; antennæ fulvous, the last four joints fuscous, the fourth and following joints transverse; thorax with a strongly raised but evenly rounded central elevation, the middle of which is distinctly but not deeply channelled, the sides of this channel bounded by a ridge, the surface closely and finely punctured at the sides, the elevation itself reticulate, the anterior angles, and a small more or less distinct spot placed at the middle near the anterior margin, fulvous; scutellum impunctate; elytra parallel, subcylindrical, black, without isolated tubercles but with the following longitudinal ridges —one running obliquely from the middle of the base to the apex and gradually approaching the suture, another commencing between the shoulder and the first ridge, and a third close to the lateral margin behind,—these ridges connected by transverse or oblique shorter ones (an oblique ridge near the base between the first longitudinal one and the suture, a more strongly raised and transverse ridge immediately below the middle, often connected along the suture with the first oblique ridge, and two other transverse ridges at the sides, one at, the other below, the middle), all the spaces between the ridges closely punctured but not reticulate, the suture dentate throughout; pygidium closely punctate, and with a long central, and two shorter lateral, ridges; the underside foveolate-punctate; the four anterior legs fulvous, the posterior femora and tibiæ partly black, but varying in this respect.

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

C. collaris, although not differing to any great extent in its general system of sculpturing from many of its Brazilian congeners, may be known by the thorax being spotted (the anterior spot being present in all the specimens), closely punctured, and without tubercles; the elytra without isolated tubercles, but with longitudinal, oblique, and transverse ridges (which are seen to better advantage if the insect is viewed from in front).

11 (C). **Chlamys högei.** (Tab. XXXIX. fig. 18.)

Black, shining, the antennæ (the apical joints excepted), labrum, palpi, and tarsi flavous; head and thorax closely punctured, the latter with an evenly rounded, scarcely channelled, elevation; elytra with two distinct subsutural costæ, these connected with a short transverse ridge at the middle and with another at the sides, the interstices very uneven and remotely punctured.

Var. The head and the anterior margin of the thorax flavous.

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

Head flat, closely punctured, with a small and very obscure fulvous central spot; antennæ flavous, the apical four joints fuscous; thorax black and shining, the middle portion raised into a rounded and moderately high elevation which is bounded at the sides and posteriorly by a distinct groove, the surface of the elevation reticulate throughout and remotely punctured, and with the centre traversed by an obsolete channel which is bounded laterally by a very short ridge, the sides also raised into an obsolete tubercle; elytra very slightly narrowed posteriorly, each with a longitudinal costa commencing near the scutellum and extending to the middle, and here joined by a transverse ridge to the second costa, the latter commencing at the middle of the base and extending nearly to the apex (the middle portion appearing to be double owing to another closely approached ridge running parallel with it), and a short third ridge running from the middle of the second to the shoulder (its lower portion bounded by a transverse ridge which turns downwards near the lateral margin and below the middle joins another transverse one so as to include a subquadrate excavated space), the apical portion entirely occupied by foveæ and short tubercles, the interstices remotely punctured, the suture dentate throughout its entire length; pygidium finely punctured, with an obsolete central ridge; legs black, with the upper margin of the anterior and intermediate femora more or less fulvous, the tarsi flavous.

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

C. högei is very closely allied to and possibly only a variety of *C. collaris*, but differs from it in the sculpture of the thorax:—in *C. collaris* the thorax is very closely punctured at the sides and the interspaces are almost as closely wrinkled, the wrinkles forming reticulations at the top of the elevation; in *C. högei* the sides of the thorax are comparatively remotely punctured, and the interstices are smooth and shining and the reticulations few.

11 (D). **Chlamys inconspicua.**

Elongate, subcylindrical, black, opaque; the labrum, antennæ, and tarsi fulvous; thorax finely punctured, the central elevation channelled in the middle; elytra with obsolete short longitudinal ridges, partly connected, the suture smooth.

Length $\frac{3}{4}$–1 line.

Head finely rugose and reticulate; labrum fulvous; antennæ with the fourth and following joints transverse, fulvous, the terminal joints obscure fuscous; thorax with the centre raised into a rounded hump, which is channelled in the middle and has its sides near the top reticulate and divided by some ridges, the lateral portion very finely punctured, the interstices nearly smooth; elytra entirely opaque, finely granulate and punctured, the longitudinal ridges partly indistinct (one placed close to the suture, another running from the middle of the base to the apical portion, and a third starting from the shoulder and extending almost as far posteriorly as the second) and with short transverse ridges between them, the interspaces uneven and finely punctured, the suture entirely smooth; pygidium rugose and with three more or less distinct longitudinal ridges; underside and legs black and opaque, the tarsi bright fulvous.

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

This opaque, dull black *Chlamys* may be known at once from the allied forms by the elytral suture being smooth (or without teeth), which character it has in common with several species found in Brazil. There is no characteristic design in the elytral sculpture, and the arrangement of the ridges is less distinct than in many of the allied species: in some specimens a short transverse ridge placed at the middle close to the suture and two subtubercular longitudinal elevations at the apex (one near the suture, the other at the sides) are plainly visible. Two diverging rather distinct ridges, one on either side of the median channel, are placed at the top of the thoracic elevation.

Chlamys cœlocephala (p. 80).

To the Mexican locality given, add :—Jalapa (*Höge*), Cordova (*Sallé*).

The two specimens obtained at the above localities agree with Lacordaire's description as regards the excavated head, the carinate epistome, and the sculpture of the pygidium, but differ from it in size and colour: the length, instead of two and a quarter, is barely two lines, and the colour (with the exception of that of the head, antennæ, part of the thorax, and the legs) is nearly black. Similar differences are, however, frequently to be found in species of this genus. The present insect differs distinctly from the allied forms in the sculpture of the head; the upper surface is nearly black but with a slight bronze tint, the thorax having fulvous spots at the sides and also near the anterior margin.

14 (A). Chlamys instabilis. (Tab. XL. fig. 2.)

Æneous or black, the labrum, antennæ, and tarsi fulvous; thorax finely strigose, its elevation deeply divided, the sides with one or two tubercles; elytra with a sinuate strongly raised oblique ridge extending from the shoulder to the apex, the apical portion with five isolated tubercles, the interstices deeply punctured.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head with some irregularly placed punctures, and with a groove in the middle; thorax finely strigose and remotely punctured, the elevation divided by a broad channel (the part on either side of it distinctly ridged posteriorly) and laterally furnished with a rounded tubercle preceded by a short ridge, the sides with a distinct tubercle, the surface finely strigose throughout; elytra minutely granulate, with a very strongly raised ridge, formed by three semicircular protuberances, extending from the shoulder to the suture, the posterior portion with five distinct isolated tubercles, of which the two placed nearest the suture are the largest, the interspaces rather deeply punctured.

Hab. Mexico, Tepetlapa in Guerrero, Cuernavaca in Morelos, Orizaba, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); Guatemala, Las Mercedes (*Champion*); Panama, Bugaba, David in Chiriqui (*Champion*).

C. instabilis is perhaps best placed near *C. assimilis*, Lac.; it is also, no doubt, closely allied to several Brazilian species described by Lacordaire, but seems to differ from all these either in the sculpture of the thorax or in the fulvous tarsi. The general colour varies from bronze to black. If the insect is looked at from above, three distinct transversely-placed tubercles are to be seen at the apex of each elytron, the outermost one being the smallest; in most of the allied species there are only two tubercles visible and these protrude, apparently, beyond the apex.

A specimen from Cuernavaca is figured.

14 (B). Chlamys sublævicollis. (Tab. XL. fig. 3.)

Subquadrate, parallel, black, the antennæ, labrum, and tarsi fulvous; thorax with a rounded elevation, the latter channelled and bicarinate, the sides nearly smooth; elytra with strongly raised longitudinal costæ and two tubercles, the latter placed near the apex.

Length $1\frac{3}{4}$ line.

Hab. Mexico, Matamoros Izucar in Puebla (*Höge*). A single specimen.

C. sublævicollis is of a deep black general colour with a slight silky gloss. The head is finely punctured and has some small fulvous spots placed at the sides, at the middle, and within the ocular indentation; the labrum and the antennæ are entirely fulvous. The thorax at the sides has only a few fine punctures and an obscure tubercle; the raised central portion is rounded and distinctly channelled at the top, bounded laterally by a very distinct ridge, and with the sides rather strongly reticulate but scarcely punctured. The elytra are sparingly punctured and have two strongly raised costæ extending from the base to the middle, the costæ being here joined and continued as a single ridge nearly to the apex and ending in a strongly raised tubercle; a third costa is placed close to the second one and extends from the middle to some distance from the apex, where it ends; the sides below the shoulders are furnished with a U-shaped ridge, which is again connected by a straight costa with a similar curved ridge near the apex, the latter being reversed in shape and joined to an elongate tubercle near the lateral margin. The pygidium has a central carina and is excavated in several places at the sides. The deep black and silky surface, the nearly smooth sides of the thorax, and the strongly raised elytral costæ will assist in the recognition of *C. sublævicollis*.

14 (c). **Chlamys scabrosa.** (Tab. XL. fig. 4.)

Subelongate, parallel, obscure dark æneous, the labrum, the basal joints of the antennæ, and the tarsi flavous; thorax with the central elevation divided, the elevation reticulate above; elytra with indistinct longitudinal and more distinct transverse ridges, the apex with two conical tubercles.

Length $1\frac{1}{4}$–$1\frac{3}{4}$ line.

Of rather elongate shape, very obscure dark cupreous or æneous, with a slight reddish tint; head closely rugose, the rough portion divided by a narrow transverse smooth space; antennæ with the second and third joints very small, the fourth and following ones strongly transverse, the lower six joints fulvous, the rest fuscous; thorax with a moderately raised central elevation which is divided into two parts at the top, each of these parts being blunt, divided again, and foveolate, and velvety-black in appearance (when seen in certain lights), the sides finely punctured, extremely minutely granulate, and with an obsolete tubercle placed at the base of the elevation on either side; scutellum strongly transverse, ending laterally in a rather distinct point; elytra minutely granulate, with three or four very indistinct longitudinal ridges, of which the first two near the suture are connected before and immediately below the middle by a transverse ridge (these transverse ridges extending nearly across the disc to the lateral margin), and a strongly raised conical tubercle at the suture near the apex and two less distinct tubercles nearer the sides, the interspaces more or less excavated and finely punctured; pygidium closely punctured, and excavated at the base and at the sides.

Hab. Mexico, Chilpancingo in Guerrero, Zacualtipan in Hidalgo (*Höge*).

I cannot with certainty refer this insect to any species described by Lacordaire; it is, no doubt, closely allied to *C. melancholica*, *C. affinis*, &c. *C. scabrosa*, if looked at with the naked eye, is dull and nearly black—with a lens, its reddish or brownish-æneous colour becomes at once apparent; the longitudinal ridges of the elytra can only be distinguished when the insect is held in certain positions, and well-defined tubercles, except the one near the apex, are absent.

14 (D). **Chlamys punctipennis.** (Tab. XXXIX. fig. 22.)

Subquadrate, narrowed posteriorly, obscure æneous, the labrum, antennæ, and tarsi fulvous; thorax minutely granulate, the elevation channelled and with a tubercle on each side; elytra with a strong oblique ridge before the middle, the space between this and the base closely punctured, the posterior portion with four or five tubercles.

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

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*); GUATEMALA, Zapote (*Champion*); PANAMA, near the city (*Champion*).

In colour and in sculpture this species resembles *Diaspis mœstifica*, from which the single scutellum and the red tarsi at once distinguish it; the last-mentioned character and the different sculpture of the elytra will separate it from *C. assimilis* and *C. plicata*, Lac. The thorax has the surface minutely granulate throughout and remotely punctured, and has a rounded tubercle on each side; the elevation is, as usual, divided at the top, each part having a rather obsolete ridge running down sideways, and another obsolete and shorter ridge may be seen near the anterior portion. The elytra have the space between the oblique ridge and the base closely punctured and semireticulate, and of a darker appearance in certain lights than the rest of the surface; the oblique ridge is strongly raised (as in some of the allied species) and near the suture forms an arcuate transverse tubercle; immediately behind this another transverse, less acutely raised ridge is placed, and an elongate elevated tubercle is situated close to the suture near the apex. *C. punctipennis* may be known by the posteriorly narrowed shape, the closely punctured anterior portion of the elytra, and the red tarsi; *C. tragulus*, Lac., differs in the colour of the underside and in other particulars.

Our figure is taken from a specimen from Cordova.

Chlamys decipiens (p. 80).

To the locality Mexico, add:—Chilpancingo in Guerrero (*H. H. Smith*), Cordova (*Höge*).

Two specimens from the above localities agree very well with Lacordaire's description. *C. decipiens* is of a very obscure æneous colour, and may be known from other similarly-coloured species by the sides of the pygidium and of the abdomen being fulvous; the thoracic elevation is divided at the top into two parts, each of which has a distinct ridge running to the base.

Chlamys pilatei (p. 81).

To the locality Mexico, add:—(*coll. Jacoby*).

17 (A). **Chlamys polycocca.**

Chlamys polycocca, Lacord. Monogr. p. 704[1].

Hab. NORTH AMERICA [1].—MEXICO, Cordova (*Höge*).

The single specimen obtained by Herr Höge in Mexico does not seem to differ from others from North America contained in my own collection. The thorax has the raised middle portion divided into two rather pointed parts, but this division is placed at a very short distance from the base (in many species of *Chlamys* the separated portion is placed more towards the middle), and almost the entire surface is finely strigose. The Mexican specimen is nearly black, but with the head of a brownish-æneous colour and the antennæ entirely fulvous.

17 (B). **Chlamys strigicollis.** (Tab. XXXIX. fig. 21.)

Subquadrate, black, the head, antennæ, and legs (part of the femora excepted) fulvous; thorax with a nearly perpendicular high elevation, obliquely strigose throughout; elytra with four very strongly raised longitudinal ridges near the base, and two shorter, still more elevated elongate tubercles near the apex.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head scarcely visibly punctured, fulvous, the vertex sometimes with a small black spot; antennæ short, dentate from the fifth joint, entirely fulvous; thorax with a strongly raised perpendicular hump, the top of which is deeply channelled but rounded, its sides and the rest of the surface traversed by oblique strigæ which are shining and partly united, the interspaces here and there impressed with a few punctures; scutellum impunctate, transverse; elytra nearly subquadrate, black, with three very distinct ridges commencing at the base and united at the middle by an equally distinct transverse ridge which extends obliquely towards the shoulder, and behind the transverse ridge a longitudinal one running parallel with the suture and another with the lateral margin, both with acute edges, the interspaces deeply punctured and minutely strigose; pygidium with three longitudinal ridges; legs fulvous, the outer sides of the four posterior femora more or less black.

Hab. Panama, Bugaba (*Champion*).

C. strigicollis seems to be allied to *C. chrysocephala*, Klug, by its coloration and other characters; but differs in the shape and size of the thoracic elevation, and in having the entire surface of this part covered with strigæ; the elytral elevations or ridges are also more than usually raised, the most prominent one being placed near the lateral margin at the apex.

17 (C). **Chlamys scrobicollis.**

Chlamys scrobicollis, Lacord. Monogr. p. 717 [1].

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).—Colombia [1].

Chiriqui specimens agree well with Lacordaire's description of this insect. *C. scrobicollis* is a small-sized species ($\frac{3}{4}$–1 line), of shining black colour, and may be known by the three more or less distinct sinuate ridges on each side of the thoracic elevation; the elytral costa, which extends from the shoulder to the middle of the suture, is very strongly raised, and some prominent tubercles are placed near the apex; the labrum, antennæ, palpi, and tarsi are fulvous or flavous.

20 (A). **Chlamys brunnea.**

Subquadrate, pale brownish; thorax with a slightly raised elevation, the apex of the elevation with two ridges;

elytra impressed with brown punctures, and each with four longitudinal costæ, the first two joined below the middle.

Length $1\frac{1}{2}$–2 lines.

Head with a shallow depression between the eyes, impressed with a few dark brown punctures; antennæ fulvous, the apical four joints fuscous; thorax of a yellowish-brown colour, rather closely impressed with brown punctures at the sides, the middle portion raised into a rounded comparatively slight elevation which is limited posteriorly by a constriction or groove, the elevation channelled in the middle and bounded on each side by a distinct ridge which extends nearly to the anterior margin (this ridge much interrupted at the top and sending off three or four transverse branches which run down each side of the elevated portion); elytra subquadrate, opaque, of the same colour as the thorax, with numerous larger dark punctures, four longitudinal costæ—the first commencing near the scutellum and extending to the middle near the suture and joined by a short oblique branch to the second costa immediately below the middle, the latter extending upwards to the middle of the base and downwards to a little distance from the apex, where it turns outwards, the third costa placed near the shoulder and joining the second before the middle (but indistinctly continued posteriorly), the fourth very indistinct, shorter than the third, and running from the shoulder obliquely downwards,—a single short tubercular ridge near the suture below the middle, a similar ridge marking the apex of the second costa before it turns outwards, and at the apical and lateral portions some more or less distinct transverse costæ, the suture dentate throughout; pygidium deeply punctured, and furnished with some short ridges; underside closely foveolate-punctate.

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

The absence of isolated pointed tubercles from the elytra and the differently sculptured thorax separate *C. brunnea* from *C. luteola*. The uniformly-coloured upper surface and the feebly raised disc of the thorax distinguish the species from most of its allies.

20 (b). **Chlamys insignis.** (Tab. XXXIX. fig. 25.)

Subquadrate, robust, entirely pale ochreous; thorax finely punctured, the base conically raised and the apex of the raised part impressed with a fovea; elytra with about ten isolated tubercles, the interspaces remotely impressed with brown punctures.

Length $1\frac{3}{4}$–2 lines.

Head finely punctured, the punctures irregularly distributed; antennæ fulvous, the fourth and following joints broadly widened; thorax finely punctured throughout, the posterior portion gradually raised into a conical protuberance, which is slightly foveate at the apex only, the surface of an opaque pale ochreous or fulvous colour with indications (in some specimens) of spots at the sides and darker markings; scutellum flavous or ochreous; elytra nearly subquadrate, of the same colour as the thorax, each with ten or twelve isolated rounded tubercles placed thus—four nearly parallel with the suture (the second placed close to it), four others, forming a second row, three placed triangularly near the apex, and one or two (nearly obsolete) anteriorly at the sides,—the interstices remotely impressed with small piceous punctures and the extreme basal margin also of that colour, the suture dentate throughout; pygidium, underside, and legs entirely flavous.

Hab. Panama, David, Caldera in Chiriqui, Tolé (*Champion*).

This species is perhaps nearest allied to *C. luteola*, from which the unicolorous upper surface, the undivided thoracic elevation, which only at its apex has a shallow groove, and the isolated rounded tubercles of the elytra distinguish it; the elytra have the usual oblique lateral constriction.

20 (c). **Chlamys prodigiosa.** (Tab. XL. fig. 5.)

Subquadrate, flavous, spotted with black; thorax with two crests, each divided at the top; elytra with five or

six strongly raised and some smaller black or metallic purplish isolated tubercles; breast and legs spotted with black.

Length 2 lines.

Head flavous, with a few dark punctures and a black spot on the vertex, and a smaller spot above each eye; antennæ fulvous; thorax with two acutely-raised crests or ridges which are separated by a deep channel, each crest being divided at its apex into three prominences or tubercles, the disc flavous, the sides, the base, and the space between the two principal ridges spotted with black; scutellum flavous, its base black; elytra with deep punctures, strongly raised isolated tubercles (one at the middle of the basal margin, two smaller ones placed obliquely between the shoulder and the suture, three in the same direction below the middle, and two large ones of trigonate shape near the apex), and a short transverse prominent ridge near the suture at the middle, the tubercles of a shining black colour, the two apical ones purplish-blue; pygidium flavous, with a large black spot near the apex; the underside flavous, spotted with black; abdomen with a small tubercle on either side, the tubercle marked with black; legs flavous, the femora with a large central black patch.

Hab. GUATEMALA (*coll. Jacoby*).

Allied to the Brazilian *C. schotti*, Koll., but differing in the sculpture of the thorax and of the elytra, and in the tubercles of the latter being partly metallic in colour. We have received a single specimen of this interesting new species from the Stuttgart Museum.

20 (D). **Chlamys nitidiceps.** (Tab. XL. fig. 6.)

Narrowly elongate, obscure reddish-cupreous, the base of the antennæ, the labrum, and the tarsi flavous; thorax irregularly tuberculate, its elevation channelled; elytra deeply punctured, the apex with some blunt tubercles, the disc with obscure longitudinal ridges.

Length 1 line.

Head flattened, finely reticulate-rugose; labrum fulvous; antennæ with the basal joint flavous, the other joints obscure fuscous; thorax with the middle portion moderately raised, the elevation bounded posteriorly and at the sides by a deep sulcation and divided in the middle by a shallow channel—each division forming a blunt longitudinal ridge at the apex and indistinctly divided into two blunt tubercles, the anterior portion with a short transverse ridge placed in front of the longitudinal one,—the entire surface irregularly reticulate; elytra closely and deeply punctured, with a broad longitudinal ridge down the middle—the surface of the ridge impressed with two rows of punctures and the ridge itself ending near the apex in a blunt tubercle,—three blunt tubercles near the apex, an indistinct costa running close to the suture from the base to the middle, where it joins the broad ridge by a transversely-shaped tubercle, a blunt tubercle at the middle of the base, and a short transverse ridge at the sides near the middle, the suture denticulate throughout; pygidium with three distinct longitudinal costæ, the spaces between the costæ hollowed; the femora dark fuscous, the tibiæ cupreous in tint.

Hab. GUATEMALA, Cerro Zunil (*Champion*). A single specimen.

The uniform obscure reddish-cupreous colour, the elongate shape, and the tricarinate pygidium distinguish this small species from its allies, *C. schuchti*, Koll., from Brazil, &c. It also differs from *C. schuchti* in the sculpture of the thorax and in the colour of the legs. In *C. nitidiceps* the tibiæ are distinctly cupreous.

Chlamys stictica (p. 83).

To the Mexican locality given, add:—Cuernavaca, Jalapa (*Höge*), Atoyac in Vera Cruz, Cordova (*Sallé*), Teapa in Tabasco (*H. H. Smith*).

Specimens from the above localities agree fairly well with Lacordaire's description of *C. stictica*; they vary a good deal in colour, the thorax being pale and almost unspotted in some examples, and in others covered with black spots which occasionally form two lateral bands and a short central stripe at the base; nearly all have a pale bright flavous or ferruginous stripe on the disc of the thorax. The middle portion of the thorax is raised into a round moderate elevation, which is not channelled but has generally a small oblong depression at the top: this is evidently the principal character by which *C. stictica* may be known. It is somewhat doubtful whether the Guatemalan specimens belong to the same species, as they have the elytra constricted at the middle and are also more elongate; they agree, however, in the main points with the Mexican insect.

25 (A). **Chlamys bugabensis.** (Tab. XXXIX. fig. 24.)

Pale flavous; thorax with four tubercles, the disc with a transverse dark band; elytra closely punctured, with a subsutural ridge on the disc extending from the middle to the apex and five tubercles, a transverse band at the base and the tubercles greenish.

Length 2 lines.

Head flat, with a few fine punctures, pale flavous; antennæ flavous; thorax finely granulate and punctured, the posterior portion raised into a rounded feeble elevation, the top of the elevation being broadly but shallowly channelled and furnished with four small tubercles, the disc with a transverse strongly sinuate dark greenish band which does not extend to either margin; scutellum black, impunctate; elytra subquadrate, constricted at the sides, closely punctured in longitudinal rows, with a distinct ridge running obliquely from the middle of the base towards the suture near the apex, where it is more strongly raised, and numerous tubercles—two near the basal margin, one near the suture before the middle, a transverse one at the middle, and two others at the sides below the middle,—the tubercles, a spot on the shoulder, and a transverse band at the base, not extending to the middle, dark olive-green; the elytral epipleuræ at the base and some small spots at the sides of the breast dark olive-green, the rest of the underside and the legs bright flavous.

Hab. PANAMA, Bugaba (*Champion*).

The coloration and sculpture of this species distinguish it readily enough from the allied forms. The elytra, in addition to the more prominent subsutural costa, have two other costæ (only visible in certain lights), one placed near the shoulder and one towards the apex near the lateral margin.

25 (B). **Chlamys semifulva.** (Tab. XL. fig. 7.)

Head and thorax fulvous; the latter with two more or less distinct brown bands, its elevation subglobose; elytra with longitudinal and transverse ridges, brownish-fuscous, with a narrow fulvous transverse band near the apex; legs and abdomen fulvous.

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

Head entirely fulvous, rugose; antennæ fulvous; thorax finely rugose-punctate, the elevation finely reticulate, subglobose, and with a narrow channel on the top bounded on either side by a fine raised ridge, the surface bright fulvous, the elevation with two dark brown stripes behind and a small spot on either side laterally; scutellum stained with fulvous; elytra subquadrate, slightly narrowed posteriorly, dark fuscous, with a narrow fulvous or flavous transverse band near the apex, four very distinctly raised sinuate longitudinal ridges—the first subsutural, S-shaped, and joined below the middle to the second ridge, the latter extending upwards to the middle of the base and downwards to near the apex, where it turns

outwards, the third ridge commencing near the shoulder and joined before the middle by a transverse costa to the second ridge, the fourth commencing at the shoulder and connected by a transverse costa (in a line with the first transverse ridge) with the third ridge,—and several small tubercles near the apex, the interstices simply punctate; pygidium fulvous, spotted with black at the base, its surface finely rugose; below fulvous, the breast dark fuscous; the posterior femora more or less fuscous.

Hab. MEXICO, Jalapa (*Höge*), Puebla (*Sallé*).

Much smaller than *C. stictica* or *C. pectoralis*, and differing from these in the colour of the elytra (which is, however, probably subject to variation) and of the underside. Two specimens.

27 (A). **Chlamys pectoralis.**

Obscure fulvous, the middle of the breast and of the abdomen black; thorax with a regular rounded elevation; elytra with excavated longitudinal spaces bounded by raised costæ, and without isolated tubercles; pygidium longitudinally carinate in the middle, spotted with black.

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

Nearly cylindrical in shape; head finely punctured and granulate, fulvous, with a small black spot on the vertex; antennæ entirely fulvous; thorax twice as broad as long, fulvous, the middle portion raised into a regularly rounded elevation which is bounded posteriorly and laterally by a distinct sulcation, the sides covered with shallow non-confluent foveæ, the elevation shallowly grooved in the middle, reticulate, and with a small black spot at the top; elytra slightly constricted at the middle, fulvous, opaque, with the excavated spaces and raised costæ placed thus—a longitudinal sulcation near the suture, the sulcation limited by two strongly raised costæ at the sides and by a transverse ridge at the middle, and followed below the latter by a smaller similarly enclosed sulcation (the first of these costæ continued towards the apex, where it forms an elongate tubercle and then curves towards the sides where it is connected with other costæ), an excavation at the middle near the sides, bounded laterally by a short longitudinal ridge (which forms the continuation of a longer one commencing at the shoulders) and inwardly by a strongly raised ridge (these connected by a short transverse elevation), and a strongly raised elongate tubercle near the apex (in a line with the subsutural one),—the interstices between the numerous ridges closely foveolate-punctate, the suture dentate throughout; pygidium reticulate and punctured, carinate in the centre, its base spotted with black; underside closely reticulate-punctate, fulvous, the breast and middle portion of the abdominal segments, as well as the coxal cavities, black; legs fulvous, with a more or less distinct black spot on the middle of the posterior femora.

Hab. MEXICO, La Parada, Juquila (*Sallé*).

C. pectoralis closely resembles the specimens which I have referred to *C. gysseleni*; but the thorax in the present insect is much more narrowed in front, and its elevation is bounded by a distinct sulcation at the sides and base; the elytra are more deeply excavated and have the costæ more strongly raised; the antennæ are entirely fulvous; and the breast and the abdomen are partly black. *C. stictica* may be known from *C. pectoralis* by the less deeply excavated elytra and less strongly raised costæ.

Chlamys insidiosa (p. 85). (Tab. XL. fig. 8.)

To the locality given, add:—MEXICO, Ventanas in Durango (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

Two specimens from the above localities agree exactly with Lacordaire's description. We figure the one from Ventanas.

Chlamys venusta (p. 88).

Chlamys fasciaticollis, Jac. huj. op. p. 85.

To the Mexican localities given, add :—Jalapa (*Höge*).

An examination of the additional material now at my disposal proves that *C. fasciaticollis* (Tab. V. fig. 7) cannot be separated from *C. venusta*.

43. **Chlamys admirabilis.** (Tab. XXXIX. fig. 23.)

Subquadrate, black, the head, the sides and front of the thorax, the pygidium, and the sides of the abdomen flavous; thorax with a very strongly raised perpendicular elevation, the elevation divided at the top, the sides impunctate; elytra with a very acute ridge at the middle, a tubercle at the base, and three tubercles near the apex, the central ridge fulvous within.

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

Head finely punctured, flavous, the vertex darker and finely rugose; antennæ fulvous, the apical seven joints broadly dilated; thorax with its middle portion suddenly and perpendicularly raised, the elevation deeply divided at the top, and each part furnished with a ridge on its inner side and some deep punctures at the apex, the central portion deep black, this colour extending in two lines down the middle to the anterior margin, the base with two elongate fulvous spots placed in front of the scutellum, the sides broadly flavous and entirely impunctate (the flavous colour forming a broad triangular patch which extends to the top of the elevation); scutellum shining, impunctate, black; elytra velvety-black, with a very prominent trigonate tubercle at the middle of the base and three others placed triangularly at the apex (the one nearest the suture the largest), the disc occupied by the usual oblique ridge (extending from the shoulder to the suture where it forms a more than usually raised **V**-shaped prominence), the inner side of which is fulvous, the space between the oblique ridge and the base remotely punctured and furnished with some small fulvous tubercles, the suture deeply dentate; the pygidium, the last abdominal segment, as well as the sides of the other segments and some spots on the shoulders, flavous; legs black, with a flavous spot placed at the base and apex of the femora and tibiæ.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Only a single specimen of this remarkable *Chlamys* was obtained. It seems to belong to the group containing *C. dromedarius*, Koll., and others; the colour of the elytra is probably subject to variation as regards the amount of fulvous or black.

44. **Chlamys biplagiata.** (Tab. XL. fig. 9.)

Black, the labrum, the basal joints of the antennæ, and the tarsi fulvous; thorax granulate-punctate, the elevation round; elytra with four or five longitudinal ridges, bright fulvous, a spot on the shoulder, and a transverse band below the middle black.

Length 1 line.

Subcylindrical, slightly narrowed posteriorly; head extremely finely granulate, entirely black; labrum and palpi fulvous; antennæ short, the lower five joints fulvous, the rest black; thorax with a regularly rounded undivided central elevation, entirely black, the surface very finely punctured at the sides only, the raised portion closely reticulate; scutellum black; elytra with four or five more or less distinct costæ in the usual position (the first two united by a transverse ridge at, and the third and fourth by a similar ridge before, the middle), the interstices closely punctured and excavate, the surface fulvous, a round spot at the shoulder, a short transverse band below the middle, abbreviated at the sides, and the suture, rather broadly, black; pygidium, underside, and legs black.

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

This little species will be easily recognized by its coloration.

45. **Chlamys multifasciata.** (Tab. XL. fig. 10.)

Dark fulvous, with a slight purplish tint; thorax with a central longitudinal and a lateral semicircular black band; elytra with a subsutural and a lateral short black band, the bands limited by strongly raised costæ, the interstices deeply punctured; the breast with a black lateral stripe.

Length $1\frac{3}{4}$ line.

Head finely rugose, the vertex with a narrow black central stripe; antennæ with the first joint fulvous (the rest broken off); thorax with the posterior portion only moderately raised and limited behind by a rather deep transverse sulcation, the raised portion with a ridge on each side at the top, the surface rather rugose, dark fulvous, the disc with a narrow black band, which extends from the top of the elevation to the anterior margin, and some irregularly distributed black punctures, the sides with a semicircular black band, the end of which extends to the lateral margin; elytra dark fulvous, with a slight purplish tint, partly shining, closely foveolate-punctate on the disc, with a deep sulcation near the suture, extending from the base to the middle, and an oblique lateral one below the shoulder, the sutural sulcation bounded on the inner side by a strongly raised ridge (the commencement and end of which is marked by a tubercle) and deep black within, and a trigonate tubercle near the suture close to the apex, the space between the first and second grooves occupied by reticulations which are divided by less strongly raised costæ, the suture dentate throughout; the underside is impressed with shallow foveæ; the breast has a longitudinal stripe on either side, and there are two oblique stripes on the abdominal segments; pygidium with two spots at the base and two others near the apical margin; tibiæ with a small black spot at the middle.

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

In this species the bands of the thorax and of the elytra are placed within the grooves; the elytra have four longitudinal costæ in the usual position, the spaces between the costæ closely foveolate-punctate, and the suture dentate throughout. One specimen.

46. **Chlamys quadricarinata.**

Subquadrate, fulvous; thorax with seven obscure brown spots, its elevation with two ridges on each side, the surface granulate-punctate; elytra with four very strongly raised costæ and some transverse ridges, these surrounding excavate spaces, the latter remotely punctured; pygidium with a central and two lateral carinations.

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

Head rugosely punctured, the labrum and other parts of the mouth black; antennæ with the lower joints fulvous (the rest broken off); thorax rather strongly narrowed anteriorly, the sides rectilinear, the disc moderately raised behind but with the elevation abruptly deflexed posteriorly, the latter with a strongly marked and a less distinctly raised ridge at the top (the inner one oblique, the outer one straight), the anterior portion with some very obscure tubercles placed in a transverse row, the surface entirely covered with deep punctures and of a pale fulvous-colour, marked with obscure, more or less longitudinal, dark brownish spots, three on each side and one at the top of the elevation; elytra with a rather deep sulcation extending from below the shoulder towards the suture, four strongly raised costæ (two running close to the suture and connected by a transverse ridge at the middle, these being more widely separated anteriorly than posteriorly and enclosing excavated spaces, and two in the usual position near and at the shoulder, these latter being joined to the others), and a strongly raised transverse lateral ridge, the latter placed in a line with the shorter subsutural ridge and sending off longitudinal costæ towards the apex, the surface of a rather bright fulvous colour here and there marked with paler stains, the interspaces between the costæ being darker and deeply but not very closely punctured; pygidium with a central longitudinal and a shorter lateral carina; underside and legs entirely fulvous, the former closely foveolate-punctate.

Hab. Panama, Bugaba in Chiriqui (*Champion*).

The single male specimen obtained by Mr. Champion is well distinguished from similarly-coloured species by the sculpturing of the thorax.

47. **Chlamys angulicollis.** (Tab. XL. fig. 11.)

Obscure dark fulvous, opaque; thorax finely granulate-punctate, with two lateral black bands, the posterior angles tuberculiform; elytra with two longitudinal costæ (the first short and S-shaped) connected by transverse short ridges, the apex with two tubercles.

Length 2 lines.

Head finely rugose, fulvous; antennæ obscure fulvous, the last four joints black, the fourth and following joints strongly transversely serrate; thorax with its middle portion gradually raised, the elevation bounded at the base by a deep transverse groove, and with a rather acute edge behind, the posterior angles produced into a blunt tubercle, the surface extremely closely and finely punctured and granulate, reddish-fulvous, entirely opaque, with a black, anteriorly widened, dentate band on each side, extending from the top of the elevation nearly to the anterior margin, and a small very obscure black spot near the lateral margin; elytra of a paler colour than the thorax, rather closely impressed with black punctures, and with two distinctly raised costæ—the first S-shaped, near the suture (its commencement marked by a tubercle), and joined at the middle by a short transverse ridge to the second costa, the latter commencing at the middle of the base and extending nearly to the apex where it ends in a tubercle,—the shoulders also costiform and with a short black stripe (if looked at sideways, the elytra also appear to have a transverse ridge before the middle, this ridge connecting the second costa with the more indistinct lateral ones, and a ridge at the sides below the transverse one); pygidium rather remotely punctured; underside and legs dark brown, with black markings in the coxal cavities.

Hab. Guatemala, San Gerónimo (*Champion*).

A single specimen.

The black bands and shape of the thorax, in connection with the two plainly marked elytral costæ, separate *C. angulicollis* from any of its congeners.

48. **Chlamys gaumeri.**

Cylindrical, obscure fuscous; thorax transversely convex, the elevation reticulate-punctate and scarcely perceptible; elytra closely punctate and reticulate, without tubercles and with very indistinct ridges, a black spot on either side of the suture near the base.

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

Head finely rugose, obscure fulvous, with a small indistinct fuscous spot on the vertex; anterior margin of the epistome black; labrum testaceous; antennæ fulvous, the terminal joints darker; thorax subcylindrical, regularly convex, the middle portion scarcely perceptibly raised, the surface of a dull brownish-fuscous colour, closely reticulate on the disc, finely punctured at the sides; elytra of the same colour as the thorax, with some slightly raised ridges, of which two extending from the middle of the base to near the apex are more plainly marked than the rest, the former limiting externally a black smoother space placed below the scutellum, the rest of the surface closely and deeply punctured and reticulate, the suture dentate throughout; pygidium closely punctured, and with two very short costæ at the base; underside and legs coloured as above, the former closely reticulate.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

The feebly raised thoracic elevation and indistinct elytral ridges, the subcylindrical shape, and the very dull fuscous colour distinguish *C. gaumeri* from any of its congeners. One example only, a female, has been received.

EXEMA (p. 89).

Exema dispar (p. 89).

To the localities given, add:—MEXICO, Northern Sonora (*Morrison*), Ventanas in Durango, Tonila in Colima, Acapulco, Cuernavaca, Jalapa (*Höge*), Chilpancingo, Tepetlapa, Soledad and Amula in Guerrero, Atoyac and Fortin in Vera Cruz (*H. H. Smith*); GUATEMALA, Cerro Zunil, San Joaquin, Chiacam, Cahabon (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Los Remedios, Tolé (*Champion*).

There can be little doubt that *Chlamys conspersa*, Mannerh., and *Exema dispar*, Lac., are one and the same species; but an examination of the type is necessary to settle this point. Numerous and very variable specimens have been received from the additional localities quoted. The insect proves to have a very extended range.

Exema punctatipes (p. 89).

To the localities given, add:—MEXICO, Vera Cruz (*Sallé*), Atoyac (*H. H. Smith*); PANAMA, Volcan de Chiriqui, Tolé, Taboga Island (*Champion*).

The numerous specimens received agree well with Lacordaire's description.

Exema complicata (p. 89).

To the Guatemalan locality given, add:—El Tumbador (*Champion*).

4. **Exema octocarinata.**

Black; thorax with eight ridges, the two lateral ones interrupted; scutellum not visible; elytra each with four longitudinal costæ on the disc and some shorter costæ towards the apex, the interstices strongly punctured anteriorly.

Length $\frac{1}{2}$–$\frac{3}{4}$ line.

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

This small species differs from all its allies in the absence of a visible scutellum, and a new genus seems almost required for its reception. The head is minutely granulate and finely punctured. The thorax has its median lobe prolonged and acutely pointed and extending to the usual position of the scutellum (the species thus differing from all others of the genus known to me); on the disc are four strongly raised costæ radiating from the base towards the anterior margin, the sides being furnished with a short ridge anteriorly and a longer but interrupted one placed more inwards; the interstices are impressed with single rows of fine punctures. The scutellum is not visible. The elytra have altogether about eight longitudinal costæ, of which three are entire; the first two costæ are joined below the middle near the suture by a short transverse ridge, and the second is also joined to the third and fourth by an oblique transverse ridge before the middle; the posterior portion of the elytra is furnished with numerous shorter longitudinal costæ; the interstices between these latter are foveolate-punctate, while those of the anterior portion are closely and strongly punctured; the suture is

smooth. The pygidium has a central ridge and two less distinct short lateral ridges. The insect is of a shining black colour, the labrum alone being fulvous or piceous. Three specimens.

POROPLEURA (p. 90).

Poropleura bacca (p. 90).

To the locality Mexico, add:—Rincon in Guerrero 2800 feet (*H. H. Smith*).

A specimen since received from the above locality proves the correctness of the Mexican habitat of this species.

LAMPROSOMA (p. 90).

Lamprosoma nicaraguense (p. 91).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*), Almolonga (*Höge*).

Mexican specimens are of a bright metallic green colour, and differ from those from Guatemala and Nicaragua in the shape of the golden-cupreous band of the thorax, this band, instead of being confined to the sides only, extending very narrowly along the anterior margin. *L. nicaraguense* may also be known by the underside being entirely bright reddish-golden.

Lamprosoma sallæi (p. 91).

To the Mexican locality given, add:—Ventanas in Durango, Acapulco in Guerrero (*Höge*).

This species greatly resembles the Mexican form of *L. nicaraguense*; but may be known from it by the thorax being almost impunctate, and with the aureous colour more extended, and by the abdomen being nearly black. The specimens from Acapulco are somewhat smaller and of a more leaden-blue colour, and they have the aureous lateral markings of the thorax not so broad and more obliquely shaped; it is probable, however, that this is only due to local variation.

2 (A). **Lamprosoma bugabense.**

Above leaden-blue, the head, sides of the thorax, apex of the elytra, and the underside and legs golden-reddish-cupreous; thorax strongly transverse, finely punctured; elytra finely punctate-striate, the interstices minutely aciculate.

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

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

This species is so closely allied to *L. nicaraguense* and *L. sallæi*, that it is only necessary to point out the differences: the colour of the upper surface is leaden-blue (in one specimen the elytra are duller than in the other); the head is minutely and

closely granulate and punctured; the thorax is much more transverse, being, at the base, more than three times as broad as long, and is impunctate at the sides and finely punctured at the middle; the elytra have their interstices finely scratched or aciculate, and the golden-cupreous band at the apex is shorter and narrower; and the prosternum is narrower and much more strongly punctured.

Lamprosoma hypochryseum (p. 92).

A specimen obtained by Herr Höge at Cuernavaca during his second expedition differs from the typical form in being of a greenish-blue colour above, and in having the elytra more strongly punctured.

Lamprosoma gratum (p. 92).

A specimen lately received from Northern Yucatan (*Gaumer*) differs from Lacordaire's description in having the prosternum scarcely one half longer than broad: Lacordaire gives the length as at least twice as long as broad, which, I think, is erroneous.

Lamprosoma chapuisi (p. 92).

To the locality Panama, add:—Volcan de Chiriqui, Boquete, Caldera (*Champion*).

Specimens from these additional localities differ from the type in the greater extent of the metallic colour of the thorax; in some of them the tarsi show a slight metallic gloss.

Lamprosoma insigne (p. 94).

To the Mexican localities given, add:—Chilpancingo in Guerrero (*Höge*, *H. H. Smith*).

Lamprosoma opulentum (p. 94).

To the locality Mexico, add:—Tonila in Colima (*Höge*).

The Mexican locality "Juquila" proves to be erroneous; it refers to a very closely allied species, *L. imitans*, Jac. Of the true *L. opulentum*, two examples only are contained in the Sallé collection (both formerly belonging to that of Sturm and labelled by him *L. superbum*), and a third has been found at Tonila by Herr Höge; these specimens agree well with Lacordaire's description, although in one the thoracic blue spot is narrowly transverse and undivided. I must further add that in these examples the head has a triangular depression at its lower portion, a character not mentioned by Lacordaire.

13 (A). **Lamprosoma imitans.**

Lamprosoma opulentum, huj. op. p. 94 (partim).

Metallic green; head and legs green, the former finely granulate; thorax with a narrow transverse violaceous

band; elytra distinctly punctate-striate, a transverse band at the base, and another at the middle, and a sutural spot at the apex, dark violaceous; abdomen black.

Length 2 lines.

Head flattened, finely granulate and opaque, subremotely punctured, the anterior margin of the epistome nearly straight; the base of the mandibles metallic green; antennæ black, the basal joint metallic green above; thorax impressed with a few scarcely perceptible punctures, metallic green, the middle of the disc with a narrow (sometimes divided) dark violaceous band; elytra rather elongate, narrowed posteriorly, somewhat strongly punctate-striate, with two transverse bands (the first occupying less than the basal third of the elytra, the second, placed at the middle, not extending to the lateral margin and more or less widened outwardly), a subapical spot placed across the suture, and the latter itself, narrowly, violaceous; the abdomen and tarsi black; the prosternum longer than broad, nearly smooth, and shining.

Hab. MEXICO, Juquila (*Sallé*).

L. imitans, I have no doubt, is quite distinct from *L. opulentum*; the head is flat and has no depression at its lower portion, and the elytral markings are quite different in shape and position. Three specimens have been received from Juquila; a fourth, without exact locality, contained in my own collection, resembles these, but has the head bright metallic cupreous, and the thorax distinctly punctured; the latter may prove to be distinct.

Lamprosoma refulgens (p. 95).

To the Mexican localities given, add:—Acapulco (*Höge*); PANAMA, Bugaba (*Champion*).

The Guatemalan locality given is erroneous; it refers to *L. guatemalense*. A single specimen obtained by Mr. Champion at Bugaba seems only to differ from those from Mexico in its rather smaller size.

14 (A). **Lamprosoma aureolimbatum.**

Black; the head and thorax reddish-cupreous, finely punctured; elytra distinctly punctate-striate, violaceous-blue, a small spot at the middle of the base and the sides (rather narrowly at the base but gradually becoming more broadly so towards the apex) golden-cupreous.

Length 2 lines.

Head extremely minutely granulate, finely but not very closely punctured, bright reddish-cupreous, the anterior edge of the epistome nearly straight and narrowly black; antennæ black, the basal joint fulvous below; thorax punctured like the head (without being granulate), very shining, bright reddish-cupreous; scutellum black; elytra with rather deep punctured striæ, violaceous-blue, with the sides from the base to the apex, but gradually becoming more broadly so posteriorly, golden-cupreous; underside and legs entirely black.

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

This species, of which a single specimen only was obtained, may be at once distinguished from *L. refulgens* and the allied species by the shape of the cupreous limb of the elytra (the cupreous colour extending upwards to the base), and by the entirely black underside and legs; at the middle of the base of each elytron there is another small cupreous spot.

Lamprosoma bifasciatum (p. 95).

To the Mexican localities given, add:—Acapulco (*Höge*).

Lamprosoma guatemalense (p. 96).

To the locality given, add:—MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Teleman in Vera Paz (*Champion*).

The single specimen obtained by Herr Höge does not differ materially from those from Guatemala.

18 (A). Lamprosoma dubiosum.

Broadly rounded, black; the head and thorax (a spot at the base excepted) reddish-cupreous; elytra violaceous-blue, distinctly punctate-striate, the apex with a common cupreous transverse band.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

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

Two examples. This insect almost agrees in coloration with *L. guatemalense*, but differs from it in its broadly rounded shape and in the elytra being very obtuse behind. The apical portion of the latter in *L. guatemalense* is also more strongly punctured and somewhat rugose; in *L. dubiosum* it is very finely punctured. The two species are smaller than any of the other similarly-coloured allied forms. In one specimen of *L. dubiosum* the thorax has nearly the entire middle of the disc violaceous-blue; in the other this colour is reduced to a small spot at the base.

20 (A). Lamprosoma femoratum.

Lamprosoma testudineum, huj. op. p. 97 (partim) (nec Lacord.).

Black below; above dark violaceous or blue; head finely granulate, the epistome deeply emarginate; thorax finely and remotely punctured; elytra finely punctate-striate; anterior femora angulate near the base; prosternum slightly longer than broad.

Length $2\frac{1}{2}$–3 lines.

Hab. MEXICO, San Andres Tuxtla, Playa Vicente (*Sallé*), Almolonga (*Höge*).

Our Mexican specimens of this insect were referred in the earlier portion of this work to *L. testudineum*; but a more careful examination has convinced me that they are distinct from that species and apparently undescribed. The principal differences are the deeply emarginate epistome, the sides of which are prolonged into an acute point; the largely developed mandibles; and the enlarged and subangulate anterior femora. There is only one species described by Lacordaire (*L. azureum*) which has similarly-formed femora; *L. azureum*, however, has the thorax and elytra finely granulate. In the present species the colour of the upper surface varies from violet to blackish-blue, and the general shape is broad ovate and but slightly narrowed posteriorly. The head alone is minutely granulate and finely punctured, with or without a fovea at its lower portion; the antennæ are black and have the underside of the first

joint and the second one entirely more or less fulvous; the thorax is very finely and rather remotely punctured; the elytra are finely punctate-striate; and the prosternum is rugosely punctured. These characters are constant in the seven specimens before me. The legs have a bluish gloss in some examples. *L. amethystinum*, Lac., seems to be a closely-allied but distinct species.

Lamprosoma approximans (p. 97).

To the Mexican locality given, add:—Ventanas in Durango, Chilpancingo in Guerrero (*Höge*), Puebla (*Sallé*).

The specimens obtained by Herr Höge differ from the others in being of a bright metallic green colour above; but in the produced shoulders and extremely fine punctuation they agree with the typical form.

Lamprosoma amabile (p. 99).

In a specimen obtained by Mr. Gaumer in Northern Yucatan the thorax is of a darker and more leaden hue than the elytra; and the prosternum is scarcely longer than broad, rather convex, excavate in front, almost smooth, with a few punctures only on the surface.

Lamprosoma pediculus (p. 101).

A further examination of the specimens referred by me to this species proves that they cannot well be identified with it, if Lacordaire's description is correct, as the head and thorax show a distinct punctuation; our localities for *L. pediculus* refer to the following two species:—

35 (A). **Lamprosoma juvencum.**

Lamprosoma pediculus, huj. op. p. 101 (nec Lacord.).

Ovate, scarcely narrowed posteriorly, black; above metallic cupreous; head minutely granulate and punctured; thorax extremely finely punctured; elytra distinctly punctate-striate, the interstices very minutely punctured; prosternum not longer than broad, finely punctured.

Length 1½ line.

Hab. MEXICO, La Parada, Oaxaca (*Sallé*), Playa Vicente (*Höge*).

L. juvencum agrees in size with *L. pediculus*, but differs from it in the finely granulate and punctured head (the punctures quite distinct when seen under a strong lens); the punctuation of the thorax is very minute, and the interstices are not granulate but shining; the elytra have their apex broadly rounded, and the surface very distinctly punctate-striate, some minute punctures being also visible on the interstices. Lacordaire says that *L. pediculus* has a nearly impunctate head and thorax, even when examined under a powerful lens.

35 (B). **Lamprosoma ovulum.**

Lamprosoma pediculus, huj. op. p. 101 (nec Lacord.).

Ovate, narrowed behind, black; above bright reddish-cupreous; head shining, finely punctured; thorax finely and distinctly punctured; elytra strongly and remotely punctate-striate; prosternum longer than broad, longitudinally sulcate.

Length 1½ line.

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

Of the same size as *L. juvencum*, but distinctly narrowed behind. The head is finely punctured (not granulate), the space between the eyes proportionately narrow. The thorax is also finely but distinctly punctured, and the punctures are remotely placed. The punctuation of the elytra is proportionately strong, and the punctures are rather widely separated. The prosternum is quite different in form from that of *L. juvencum*, it being longer than broad and longitudinally sulcate.

35 (C). **Lamprosoma pusillum.**

Ovate, slightly narrowed behind, black; above bright cupreous; head impunctate, the anterior margin of the epistome raised into a ridge; thorax distinctly punctured; elytra strongly punctured, the interstices finely punctate; prosternum slightly longer than broad; claws simple.

Length 1 line.

Hab. PANAMA, Bugaba (*Champion*).

Of short, convex shape, scarcely narrowed behind, and separated from *L. ovulum* by the impunctate head and the narrow but distinct transverse ridge which forms the anterior margin of the epistome; the antennæ have the first joint metallic above, the rest black; the thorax is much more distinctly punctured than in *L. juvencum* and *L. ovulum*; the punctuation of the elytra is strong and deep, and the punctures are closer than in *L. ovulum*. The claws in the present species appear to be simple. In one specimen the head and the anterior legs are metallic green.

35 (D). **Lamprosoma intermedium.**

Oblong-ovate, slightly narrowed posteriorly, black; above metallic reddish-cupreous; head and thorax finely punctured; elytra strongly punctate-striate, the interstices finely punctured; prosternum slightly broader than long, finely punctured.

Length 1½–1¾ line.

Hab. MEXICO, Juquila (*Flohr*), Chilpancingo in Guerrero (*H. H. Smith*), La Parada (*Sallé*).

Of somewhat elongate shape, scarcely narrowed behind, and distinguishable from *L. pediculus*, Lac., by the finely punctured head and thorax and the shape of the prosternum. The head, when seen under a strong lens, is minutely granulate and very finely punctured, with a shallow depression at its lower portion; the thorax is as finely punctured, except near the base where the punctures are stronger, the median

lobe not very acutely produced but somewhat rounded; the elytra are only moderately convex, broadly rounded at the apex, their punctuation distinct, the interstices also here and there extremely finely punctured; the entire underside and the legs are black; the prosternum is broader than long (this and the punctured elytral interstices distinguish *L. intermedium* from several other closely allied forms) and finely punctured. In the specimen from La Parada the thorax is much more strongly punctured, and the elytral interstices are also much more distinctly (though finely) punctate; this example, although of similar shape, is broader than the others; it is probably a female of the same species.

36 (A). **Lamprosoma chiriquense.**

Very convex, narrowed behind, black; above bright metallic green; head and thorax very finely punctured; elytra rather strongly punctate-striate; prosternum slightly longer than broad, smooth.
Length 3 lines.

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

This large-sized *Lamprosoma*, of which Mr. Champion obtained but a single specimen, is closely allied to *L. salvini* and also to several species described by Lacordaire. In shape it is very different from *L. salvini*, the latter being very much less convex and more evenly rounded; in *L. chiriquense* the greatest convexity of the elytra is at the base, the entire posterior portion being strongly deflexed. The head is finely and closely punctured, and has an obscure short central groove; the epistome is continuous with the front, its anterior margin being moderately emarginate (in *L. salvini* the angles are prolonged into points); the antennæ are short, black, the underside of the first joint, and the second one entirely, fulvous, the basal joint strongly widened. The thorax has its median lobe rather more pointed than in *L. salvini*, and also has two rather distinct depressions at the base in the middle; it is as finely punctured as the head, except near the base, where the punctures are, as usual, stronger. The elytra are punctured as in *L. salvini*. The prosternum is smooth, narrowed posteriorly, and excavate at its anterior portion.

36 (B). **Lamprosoma opacicolle.**

Ovate, scarcely narrowed posteriorly, black; the head and the legs reddish-cupreous, the thorax greenish-blue, and the elytra dark plumbeous, the sides of the thorax and the apex of the elytra reddish-cupreous; thorax opaque, impunctate; elytra strongly punctate-striate; prosternum scarcely broader than long.
Length 1½ line.

Head very finely granulate, with a few scarcely perceptible punctures; labrum and mandibles black; antennæ scarcely extending to half the length of the thorax, black, the first joint cupreous; thorax extremely finely granulate, opaque, of a dull greenish-blue colour, the sides, but more narrowly so at the base, reddish-cupreous; elytra of a bluish-plumbeous colour, more shining than the thorax, very strongly punctured, the interstices slightly rugose and with a few fine punctures, the sides with a metallic cupreous band extending from below the middle to the apex; the underside and tarsi black; prosternum slightly broader than long, with a few fine punctures and hairs.

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

L. opacicolle differs from the similarly-coloured allied forms in the shape of the prosternum, and in the opaque and impunctate thorax, dull leaden colour of the elytra, bright red, but not very shining, head and sides of the thorax, and posteriorly broad shape. One specimen.

36 (c). **Lamprosoma angustatum.**

Ovate, strongly narrowed posteriorly, black, above reddish-cupreous; head and thorax finely punctured; elytra finely punctate-striate; prosternum broader than long.

Length 2¼ lines.

Head extremely finely granulate, finely and rather closely punctured, the anterior margin of the epistome nearly straight, the parts of the mouth black; antennæ black, the basal joints fulvous below; thorax strongly transverse, very finely and remotely punctured at the sides, more closely and strongly so on the disc; elytra much narrowed posteriorly, finely punctate-striate, the interstices somewhat aciculate; underside and legs black; prosternum distinctly broader than long, with a few punctures.

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

I am unable to refer this insect, of which only a single specimen was obtained, to any described species, owing to its posteriorly narrowed shape and broad prosternum, the latter in most of the similarly-coloured congeners being longer than broad. In the example before me there is an obscure dark band at the base of the thorax which is probably accidental.

36 (d). **Lamprosoma constrictum.**

Ovate, strongly convex, much narrowed posteriorly, bright metallic green; antennæ and abdomen black; head and thorax strongly punctured; elytra deeply punctate-striate, the interstices obsoletely aciculate; prosternum excavate.

Length 2 lines.

Of very convex and posteriorly narrowed shape, bright metallic green; head minutely granulate and strongly but not very closely punctured, the epistome strongly deflexed, deeply emarginate anteriorly, the labrum and mandibles black; antennæ black, the first joint below and the second one entirely fulvous; thorax short, very strongly transverse, the median lobe rather rounded and with a depression near its apex, the surface punctured like that of the head; elytra only half as wide at the apex as at the base, strongly punctate-striate, the interstices irregularly and obsoletely aciculate, the lateral lobe moderately produced and not very pointed; underside black, the sides of the metasternum and the femora metallic greenish; prosternum quadrate, excavate throughout its entire length, and punctured.

Hab. GUATEMALA, Panzos in Vera Paz (*Conradt*).

The strongly punctured head and thorax and the excavate prosternum, in connection with the posteriorly narrowed shape, separate this species from any of its similarly-coloured allies. One example.

36 (e). **Lamprosoma unicolor.**

Broadly ovate, metallic violaceous-blue; head and thorax minutely and closely punctured; elytra finely punctate-striate, the interstices obscurely aciculate; prosternum subquadrate, deeply excavated.

Length 2 lines.

Head very finely and closely punctured; the epistome separated from the face by an obscure transverse groove, a little more strongly punctured than the rest of the head, its anterior margin moderately concave-

emarginate; the eyes very feebly notched; antennæ black, the first joint partly fulvous below; thorax punctured like the head; elytra moderately convex, their apex broadly rounded, the disc finely punctate-striate.

Hab. GUATEMALA, Santa Ana on the Rio Negro (*coll. Jacoby*).

The broadly ovate, scarcely narrowed shape, the blue underside and legs, and the broad and deeply excavated prosternum distinguish *L. unicolor* from all the other species of the genus here enumerated. A single specimen, received from the Stuttgart Museum.

36 (F). **Lamprosoma aterrimum.**

Very convex, narrowed posteriorly, entirely black; head and thorax finely and sparingly punctured; elytra very finely punctate-striate, the interstices smooth; prosternum scarcely longer than broad, flat.

Length 2½ lines.

Hab. NICARAGUA, Chontales (*Janson*).

Of an entirely black colour, and therefore easily distinguishable from any other species of the genus. The head is very finely and remotely punctured, the anterior margin of the epistome moderately emarginate; the thorax is only visibly punctured near the median lobe, the latter itself being rather rounded; the elytral punctuation is only visible under a strong lens; the prosternum is somewhat rugose in front, for the rest smooth and shining. If looked at sideways, the greatest convexity of the elytra is at the base. A single specimen.

Lamprosoma minutum (p. 103).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil, Cahabon (*Champion*), Coban in Vera Paz (*Conradt*).

Lamprosoma godmani (p. 104).

To the Guatemalan locality given, add:—Paraiso (*Champion*).

42 (A). **Lamprosoma atro-violaceum.**

Ovate, distinctly narrowed posteriorly, black; head minutely granulate, greenish; thorax black, extremely finely punctured; elytra blackish-violaceous, distinctly punctate-striate at the base, the apex almost impunctate.

Length ½ line.

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

This small species differs from *L. godmani* in being more narrowed posteriorly and in having the head very finely granulate. The head is sometimes black, frequently metallic greenish, with a fine longitudinal groove down the centre. The elytra have a violaceous or bluish tint, and the punctuation is only distinct near the base, and almost entirely obliterated below the middle; in *L. godmani* the punctures are distinct

to the apex, and the interstices are also sparingly and very finely punctured (scarcely rugose, as given in the description). The prosternum is subquadrate, and has a few fine punctures.

42 (B). **Lamprosoma veræpacis.**

Black; head greenish, finely granulate; thorax finely and rather closely punctured; elytra narrowed posteriorly, very finely punctate-striate; prosternum constricted at the middle, longer than broad.

Length $\frac{3}{4}$ line.

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

Of posteriorly less narrowed shape than *L. atro-violaceum*, almost entirely black, the thorax more distinctly and closely punctured; but principally distinguished from that species by the elongate and distinctly constricted prosternum. The head is minutely granulate, of a metallic greenish colour, and impressed with a few punctures (but not with a longitudinal groove). The underside, instead of being distinctly punctured, as in several of the allied species, is entirely impunctate.

Lamprosoma modestum (p. 104).

To the locality given, add:—PANAMA, Boquete (*Champion*).

A specimen subsequently received from the State of Panama is slightly larger and of somewhat broader shape than the Guatemalan type.

45. **Lamprosoma punctifrons.**

Ovate, very convex, narrowed behind, black; above metallic cupreous; head greenish, strongly punctured; thorax closely and finely punctured; elytra strongly punctate-striate, the interstices finely punctured; prosternum slightly longer than broad, narrowed at the middle.

Length $\frac{3}{4}$ line.

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

The head in this small species is very strongly punctured near the eyes; the latter are large and their diameter is equal to that of the space dividing them, this space being extremely finely granulate and having a longitudinal groove down the centre. The thorax is three times as broad as long; its median lobe is very little prominent or produced, the margin on each side of it being slightly sinuate; the surface is closely and finely punctured. The elytra are more strongly punctured than the thorax, and the interstices each bear a single row of finer punctures. The underside is black, the meso- and metasternum finely and remotely punctured; the prosternum is elongate.

OOMORPHUS. (To follow the genus *Lamprosoma*, p. 105.)

Oomorphus, Curtis, Brit. Entom. viii. t. 347 (1831).

Three species are at present placed in this genus, which principally differs from

Lamprosoma in the short eighth joint of the antennæ and in the simple claws. The two species from Central America referred to it seem to possess these characters, as well as wings, and they are of somewhat more elongate shape than their Old-World congeners.

1. Oomorphus mexicanus.

Oblong, subcylindrical, dark æneous; the basal two joints of the antennæ fulvous; head and thorax almost impunctate; elytra finely punctate-striate, greenish-æneous.

Length $\frac{3}{4}$ line.

Head entirely impunctate; eyes entire; antennæ extending to the base of the thorax, black, the lower two or three joints fulvous; thorax more than twice as broad as long, the sides straight but slightly converging towards the apex, the base oblique on each side and with the median lobe scarcely pointed, the surface exceedingly finely punctured (the punctuation only visible under a very strong lens); scutellum scarcely visible; elytra cylindrical, very little narrowed posteriorly, not lobed at the sides, the punctuation fine but distinct, but stronger at the base than near the apex, the interstices also with some minute punctures; underside blackish-æneous; the prosternum broad, a little longer than wide, and longitudinally sulcate throughout its entire length; abdomen finely pubescent.

Hab. Mexico, Chilpancingo and Omilteme in Guerrero (*H. H. Smith*).

The unnotched eyes and the absence of a lateral lobe to the elytra, together with the subcylindrical shape, will help to distinguish *O. mexicanus* from any species of *Lamprosoma*.

2. Oomorphus hirtipes.

Oblong, black; above and the prosternum and tibiæ dark æneous; antennæ obscure fulvous, the apical joint black; head and thorax finely punctured; elytra strongly punctate-striate; tibiæ with long grey hairs; prosternum quadrate.

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

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

Much larger and more robust than *O. mexicanus*; the head extremely finely granulate and punctured; the eyes entire; the antennæ differently coloured; the elytra much more strongly punctured and with smooth interstices; the tibiæ and the prosternum obscure æneous, the former with a long fringe of greyish hairs along their outer edge. A single specimen.

CHRYSODINA (p. 105).

3 (A). Chrysodina servula.

Chrysodina servula, Lefèvre, Bull. Soc. Ent. Fr. 1887, p. clv [1].

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Costa Rica, Cache (*Rogers*); Panama, Bugaba, Volcan de Chiriqui (*Champion* [1]).

Closely allied to *C. festiva*; but differing from it in the unicolorous and much less deeply punctured head (in *C. festiva* the space above the insertion of the antennæ and part of the epistome is metallic blue), and in the much broader prosternum. Many specimens, including the type.

Chrysodina flavipes (p. 106).

To the locality given, add:—PANAMA, Volcan de Chiriqui (*Champion*).

The general colour of the upper surface is better described as cupreous rather than æneous.

Chrysodina ornata (p. 107).

To the Mexican locality given, add:—Ventanas in Durango (*Forrer*), Iguala and Mescala in Guerrero (*Höge*).

In the specimens obtained by Herr Höge the cupreous colour at the sides of the elytra does not extend quite so far upwards as in the type.

Chrysodina ornaticollis (p. 108).

To the Mexican localities given, add:—Amula in Guerrero (*H. H. Smith*).

C. ornaticollis seems subject to great variation, and it is scarcely possible to say whether all the specimens before me really belong to one species. The punctuation of the head in the example from Playa Vicente is very strong, in that of one from Guanajuato quite fine. The specimen from Amula has entirely fulvous antennæ and legs, yet in general shape and other particulars it does not differ from the rest. In general shape, *C. ornaticollis* is cylindrical, convex, and rather more elongate than most of its congeners.

8 (A). **Chrysodina cyanipennis.**

Black; the basal joints of the antennæ, the apex of the tibiæ, and the tarsi, fulvous; thorax metallic cupreous, strongly punctured; elytra metallic blue, strongly punctate-striate.

Length 1 line.

Head metallic green or blue, rather strongly and remotely punctured; the vertex strigose; the clypeus triangular, coarsely punctured; the labrum fulvous; the antennæ extending to beyond the middle of the body, the lower five joints fulvous, the rest black, thickened; thorax strongly transverse, the sides moderately rounded, narrowed anteriorly, and here rather strongly deflexed, the surface bright aureous or cupreous, rather deeply and closely punctured; scutellum violaceous, broad; elytra more strongly punctured than the thorax, metallic blue, the punctures arranged in closely approached, rather regular rows; underside black, the sides of the breast and the legs metallic blue; the apex of the tibiæ and the tarsi fulvous.

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

This species is similarly coloured to *C. ornaticollis*; but is only half the size, and has the thorax and elytra more deeply punctured. The legs (including the tarsi) also differ in colour; the specimen from Tacambaro, however, has unicolorous tibiæ.

Chrysodina pubescens (p. 108).

To the Mexican locality given, add:—Tupataro and Irapuato in Guanajuato (*Höge*).

Of this curious species more than twenty specimens were obtained by Herr Höge during his second expedition.

9 (A). **Chrysodina pilosa.**

Chrysodina pilosa, Lefèvre, Bull. Soc. Ent. Fr. 1887, p. clv [1].

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion* [1]).

This is a pubescent species which differs from *C. pubescens* in the closely punctured and more shining elytra and their much longer pubescence; the thorax is very strongly rugose-punctate, and the elytra are finely granulate, with more distinct rows of punctures; the pubescence is long, silky, and whitish in appearance.

9 (B). **Chrysodina fulvicornis.**

Below blackish, the sides of the breast and abdomen metallic greenish, the antennæ and legs fulvous; thorax reddish-cupreous, minutely punctured; elytra metallic green, rather remotely punctate-striate.

Length 1 line.

Of subcylindrical, oblong shape; the head metallic green, rather strongly but not very closely punctured, the space above the insertion of the antennæ obscure cupreous; labrum and palpi fulvous; antennæ scarcely extending beyond the base of the thorax, fulvous, the last five joints thickened; thorax strongly transverse, widened at the middle, the sides moderately rounded and narrowed towards the apex, the surface extremely finely and rather remotely punctured, bright reddish-cupreous; elytra metallic greenish, proportionately strongly punctate-striate, the punctures becoming finer towards the apex, and (like the striæ) somewhat remotely placed; legs fulvous.

Hab. MEXICO, Cerro de Plumas (*Höge*). A single specimen.

C. fulvicornis differs from *C. championi* and *C. ornaticollis* in its smaller size and different shape, and in the fulvous antennæ and legs.

Chrysodina purpureicollis (p. 109).

To the Mexican localities given, add:—Pinos Altos in Chihuahua (*Buchan-Hepburn*), Ciudad in Durango (*Forrer*), Juquila (*Flohr*), Zacualtipan in Hidalgo, Jalapa (*Höge*).

Chrysodina cupriceps (p. 109).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*).

The broad, oblong shape, less transverse thorax, proportionately long antennæ, broad scutellum, and medially constricted prosternum, give *C. cupriceps* a very different facies to the other members of the genus *Chrysodina*; it might, perhaps, equally well be placed in *Noda*, near *N. curtula*, Jac., a species of nearly similar shape and structure.

Chrysodina minuta (p. 110).

This species was provisionally placed by me in *Chrysodina*, although the more elongate shape and long prosternum suggest the possibility of its requiring another genus for its

reception. M. Lefèvre has, however, lately placed (Ann. Soc. Ent. Fr. 1889, p. 330) *C. minuta* in *Lamprosphærus*, for what reason I know not. In my opinion the insect cannot find its place in that genus, owing to its elongate shape and the thickened terminal joints of the antennæ, the filiform antennæ being one of the principal characters of *Lamprosphærus*. If M. Lefèvre's view is adopted, the *Lamprosphærus* described by me as *minutus* will require a new name.

15. **Chrysodina nana.**

Blackish, the labrum, antennæ, and legs fulvous, above greenish-æneous; the head remotely, the thorax finely and more closely, punctured; elytra regularly punctate-striate, the punctuation diminishing towards the apex.

Length 1 line.

Of oblong and subcylindrical shape; the head finely and remotely punctured, the epistome more strongly punctate, the latter triangularly emarginate at its lower edge; labrum fulvous; antennæ rather long and robust, fulvous, the terminal joint darker; thorax transverse, narrowed in front, the sides rounded, the anterior angles acute but not produced, the surface finely, evenly, and rather closely punctured; elytra regularly punctate-striate, the punctures rather strong near the base, gradually becoming finer towards the apex, the interstices smooth; prosternum broad, nearly quadrate.

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

I include this very small species in *Chrysodina* (although from its general shape it might almost equally well be placed in *Noda*), owing to its regularly punctate-striate elytra and broad quadrate prosternum. It differs from the closely-allied *C. minuta*, Jac., by the thorax being less transverse, more narrowed anteriorly, and more finely punctured, and by the elytral striæ being more regular and less closely punctured. The general shape of the insect is also shorter and broader than in the allied species.

16. **Chrysodina pusilla.**

Oblong, blackish-æneous, above light bronze; antennæ and legs fulvous; head and thorax rather strongly punctured; elytra regularly punctate-striate, the punctures finer towards the apex.

Length 1 line.

Head minutely granulate, rather strongly punctured, with a transverse depression between the eyes; labrum fulvous; antennæ not extending to half the length of the elytra, fulvous, the second to the sixth joints short, equal, the terminal joints strongly thickened; thorax moderately transverse, the sides rounded, narrowed in front, the surface punctured like that of the head, the punctures somewhat oblong in shape; elytra oblong, subcylindrical, convex, the punctures coarser and of more rounded shape than those of the thorax, but becoming finer towards the apex, where they form single and remotely placed rows, the shoulders rather prominent and angular, the submarginal interstices convex; legs robust, fulvous, the basal joints of the front and middle tarsi much widened in the male; prosternum very broad, subquadrate, rugosely punctured.

Hab. PANAMA, Tolé, Peña Blanca (*Champion*).

This species resembles *C. minuta*, Jac., in colour; but in the latter the thorax is still more transverse, and its sides are more strongly rounded near the apex. In *C. pusilla* the head is much more finely and closely punctured than in *C. minuta*, and the thorax is minutely granulate; the antennæ of the female generally have the

seventh joint and also the apical one obscure fuscous. One specimen is of a violaceous colour above, but does not otherwise differ from the rest.

17. **Chrysodina vicina.**

Blackish-æneous, above bright metallic green, the basal joints of the antennæ fulvous; thorax finely and closely punctured; elytra strongly punctate-striate.

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

Cylindrical and convex, proportionately short; head distinctly but not closely punctured; eyes widely distant, notched; mandibles robust, piceous; antennæ rather short, the lower five joints fulvous (the basal one metallic blue above), the others black, the latter transversely widened; thorax transverse, convex, twice as wide at the base as at the apex, the sides but slightly rounded, the surface evenly, closely, and finely punctured; scutellum broader than long, smooth; elytra convex, with an obscure depression, the surface with deep, rather strong, and closely-placed rows of punctures, the punctures gradually becoming finer towards the apex, the submarginal interstices rather strongly costate; legs dark bluish-green; prosternum longer than broad.

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

Very closely allied to, and perhaps only a local variety of, *C. hœgei*, from which it differs in the dark blue or greenish legs, and in the finely punctured and more transversely shaped thorax. In *C. hœgei* the legs are entirely fulvous.

18. **Chrysodina atro-violacea.**

Bluish- or violaceous-black, the lower four or five joints of the antennæ fulvous; head opaque; thorax impunctate; elytra finely punctured, the punctuation becoming almost obsolete towards the apex; legs violaceous-black.

Length $\frac{3}{4}$–$1\frac{1}{4}$ line.

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

According to Lefèvre, who kindly examined our specimens, this is only a variety of his *C. lævicollis*; but in my opinion it is specifically distinct. The colour of the insect is blackish-blue or blackish-violaceous, with the exception of the basal joints of the antennæ. In *C. lævicollis* the apices of the tibiæ and the tarsi, as well as the antennæ, are rufous; in more than twenty specimens obtained of the present insect, the legs (including the tarsi) are violaceous-black. In *C. atro-violacea* the head is entirely opaque, with a few scarcely perceptible punctures, the front generally impressed with a more or less distinct oblong depression; the thorax is impunctate (but shows some minute punctures in the female); the elytra have the punctuation remote and only visible on the anterior half, and the submarginal interstice convex; the legs are coloured like the underside. *C. atro-violacea* differs, therefore, from *C. lævicollis* in the black apical joints of the antennæ, the violaceous-black colour of the upper and undersides, and in the unicolorous legs.

19. **Chrysodina antennata.**

Chrysodina antennata, Lefèvre, Bull. Soc. Ent. Fr. 1887, p. clv [1].

Hab. PANAMA, Volcan de Chiriqui (*Champion* [1]).

The antennæ in this species are much more elongate and slender than in most other species of this genus. The insect is of a pale fulvous colour, with the disc of the thorax more or less æneous (in some specimens the entire head and thorax are of this colour); the elytra have frequently the extreme sutural and lateral margins æneous.

20. **Chrysodina (?) granulata.**

Black, the basal joints of the antennæ and the legs fulvous, above greenish-æneous; head and thorax finely granulate and sparingly punctured; elytra very finely punctate-striate, the punctuation obsolete towards the apex.

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

Head greenish, very minutely granulate and scarcely perceptibly punctured; the clypeus separated from the face at the sides by a very fine groove, its lower edge angulate-emarginate, the surface punctured like the rest of the head; labrum fulvous, its anterior margin piceous; palpi and the apices of the mandibles fulvous; antennæ two-thirds the length of the body, the lower six joints fulvous, the rest black, the latter strongly thickened; thorax transverse, scarcely narrowed in front, slightly widened at the middle, the sides nearly straight behind, but slightly rounded anteriorly, the posterior angles produced into a short point, the surface granulate like that of the head and nearly as finely (but more closely) punctured; scutellum broader than long; elytra moderately convex, parallel, minutely granulate, the punctuation fine and somewhat serially arranged (distinct at the base, impressed in fine and scarcely perceptible striæ towards the apex), the interstices perfectly flat; prosternum broader than long, punctured; legs fulvous.

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

One specimen only of this small species was obtained. The antennæ are proportionately long, and the entire upper surface is finely granulate and finely punctured. *C. granulata* differs from the allied forms in its elongate general shape and in the transverse-subquadrate form of the thorax.

CHALCOPLACIS (p. 111).

3. **Chalcoplacis fulvitarsis.**

Broadly ovate, very convex, metallic green or blue, the antennæ and tarsi fulvous; head and thorax closely punctured; elytra punctate-striate.

Length 2 lines.

Head rather opaque, closely punctured throughout, the punctures on the vertex in the form of strigæ, the clypeus bounded above by two raised metallic green spaces; antennæ more than half the length of the body, fulvous, the terminal joints slightly compressed; thorax three times as broad as long, the sides nearly straight at the base, rapidly converging towards the apex from the middle, the anterior angles produced beyond the eyes, the surface very closely impressed laterally with somewhat elongate punctures (which are here and there confluent and extend quite to the lateral margin), the middle of the disc much more remotely punctured; elytra finely and regularly punctate-striate on the disc, a broader space near the lateral margin impunctate, the epipleuræ nearly flat; underside and legs metallic green or blue, the tarsi fulvous.

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

A single specimen. The closely and somewhat rugosely-punctured head and the fulvous tarsi distinguish *C. fulvitarsis* from any of its allies.

4. **Chalcoplacis mexicanus.**

Ovately rounded, black, above dark bluish or greenish, the antennæ and legs fulvous; head and thorax minutely granulate and finely punctured; elytra very closely punctate-striate.

Length 1–1½ line.

Of moderately rounded and convex shape; the head in the male not perceptibly punctured, in the female finely punctate, in both sexes minutely granulate; the epistome not separated from the face, its anterior edge moderately emarginate; mandibles large, partly fulvous; antennæ about half the length of the body, subfiliform, entirely fulvous; thorax nearly three times as broad as long, scarcely widened at the middle, the sides rounded and slightly narrowed in front, the surface granulate like that of the head, and very finely and rather distantly punctured, the punctures only visible under a strong lens; scutellum smooth, scarcely broader than long; elytra ovate, moderately convex, dark bluish, with closely approached rows of fine punctures, which become rather more obsolete posteriorly; underside nearly black, the breast with a greenish gloss; legs dark fulvous, the apex of the posterior femora stained with piceous.

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

Two specimens, apparently male and female, the former being at least one third smaller than the latter, and the female having the punctuation of the thorax and elytra very much more strongly marked; the shoulders are prominent, acute, and of a metallic greenish colour; the prosternum in the smaller example (male?) is broader than long, quadrate, and flat. In the strongly transverse thorax, its thickened flanks, and the ovately rounded general shape, the insect agrees with *Chalcoplacis*.

PHÆDRA (p. 111).

The generic name *Phædra* having already been used three times in zoology, it has been changed by Lefèvre [Cat. Eumolp. p. 166 (1885)] to *Phædrias*.

This author, in his diagnosis of the genus, gives the femora as unarmed; in *P. maxima*, Lefèvre, however, they have a distinct tooth.

Phædra maxima (p. 112).

To the locality given, add:—GUATEMALA, Coban in Vera Paz (*Conradt*).

3. **Phædra chapuisi.**

Above dull greenish, opaque, the antennæ (the seventh and the apical two joints excepted), abdomen, and legs fulvous; head, thorax, and elytra minutely granulate and finely punctured; breast piceous.

Length 1½ line.

Hab. PANAMA, Bugaba (*Champion*).

P. chapuisi seems to resemble *P. rufipes*, Chap., from Guiana, in coloration, so far as I can judge from the short diagnosis given by that author; *P. rufipes*, however, is described as "subnitida," and with dark terminal joints to the antennæ. In the Panama insect the entire upper surface is opaque, and of a greenish-leaden colour; the head has a few fine punctures (more numerous on the clypeus); the labrum and palpi, as well as the antennæ, are fulvous, the latter having the seventh and the apical two

joints fuscous; the thorax is more than three times as broad as long, rounded at the sides (but without projecting anterior angles), and very finely and rather closely punctured; the scutellum is impunctate, minutely granulate, and narrowly margined with blue; the elytra are very convex at the base, very finely and rather closely punctate-striate, their epipleuræ broad and concave; the breast, coxæ, and extreme base of the femora are piceous, the rest of the legs and the abdomen being fulvous. A single specimen.

4. **Phædra abdominalis.**

Dark violaceous-blue, the basal joints of the antennæ and the abdomen obscure fulvous; thorax finely and not closely (the sides more remotely) punctured; elytra closely and more strongly (semi-regularly) punctate.

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

Broadly rounded, very convex; the head shining, sparsely impressed with deep punctures; the clypeus wedge-shaped, sparingly punctured; labrum and mandibles piceous; antennæ rather short, the lower three joints obscure fulvous, the rest black; thorax about three times as broad as long, the sides but moderately rounded, the anterior angles rather obtuse and preceded by a short impressed line, the surface finely but not closely punctured, the punctures at the sides more strongly impressed and still more remote from each other; elytra much more strongly and closely punctured than the thorax, with a short semicircular row of punctures extending from the shoulder to about the middle of the lateral margin, and a broad smooth impunctate space within the margin, the inflexed limb deeply concave; underside and legs blackish-blue; abdomen dark fulvous.

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

This insect has the elytral epipleuræ broad and deeply concave, as usual in *Phædra*, from the other species of which it may be known by the sparingly-punctured head and the colour of the abdomen. A single specimen.

5. **Phædra brevicornis.**

Rotundate, convex, metallic purplish; above cupreous; antennæ short, the basal joints flavous; thorax strongly transverse, closely punctured; elytra rather remotely punctate-striate.

Length 2 lines.

Of a brilliant cupreous colour above, bluish-purple beneath; the head strongly and closely punctured; the labrum and mandibles piceous; antennæ extending only to the base of the elytra, the lower six joints flavous, the others fuscous, the latter slightly thickened; thorax three times as broad as long, the sides obliquely rounded and strongly narrowed in front, the anterior margin deeply concave-emarginate, the surface strongly and closely punctured at the sides, more sparsely so on the disc; scutellum not broader than long; elytra wider at the base than the thorax, rounded at the sides, regularly convex, the surface rather remotely but not more finely punctured than the thorax, the punctures arranged in semi-regular rows, the epipleuræ broad and nearly flat; prosternum subquadrate.

Hab. NICARAGUA, Chontales (*Janson*).

This handsome species, of which only a single specimen was obtained, seems to possess all the structura characters of *Phædra*; but is distinguished from the other members of that genus by the comparatively very short antennæ.

LAMPROSPHÆRUS (p. 112).

Lamprosphærus apicalis (p. 112).

To the localities given, add :—MEXICO, Teapa (*H. H. Smith*); GUATEMALA, Mirandilla (*Champion*).

The Mexican specimen belongs to the fulvous variety, but does not otherwise differ from the Guatemalan form.

1 (A). **Lamprosphærus submetallicus.**

Fulvous, tinged with metallic green above, the seventh and the apical two joints of the antennæ fuscous; thorax finely and sparingly punctured; elytra strongly punctate-striate, the interstices at the sides and at the apex costate.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head fulvous, the vertex greenish, exceedingly finely granulate, and with a few fine punctures, longitudinally grooved in the centre; the clypeus trigonate, separated from the face by a transverse groove, its surface sparingly but strongly punctured; antennæ filiform, extending beyond the middle of the elytra, fulvous, the seventh and the apical two joints fuscous; thorax nearly three times as broad as long, the sides moderately rounded and narrowed towards the apex, with a narrow margin, the surface remotely, irregularly, and finely punctured; elytra with a scarcely perceptible depression below the base, very strongly and regularly punctured, the punctures at the sides still coarser, the interstices at the sides and at the apex strongly costate; underside and legs fulvous.

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

L. submetallicus may be known from the fulvous varieties of *L. apicalis* by the metallic gloss of the upper surface, the scarcely punctured head, and the colour of the antennæ.

1 (B). **Lamprosphærus cæruleatus.**

Lamprosphærus cæruleatus, Lefèvre, Ann. Soc. Ent. Fr. 1877, p. 119 [1].

Hab. PANAMA, Bugaba, Volcan de Chiriqui, Caldera (*Champion*).—AMAZONS [1]; PERU [1].

Although M. Lefèvre himself has kindly examined our Panama specimens, I have some doubt as to the correctness of his determination. The Panama insect is smaller than South-American examples of *L. cæruleatus*; the thorax is nearly black and more finely punctured; and the general shape is more pointed. It is possible, however, that these differences are only due to local variation. Some of the Panama specimens have entirely black elytra.

1 (C). **Lamprosphærus variabilis.**

Below piceous or black, above metallic green or violaceo-cupreous; the head strongly, the thorax remotely, the elytra strongly and closely, punctured; antennæ and legs fulvous.

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

Head cupreous, remotely and coarsely punctured, with an obsolete longitudinal groove in the centre; the clypeus as strongly punctured as the rest of the head; labrum and antennæ fulvous, the third and fourth joints of the latter equal; thorax more finely punctured than the head, the punctures rather remote, the

sides very slightly rounded, the extreme lateral margin metallic green; elytra strongly and rather closely punctate-striate, the punctures distinct to the apex, and with a deeply impressed sutural stria.

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

Two examples. I am obliged to separate this insect from *L. cæruleatus*, owing to the strong punctuation of the head and elytra, and the cupreous colour of the thorax. The elytra in one specimen are violaceous (almost black) in colour; in the other they are metallic green; in *L. cæruleatus* the punctuation is almost obsolete near the apex.

Lamprosphærus minutus (p. 113).

To the localities given, add:—PANAMA, Bugaba, Caldera, Tolé (*Champion*).

Var. Above brownish-æneous or dark blue.

This small species seems to be very variable in colour, the specimens from Guatemala being generally bright metallic green, those from Bugaba dark metallic blue, and those from Tolé brownish-æneous; there is also a slight difference in shape, some examples being rounded, others more pointed at the apex. The filiform (not thickened) antennæ and the more transverse thorax distinguish it from *Chrysodina pusilla*, an insect found at the same locality. *L. minutus* is the smallest known member of the genus.

3. **Lamprosphærus semipurpureus.**

Subrotundate, very convex, black, above obscure dark purplish; the basal joints of the antennæ fulvous; the head and thorax finely punctured; elytra remotely and rather finely punctured, the punctures coarser towards the base.

Length $\frac{3}{4}$–1 line.

Head with a few fine punctures on the vertex, the lower portion and the clypeus more strongly punctured, and with a deep longitudinal groove down the centre, not extending to the vertex; labrum fulvous; antennæ about half the length of the body, the lower four joints fulvous, the rest black; thorax of usual shape, dull purplish, the surface impressed with not very closely-placed somewhat elongate punctures; elytra purplish-violaceous, rather strongly punctured anteriorly, more finely so towards the apex; underside and legs black, the anterior tarsi and the knees more or less fulvous.

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

The dark purplish colour and the black legs separate this small species from its allies, *L. janthinus* and *L. luctuosus*, Lefèvre; it differs from the former in the colour of the legs and in the rugosely punctured head, and from the latter in the purplish colour of the legs and upperside.

4. **Lamprosphærus plumbeus.**

Bluish-black, the labrum, antennæ, and legs fulvous; head and thorax opaque, finely punctured and granulate; elytra strongly and closely punctate-striate.

Length 1 line.

Head broad, minutely granulate, and scarcely perceptibly punctured, the upper portion entirely impunctate; labrum broad, fulvous; antennæ more than half the length of the body, fulvous, the terminal joints

slightly thickened; thorax at least three times as broad as long, nearly equal in width, the sides very moderately rounded and but slightly narrowed in front, the surface very minutely punctured, the punctures more distinct at the middle than at the sides, the interspaces very finely granulate, opaque; elytra more shining, dark blue, closely and strongly punctate-striate; legs fulvous.

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

A single specimen. The opaque and minutely punctured thorax and the fulvous antennæ and legs characterize this species.

NODA (p. 113).

I cannot help expressing here my regret that in *Noda*, as well as in so many other difficult genera, short diagnoses should have been published of extremely closely allied species, which makes their determination impossible without an examination of the types; moreover, there are some species almost intermediate between this genus and *Chrysodina*, either in the structure of the antennæ or in the form of the thorax. In his general diagnosis of the group Iphimeinæ, into which *Noda* enters, M. Lefèvre gives the anterior femora as armed with a tooth; but this applies only to some of the genera in this group and certainly not to *Noda*.

The name *Noda* being preoccupied in Diptera, it has been changed by M. Lefèvre [Cat. Eumolp. p. 166 (1885)] to *Nodonota*.

Noda cretifera (p. 114).

To the localities given, add:—MEXICO, Omilteme and Chilpancingo in Guerrero, Cuernavaca (*H. H. Smith*), Michoacan (*Flohr*); GUATEMALA, Cubilguitz, Zapote, Dueñas (*Champion*).

N. cretifera seems to be subject to great variation, and the male insect is consequently often very difficult to recognize, as it has not the distinguishing curved elytral costa of the female. The punctuation of the elytra is always very fine, and arranged in more or less double rows; while that of the thorax is variable, though usually very fine and close. The elytra of the male insect have a more or less smooth space below the shoulders, corresponding to the place occupied by the raised costa of the female. The general colour of the upper surface varies from blue to green and violaceous; and the tibiæ, or the entire legs, are as frequently fulvous as they are violaceous. Specimens from Juquila, Omilteme, and Chilpancingo are smaller, more robust, and more convex than those from the other localities.

Noda thoracica (p. 116).

Noda thoracica, Jac.=*Spintherophyta cyanea*, Lefèvre: it must be transferred to *Spintherophyta*.

4 (A). **Noda imitans.**

Oblong-ovate, narrowed posteriorly, æneous, the base of the antennæ fulvous; thorax very closely punctured; elytra closely and strongly geminate-punctate-striate, the interstices minutely punctured and slightly costate at the sides.

Length $1\frac{3}{4}$ line.

♀. Head irregularly but rather closely punctured, the labrum and palpi piceous; antennæ short, scarcely extending beyond the base of the thorax, the basal and the five terminal joints piceous, the others fulvous; thorax rather more than twice as broad as long, the sides very slightly rounded, the anterior angles acute, the surface closely and distinctly punctured, the sides more closely than the disc; elytra with deep and closely-placed double rows of punctures, the interstices convex at the sides; underside and legs æneous, the underside finely granulate and punctured.

Hab. MEXICO, Durango city (*Höge*).

In the strongly and closely geminate-punctate-striate elytra this insect resembles *N. lateralis*, from which it differs, however, in having the lateral interstices only slightly raised (these in *N. lateralis* being replaced by highly raised ridges). A single male specimen, also obtained at Durango, agrees in colour with the females from which our description is taken, and may be the other sex of the same species; it has the thorax more convex and more strongly rounded at the sides; the elytra, however, are quite differently punctured, the punctuation being fine and arranged in closely approached single rows. The general colour may be described as obscure cupreous or bronze.

Noda lefevrei (p. 117).

To the localities given, add:—MEXICO, Vera Cruz, Orizaba (*Sallé*), Atoyac, Teapa and Frontera in Tabasco (*H. H. Smith*); GUATEMALA, Sabo, Tamahu, El Jicaro, Purula, and San Gerónimo, all in Vera Paz (*Champion*), Aceytuno (*Salvin*).

N. lefevrei is evidently subject, like most of its congeners, to great variation; and I refer all the specimens which show distinctly raised or costate elytral interstices at the apex, and which have the extremities of the tibiæ more or less fulvous, to this species. In the Sallé collection, *N. lefevrei* bears the name of *N. apicecostatis*.

The present insect cannot be mistaken for *N. lateralis*, Jac., which has also the elytra costate at the apex, owing to the thorax being rounded at the sides (in *N. lateralis* the sides are nearly straight). In both sexes of *N. lefevrei* the elytra are without tubercles, the female thus differing from that of *N. lateralis*.

Mr. Smith obtained numerous specimens at Teapa.

9 (A). **Noda opacicollis.**

Æneous or metallic blue, the antennæ (the first and the apical joints excepted) and the tibiæ fulvous; thorax opaque, finely punctured; elytra rather finely subgeminate-punctate-striate, the interstices costate at the apex.

Length $1\frac{1}{4}$–$1\frac{3}{4}$ line.

Hab. MEXICO, Tapachula in Chiapas, Teapa in Tabasco (*Höge*).

Very closely allied to, and perhaps only a local variety of, *N. lefevrei*; the numerous specimens, however, before me agree in having the tibiæ entirely fulvous and the thorax opaque. The general colour of the upper surface varies from light or dark æneous to metallic blue; the head is finely punctured on the vertex, much more strongly so between the eyes; the antennæ have the second to the sixth or the second to the seventh joints fulvous, the first one above and the terminal joints fuscous or bluish-black; the thorax is nearly always of a duller colour than the elytra, and its sides are strongly narrowed anteriorly; the surface is usually much more finely and sparingly punctured than in *N. lefevrei* (the punctuation sometimes almost obsolete); the disc of the elytra is generally finely geminate-punctate-striate, the sides much more strongly punctured in single rows, and the interstices at the apex are strongly costate; the legs are æneous, the tibiæ entirely fulvous. The female insect, although more strongly punctured than the male, does not differ materially in other respects. The Teapa specimens may represent yet another closely-allied species: they differ in having the thorax and elytra more shining and more strongly punctured, and in the base of each of the apical joints of the antennæ being fulvous; the tibiæ agree, however, in colour with those of the specimens from Tapachula (I have not seen a single specimen of *N. lefevrei* thus coloured, the fulvous tint being always confined to the extreme apex of the tibiæ).

It may be remarked that one of the localities for *N. opacicollis* is on the Pacific, the other on the Atlantic slope.

9 (B). **Noda chontalensis.**

Cupreous or dark blue, the basal joints of the antennæ fulvous; thorax very finely but not very closely punctured; elytra finely and regularly punctate-striate.

Var. Legs obscure fulvous.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Hab. NICARAGUA, Chontales (*Janson*).

Of rather convex and subcylindrical shape, dark blue or metallic cupreous; the thorax but little rounded at the sides, its surface not very closely nor very finely punctured; the elytra a little more strongly and rather closely punctate-striate, the arrangement in double rows only here and there perceptible, the interstices smooth. *N. chontalensis*, of which the sexes scarcely vary except in size, is more finely punctured than *N. lefevrei*, from which it also may be known by the elytra having the interstices smooth near the apex in both sexes. In *N. viridis* the thorax is almost rugosely punctured; in *N. subcylindrica* the thorax is also quite differently sculptured, and the elytra are strongly punctate-striate; in *N. fulvicornis* the thorax is proportionately longer, and the antennæ and legs are fulvous.

9 (c). **Noda sinuata.**

Greenish-black, above dark blue or obscure cupreous, the basal joints of the antennæ fulvous; thorax finely punctured, the posterior angles acute; elytra finely punctate-striate; legs greenish-æneous.

Length 1½ line.

Head minutely granulate, rather strongly and closely punctured, a triangular space above the insertion of the antennæ shining and smooth; mandibles and the terminal joints of the palpi piceous; antennæ nearly two-thirds the length of the body, the basal two or more joints (sometimes as many as the basal six) fulvous (the first stained with piceous above), the rest black; thorax transverse, more than twice as broad as long, the anterior margin perfectly straight, the posterior margin produced at the middle, the sides rounded, concave near the base, the posterior angles pointed and produced, the surface finely, irregularly, and not very closely punctured, the interspaces minutely granulate; scutellum smooth; elytra convex, without basal depression, rather evenly and finely punctate-striate, the punctures distinct to the apex and stronger at the sides than on the disc, the interstices flat; underside and legs greenish-æneous.

Hab. MEXICO, Chilpancingo in Guerrero, Huetamo in Michoacan (*Höge*).

Closely allied to, but apparently distinct from, *N. chontalensis*, from which it chiefly differs in having the sides of the thorax sinuate or concave near the base (instead of simply rounded) and the posterior angles acutely pointed, and the head more strongly punctured. The antennæ are comparatively elongate; the colour of the basal joints is variable. The female only differs from the male in the stronger elytral punctuation and in the raised submarginal interstices.

9 (d). **Noda elongata.**

Elongate, subcylindrical, blackish-æneous, above dark blue (♂) or violaceous (♀); antennæ and legs fulvous; elytra strongly and closely punctate-striate, with a slight transverse depression below the base.

♂. Thorax remotely and finely punctured.

♀. Thorax more transverse, more closely punctured; the elytra broader, the lateral interstices obsoletely costate.

Length 1¼–1½ line.

♂. Of unusually elongate shape, metallic dark blue above; the head without central groove, rather irregularly but distinctly punctured; the labrum, palpi, and antennæ fulvous, the terminal joints of the latter slightly darker; thorax about twice as broad as long, the sides evenly rounded and moderately narrowed in front, the anterior angles not produced, the surface finely, very remotely, and irregularly punctured; scutellum slightly broader than long; elytra convex and nearly parallel, scarcely perceptibly depressed below the base, the punctures strong and arranged in close rows, the submarginal row very regular and even; legs fulvous.

Hab. MEXICO (*Sallé*).

There are two specimens of this insect, marked ♂ and ♀, and named *N. inconstans*, in the Sallé collection. The fulvous antennæ, less transverse and more remotely punctured thorax, the entirely fulvous legs, and more elongate general shape (especially of the male) separate *N. elongata* from *N. chontalensis*. In the female of the present species the elytral depression is a little more distinct than in the other sex.

Noda violaceipennis (p. 118).

To the localities given, add :—MEXICO, Oaxaca (*Sallé*), Juquila (*Flohr*).

Mexican specimens differ from those from Guatemala in having the thorax rather

less transverse and less rounded at the sides, the elytral punctuation somewhat finer and more remotely placed, and the upper surface of a more decided dark blue colour. Mr. Flohr has kindly sent me examples of both sexes. The female was hitherto unknown to me; it differs from the male in the costate lateral interstices of the elytra, and in its more pointed shape and rather stronger punctuation.

14 (A). **Noda fulvicornis.**

Subcylindrical, convex, æneous, dark metallic blue or greenish-blue; the antennæ and legs fulvous; thorax transversely convex, very finely and closely punctured; elytra rather closely punctate-striate, the punctures coarser than those of the thorax.

Length 1¼ line.

Of rather parallel, convex, and cylindrical shape; the head finely but irregularly punctured (but variable in this respect); labrum and palpi fulvous, the last joint of the latter comparatively robust; antennæ entirely fulvous, or with the terminal joints slightly darker; thorax transverse, still more convex than in the allied forms, the sides rounded, the surface very closely and finely punctured; scutellum slightly broader than long, its sides rounded; elytra parallel, rather regularly punctate-striate, the punctures gradually becoming finer towards the apex and arranged in close and slightly geminate rows; legs fulvous, robust, the femora in some specimens darker.

Hab. MEXICO, Oaxaca, Cordova, Capulalpam (*Sallé*).

Very closely allied to *N. balyi*, but differing in the dark blue colour of the upper surface; the thorax is also longer, less rounded at the sides, more narrowed in front, and more finely and more closely punctured (the punctures equal in size, this not being the case in *N. balyi*). *N. balyi* is also larger, and of an æneous or obscure cupreous colour.

Noda curtula (p. 120).

To the Mexican localities given, add:—Presidio, Tres Marias Is. (*Forrer*), Amula, Chilpancingo, and Tepetlapa, all in Guerrero (*H. H. Smith*), Tacambaro in Michoacan, Matamoros Izucar in Puebla (*Höge*).

Numerous examples since received from the above localities prove that *N. curtula*, like so many of its congeners, is a very variable species, not only in colour but in shape, some specimens being broadly ovate, others more oblong and less rounded; the punctuation of the elytra is close and distinct (but often very fine near the suture), that of the female much coarser, the interstices at the sides in this sex being costate; the thorax is very finely punctured on the disc, extremely closely so at the sides.

N. curtula somewhat resembles *Chrysodina cupriceps* in shape, but, in my opinion, is better placed in *Noda*.

18 (A). **Noda basalis.**

Broadly ovate, dark brownish-æneous, the basal joints of the antennæ fulvous; thorax finely and closely punctured at the sides, more remotely so on the disc; elytra irregularly geminate-punctate-striate, and laterally with three or four short costæ at the base.

Length 2 lines.

♀. Head moderately closely and finely punctured, with an obsolete depression between the eyes, the latter sinuate at the inner margin; epistome not separated from the face, a little more strongly punctured than the head; labrum piceous; antennæ scarcely extending to the middle of the elytra, the lower eight joints fulvous, the terminal ones nearly black, the latter thickened; thorax strongly transverse, but moderately narrowed anteriorly, the sides very little rounded, the anterior angles produced into a short straight point, the surface very finely and closely punctured at the sides, more remotely so on the disc; scutellum much broader than long, impunctate; elytra broadly ovate, scarcely narrowed posteriorly, with a short depression below the base, the punctuation fine and arranged in irregular double rows, which are interrupted near the shoulders and at the sides by four or five short costæ (these extending as far as the basal depression, the outer one, however, accompanying the lateral margin throughout), the apical portion impressed near the suture with a deep stria, the extreme apex rather pointed; the tibiæ are generally more or less fulvous at the apex; the prosternum is distinctly longer than broad and constricted at the middle.

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

Like *N. curtula*, the present species is broadly ovate (instead of having the more oblong shape of a typical *Noda*); it agrees, however, with *Noda* in the form of the antennæ, scutellum, and prosternum. *N. basalis*, of which apparently only female specimens were obtained, may be distinguished from *N. curtula* by the short longitudinal costæ at the base of the elytra and by the less crowded punctuation at the sides of the thorax.

22. **Noda placida.**

Metallic greenish-blue, the basal joints of the antennæ and the legs fulvous; thorax short, extremely finely and rather remotely punctured; elytra with a shallow transverse basal depression, closely and rather strongly punctate-striate.

♀. Above brownish-cupreous; elytra with a deeper basal depression, and with three or four longitudinal costæ at the sides.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Hab. MEXICO, Cordova, Jacale (*Sallé*), Zacualtipan in Hidalgo (*Höge*); PANAMA, Volcan de Chiriqui (*Champion*).

Of this species a male and a female specimen from Cordova (taken "in copulâ"), as well as two others from Jacale, are contained in the Sallé collection. *N. placida* seems to me to differ from most other species from our region in the well-marked basal depression of the elytra in connection with the very fine punctuation of the thorax, the closely-punctured elytra, and the fulvous legs. In the female the elytral depression is deeper, but the punctuation is much finer and somewhat arranged in double rows. In the male the thorax is short, strongly transverse, and rather strongly rounded at the sides, the anterior angles being produced into a short outwardly-directed point.

The specimens from Zacualtipan agree entirely with the others, as well as those obtained by Mr. Champion in Chiriqui.

23. **Noda metallica.**

Pale metallic green; antennæ black; the basal five joints fulvous; thorax strongly transverse, finely and rather closely punctured; elytra finely subgeminate-punctate-striate; legs obscure cupreous.

♀. Elytra with the two submarginal interstices costate.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Moderately convex, of a metallic-green colour, slightly tinged with yellowish; the head distinctly but irregularly punctured; the labrum and mandibles piceous; antennæ half the length of the body, fulvous, the terminal six joints bluish-black; thorax nearly three times as broad as long, the sides moderately and evenly rounded, the anterior margin straight, the anterior angles not produced but acute, the surface finely punctured, the punctures a little more closely placed at the sides than on the disc, the interspaces here and there impressed with very minute punctures and finely granulate; elytra scarcely more strongly punctured than the thorax, the punctures arranged in regular but somewhat geminate rows (more distinctly geminate in the female), which near the apex form single striæ; legs entirely dark cupreous or æneous.

Hab. MEXICO, near the city (*Flohr*), Guanajuato, Orizaba (*Sallé*), Chilpancingo in Guerrero (*Höge*).

Although not greatly differing from several other species of this genus, *N. metallica* may be known by its pale greenish colour, the fine punctuation of the thorax and elytra, and the semi-cupreous legs; the sexes are very similar in sculpture. *N. cretifera*, Lefèvre, has the apices of the tibiæ fulvous, and the elytra in the female differently sculptured; *N. subcylindrica*, Jac., is of a more convex shape, and has the thorax and elytra much more closely punctured. The costæ at the sides of the elytra in the female of *N. metallica* are not very strongly raised but distinct.

24. **Noda plumbea.**

Dark leaden-blue; the head and thorax very finely and sparingly punctured; elytra convex, finely and regularly punctured.

♀. Slightly larger, the thorax more transversely shaped, the elytra similar to that of the male.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Of convex, somewhat posteriorly narrowed shape; the head broad, sparingly punctured, the epistome not separated from the face; antennæ half the length of the body, proportionately slender, the lower five joints fulvous (the first stained with dark blue above), the others bluish-black; thorax twice as broad as long in the male, narrowed in front, the sides moderately rounded, the surface very finely and remotely punctured, almost impunctate at the sides; scutellum scarcely broader than long, smooth; elytra convex, very little narrowed posteriorly, not depressed below the base, the punctures fine, rather widely separated, and placed at regular distances in rows, which are distinct to the apex; underside coloured as above; the prosternum constricted between the coxæ.

Hab. MEXICO, Teapa (*H. H. Smith*).

The uniform and rather dull leaden-blue colour, the sparingly punctured thorax, and the regularly punctured elytra distinguish *N. plumbea* from its allies. The female is very similar to the male, except that it has the thorax more transversely shaped.

Several specimens.

25. **Noda parvula.**

Violaceous-black, the antennæ and tibiæ fulvous; thorax scarcely perceptibly punctured; elytra finely punctate-striate on the disc, more strongly so at the sides, the base with an obscure depression.

Length 1 line.

Head strongly but not very closely punctured; the epistome wedge-shaped, the anterior margin deeply concave-emarginate; labrum and palpi fulvous; antennæ half the length of the body, entirely fulvous;

thorax about twice as broad as long, narrowed in front, the sides but slightly rounded, the surface minutely granulate, opaque, with remotely-placed extremely fine punctures (only visible under a strong lens); scutellum broader than long; elytra with regular rows of fine and rather closely placed punctures, the shoulders prominent but narrow, the base with a very obsolete depression, the punctures at the sides much stronger than those on the disc; femora dark æneous, the tibiæ entirely (or partly) fulvous.

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

The small size, the dark opaque violaceous colour, and the almost impunctate thorax separate *N. parvula* from its many congeners. A specimen from Bugaba, which I take to be the female of the same species, has an elongate tubercle placed parallel with and close to the shoulder and a transversely-shaped similar tubercle below it; in this example the terminal joints of the antennæ and the tibiæ are dark.

26. **Noda cyanella.**

Oblong, pointed posteriorly, obscure æneous; above dark blue; the antennæ and legs fulvous; thorax transverse, short, closely punctured; elytra very closely and rather irregularly punctured, the interstices at the apex subcostate.

Length $1\frac{3}{4}$ line.

♂. Head strongly and rather closely punctured; the mandibles piceous; the palpi fulvous, their terminal joint very elongate and subcylindrical; antennæ extending to the middle of the elytra, entirely fulvous; thorax short, transverse, more than twice as broad as long, the sides evenly rounded, the anterior angles slightly produced, the surface extremely finely granulate and closely impressed with punctures of unequal size, the punctures more crowded at the sides than on the disc, the interspaces also here and there minutely punctate; scutellum broader than long, its disc impressed with a few minute punctures; elytra very closely punctured, the punctuation stronger than that of the thorax, with a narrow smooth longitudinal space near the suture, the interstices towards the apex slightly costate, those at the sides somewhat rugose; legs entirely fulvous.

Hab. MEXICO, Oaxaca (*Sallé*).

N. cyanella, of which only a single male specimen is before me, may be known by the very close and almost rugose punctuation of the thorax and elytra, the punctures on the latter scarcely arranged in rows; the fulvous antennæ and legs will further assist in the recognition of the species.

27. **Noda acutangula.**

Blackish-æneous, above metallic green or bluish; antennæ and legs fulvous; head and thorax closely punctured, the anterior angles of the latter dentiform; elytra strongly and closely punctate-striate.

Length $1\frac{3}{4}$ line.

Of rather broad, posteriorly pointed shape; head strongly and rather closely, the vertex more finely, punctured; antennæ extending nearly to the middle of the elytra, entirely fulvous, the terminal joints much thickened; thorax rather strongly transverse, the sides evenly rounded, narrowed anteriorly, the angles produced into a short but distinct acute point or tooth, the surface rather closely impressed with punctures of unequal size; scutellum broader than long, with a few fine punctures; elytra more coarsely punctured than the thorax, the punctures arranged in close and rather regular rows; legs fulvous or rufous.

Hab. MEXICO, Silao (*Sallé*), Zacualtipan in Hidalgo (*Höge*).

Of this species (which may be distinguished from most others from our region with fulvous antennæ and legs by the produced angles of the thorax) three specimens are

contained in the Sallé collection; two of these are metallic green above, and one is nearly black. The three others obtained by Herr Höge are bluish-green.

28. **Noda hondurensis.**

Oblong-ovate, metallic green, the antennæ and legs fulvous; thorax closely and irregularly punctured, the interspaces very finely granulate, the anterior angles produced; elytra rather irregularly punctate-striate, the striæ almost equidistant from each other, the interstices minutely granulate.

♀. Elytra with three or four lateral costæ and a small tubercle.

Length $1\frac{3}{4}$–2 lines.

Head minutely granulate, rather closely and distinctly punctured, longitudinally depressed between the eyes; anterior margin of the epistome but moderately emarginate; mandibles piceous; antennæ entirely fulvous; thorax strongly transverse, more than twice as broad as long, the sides strongly rounded, the anterior angles produced outwardly into a small tooth, the surface closely but rather regularly impressed with punctures of unequal size, the interspaces very finely granulate; scutellum with its sides oblique, the apex pointed, its surface slightly concave or depressed; elytra moderately convex, more strongly punctured than the thorax, the punctures arranged in close but not very regular rows, the interstices flat and minutely granulate; legs robust, entirely reddish-fulvous; prosternum longer than broad, constricted at the middle, and clothed with rather long yellow pubescence.

Hab. BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

The principal characters by which this species may be recognized are the transversely-shaped thorax and its acutely produced anterior angles in connection with the fulvous antennæ and legs and the finely granulate upper surface. The female has the frontal groove between the eyes more deeply impressed, and the elytra furnished with three or four more or less distinct costæ at the sides, the innermost of which is interrupted and preceded before the middle by a small tubercle, the base in front of this tubercle being somewhat transversely depressed. Some specimens are of a very obscure brownish-æneous colour, but this is probably due to immaturity.

N. hondurensis is very closely allied to *N. acutangula*; the latter, however, has the head, thorax, and elytra still more closely punctured, the elytra with the punctures much less distinctly arranged in rows and the interstices not granulate.

29. **Noda obliterata.**

Blackish-green, above metallic blue, greenish, or cupreous; antennæ and legs fulvous; thorax finely and closely punctured; elytra very finely punctured at the base, the punctures nearly obsolete below the middle.

♀. Of a darker cupreous tint, the antennæ and legs sometimes infuscate, the elytral interstices at the sides slightly convex.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Generally of a bright pale cupreous or green colour, with entirely fulvous antennæ and legs; the head distinctly but not very closely punctured; the antennæ about two-thirds the length of the body, the terminal joints strongly thickened; thorax twice as broad as long, narrowed in front, the sides distinctly rounded, the anterior angles produced into a small tooth, the surface closely and irregularly punctured, the punctures of unequal size; scutellum with a few fine punctures; elytra convex, subcylindrical, with a shallow depression below the base, the shoulders prominent, the punctuation very fine (but well marked in the female), arranged in single not very closely approached rows, and almost obsolete below the middle.

Hab. MEXICO, Xucumanatlan and Chilpancingo, both in Guerrero (*H. H. Smith*).

The generally cupreous colour and the fine and nearly obsolete punctuation of the

elytra (the base of which is depressed), in connection with the fulvous antennæ and legs, distinguish *N. obliterata* from its allies. The female varies in regard to the colour of the legs and is more strongly punctured; but is not distinguished by strongly marked elytral costæ, the interstices being only slightly convex at the sides.

A somewhat doubtful species.

30. **Noda ovata.**

Ovate, obscure æneous, the antennæ and legs fulvous; thorax transverse, the sides rounded, the surface finely and closely punctured; elytra more or less widened at the middle, the apex pointed, the disc very closely punctate-striate.

♀. Elytra more elongate, less widened, the rows of punctures separated by narrow smooth longitudinal spaces, the sides with about six tubercles, which are placed longitudinally in two rows.

Length 1½–2 lines.

Hab. PANAMA, Peña Blanca, Tolé (*Champion*).

N. ovata may be at once separated from its allies by its ovate, posteriorly pointed shape, the dull brownish-æneous colour, the fulvous antennæ and legs, the transversely shaped thorax (the sides of which are rounded), and the very closely punctured elytra. The head is somewhat remotely punctured; the labrum and the robust mandibles are fulvous; the antennæ barely extend to the middle of the elytra, and are rather stout; the thorax is scarcely narrowed anteriorly, and its anterior angles are subtuberculiform and furnished each with a single hair; the elytra have the shoulders rounded (scarcely prominent), and are devoid of any post-basal depression. The female differs considerably from the male in the sculpture of the elytra; and has, in addition to the six more or less elongate tubercles at the sides, a strongly raised costa placed parallel with the lateral margin, all the other interstices being also more or less convex.

It is possible that *N. ovata* may be better placed in Lefèvre's genus *Ephyræa* (Ann. Soc. Ent. Fr. 1889, p. 332), the thorax being very strongly transverse. Many species of *Noda*, however, vary greatly in the form of the thorax (and also in having more or less filiform antennæ), and this seems to me to be an inconstant character.

31. **Noda bella.**

Greenish-black; above metallic yellowish-green, golden-yellow, or pale cupreous; the base of the antennæ fulvous; thorax transversely convex, very closely punctured; elytra very closely geminate-punctate-striate.

♀. Larger, more pointed posteriorly, the legs fulvous.

Length 1½–2 lines.

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

Of rather convex, subcylindrical, and somewhat posteriorly narrowed shape, and bright golden-yellow or yellowish-green colour; the head, thorax, and elytra very closely but not very finely punctured; the elytra with an obsolete depression below the shoulders, the punctuation arranged in closely approached double rows which towards the apex become single (as is generally the case in this genus), and the interstices

shining and not granulate. The specimens which I consider to be the females of the same species are larger, more pointed posteriorly, and have the legs fulvous and the elytra entirely devoid of lateral costæ (this character separating the female of *N. bella* from that of most other species of the genus).

The bright golden-yellow colour, the rounded sides of the thorax, and the crowded punctures of the upper surface will help to distinguish the male, of which a single example has been kindly given me by Mr. Flohr.

32. **Noda congregata.**

Oblong-ovate, black; above metallic dark blue, the basal joints of the antennæ fulvous; thorax transverse, its surface crowded with oblong punctures; elytra closely and finely punctate-striate.

Length 1½ line.

Head finely and remotely punctured; the anterior edge of the clypeus but slightly concave-emarginate; labrum and mandibles nearly black; antennæ less than half the length of the body, black, the lower three joints fulvous, the terminal ones gradually thickened; thorax twice as broad as long, the anterior lateral portion rather strongly deflexed, the sides much rounded, the anterior angles slightly produced, the posterior angles simple, the anterior and posterior margins somewhat produced at the middle, the entire surface very closely covered with oblong punctures, the punctures equal in size throughout; scutellum smooth; elytra rather broadly ovate and convex, the shoulders prominent, the disc impressed with very regular and rather close rows of fine somewhat distantly placed punctures; underside and legs black; tarsi piceous; prosternum strongly narrowed between the coxæ.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

A very distinct species, of which only a single specimen (apparently a female) was obtained. The crowded punctuation of the thorax, its anteriorly deflexed shape, and the black underside and legs, are the chief characters of *N. congregata*.

SPINTHEROPHYTA (p. 122).

Spintherophyta lesueuri (p. 122).

To the Mexican localities given, add:—Atoyac in Vera Cruz (*H. H. Smith*).

5. **Spintherophyta thoracica.**

Noda thoracica, Jac. huj. op. p. 116 (Aug. 1881).

Spintherophyta cyanea, Lefèvre, Compt.-rend. Soc. Ent. Belg. 1884, p. cxciii.

To the Mexican localities given, add:—Chilpancingo in Guerrero (*H. H. Smith*), Morelia in Michoacan (*Höge*).

The sexes of this species seem to differ somewhat in the strength of the punctuation of the thorax; in some specimens the tibiæ are almost entirely fulvous, but this colour is restricted in the type of *S. cyanea*, Lefèvre, to the base of the femora. The insect is of a dark blue colour, the thorax being more opaque, and closely and strongly punctured.

The name *thoracica* has three years' priority over that of *cyanea*; the species is rightly included in *Spintherophyta* by Lefèvre.

6. **Spintherophyta violacea.**

Ovately-rounded, black, the antennæ and tarsi fulvous; above dark violaceous; head and thorax opaque, the latter remotely and very finely punctured; elytra closely and semiregularly punctured, the interstices at the sides convex.

Length 1½ line.

Head not longer than broad, minutely granulate and opaque; eyes notched; labrum fulvous; mandibles very robust and prominent, obscure fulvous; palpi flavous, the terminal joint piceous, elongate, and cylindrical; antennæ not extending much beyond the base of the elytra, pale fulvous, the terminal joints moderately and gradually thickened; thorax transverse, more than twice as broad as long, the sides rounded and narrowed in front, the angles distinct but not produced, the surface opaque, minutely granulate, and very remotely and finely punctured, the punctures only visible under a strong lens; elytra short and broad, more shining than the thorax, rather strongly and closely punctured, the punctures arranged in irregular rows, the interstices near the lateral margin convex; underside and legs black, the latter robust, the apex of the tibiæ and the tarsi dark fulvous; prosternum broad, subquadrate.

Hab. MEXICO, Ventanas in Durango (*Forrer*). A single male specimen.

ISCHYROLAMPRA. (To follow the genus *Spintherophyta*, p. 123.)

Eulampra, Baly, Trans. Ent. Soc. Lond. 1878, p. 281 (nec Chaudoir).
Ischyrolampra, Lefèvre, Cat. Eumolp. in Mém. Roy. Liége, xi. p. 166 (1885).

The species of this genus described below agrees well in its structural characters with the type, which is from the Amazon region. *Ischyrolampra* is allied to *Spintherophyta*, but differs from it in the dilated terminal joints of the antennæ.

1. **Ischyrolampra panamensis.** (Tab. XL. fig. 12, ♂.)

Fulvous, above pale metallic greenish; thorax very finely and rather closely punctured; elytra very closely and finely punctured in rows, the interstices at the apex subcostate.

♂. Antennæ with the terminal six joints strongly dilated.

♀. Antennæ much less strongly dilated; elytra longitudinally costate at the sides.

Length 1½ line.

Head broad, the eyes widely separated and entire, the vertex finely and rather closely punctured, the interspaces extremely minutely granulate, the surface pale fulvous with a more or less strong metallic green gloss; the clypeus transverse, its lower edge moderately concave; labrum and palpi fulvous, the terminal joint of the latter fuscous, rather elongate, subcylindrical; antennæ fulvous, the apical joints fuscous, the sixth to the eleventh joints gradually and strongly dilated, the apical one more elongate, emarginate near the apex; thorax transverse, the sides nearly straight and narrowly margined, the anterior margin sinuate behind the eyes, the posterior angles acute and pointed, the surface transversely convex, finely punctured, of a pale metallic greenish colour much suffused with fulvous; scutellum smooth; elytra slightly widened towards the apex, subcylindrical, scarcely more strongly punctured than the thorax (except at the sides), the punctures arranged in rather close rows which show a tendency to form pairs, the interstices near the lateral margin and at the apex costate; underside and legs fulvous, the latter robust, the femora very strongly incrassate, the first joint of the posterior tarsi longer than the following one; claws appendiculate; prosternum narrowed between the coxæ, its lower margin slightly concave.

Hab. PANAMA, Tolé, Peña Blanca (*Champion*).

The ground-colour of this insect is pale fulvous, but the entire upper surface has a pale metallic green gloss; the female, besides having much less strongly dilated

antennæ, has four or five longitudinal costæ at the sides of the elytra. Specimens of the two sexes were captured in about equal numbers.

AGBALUS (p. 123).

The type of this genus (*A. sericeus*) has short, robust antennæ and legs, but several of the species placed in it by Lefèvre (including *A. chalybæus*) possess long, filiform antennæ and slender legs.

3. Agbalus chalybæus.

Agbalus chalybæus, Lefèvre, Mitth. Münch. ent. Ver. 1878, p. 118[1].

Hab. MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, San Juan and Cubilguitz in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Caldera, Tolé (*Champion*).—COLOMBIA[1].

Many examples of *A. chalybæus* were obtained by Mr. Champion; it is evidently a very variable insect. The typical form, specimens of which from Panama M. Lefèvre has kindly examined, is of a dark blue colour above; the punctuation of the thorax is fine, and that of the elytra strong and arranged in close rows. Other specimens, also from the State of Panama, are much more finely punctured, and have the thorax more rounded at the sides, and the antennæ pale; some of these have dark fulvous legs. Besides these varieties, two others are before me, one of them of a greenish-æneous or bronze colour, the other metallic cupreous, the legs being either æneous or fulvous. I am unable to satisfactorily separate these forms, although they differ a little in shape and punctuation, as well as in size and colour. The males of all of them have the usual characteristic long spine to the posterior tibiæ.

4. Agbalus puncticollis.

Broadly ovate, black; above dark violaceous; the basal joints of the antennæ fulvous; thorax closely and evenly punctured, the punctures elongate in shape; elytra irregularly and closely punctate-striate.

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

Head very sparingly punctured, the labrum and mandibles black; antennæ two-thirds the length of the body, black, the lower four joints fulvous, the terminal five joints thickened; thorax transversely convex, twice as broad as long, the anterior portion deflexed, the anterior angles produced, the surface closely impressed with very evenly distributed, deep, elongate punctures; elytra convex, rather short, closely and comparatively strongly punctate-striate, the shoulders prominent; prosternum slightly narrowed at the middle.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single specimen. *A. puncticollis* seems to possess the structural characters of *Agbalus*, although the tibiæ in the (apparently male) specimen obtained are unarmed; the crowded and elongate punctures of the thorax will help to distinguish the species.

5. Agbalus högei.

Oblong-ovate, bluish-black; above obscure purplish or violaceous; antennæ and legs fulvous; thorax very finely and closely punctured; elytra strongly and closely punctate-striate, with an obsolete basal depression.

Length 1½ line.

Of rather short and broadly ovate shape; the head with some oblong and not very closely placed punctures on the vertex, and an obscure median longitudinal groove; the clypeus rugosely punctured, bounded above on each side by a smooth bluish space; labrum and palpi fulvous; antennæ extending beyond the middle of the elytra, fulvous, the terminal joints slightly thickened and marked with fuscous at the apex; thorax transverse, convex, the sides strongly rounded and narrowed towards the apex, with a narrow reflexed margin, the anterior angles acute but not produced, the surface very closely and finely punctured at the sides, more remotely so on the disc; elytra with a rather distinct transverse depression below the base, strongly punctured in rows, the sides with two or three strongly raised costæ towards the apex, the suture also narrowly but distinctly raised; legs fulvous.

Hab. Mexico, Refugio in Durango (*Höge*).

This insect agrees in shape and in its main characters with *Agbalus*; the specimens received are apparently all females. The dark purplish colour and the fulvous antennæ and legs distinguish *A. högei* from its allies from our region.

6. Agbalus tenebrosus.

Oblong-ovate, dark greenish-æneous; the lower joints of the antennæ fulvous; thorax transversely convex, minutely punctured; elytra finely and closely semiregularly punctate-striate.

Length 1½ line.

Head finely and remotely punctured on the vertex; the clypeus more closely punctate, not separated from the face, its lower edge concave-emarginate; eyes sinuate at their lower margin; labrum piceous; terminal joint of the palpi robust and rather elongate; antennæ not extending much beyond the base of the thorax, robust, the lower six joints fulvous (the first piceous above), the others black and much thickened; thorax transversely convex, its sides strongly rounded, the anterior margin straight, the angles acute but not produced, the surface very finely and rather closely punctured; scutellum broad, smooth; elytra slightly widened towards the middle, rather short, the shoulders scarcely prominent, the base with a very obsolete depression, the surface punctured in closely-arranged but not very regular rows, which are more widely separated towards the apex, the interstices flat; underside metallic greenish; legs robust, the tibiæ clothed with long fulvous pubescence near the apex; prosternum elongate, narrowed between the coxæ.

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

A. tenebrosus, of which only a single example was obtained, is much more typical of the genus than many of its congeners, although the posterior tibial spine, peculiar to the male in some species, is here absent; the specimen described is undoubtedly a male, it having the anterior tarsi dilated. In the robust antennæ and legs and the general shape it agrees with *Agbalus*; the elytra have a slight purplish tint when viewed in certain lights.

7. Agbalus violaceus.

Corysthea violacea, Jac. huj. op. p. 154, t. 9. fig. 3.

According to Lefèvre (Ann. Soc. Ent. Fr. 1889, p. 340) this species should be placed in *Agbalus*; but as in my opinion neither this genus nor *Corysthea* is sufficiently well defined (containing species with short, robust, and long filiform antennæ and emar-

ginate or nearly truncate prosternum respectively), it matters but little where the insect is placed. *A. violaceus* has the antennæ long and filiform, and the prosternum slightly emarginate.

EUPHRYTUS (p. 124).

Euphrytus æneus (p. 125).

Var. Entirely fulvous, the apical joints of the antennæ black.

To the Mexican locality given, add:—Refugio in Durango, Cuernavaca in Morelos, Acapulco and Chilpancingo in Guerrero, Mexico city (*Höge*).

E. æneus, like the other members of this genus, seems to vary greatly in many respects, and it is a species very difficult to define. Entirely fulvous specimens (the elytra with a slight æneous gloss) have been obtained at Chilpancingo.

Euphrytus simplex (p. 125).

To the Mexican localities given, add:—Milpas in Durango (*Forrer*), Durango city, Jalapa, Mexico city (*Höge*).

It is somewhat doubtful whether *E. simplex* is specifically distinct from *E. æneus*, or is merely a variety in which the femoral tooth is not developed. The specimens vary to such an extent that I am unable to form any conclusive opinion. As a rule, *E. simplex* is smaller than *E. æneus*, and has the femora unarmed in both sexes.

2 (A). **Euphrytus pallipes.**

Narrowly elongate, obscure æneous; the basal joints of the antennæ and the legs pale flavous; thorax very closely punctured; elytra a little more strongly punctured, the punctures arranged in close rows; posterior femora in the male with a triangular tooth.

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

Hab. MEXICO, Durango and Chihuahua city (*Höge*).

E. pallipes may be known from *E. æneus*, *E. simplex*, &c. by its smaller and more narrowly elongate general shape. The antennæ, which extend to two-thirds the length of the body, are generally pale fulvous, with the apex of each joint darker, and the terminal joint entirely black; the apical joint is broadly triangularly widened, its extreme apex being pointed. The thorax is very closely punctured. The legs are pale flavous (the lower portion of the femora alone being darker); the posterior femora in the male are strongly toothed. The colour of the upper surface is brassy-æneous. Four specimens, agreeing entirely in the above particulars.

2 (B). **Euphrytus intermedius.**

Piceous, the base of the antennæ and legs pale flavous; thorax very finely and closely punctured; elytra more strongly punctate, the punctures geminate, the interstices costate; femora unarmed.

Length 2–$2\frac{1}{2}$ lines.

Head rather sparingly punctured, with a more or less distinct metallic greenish gloss, the clypeus more closely

punctured, the labrum fulvous, the palpi flavous; antennæ nearly as long as the body in the male, the five or six lower joints pale flavous, the others fuscous; thorax transverse, the sides but slightly rounded, narrowed towards the apex, the angles obtuse, the surface very closely and finely punctured, piceous, with a more or less distinct greenish gloss; elytra not wider at the base than the thorax, and of the same colour, nearly parallel, the punctures closely and irregularly placed anteriorly, but arranged in double rows towards the apex, the interstices costate; femora unarmed; the first joint of the posterior tarsi as long as the following three joints united.

Hab. Mexico, Northern Sonora (*Morrison*), Chilpancingo in Guerrero, Puente de Ixtla in Morelos (*H. H. Smith*), Iguala in Guerrero (*Höge*).

Smaller and less elongate in shape than its congeners, and piceous in colour. The thorax is much more finely punctured than in *E. simplex*; and the elytral interstices are more or less raised (especially in the specimens from Chilpancingo and Puente de Ixtla, these also having the punctuation more distinctly arranged in double rows). In some of the females the antennæ and legs are nearly black. The male insects are generally smaller, pale brown in colour, and have each joint of the antennæ furnished below with a long, stiff, whitish bristle (this can be seen only in certain lights, and not in all specimens).

Euphrytus fulvicollis (p. 126).

A renewed examination of the specimens referred to *E. fulvicollis* has convinced me that they do not all belong to the same species; the type has only been obtained at Cuernavaca, the other localities should be erased and transferred to the following closely allied form which I now describe under the name of *E. varipennis*. The insect figured under the name of *E. fulvicollis* is also referable to *E. varipennis*.

5. **Euphrytus varipennis.** (*E. fulvicollis*, Tab. VIII. fig. 19.)

Euphrytus fulvicollis, huj. op. p. 126 (pars).

Bluish-black, the head, thorax, and legs fulvous; thorax impunctate; elytra very finely geminate-punctate-striate, dark blue, violaceous, or green, scarcely shining; femora unarmed.

Length 2–2½ lines.

Hab. Mexico, Puebla, Capulalpam, Juquila, Oaxaca (*Sallé*), Orizaba (*Flohr*), Xucumanatlan in Guerrero (*H. H. Smith*).

E. varipennis differs in the following particulars from *E. fulvicollis*:—The antennæ are black, with the exception of the basal two or three joints, which are fulvous; the elytra (instead of being finely and closely punctured in rows) are very finely geminate-punctate-striate, and have the interstices slightly convex; and the femora are not dilated into a tooth. An example from Guatemala (*Sallé*), of smaller size and with long and slender antennæ, is perhaps the male of the same species; this specimen has the elytra more shining and with fine irregular rows of double punctures, and the tarsi black; it is possible that it belongs to yet another species.

6. **Euphrytus fulvicornis.**

Bluish-black; the antennæ, head, and thorax fulvous; elytra dark bluish or greenish, opaque, very finely geminate-punctate-striate.
Length 2–2½ lines.

Hab. MEXICO, Ventanas and Milpas in Durango (*Forrer*).

Closely allied to *E. varipennis*, but differing from it by the entirely fulvous antennæ and by the opaque and silky appearance of the elytra, the punctuation of which is extremely fine, and in some specimens scarcely perceptible. The thorax is impunctate, and shaped as in *E. varipennis*; the femora are also unarmed. The specimens received are apparently all females.

7. **Euphrytus umbrosus.**

Elongate, subcylindrical, dark æneous, the base of the antennæ pale; thorax finely and closely punctured; elytra more strongly and very closely punctured, the interstices at the apex convex.
♂. The antennæ more than half the length of the body; the posterior femora toothed.
♀. The antennæ much shorter; the posterior femora unarmed.
Length 3 lines.

Hab. MEXICO, Chilpancingo, Omilteme, and Tepetlapa, all in Guerrero, Cuernavaca in Morelos (*H. H. Smith*).

Of darker general colour than *E. æneus*; the antennæ black (the second to the fourth joints excepted) and much shorter, the terminal joint in the male curved and widened; the legs dark æneous; the tooth on the posterior femora in the male smaller and shorter, and the intermediate tibiæ curved near the apex. The armed femora and dark legs distinguish it from *E. simplex*; and the shorter antennæ and their colour from the last-named species and from *E. varicornis* also.

8. **Euphrytus varicornis.**

Elongate, obscure dark bronze; antennæ testaceous, the seventh and the two terminal joints fuscous; thorax very closely punctured; elytra very closely semipunctate-striate; legs testaceous; femora unarmed.
Length 3 lines.

Hab. MEXICO, Chilpancingo, Iguala, and Amula, all in Guerrero (*Höge, H. H. Smith*).

E. varicornis is very closely allied to *E. simplex*, and is possibly only a variety of that species; it differs principally by the colour of the antennæ, which is constant in the eight examples before me. The thorax is also rather longer and devoid of any depression. In the specimens which I suppose to be the females the antennæ are only half the length of the body.

9. **Euphrytus pallidus.** (Tab. XL. fig. 13.)

Elongate, entirely pale flavous; thorax minutely and closely punctured; elytra more strongly and very closely punctured, the interstices slightly raised on the disc, distinctly costate near the apex.
Length 2½ lines.

Head closely and distinctly punctured; eyes large and prominent, sinuate; antennæ two-thirds the length of the body, flavous, the third and fourth joints equal; thorax about one half broader than long, the sides rounded and slightly sinuate, the surface extremely minutely and closely punctured, flavous; scutellum with a few fine punctures; elytra rather strongly and closely punctured, the punctures arranged almost in double rows, the interstices transversely rugose at the sides, slightly raised in narrow lines on the disc, these lines being more strongly raised and broader at the apex; femora unarmed; the first joint of the posterior tarsi as long as the following three joints united; prosternum narrowly elongate.

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

A typical species, recognizable at once by the entirely flavous colour.

10. **Euphrytus nigritarsis.**

Fulvous, the antennæ (the three basal joints excepted), the apices of the tibiæ, and the tarsi black; thorax extremely closely and finely punctured; elytra metallic green, subgeminate-punctate-striate, the interstices slightly raised.

Length 3 lines.

♀. Head finely and rather closely punctured; antennæ black, the lower three joints fulvous, the terminal joints gradually thickened; thorax scarcely twice as broad as long, the sides slightly sinuate, narrowed in front, with a narrow flattened margin, the surface extremely finely and closely punctured throughout; scutellum fulvous; elytra with closely arranged double rows of strong punctures, separated by narrow longitudinal smooth spaces, metallic green; underside and legs fulvous, the apices of the tibiæ and the tarsi black; femora unarmed.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

11. **Euphrytus elongatus.** (Tab. XL. fig. 14.)

Elongate, blackish or purplish-æneous; thorax closely and finely rugose; elytra strongly and closely geminate-punctate-striate, the interstices longitudinally raised.

♂. Antennæ robust, the terminal joints gradually widened and flattened; the posterior femora obsoletely angulate.

♀. Antennæ much shorter, the joints scarcely widened; the posterior femora simple.

Length 3 lines.

♂. Head rugosely punctured; the antennæ robust, two-thirds the length of the body, the first joint short, nearly subquadrate, piceous above, the second joint very short, the third and fourth joints fulvous, the third widened at its apex and much shorter than the fourth, the following joints subtriangularly widened, black, the apical one concave and sinuate at its apex; thorax about one half broader than long, the sides rounded, narrowed in front, the surface very closely punctured and finely rugose throughout; elytra with strong double rows of punctures, divided by longitudinal narrow raised lines; the first joint of the posterior tarsi as long as the following two joints united, the claw-joint very long and slender.

Hab. Mexico, Durango city (*Höge*).

The colour of this very elongate and narrow species is dull black, purplish, or æneous; the general shape, the structure of the antennæ in the male, the rugosely sculptured thorax, and the semicostate elytra separate *E. elongatus* from any of its allies.

12. **Euphrytus humeralis.** (Tab. XL. fig. 15.)

Elongate, black, the basal joints of the antennæ testaceous; thorax closely and finely punctured; elytra subgeminate-punctate-striate, black, a large subquadrate spot at the shoulders rufous.

Length 3 lines.

♀. Head finely and closely punctured, black; labrum fulvous, its disc black; antennæ half the length of the

body, black, the lower three joints testaceous at the apex, the first joint short and thick, black above, the terminal joints elongate, but slightly thickened; thorax transverse, the sides nearly straight, narrowed in front, with a narrow greenish margin, the disc finely and closely punctured, black; elytra black, with a large subquadrate rufous spot surrounding the shoulders, slightly depressed below the base, the disc closely geminate-punctate-striate, the interstices forming narrow longitudinal spaces, which become costate near the apex; legs and underside black; femora unarmed.

Hab. MEXICO, Chilpancingo (*H. H. Smith*). A single specimen.

13. **Euphrytus (?) semirugosus.**

Elongate, dark æneous; antennæ short, the apical joints thickened; thorax very closely and rather strongly punctured; elytra as closely and more strongly punctured, the interstices at the sides semirugose.

Length 2 lines.

Head not closely but distinctly punctured on the vertex; the eyes widely separated, sinuate at the inner margin; labrum fulvous; terminal joint of the palpi thickened, its apex subtruncate, piceous; antennæ (♀) only extending a little beyond the base of the elytra, black, the basal joints testaceous at their apex, the terminal five joints thickened; thorax twice as broad as long, the sides rather strongly rounded, the anterior angles slightly thickened and produced, the surface very closely punctured (especially near the sides), and with a more or less distinct lateral depression; elytra narrowly parallel, more strongly punctured than the thorax, the punctures arranged in very close, somewhat geminate, rows near the suture, but becoming irregular at the sides, the sutural interstices slightly raised in lines, the lateral interstices obscurely wrinkled; legs piceous or black; femora unarmed, their base sometimes paler; the first joint of the posterior tarsi as long as the following two joints together; prosternum comparatively broad, not much narrowed between the coxæ.

Hab. MEXICO, Refugio in Durango (*Höge*).

I place this comparatively small species, of which only female specimens seem to have been obtained, in *Euphrytus*, as it agrees with the members of that genus in its general shape; it differs, however, from the allied forms in the short and thickened antennæ, the short metatarsus of the posterior legs, and the broader prosternum. *E. semirugosus* may be known by its small size, short antennæ, and semirugose lateral interstices of the elytra.

14. **Euphrytus apicicornis.** (Tab. XL. fig. 16.)

Greenish-æneous, the antennæ (the apical three joints excepted), elytra, and legs fulvous; head and thorax finely and closely punctured; elytra rather regularly punctate-striate; femora unarmed.

Length 3 lines.

Head finely and rather remotely punctured on the vertex, the lower portion and the clypeus more strongly and closely punctured; the latter wedge-shaped, bounded on each side by a smooth triangular space; labrum and mandibles fulvous; antennæ two-thirds the length of the body, fulvous, the basal joints very slender, the apical three joints fuscous; thorax about one half broader than long, the sides very slightly rounded, the anterior angles thickened, the surface closely and finely punctured, greenish-æneous, somewhat depressed near the posterior angles; scutellum metallic æneous; elytra nearly parallel, slightly transversely depressed below the base, reddish-fulvous, the punctuation stronger than that of the thorax, and arranged in close and rather regular rows, the interstices forming narrow, somewhat raised, smooth longitudinal spaces; underside dark æneous, the last abdominal segment obscure fulvous; legs fulvous; the first joint of the posterior tarsi as long as the following three joints together; prosternum narrowly elongate.

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

Of this distinct species only one specimen was obtained; the colour of the antennæ,

the comparatively narrow thorax, and the colour of the elytra separate *E. apicicornis* from its congeners.

15. **Euphrytus (?) rugosus.** (Tab. XL. fig. 17.)

Elongate, subdepressed, obscure æneous; the head, thorax, and legs rufous; elytra greenish-æneous, closely punctured and finely transversely rugose; tarsi black.

Length 3 lines.

Head closely rugose-punctate, rufous; the clypeus transverse, separated from the face by a transverse groove, rugosely punctured; the labrum with a large black patch; mandibles and palpi black; antennæ (♀) scarcely extending to the middle of the elytra, black, pubescent, the basal joints fulvous at the apex, the seventh and following joints gradually thickened; thorax transverse, twice as broad as long, the sides strongly rounded, the anterior angles obtuse, the surface finely and very closely semirugose punctate, rufous; scutellum black; elytra obscure greenish-æneous, more strongly punctured than the thorax, the interstices transversely rugose or wrinkled throughout, with traces of longitudinal narrow lines on the disc and near the apex; legs rufous, the tarsi black; the first joint of the posterior tarsi as long as the following two joints together; prosternum rather broad, widened and truncate posteriorly.

Hab. Mexico, Yolos (*Sallé*).

A single specimen, apparently a female. This insect is provisionally included in *Euphrytus*, from the typical forms of which it differs in the broader prosternum and in the shorter metatarsus of the posterior legs. *E. rugosus* may be easily recognized by its coloration and sculpture.

THERSES. (To follow the genus *Euphrytus*, p. 126.)

Body oblong; antennæ subfiliform, the terminal joints thickened; thorax transverse, strongly narrowed in front; elytra semipunctate-striate; legs rather slender; femora unarmed; tibiæ channelled; claws bifid; prosternum narrowly elongate; the anterior margin of the prothoracic episterna concave.

This new genus may be at once distinguished from all others of the Iphimeinæ by the bifid claws. The two species referred to it, both of which are from Mexico, have somewhat the general appearance of certain members of the family Erotylidæ; they differ from *Euphrytus* and the allied genera in the shape of the thorax, as well as by the form of the claws.

1. **Therses nigricollis.**

Body narrowed posteriorly, black; head and thorax opaque, impunctate; elytra metallic greenish, finely geminate-punctate-striate, the interstices more or less longitudinally convex.

Length 2 lines.

Head impunctate; the eyes widely separated, slightly sinuate at their inner margin; the antennæ extending to the middle of the body, black, the lower three joints fulvous at the apex, the third joint distinctly longer than the second but shorter than the fourth, the apical joints shorter and stouter; thorax rounded at the sides and strongly narrowed in front, the anterior angles not produced, the surface opaque, black, impunctate (under a very strong lens, some minute punctures are visible); scutellum black; elytra narrowed and pointed towards the apex, metallic greenish, geminate-punctate-striate, the punctures towards the apex arranged singly, the interstices (especially towards the sides) longitudinally convex; underside and legs black, the knees piceous, the first joint of the posterior tarsi as long as the following two joints together.

Hab. Mexico, Jalapa (*Höge*).

A single specimen, apparently a female.

2. Therses ochripes.

Elongate, slightly narrowed posteriorly, black; the head, antennæ, thorax, and legs fulvous; elytra greenish-æneous, extremely finely punctured in rows.

Length 1½ line.

Head impunctate, the clypeus with a few minute punctures only; antennæ fulvous, about two-thirds the length of the body, the third and fourth joints equal, the following joints slightly and gradually thickened; thorax twice as broad as long, the sides rounded near the base, strongly narrowed in front, the anterior and posterior margins nearly straight, the surface opaque, impunctate, fulvous; elytra of a brassy-green colour, with rows of minute punctures, which are a little more distinct at the sides, the interstices somewhat silky in appearance; legs entirely fulvous.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

PSEUDOCHORIS.

Elongate, subparallel. Eyes entire. Antennæ filiform, the terminal joints but slightly thickened, the second joint short, the others nearly equal in length. Thorax transverse, the anterior margin nearly straight, the sides moderately rounded, the anterior angles not produced. Elytra punctured in rows. Femora unarmed. The first joint of the posterior tarsi as long as the following two joints together. Claws appendiculate. Prosternum narrowed between the coxæ, its base truncate. The anterior margin of the prothoracic episterna concave.

This new genus is proposed for the reception of an insect having the general characters of the Iphimeinæ, without agreeing entirely with any of the genera of that group. The filiform, scarcely thickened antennæ and the truncate base of the prosternum separate *Pseudochoris* from *Choris*; the transverse thorax, entire eyes, and much shorter metatarsus of the posterior legs from *Euphrytus*, to which genus, however, *Pseudochoris* is closely allied.

1. Pseudochoris fulvicollis. (Tab. XL. fig. 18.)

Obscure greenish-æneous, the head, antennæ, thorax, and legs fulvous; thorax finely punctured; elytra metallic green, strongly punctured, the interstices at the sides obsoletely transversely rugose.

Var. Thorax and elytra obscure æneous.

Length 2 lines.

♂. Head rather closely punctured, with a metallic green gloss; palpi fulvous, the terminal joint robust; antennæ extending to a little beyond the middle of the elytra, fulvous; thorax about one half broader than long, scarcely narrowed in front, the sides evenly and moderately rounded, with a narrow margin, the base very slightly produced at the middle and accompanied by a deeply impressed line, the anterior angles somewhat oblique and thickened, the surface finely and rather closely punctured (especially at the sides), fulvous, with a slight metallic gloss; scutellum metallic green, smooth, not broader than long; elytra parallel, with a very shallow depression below the base, metallic green or bronze, rather strongly punctured in rows, the punctures on the disc finer and more distant than those at the sides, the lateral interstices transversely rugose; legs fulvous, rather robust; the first joint of the anterior tarsi dilated in the male, that of the posterior pair not longer than the following two joints together.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Some specimens, especially females, have the thorax and elytra æneous, and the

terminal joints of the antennæ black; these examples much resemble *Coytiera fulvipes*, which may, however, be distinguished by the strongly rounded sides and acute angles of the thorax.

EPHYRÆA. (To precede the genus *Coytiera*, p. 126.)

Ephyræa, Lefèvre, Ann. Soc. Ent. Fr. 1889, p. 332.

Ephyræa contains some small species having the general shape of *Noda*, but with more elongate antennæ and a strongly transverse thorax. Two species from the State of Panama are here referred to it.

1. **Ephyræa exigua.**

Greenish-black, the basal joints of the antennæ and the legs fulvous; thorax and elytra obscure violaceous-black, the former finely and remotely punctate, the latter finely punctate-striate.

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

Head finely and remotely punctured, the clypeus not separated from the face, the eyes entire, the labrum and palpi fulvous; antennæ more than half the length of the body, fulvous, the seventh and following joints stained with fuscous and gradually thickened; thorax very short and transverse, the sides strongly widened and rounded at the middle, and thence to the base nearly straight, the surface finely and remotely punctured, the punctures of unequal size, the anterior angles produced into a small tooth; elytra with a shallow depression below the base, of a dark violaceous or purplish colour, distinctly and regularly punctate-striate, the punctures somewhat geminate towards the base, in single rows and more distant near the apex; legs fulvous; prosternum broad, widened at the base.

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

2. **Ephyræa isthmica.** (Tab. XL. fig. 19.)

Elongate, strongly narrowed posteriorly, metallic greenish; antennæ and legs fulvous; thorax rather closely punctured; elytra strongly geminate-punctate-striate, the sides with three sharply raised longitudinal costæ.

Length 1 line.

Head remotely and finely punctured, the interstices minutely granulate; labrum and mandibles fulvous; antennæ extending to about one-third the length of the elytra, fulvous, the terminal joints strongly thickened; thorax short, more than twice as broad as long, the sides strongly widened and rounded, the anterior angles dentiform, the surface closely punctured at the sides, more sparsely so on the disc; scutellum impunctate; elytra narrow and convex, pointed at the apex, the punctuation stronger than that of the thorax, arranged in double rows anteriorly, but in single rows near the apex, the interstices somewhat opaque, raised into three sharp costæ at the sides, of which the intermediate one is the highest, this latter commencing at the shoulder, and extending towards the apex, where it is joined to the preceding costa; legs fulvous.

Hab. PANAMA, Peña Blanca (*Champion*).

A single specimen. In its narrowly elongate and pointed shape this insect differs totally from the allied species; but the form of the thorax and other structural characters agree with *Ephyræa*. It is probable that the example before me is of the female sex. *E. isthmica* is well distinguished by the sharply raised lateral costæ of the elytra.

COYTIERA (p. 126).

Coytiera fulvipes (p. 126). (*Corysthea högei*, Tab. VII. fig. 3.)

To the Mexican localities given, add:—Chilpancingo, Tepetlapa, and Soledad, all in Guerrero (*H. H. Smith*), Iguala in Guerrero (*Höge*).

In a single male specimen, obtained at Chilpancingo, the posterior femora are dilated into a triangular tooth: the insect in this respect agrees with *Euphrytus*, although it has the prosternum, and also the thorax, differently shaped. The elytra have a more or less distinct depression below the base, and they vary in colour from cupreous to metallic green or blue.

The insect figured on Tab. VII. under the name of *Corysthea högei* is, as noted on p. 154, only a variety of this species.

3. Coytiera costata.

Oblong, obscure æneous; the antennæ and legs fulvous; thorax very closely and finely punctured; elytra geminate-punctate-striate, the interstices longitudinally costate.

Var. Antennæ and legs piceous.

Length 2 lines.

Head rather closely punctured, the eyes widely separated, the labrum fulvous; antennæ nearly as long as the body, filiform, the first joint thickened from the base to the apex, and slightly curved, the second very small, the third and fourth joints equal, the following joints slightly longer; thorax transversely subquadrate, the sides rounded, equally constricted at the base and apex, the anterior angles slightly produced outwards, the surface very closely, evenly, and finely punctured throughout, with or without a shallow fovea on each side; scutellum with a few minute punctures; elytra parallel, with seven or eight distinctly raised longitudinal costæ extending from the base to the apex, the interstices geminate-punctate; legs robust, the femora thickened, the tibiæ bicarinate on each side, clothed with yellowish pubescence, the first joint of the posterior tarsi scarcely so long as the following two joints united; claws appendiculate; prosternum slightly narrowed at the middle.

Hab. Mexico, Chilpancingo and Iguala in Guerrero (*Höge*).

Like *C. fulvipes*, the present species has not the facies of a *Coytiera*, but it agrees in the principal structural characters with that genus. In the single female example received, which was obtained at Chilpancingo, the antennæ are much shorter than in the male (from Iguala), and the terminal joints are much more robust; the elytral punctuation is stronger; and the legs are piceous.

CHORIS. (To follow the genus *Coytiera*, p. 127.)

Mevania, Harold, Coleopt. Hefte, xii. p. 82 (1874) (nomen præocc.).
Choris, Lefèvre, Ann. Soc. Ent. Fr. 1877, p. 123.

The species for which this genus was established are of small size, and principally distinguished by the transversely-shaped thorax, its rounded margin, and the elongate and narrowed prosternum. The Mexican representative described below does not agree entirely in its structural characters with *Choris*, differences being visible in the

length and structure of the antennæ, and in the more produced anterior margin of the thorax, this latter in *Choris* being described as straight.

1. **Choris pubicollis.** (Tab. XL. fig. 20.)

Narrowly elongate, subcylindrical, blackish, above brownish- or greenish-æneous; the basal joints of the antennæ and the legs fulvous; thorax extremely closely punctured, the sides finely pubescent; elytra strongly and closely punctured, transversely rugose at the sides.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Head broader than long, strongly punctured, and sparsely clothed with short whitish pubescence; eyes very widely separated, entire; clypeus transverse, not more closely punctured than the head, its lower edge concave-emarginate; labrum and palpi fulvous, the terminal joint of the latter subcylindrical, piceous; antennæ two-thirds the length of the body in the male, much shorter in the female, robust, black, the lower four joints fulvous, the basal joint short and thick (almost cylindrical), stained with piceous above, the second joint half the size, the following four joints nearly equal, the rest more thickened but elongate; thorax strongly transverse, more than twice as broad as long, the sides very strongly rounded at the middle, entire, the anterior margin slightly produced in the centre, the anterior angles thickened but not produced, the surface extremely closely and rather finely punctured, the interspaces slightly rugose, and clothed with short pubescence at the sides; scutellum broadly ovate; elytra slightly wider at the base than the thorax, convex and subcylindrical, æneous, the disc much more strongly punctured than the thorax, the punctures arranged in irregular rows, the interstices here and there raised in longitudinal lines, transversely rugose at the sides; legs robust, fulvous, the femora incrassate; tibiæ longitudinally carinate, widened towards the apex, the latter deeply hollowed; claws appendiculate; prosternum strongly convex, narrowed at the middle and elongate, its base truncate.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*, *H. H. Smith*).

In general appearance this insect closely resembles a *Sphæropis*, the antennæ, thorax and its pubescence, as well as the shape of the prosternum, agreeing with that genus; but it has the claws appendiculate (not bifid), and the species is therefore better placed in *Choris*.

CLISITHERA. (To precede the genus *Beltia*, p. 128.)

Clisithera, Baly, Journ. Ent. ii. p. 220 (1864).

This genus belongs to the group Iphimeinæ, and as yet contains only a single species; it is principally distinguished by the dilated intermediate joints of the antennæ and the transverse thorax.

1. **Clisithera cerasina.** (Tab. XL. fig. 21.)

Eumolpus cerasinus, Perty, Del. Anim. art. Bras. p. 105, t. 21. fig. 5 (1832)[1].
Clisithera cerasina, Lefèvre, Bull. Soc. Ent. Fr. 1884, p. xlv.
Clisithera nigricornis, Baly, Journ. Ent. ii. p. 221[2].

Hab. Panama, Volcan de Chiriqui (*Champion*).—Amazons[2]; Brazil, Bahia[1].

A single female specimen was obtained by Mr. Champion in Chiriqui; it differs from the type in having the first two joints of the antennæ fulvous.

TALURUS. (To precede the genus *Metaxyonycha*, p. 128.)

Talurus, Lefèvre, Ann. Soc. Ent. Fr. 1889, p. 337.

This genus has been lately established by Lefèvre on two species placed by me in *Rhabdophorus* *; these species differ, however, from *Rhabdophorus* in the very transverse thorax, the sides of which are rounded and entire, the filiform antennæ, and the longer first joint of the posterior tarsi. Lefèvre erroneously describes the eyes as entire; they are distinctly emarginate on their inner edge.

1. **Talurus salvini.**

Rhabdophorus salvini, Jac. huj. op. p. 148, t. 9. fig. 2.
Talurus salvini, Lefèvre, Ann. Soc. Ent. Fr. 1889, p. 337.

Var. a. The head and the anterior margin of the thorax metallic green, the disc of the latter fulvous.
Var. b. Below piceous, above dark purplish.

To the localities given, add:—Mexico, Cerro de Plumas (*Höge*).

Of the varieties I have received some Guatemalan specimens from the Stuttgart Museum; they do not differ much from the type, except in colour and in the more closely rugose interstices at the sides of the elytra.

2. **Talurus rugosus.**

Rhabdophorus rugosus, Jac. huj. op. p. 150, t. 7. fig. 8.
Talurus rugosus, Lefèvre, Ann. Soc. Ent. Fr. 1889, p. 337.

METAXYONYCHA (p. 128).

Metaxyonycha chlorospilota (p. 129).

To the Mexican localities given, add:—Atoyac in Vera Cruz (*H. H. Smith*), El Mirador (*Flohr*).

2 (A). **Metaxyonycha hirsuta.** (Tab. XL. fig. 22, ♂.)

Testaceous; thorax closely punctured, the lateral margins obsoletely bidentate; elytra strongly and closely punctured in rows, sparsely pubescent, strongly costate at the apex, a subquadrate spot at the base and a transversely shaped one below the middle metallic green.

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

Head rather closely and strongly punctured at the sides, deeply triangularly depressed between the eyes, the apices of the mandibles black; antennæ long and slender, entirely testaceous; thorax about one half broader than long, closely but irregularly and not very strongly punctured, the lateral margins obsolétely bi- or tridentate or merely sinuate, the anterior angles produced; elytra not very deeply punctured, more sparsely so near the suture than at the sides, the interstices strongly costate near the apex, and sparingly clothed with stiff fulvous hairs, the shoulders with a subquadrate metallic green spot not extending to either margin, another spot of the same size, but of more transverse shape, placed below the middle; the first joint of the anterior tarsi widened, and the intermediate tibiæ strongly curved at the apex, in the male; the female with three or four short costæ at the base of the elytra within the metallic green spot.

Hab. Panama, Bugaba (*Champion*).

* Changed to *Rhabdopterus* by Lefèvre.

In its markings *M. hirsuta* resembles many of its congeners (especially *M. chlorospilota*), but is well distinguished by the entirely testaceous antennæ, and the non-costate elytral interstices on the disc and their pubescence; the latter consists of a single row of erect hairs on each interstice, but is very marked in well-preserved examples. In the female the thorax is, as usual, more transverse. Many specimens.

2 (B). **Metaxyonycha panamensis.** (Tab. XL. fig. 23.)

Testaceous, the intermediate joints of the antennæ piceous; thorax remotely punctured, the sides tridentate; elytra strongly and irregularly punctured in rows, the interstices costate at the apex, a humeral spot and a narrow short transverse band below the middle metallic blue or green.

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

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

Although closely allied to several other species of the genus, *M. panamensis*, of which many specimens are before me, differs constantly in the following particulars:—The antennæ have the fifth and the following two joints piceous; the thorax is irregularly and remotely punctured (the species differing in this respect from *M. tridentata*); the elytra have smaller metallic spots, and the posterior one is in the shape of a short transverse narrow band (thus agreeing with *M. tridentata*, but in that species the elytral interstices are convex throughout—in the present insect they are only so at the apex). *M. panamensis* may be separated from various South-American forms by the entirely testaceous legs, and from *M. hirsuta* by the glabrous elytra. Several examples have the left lateral margin of the thorax nearly entire or unidentate, and in others the teeth are placed in different positions to those of the right side.

5. **Metaxyonycha variolosa.**

Testaceous; the antennæ (the basal three joints excepted) black; thorax deeply and rather closely punctured, bifoveolate at the sides, the latter tridentate; elytra metallic green, rugosely punctured, the lateral and apical margins testaceous; intermediate tibiæ emarginate at the apex.

Length 4 lines.

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

A single specimen. This species has much the appearance of *Prionodera chloroptera* (Germ.); the colour of the antennæ and the different structure of the thorax and of the intermediate tibiæ will, however, separate *M. variolosa* from it. The three teeth on the lateral margin of the thorax are very distinct; the elytra are very strongly transversely rugose between the punctures, and also show traces of longitudinal costæ near the suture; the underside and legs are entirely testaceous.

PRIONODERA (p. 130).

Prionodera salvini (p. 131).

To the localities given, add:—PANAMA, Volcan de Chiriqui (*Champion*).

4. **Prionodera limbata.** (Tab. XL. fig. 24.)

Fulvous; the sixth and seventh and the terminal two joints of the antennæ black; thorax bidentate at the sides; elytra metallic green, deeply punctured and transversely rugose, the lateral and apical margins fulvous.

Length 3 lines.

Head rather closely impressed with large and small punctures; antennæ fulvous, the sixth and seventh and the apical two joints black; thorax about one half broader than long, the sides with two more or less distinct teeth, the anterior angles produced, the surface irregularly and rather closely punctured, the punctures unequal in size; scutellum fulvous; elytra bright metallic green, closely and strongly rugose-punctate, the interstices longitudinally and also transversely raised, the lateral and apical margins evenly and rather broadly fulvous; underside and legs fulvous.

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

The colour of the antennæ and the comparatively broad fulvous elytral margin chiefly distinguish *P. limbata*.

PROMECOSOMA (p. 131).

2 (A). **Promecosoma flohri.** (Tab. XL. fig. 25.)

Oblong, piceous; the lower five joints of the antennæ, the head, thorax, and legs rufous; elytra opaque, dull greenish, very closely punctured, with three or four obsolete longitudinal costæ, the extreme apex dentiform and rufous in colour.

Length 3 lines.

Head coarsely rugose at the middle, more finely so on the vertex; antennæ less than half the length of the body, black, the lower five joints rufous; thorax one half broader than long, narrowed in front, the sides undulate, and with a flattened margin, the surface irregularly impressed with large and small punctures, the interspaces wrinkled at the sides, the disc with a smooth narrow longitudinal space in the middle; scutellum fulvous, its apex truncate; elytra scarcely widened at the middle, opaque, greenish, very closely punctured, the interstices finely granulate, but hardly rugose, the sides with two distinct, the disc with two very obsolete, longitudinal costæ, the extreme lateral margin at the apex rufous, the apex itself produced into a tooth; below nearly black, the sides of the breast and the legs rufous.

Hab. Mexico, Refugio in Durango, Durango city (*Höge*), Maravatio (*Flohr*).

This species is perhaps nearest allied to *P. dispar*; but differs from that insect and most of its allies in the elytra being simply punctured (not rugose) and having the apex produced. I have received a single specimen from Mr. Flohr, and a dozen others were obtained by Herr Höge; some of these latter have the antennæ fulvous, with the seventh and apical joints alone fuscous.

Promecosoma nobilitatum (p. 132).

To the localities given, add:—Mexico, Chilpancingo and Tepetlapa in Guerrero (*H. H. Smith*).

A specimen from Tepetlapa differs from the type in having rufous (instead of black) tarsi.

Promecosoma sanguinolentum (p. 133).

To the locality Mexico, add:—Mescala in Guerrero (*H. H. Smith*), Iguala in Guerrero, Yautepec in Morelos, Cholula in Puebla (*Höge*).

Promecosoma inflatum (p. 134).

To the Mexican locality given, add:—Chilpancingo in Guerrero, Yautepec in Morelos (*Höge*).

Promecosoma viride (p. 135).

To the Mexican localities given, add:—Santa Clara in Chihuahua, Durango city, Tapachula in Chiapas (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

18. **Promecosoma suturale.**

Broadly ovate; antennæ (the basal joints excepted) black; thorax closely punctured, the interspaces irregularly raised; elytra metallic green, strongly rugosely punctured, the sutural and lateral margins flavous; legs piceous or fulvous.
Length 3 lines.

Hab. MEXICO, Santa Clara in Chihuahua, Ventanas in Durango (*Höge*).

Of broadly ovate, medially widened shape, depressed above; the elytra deeply punctured, and the interstices transversely rugose, with traces of longitudinal costæ near the suture and apex. The elytra in the female have more strongly raised transverse wrinkles and a distinct costa near the lateral margin. *P. suturale* is distinguished from its congeners by the flavous sutural and lateral margins of the elytra; the antennæ generally have the four basal joints flavous; the intermediate tibiæ are deeply emarginate near the apex.

COLASPIS (p. 135).

Colaspis championi (p. 137).

To the localities given, add:—MEXICO, Presidio (*Forrer*).

Colaspis hypochlora (p. 138).

To the localities given, add;—MEXICO, Yautepec in Morelos, Colima city, Tapachula in Chiapas (*Höge*), Chilpancingo, Amula, and Xucumanatlan in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba, Caldera, David (*Champion*), Colon (*Lefèvre*).

Colaspis prasina (p. 138).

Chiriqui specimens of this species vary greatly in size, and many of them are of a

dull æneous tint, in this respect resembling *C. pruinosa*, Lefèvre; *C. prasina* may be either metallic green, purplish, or dark æneous in colour.

Colaspis bifasciata (p. 139).

To the Panama locality given, add:—Bugaba (*Champion*).

Additional specimens of both sexes since received agree with the type, and differ from *C. splendida* in the way described; another distinctive character is to be found in the central metallic green mark of the thorax, which in *C. splendida* is reduced to a narrow longitudinal stripe, while in the present species it assumes the shape of a broad triangular patch. It is not impossible, however, that the sculpture may vary, and I have as yet only seen two specimens of *C. splendida*.

Colaspis lebasi (p. 139).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*), Tapachula in Chiapas (*Höge*).

Colaspis submetallica (p. 140).

Var. Entirely fulvous, with the exception of a common transverse more or less distinct piceous mark below the base of the elytra.

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui, Caldera (*Champion*).

The variety, which at first sight seems quite distinct, was collected in numbers in Chiriqui together with the typical form; it cannot be mistaken for *C. belti* (which has also a mark at the base of the elytra), as it is smaller, and has a differently shaped thorax, and differently coloured antennæ and legs. Some examples show a distinct metallic gloss over the fulvous ground-colour.

11 (A). **Colaspis fastidiosa.**

Colaspis fastidiosa, Lefèvre, Bull. Soc. Ent. Fr. 1885, p. cxci [1].

Hab. PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA [1]; VENEZUELA [1].

Panama specimens differ somewhat from the typical form in having the thorax and elytra less closely punctured. The general colour of *C. fastidiosa* is greenish-æneous, or fulvous with a metallic gloss; the thorax is more or less distinctly bidentate or biangulate at the sides; the elytra have very closely arranged double rows of punctures, and the interstices very obscurely longitudinally raised and smooth; the antennæ and legs are fulvous. Some examples are entirely fulvous.

Colaspis fulvo-testacea (p. 141).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*), Tapachula in Chiapas (*Höge*).

Lefèvre describes the head as smooth, and the thorax as sinuate or dentate at the middle. In the Mexican specimens the head is finely punctured near the eyes, and the thorax has one or two teeth at the sides. The other details of the author's description agree with the Mexican insect.

Colaspis inconstans (p. 142).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui, Caldera (*Champion*).—BRAZIL (*coll. Jacoby*).

This insect, as its name implies, varies much in coloration—blue, green, and æneous specimens occurring; it also varies in size.

Colaspis melancholica (p. 143).

To the localities given, add:—MEXICO, Mazatlan, Tapachula in Chiapas (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*); PANAMA, David, Caldera (*Champion*).

Colaspis balyi (p. 143).

This insect is probably only a variety of *C. melancholica*.

Colaspis impressa (p. 145). (*C. laticollis*, Tab. VII. fig. 6.)

Var. *Colaspis laticollis*, Jac. huj. op. p. 144.

To the localities given, add:—MEXICO, Acapulco in Guerrero, Tapachula in Chiapas (*Höge*), Teapa in Tabasco (*H. H. Smith*), Temax in Northern Yucatan (*Gaumer*).

From an examination of the large amount of additional material since received, *C. laticollis*, Jac. (of which an example is figured on Tab. VII. fig. 6), proves to be only a variety of *C. impressa*, from which it differs in its less closely punctured thorax. *C. impressa* varies greatly in size, sculpture, and shape, and the legs also vary in colour, being either fulvous with black tarsi or entirely dark blue; the species may be principally known by its dark blue colour, and by having the elytra impressed below the base.

23. **Colaspis compta.**

Colaspis compta, Lefèvre, Ann. Soc. Ent. Fr. 1877, p. 144[1]; Mitth. Münch. ent. Ver. 1878, p. 122[2].
Colaspis godmani, Jac. huj. op. p. 145 (1882).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Caldera, Peña Blanca, San Miguel in the Pearl Islands (*Champion*).—COLOMBIA[1 2].

Central-American examples agree in all essential details with typical forms contained in my collection; the insect varies considerably, Teapa specimens being very little more than half the size of those from Colombia.

23 (A). **Colaspis sculpta.**

Fulvous, the apical joints of the antennæ fuscous; above metallic green or æneous; thorax subremotely and strongly punctured, the sides angulate at the middle; elytra punctate-striate near the suture, the lateral interstices strongly transversely rugose.
Length $2\frac{1}{2}$ lines.

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

Closely allied to *C. compta*, from which it differs thus:—The four or five lower joints of the antennæ are fulvous; the punctuation of the thorax is coarser and much more remote, with the interspaces smooth and somewhat raised; the elytra are more strongly punctured, the lateral interstices are rugose, and the basal depression is much shallower. In *C. compta* the elytra have a cupreous basal spot and band, this being entirely absent in *C. sculpta*. A dozen specimens were obtained.

25. **Colaspis dugesi.**

Colaspis dugesi, Lefèvre, Cat. Eumolp. in Mém. Soc. Roy. Liége, xi. p. 32 (1885)[1].

"Suboblongo ovalis, subtus cum pedibus obscure cærulea, supra subcyaneo-fusco-æneo, parum nitida, labro, palpis antennisque (basi excepta obscure fulva) piceis; capite dense punctulato; prothorace lateribus utrinque in medio bisinuato, creberrime confluenter foveolatim punctato, in medio disci spatio lævi tumido; elytris densissime undique foveolatim punctatis, punctis confluentibus, interstitiis subelevatis, strigas irregulares formantibus.—Long. 4, lat. $2\frac{1}{2}$ millim."

Hab. MEXICO, Tupataro [1].

Unknown to me.

26. **Colaspis jacobyi.**

Colaspis jacobyi, Lefèvre, Bull. Soc. Ent. Fr. 1885, p. cxc[1].

Hab. MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Zapote (*Champion*); PANAMA, Bugaba (*Champion*[1]).

This is a species of rather robust and parallel shape; fulvous, with the terminal joints of the antennæ, the apices of the tibiæ, and the tarsi black; the elytra are metallic green, or fulvous with a metallic-green gloss, strongly transversely rugose at the sides, punctate-striate near the suture; the punctuation of the thorax is remote but strong; the length is four lines. The posterior femora in the male insect are unusually thickened, almost as much as in a species of Halticidæ.

Found in numbers in Chiriqui; single specimens only have been obtained from Mexico and Guatemala.

27. **Colaspis subænea.**

Obscure dark æneous or piceous, the antennæ and legs flavous; thorax rather strongly and closely punctured, the sides obsoletely bisinuate at the middle; elytra strongly and closely punctured, the interstices subrugose and longitudinally costate.

Length 2–2½ lines.

Hab. GUATEMALA (*mus. Stuttgart*), near the city 5000 feet (*Salvin*).

C. subænea is of a uniform dull fusco-æneous colour. It varies a little in the amount of the punctuation, the head and thorax, however, are generally rather closely and distinctly punctate; the lateral margin of the thorax is not dentate but obsoletely bisinuate; the elytra are almost rugosely punctured (owing to the interstices being irregularly raised on either side), and have the longitudinal interspaces broad and especially distinct near the apex, the interspaces costate, but not forming acute ridges. *C. subænea* is perhaps nearest allied to *C. interstitialis*, Lefèvre, in regard to colour, but differs entirely in the shape of the thorax and in the elytral sculpture.

28. **Colaspis inconspicua.**

Obscure piceous or brownish-æneous; thorax more or less distinctly punctured, the sides dentate or subangulate below the middle; elytra opaque or slightly metallic, geminate-punctate-striate, the interstices longitudinally costate.

Length 2½–3 lines.

Of rather elongate and convex shape; the head closely and somewhat rugosely punctured; the antennæ two-thirds the length of the body, the basal joints more or less fulvous, the others fuscous; thorax twice as broad as long, narrowed in front, the sides narrowly margined, sinuate before and angulate or dentate below the middle, the surface rather more strongly and closely punctured at the sides than at the middle; elytra with regular and deep rows of punctures arranged in pairs, the interstices strongly and regularly costate throughout (each elytron with eight costæ); legs piceous or fulvous.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).—BRAZIL, San Paulo (*coll. Jacoby*).

This species, of which about twenty examples were obtained in Chiriqui, may be known by its dull opaque colour: some specimens are nearly black, others are obscure brownish-æneous. The thorax varies in the amount and intensity of the punctuation, but the sides are always toothed below the middle; the elytra are regularly geminate-punctate-striate, and have the interstices costate. A single specimen from San Paulo in my collection does not differ in any particular from those from Chiriqui. *C. interstitialis*, Lefèvre, from Brazil, is a closely allied species; it is, however, of a much more metallic and shining colour, and has the antennæ and legs testaceous, the elytral costæ much less strongly raised, and the lateral tooth of the thorax situated at (not below) the middle. Two specimens obtained by Mr. Champion differ from the others in having a fulvous head and thorax.

29. **Colaspis yucatana.**

Oblong, convex, dark violaceous, the labrum and antennæ fulvous; thorax sparingly punctured, the sides angulate just below the middle; elytra closely and deeply punctured at the sides, punctate-striate near the suture, the interstices convex at the apex.

Length 2¼ lines.

Head of a more brilliant metallic bluish colour than the thorax and elytra, finely and rather sparingly punctured, with a more or less distinct longitudinal groove down the middle; labrum and palpi fulvous; antennæ entirely fulvous; thorax about twice as broad as long, moderately convex, the sides distinctly toothed immediately below the middle, the punctuation rather deep and strong, the disc somewhat remotely, the sides a little more closely punctured; elytra convex, the punctures arranged in somewhat regular rows near the suture, closely and irregularly placed at the sides in the male, more scattered in the female; underside and legs violaceous, the tarsi obscure piceous.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

The difference in the elytral punctuation in the two specimens obtained, and which is apparently sexual, is considerable. The dull dark violaceous colour and the fulvous antennæ principally separate *C. yucatana* from its allies.

30. **Colaspis femoralis.**

Colaspis femoralis, Lefèvre, Mitth. Münch. ent. Ver. 1878, p. 122[1].

Hab. PANAMA, Bugaba (*Champion*).—COLOMBIA, Muzo[1].

Chiriqui examples do not show any important differences from those from Muzo, of which several have been kindly given to me by M. Lefèvre; most of the specimens from both localities have the knees, as well as the tibiæ and tarsi, black, and the femora are not always entirely reddish-testaceous as stated by Lefèvre.

ALETES (p. 146).

Aletes, Chapuis, Gen. Col. x. (1874) (nomen præocc.).
Alethaxius, Lefèvre, Cat. Eumolp. in Mém. Soc. Roy. Liége, xi. p. 42 (1885).

The name *Alethaxius* has been proposed by Lefèvre for this genus, *Aletes* being preoccupied in Mollusca.

4. **Alethaxius tuberculifer.**

Alethaxius tuberculifer, Lefèvre, Ann. Soc. Ent. Fr. 1889, p. 338[1].

Hab. MEXICO[1].

Unknown to me.

5. **Alethaxius semiviridis.**

Blackish, above metallic green or somewhat cupreous, the antennæ and legs fulvous; thorax extremely closely and finely punctured, the sides sinuate; elytra very closely punctured, the interstices finely rugose.

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

Of elongate and parallel shape; the head very closely and rather finely punctured; labrum fulvous; antennæ (♂) two-thirds the length of the body, robust, fulvous, the basal joint thickened, rather short, the second extremely short, the third and fourth joints equal, the others slightly longer; thorax twice as broad as long, the anterior and posterior margins nearly parallel, the sides rounded, obscurely bisinuate at the middle, the surface densely impressed with fine punctures (which are a little less closely placed at the middle), and with a short smooth median line near the base, the anterior angles slightly produced outwards; scutellum a little longer than broad, with a few punctures; elytra more strongly but not less

closely punctured than the thorax, the interstices (especially at the sides) finely transversely rugose, the shoulders smooth and prominent; underside nearly black, very finely punctured; legs fulvous, sparingly pubescent, the apices of the anterior tibiæ produced into a strong tooth.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*, *Höge*).

In the robust antennæ in the male, the shape of the thorax and its sinuate margin, &c., this species agrees well with *Aletes*. The female insect has the antennæ shorter and scarcely thickened. The upperside is very slightly metallic.

6. **Alethaxius pubicollis.**

Blackish-green, the basal joints of the antennæ and the femora obscure fulvous; head and thorax æneous, the latter closely punctured and sparingly pubescent; elytra metallic greenish, strongly punctured, the sides transversely rugose.

Length 1½ line.

Elongate, parallel; the head rather remotely impressed with oblong punctures, æneous; the clypeus transverse, deflexed; labrum piceous; antennæ robust, two-thirds the length of the body, black, the lower four joints more or less fulvous; thorax more than twice as broad as long, the sides strongly rounded, very obscurely angulate at the middle, the surface crowded with small punctures (especially at the sides), æneous, laterally clothed with fine short whitish pubescence; elytra with a very obsolete depression below the base, greenish, the punctuation much deeper than that of the thorax, and obsoletely arranged in rows, the interstices at the sides strongly transversely rugose; legs robust; the underside and tibiæ nearly black.

Hab. MEXICO, Chilpancingo (*H. H. Smith*).

A single specimen only of this small species was obtained. It is well distinguished by the sparingly pubescent thorax and its general colour.

RHABDOPHORUS (p. 148).

Rhabdophorus, Lefèvre, Mitth. Münch. ent. Ver. 1878, p. 126 (nomen præocc.).
Rhabdopterus, Lefèvre, Cat. Eumolp. in Mém. Soc. Roy. Liége, xi. p. 46 (1885).

For this genus Lefèvre has proposed a change of name, the one first used by him being preoccupied.

Rhabdopterus salvini (p. 148).

R. salvini and *R. rugosus* (antèa, p. 150), as already noted on p. 217 of this Supplement, have been transferred to *Talurus* by Lefèvre.

Rhabdopterus jansoni (p. 149).

To the locality given, add:—PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

A single female specimen from Chontales served me for the description of this species; the numerous examples since received, obtained principally at Bugaba, do not differ from it to any marked degree, and amongst them are many males; these latter have the tarsi entirely black, and the first joint of the anterior pair (as usual) broadly

flattened. *R. jansoni* is a large-sized species, and would perhaps be equally well placed in *Talurus*.

12. **Rhabdopterus curtus.**

Rhabdophorus curtus, Lefèvre, Mitth. Münch. ent. Ver. 1878, p. 128 [1].
Rhabdopterus curtus, Lefèvre, Cat. Eumolp. in Mém. Soc. Roy. Liége, xi. p. 46.

Hab. GUATEMALA, Cerro Zunil (*Champion*); PANAMA, near the city (*Champion*).—COLOMBIA [1].

Single specimens only were obtained by Mr. Champion in Guatemala and the State of Panama; one of these M. Lefèvre has kindly compared with the type. *R. curtus* is of comparatively short, parallel shape; the thorax is finely and rather sparingly punctured, rounded or scarcely perceptibly angulate at the sides; the elytra are punctate-striate near the suture, strongly punctured at the sides, where the interstices are subrugose, those near the apex being costate. The length of the insect is about one line and a half.

13. **Rhabdopterus fulvus.**

Fulvous, joints 7–9 of the antennæ fuscous; thorax remotely punctured, the sides sinuate or angulate; elytra strongly and rather distantly punctured in rows, the interstices flat.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Of oblong, parallel shape; the clypeus with some remotely placed strong punctures, the rest of the head entirely impunctate; the antennæ nearly extending to the end of the elytra in the male, fulvous, the seventh to the ninth joints fuscous, the third and fourth joints slender, equal, the following joints still more elongate; thorax transverse, more than twice as broad as long, the anterior margin nearly straight, the sides angularly widened or sinuate at the middle, the surface irregularly, remotely, and rather strongly punctured; elytra not wider at the base than the thorax, parallel, with an obsolete depression below the base, strongly punctured within this depression and at the sides, more finely so towards the apex, where the punctures are arranged in rows, the suture accompanied by a deeply impressed stria; prosternum rather elongate, slightly narrowed between the coxæ.

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

This comparatively small species agrees in shape, the structure of its thorax, antennæ, &c., with *Rhabdopterus*; it may be easily distinguished from the allied forms by its uniform fulvous colour.

HERMESIA. (To follow the genus *Rhabdopterus*, p. 153.)

Hermesia, Lefèvre, Bull. Soc. Ent. Fr. 1877, p. clxxviii.

A few species from Tropical America, one of which extends northwards into our region, are placed by Lefèvre in this genus; they resemble *Colaspis* in general appearance, but differ from it in having a rather more transversely-shaped thorax, the sides of which are dilated and have a more or less sinuate margin.

1. Hermesia aurata.

Colaspis aurata, Oliv. Ent. vi. p. 882, t. 1. fig. 8[1].
Hermesia aurata, Lefèvre, Bull. Soc. Ent. Fr. 1877, p. clxxviii[2].
Var. *Rhabdophorus violaceus*, Jac. huj. op. p. 151[3].

Hab. Nicaragua, Chontales (*Janson*[3]); Panama, Volcan de Chiriqui, Bugaba (*Champion*).—Guiana, Cayenne[1 2]; Amazons (*coll. Jacoby*).

Panama specimens are either of a metallic green or dark blue colour; they have the thorax rather more transversely-shaped than in the type. The dark blue variety, which agrees entirely with the green specimens in every way except in colour, has been described by myself as a distinct species under the name of *Rhabdophorus violaceus*[3].

CORYSTHEA (p. 153).

If Lefèvre's opinion of the true affinity of the single species included by me in this genus proves to be correct, *Corysthea* must be erased from our list.

CHALCOPHANA (p. 154).

Chalcophana cincta (p. 155).

To the localities given, add:—Mexico, Cerro de Plumas, Matamoros Izucar (*Höge*), Fortin and Atoyac in Vera Cruz (*H. H. Smith*).

The fulvous elytral band is only just indicated at the sides (and entirely obsolete on the disc) in some specimens; it is very variable in width. I have also examples before me with only the four (instead of the six) basal joints of the antennæ fulvous.

Chalcophana championi (p. 155).

To the localities given, add:—Mexico, Soledad, Xautipa, Chilpancingo, Amula, all in Guerrero (*H. H. Smith*); British Honduras, R. Sarstoon (*Blancaneaux*).

The Mexican specimens lately received have the first four joints of the antennæ fulvous and the elytral band prolonged laterally to the margins; in other respects they agree with the type. They have the thorax narrower than in *C. cincta*, and much more strongly and more closely punctured, and the elytral punctuation coarse and irregularly placed in single rows, the interstices being more or less convex; this is also the case with the Guatemalan examples, which, however, have only two or three joints of the antennæ fulvous and the elytral band abbreviated at the sides.

Chalcophana ancora (p. 156).

The Guatemalan specimens referred to *C. ancora* prove on renewed examination to belong to a closely allied but distinct species, which I describe below under the

name of *C. emarginata*; the Guatemalan localities have therefore to be transferred to that insect. The locality Costa Rica (*Van Patten*) should be erased altogether.

4 (A). **Chalcophana emarginata.**

♀. Fulvous, the seven outer joints of the antennæ black; thorax sparingly punctured; elytra with a metallic-green transverse band at the base and a round spot below the middle, coarsely punctured, the interstices strongly longitudinally costate, the apex deeply emarginate.

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

Hab. GUATEMALA, near the city, Zapote (*Champion*).

C. emarginata is the only species of the genus known to me in which the apex of the elytra shows a deep emargination, the sutural angle (as in *C. quadricostata*) being produced into a short tooth; this may or may not be a sexual peculiarity. The general system of coloration is that of *C. ancora*; but the transverse basal band of the elytra in the present insect is not so long, and its posterior margin is concave, while the posterior spot (instead of being elongate-triangular) is of a more rounded shape. The sculpture of the elytra is coarse and deep, and the costæ are very strongly raised except near the suture. These characters will assist in the recognition of *C. emarginata*.

4 (B). **Chalcophana nigritarsis.**

Fulvous, the antennæ (the first four joints excepted) and tarsi bluish-black; thorax irregularly and subremotely punctured; elytra metallic green, the extreme lateral margins, the apex, and a transverse central band, much widened at the middle, fulvous, closely geminate-punctate.

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

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

Similar in its system of coloration to *C. cincta* and several allied species, but differing principally from these by the colour of the tarsi and by the elytral punctuation. The antennæ extend to two-thirds the length of the body, and have their four basal joints fulvous. The thorax is twice as broad as long, scarcely narrowed in front, with rounded sides; the surface is irregularly punctured, more closely so at the sides than on the disc. The elytra have a slight but distinct post-basal depression and prominent shoulders; the punctuation is arranged in close double lines which become indistinct outwardly; the fulvous band is lozenge-shaped across the suture and extremely narrow towards the sides, where it widens again slightly and is connected with the similarly-coloured lateral margin; the tarsi are metallic bluish-black.

The single example obtained is a male.

Chalcophana simplex (p. 162).

To the locality given, add:—MEXICO, Tapachula in Chiapas (*Höge*).

The Mexican specimens obtained by Herr Höge during his second journey agree sufficiently well with *C. simplex* to refer them to that species; they have, however, the

basal four joints of the antennæ fulvous (instead of three, as in the type), and the elytra obsoletely costate at the sides in the female sex. The elytra are strongly costate at the sides in the corresponding sex of most of the allied species, though they are not so in the single female of *C. simplex* from which my description was taken. The comparatively fine punctuation arranged in single rows, which become almost obsolete near the apex, in connection with the fulvous tibiæ and tarsi, form the principal characters of distinction of *C. simplex*.

20. **Chalcophana brevicollis.**

♀. Reddish-fulvous, the antennæ (the basal two joints excepted), the apices of the tibiæ, and the tarsi black; thorax narrow, closely punctured; elytra closely semirugose-punctate, metallic green, the extreme lateral and apical margins fulvous; prosternum very slightly emarginate.

Length 3 lines.

Head deeply punctured near the eyes, with a deep longitudinal median groove which ends in a fovea; clypeus very minutely punctured; antennæ bluish-black, the basal two joints fulvous; thorax not more than one half broader than long, the sides obtusely rounded at the middle, rather strongly narrowed in front, the anterior angles distinct but not produced, the surface closely impressed with punctures of unequal size; elytra deeply and closely punctured, the punctures near the suture arranged in semiregular rows, irregularly and coarsely rugose at the sides, and with an indistinct costa running downwards from the shoulder to the middle, the shoulders themselves prominent.

Hab. MEXICO, Jalapa (*Höge*).

A single female specimen. The comparatively narrow thorax and its close punctuation, the rugosely punctured elytra without costæ (the ill-defined humeral one excepted), and the scarcely emarginate prosternum, separate this species from any of its similarly-coloured allies.

21. **Chalcophana quadricostata.**

♀. Reddish-fulvous, the eight terminal joints of the antennæ, the apices of the tibiæ, and the tarsi black; head and thorax closely punctured; elytra metallic green, strongly geminate-punctate-striate, the sides with four longitudinal costæ, the lateral and apical margins fulvous, the sutural angle dentiform.

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

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

Two female specimens. Similar in coloration to *C. godmani*, *C. hybrida*, *C. germari*, &c., but differing thus:—The head and thorax are much more closely punctured; the elytral punctuation is strong and very closely placed, so that the geminate arrangement is indistinct except at the sides, where the double rows of punctures are divided by strongly raised costæ (of these the inner one is more or less feeble); and the sutural angle of the elytra is produced into a tooth. *C. puncticollis*, Lefèvre, from Colombia, is described as having black intermediate joints to the antennæ and rufous tibiæ; *C. landolti*, Lefèvre, has a deep basal depression to the elytra, instead of a shallow one as in *C. quadricostata*. The thorax in *C. quadricostata* is rather short and strongly transverse.

22. **Chalcophana dimidiaticornis.**

Pale fulvous; antennæ with the seventh joint fuscous; thorax sparingly punctured; elytra deeply semigeminate-punctate-striate, the interstices slightly convex, a transverse band at the base and a rounded spot below the middle metallic green.

Var. Elytra metallic green, the posterior portion of the suture and the apex fulvous.

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

♂. Head rather closely and distinctly punctured; the clypeus separated from the face by distinct grooves; antennæ nearly as long as the body, fulvous, the seventh joint (and sometimes the eighth also) obscure fuscous; thorax transverse, the sides straight at the base but rounded from the middle to the apex, the anterior angles mucronate, the surface sparingly punctured; elytra deeply punctured, the punctures mostly arranged in single rows but here and there geminate, the interstices somewhat swollen, costate at the apex and at the sides, the metallic-green basal band strongly oblique or rounded on its hinder edge, the posterior spot not extending to either margin; underside and legs entirely fulvous.

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

Similar in coloration and pattern to *C. ancora* &c., but differing from these in the coloration of the antennæ. The elytra are coarsely and more sparsely punctured than in *C. ancora*, with the interstices more or less swollen; in the female (which is much larger than the same sex of *C. ancora*) the interstices are strongly costate at the sides, and the punctures are also more distinctly geminate. In one specimen the fifth to the eighth joints of the antennæ are fuscous; in the variety the metallic-green band is united with the posterior spot on the disc.

XANTHONIA (p. 164).

Xanthonia marmorata (p. 165).

To the localities given, add:—MEXICO, Ventanas in Durango, Zacualtipan in Hidalgo (*Höge*), Amula and Chilpancingo in Guerrero (*H. H. Smith*); PANAMA, Peña Blanca (*Champion*).

The specimens lately obtained at the above localities vary considerably in the extent of their markings and also in size and sculpture: in some examples the elytral punctuation is irregular, in others it is arranged in rows and the interstices are finely costate, this latter peculiarity being probably sexual. Of the light fulvous variety many additional specimens have also been received. It is not impossible that *X. marmorata* may ultimately prove to be a variety of *X. decemnotata* (Say) or of some other described species. In a few specimens from Chilpancingo the elytral spots form irregular patches.

THOOTES. (To follow the genus *Xanthonia*, p. 166.)

Body oblong-ovate, glabrous; eyes entire; antennæ gradually thickened; thorax transverse, flattened on the disc, with a distinct lateral margin; elytra punctured in rows; legs slender, the femora unarmed; the first joint of the posterior tarsi as long as the following two joints united; claws appendiculate; prosternum strongly narrowed between the coxæ, its base truncate; the anterior margin of the prothoracic episterna concave.

The Mexican insect for which this new generic name is proposed has the general appearance of a *Xanthonia*, from which it differs in the thorax having a very distinct lateral margin and a glabrous upper surface; the prosternum also is much more strongly constricted at the middle than it is in *Xanthonia*.

1. **Thootes glabratus.**

Fulvous; the head and thorax closely punctured; elytra metallic blue, strongly punctate-striate.
Var. Elytra fulvous with a more or less distinct bluish gloss on the disc, or entirely fulvous.
Length 1–1$\frac{1}{4}$ line.

♂. Head distinctly but not very closely punctured, fulvous; palpi flavous, the terminal joint thickened; antennæ two-thirds the length of the body, fulvous, the terminal joints gradually but rather strongly thickened, the third and fourth equal, the following joints slightly longer; thorax about one half broader than long, the sides strongly rounded, the disc with a shallow transverse depression at the middle, the surface strongly and closely punctured, fulvous; scutellum small, obscure fulvous; elytra much wider at the base than the thorax, the shoulders prominent and raised, the surface dark metallic blue (the shoulders and apex sometimes fulvous), the punctures strong, arranged in regular but not very close rows, those near the apex more distantly placed; underside obscure piceous; legs flavous or fulvous.

Hab. MEXICO, Zacualtipan in Hidalgo (*Höge*).

I have taken a male specimen with blue elytra for the type; the females are larger, more flattened and widened posteriorly, and have much shorter and thinner antennæ.

In this insect the thorax is transversely sulcate on the middle of the disc, while in *Xanthonia* it is sulcate in front.

FIDIA (p. 166).

Fidia albovittata (p. 167).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Frontera in Tabasco (*Höge*), Temax in Northern Yucatan (*Gaumer*).

11. **Fidia tibialis.**

Obscure æneous, finely pubescent, the tibiæ and tarsi fulvous; thorax very finely and closely punctured; elytra subquadrate, closely punctured and pubescent, the interstices at the sides finely transversely rugose.
Length 1$\frac{1}{2}$ line.
Head closely punctured and pubescent; eyes widely separated, entire; antennæ extending only to the base of the elytra, black, the lower joints piceous at the base, the terminal joints thickened; thorax somewhat depressed, subcylindrical, narrowed posteriorly and at the apex, without distinct lateral margin, the disc closely punctured, clothed with fine greyish pubescence; scutellum thickly pubescent; elytra punctured in close irregular rows near the suture and clothed with rather long whitish pubescence, the sides finely wrinkled; femora unarmed, black; tibiæ and tarsi fulvous, the latter darker at the base of each joint; underside closely pubescent.

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

A single specimen.

HABROPHORA (p. 169).

2. Habrophora viridicollis.

Dark fuscous; the antennæ fulvous, the seventh and the apical two joints black; head and thorax obscure metallic green, finely pubescent; elytra very closely punctate-striate, each with four whitish spots anteriorly and an irregular dentate transverse band below the middle.

Length $2\frac{1}{2}$–3 lines.

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

In general shape and appearance this species resembles *H. maculipennis*, from which it may be at once distinguished by the metallic green head and thorax and the slightly different pattern of the elytra. The metallic colour is not very bright, owing to the fine pubescence and the close punctuation; the spots and the elytral band are formed by fine pubescence, the spots being placed before the middle obliquely, the lateral one more elongate than the others and connected with the band at the sides, this band being of variable width and extending across the suture.

SPHÆROPIS. (To follow the genus *Habrophora*, p. 169.)

Sphæropis, Lefèvre, Rev. et Mag. Zool. 1876, p. 302; Catal. Eumolp. in Mém. Soc. Roy. Liége, xi. p. 92 (1885).

The members of this genus resemble in shape a small *Noda* or *Colaspis*, from which they may be known by the thickly pubescent upper surface; from *Colaspis* they also differ by the thorax being without lateral teeth or distinct angles, and by the terminal joints of the antennæ being thickened. One species has been obtained in plenty in various parts of the State of Panama; the five other members of the genus are inhabitants of Tropical South America.

1. Sphæropis championi.

Sphæropis championi, Lefèvre, Bull. Soc. Ent. Fr. 1877, p. clvi[1].

Hab. PANAMA, Bugaba, David, San Miguel in the Pearl Islands (*Champion*[1]).

METACHROMA (p. 169).

Metachroma variabilis (p. 170).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*).

I refer some specimens from Southern Mexico to this species, as these have the thorax and the apex of the elytra impunctate; in a few others, however, from the same locality there is an extremely fine punctuation visible on the thorax, and it is therefore possible that *M. regularis*, Jac., may only be a variety of *M. variabilis*.

Metachroma mexicana (p. 171).

To the Mexican localities given, add:—Cuernavaca in Morelos (*Höge*).

The specimens obtained by Herr Höge all belong to the unspotted variety.

7. Metachroma longicollis.

Obscure æneous, the basal joints of the antennæ and the legs fulvous; head and thorax closely punctured, the latter scarcely broader than long; elytra obscure fulvous with a strong æneous gloss, rather strongly punctate-striate.

Length 1 line.

Of narrowly elongate shape; the head æneous, rather remotely punctured on the vertex, more closely on the clypeus, the latter not separated from the face, its lower margin very slightly concave, the labrum and palpi fulvous; antennæ extending very little beyond the base of the elytra, black, the lower four joints fulvous; thorax but slightly broader than long, the sides rounded, slightly subangulate at the middle, the anterior angles not or scarcely produced, the surface rather closely and strongly punctured, a little more sparsely on the disc, the latter with a narrow longitudinal smooth space in the middle; elytra obscure fulvous with a metallic æneous gloss, without any basal depression, the punctures rather strong and very regularly placed, gradually diminishing towards the apex, the interstices flat and impunctate; underside æneous, coarsely punctured; legs fulvous, the femora with a slight æneous gloss.

Hab. MEXICO, San Juan Bautista in Tabasco (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

Of this very distinct but typical species only a single specimen was obtained by Herr Höge, two others by Mr. Champion. These latter are rather smaller, and have the elytra of a more decided æneous colour.

8. Metachroma ornata.

Black or piceous, the basal joints of the antennæ and the legs fulvous; above fulvous, the head with one, the thorax with two black spots; elytra strongly punctate-striate, the apex nearly impunctate, the disc with an irregularly shaped subquadrate black patch.

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

Head rather closely and finely punctured, the vertex with a central black spot, the clypeus not separated from the face, finely rugose; labrum fulvous; eyes deeply notched; antennæ black, the lower six joints fulvous; thorax transverse, the sides strongly rounded, the surface scarcely perceptibly punctured, fulvous, a large transverse slightly sinuate black spot on either side; scutellum fulvous; elytra pale fulvous, deeply punctate-striate, the humeral interstice convex and extending obliquely to the sides, the other interstices flat and impunctate, the disc with a large subquadrate black patch (commencing below the base and extending beyond the middle, and with all its margins concave, the lateral ones deeply so), which extends upwards along the suture to the scutellum, and laterally in a narrow stripe to the shoulders, and is interrupted in the middle on either side of the suture by a narrow stripe of the ground-colour, the sides with two small black spots placed close to the lateral margin—one below the shoulders, the other a little before the middle.

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

In one specimen the thorax has four small spots instead of two large ones.

9. **Metachroma bipunctata.**

Black, the basal joints of the antennæ and the head fulvous; the thorax fulvous, with two black spots, closely punctured; elytra flavous, strongly punctate-striate, the suture and a small spot below the middle, black.

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

Head finely and closely punctured on the vertex, the latter stained with piceous at the sides; the clypeus mor strongly and remotely punctured, its lower margin moderately strongly emarginate; labrum fulvous; mandibles black; antennæ with the lower six joints fulvous, the others black; thorax transverse, the sides strongly rounded, the anterior angles dentiform, the surface very closely punctured, the punctures more distinct at the sides than on the disc, the latter fulvous, with two elongate, rather distantly placed, black spots; scutellum piceous; elytra flavous, very strongly, deeply, and regularly punctate-striate, the punctures piceous in colour and distinct to the apex, the interstices minutely punctured, and at the sides rather strongly costate, the suture and a small spot on the fifth interstice below the middle black; underside black; legs fulvous.

Hab. Mexico, Vera Cruz (*Höge*).

10. **Metachroma quadrimaculata.**

Fulvous, the antennæ (the lower four joints excepted) black; thorax very finely punctured, with four black spots, placed transversely; elytra rather finely punctate-striate, the sutural and lateral margins, an oblique stripe at the shoulder, and another near the apex, black.

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

Head with a black spot in the middle, rather coarsely and closely punctured on the vertex, the punctures somewhat elongate, the clypeus strongly and irregularly punctured; antennæ proportionately slender, black, the lower four or five joints pale fulvous; thorax of the same shape as in *M. ornata*, very finely and remotely punctured, the disc with four elongate equidistant black spots; scutellum with a few fine punctures; elytra more finely punctured than in *M. ornata*, with a distinct lateral depression below the base, the punctures becoming indistinct towards the apex, each elytron with an oblique short stripe extending from the shoulder towards the middle, and another (longer or shorter) spot or stripe below the middle, the suture and lateral margin (narrowly) black, the sutural stripe in some specimens being widened into a spot below the scutellum; underside and legs fulvous.

Hab. Mexico, Cuernavaca in Morelos (*H. H. Smith*).

EUMOLPUS (p. 172).

Eumolpus surinamensis (p. 172).

To the localities given, add:—Mexico, Northern Sonora (*Morrison*), Presidio de Mazatlan (*Forrer*), Ventanas in Durango, Huetamo in Michoacan, Tonila in Colima, Tapachula in Chiapas (*Höge*), Tepetlapa, Mescala, and Acapulco in Guerrero, Puente de Ixtla in Morelos (*H. H. Smith*); Panama, David, Bugaba (*Champion*).

The specimens from Sonora differ from all those from the other localities in having the oblique lateral grooves which separate the clypeus from the face obsolete, and it is possible that they represent a closely allied species; but in the absence of other marks of distinction, it is not advisable to separate these forms.

MYOCHROUS (p. 174).

Myochrous melancholicus (p. 174).

To the Mexican localities given, add:—Villa Lerdo in Durango, Cholula in Puebla, Frontera in Tabasco (*Höge*).

6. Myochrous carinatus.

Obscure æneous, clothed with yellow scales; the basal five joints of the antennæ fulvous; the head with two oblique ridges on the vertex; the thorax with three lateral teeth; elytra rather finely punctate-striate; anterior tibiæ distinctly, the posterior femora obsoletely, toothed.

Length 2–2½ lines.

Hab. Mexico, Toxpam (*Sallé*), Teapa and San Juan Bautista in Tabasco (*H. H. Smith, Höge*).

M. carinatus differs from all the other species of the genus known to me by the more or less distinct oblique ridges on the vertex of the head. The entire upper surface is, as usual, covered with thick yellowish scales, which often obscure the punctuation; the labrum and the basal five joints of the antennæ are fulvous; the thorax is about as broad as long, but the teeth at the sides are much more distantly placed than they are in *M. melancholicus*.

TYPOPHORUS (p. 177).

2 (a). Typophorus interstitialis.

Bluish-black, the basal six joints of the antennæ fulvous; thorax strongly rugosely punctured; elytra with a large pale red basal spot, strongly punctate-striate, the interstices finely punctured.

Length 3 lines.

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

The strongly, semirugosely, punctured head and thorax and the finely punctured elytral interstices distinguish this species from all others of the genus known to me. The red basal spot extends nearly to the middle, but not quite to the sutural margin of the elytra, and its posterior edge is strongly oblique; the elytra have no basal transverse depression, and their punctured striæ are visible to the apex. The femora are armed with a minute tooth. A single specimen.

Typophorus chalceus (p. 179).

To the Mexican localities given, add:—Acapulco in Guerrero, Tapachula in Chiapas (*Höge*), Temax in North Yucatan (*Gaumer*).

Very variable in size and punctuation, as well as in colour. *T. viridicyanea* (Crotch) seems to me to be only a blue variety of this species; if so, Lefèvre's name cannot stand. Numerous specimens were obtained by Herr Höge during his second expedition.

Typophorus mexicanus (p. 180).

To the localities given, add:—Mexico, Chilpancingo, Xucumanatlan, and Amula, all in Guerrero (*H. H. Smith*), Cuernavaca in Morelos, Jalapa and Fortin in Vera Cruz, Tapachula in Chiapas (*Höge*, *H. H. Smith*).

Variable in size, and occasionally also in the colour of the legs, which in some specimens are black. *T. mexicanus* seems to differ from *T. cyanipennis*, Lefèvre, in the much longer antennæ, these organs extending considerably beyond the middle of the elytra.

Typophorus melanocephalus (p. 180).

To the Mexican localities given, add:—Cuernavaca in Morelos (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

Of this species several specimens of a variety with an almost black thorax were obtained by Herr Höge; they differ in no other way whatever from the type.

Typophorus nigricollis (p. 181).

To the Mexican localities given, add:—Tupataro in Guanajuato (*Höge*), Amula in Guerrero (*H. H. Smith*).

Typophorus variabilis (p. 182).

To the Panama locality given, add:—Bugaba, Boquete, David, Tolé (*Champion*).

13. **Typophorus apicicornis.**

Dark or pale fulvous, the sixth to the tenth joints of the antennæ black; thorax obsoletely punctured; elytra strongly punctate-striate anteriorly, much more finely so posteriorly, each with two spots at the base, and a larger one on the disc, obscure piceous; apices of the femora and the tibiæ black.

Var. Entirely fulvous.

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

Head nearly impunctate, smooth; the clypeus not separated from the face, but forming a plane surface; the ocular sulci deep; antennæ black, the lower five joints and the apical one fulvous; thorax rather broad and not very convex, the sides deflexed, the lateral margin nearly straight, the surface with a few fine irregularly distributed punctures; elytra with a very obsolete depression below the base, strongly punctate-striate anteriorly, the punctures nearly obsolete on the apical portion, each elytron with a small spot on the shoulder, another near the scutellum, and a larger more elongate one on the middle of the disc; legs and underside fulvous, the knees and the apices of the tibiæ more or less black.

Hab. Panama, Caldera and Tolé in Chiriqui (*Champion*).

Of this small species a good many specimens were obtained, the majority of which belong to the varietal form, only a few examples being spotted. *T. apicicornis* seems to be closely allied to *T. histrio*, Lefèvre, of which only a short diagnosis is given; but

apparently differs from it in the colour of the antennæ, the entirely smooth head without transverse groove, the finely punctured thorax, and the more strongly punctate elytra, as well as in the colour of the legs. Some of the specimens are pale fulvous, rather broader in shape, and more finely punctured.

This species agrees with *Typophorus* in having broad ocular sulci, and with *Paria* in the absence of any grooves on the head.

14. **Typophorus limbata.**

Greenish-black, the lower five joints of the antennæ pale fulvous; head impunctate; thorax extremely finely punctured; elytra very finely punctate-striate, the punctures obsolete below the middle, the disc greenish-black, the sides broadly reddish-fulvous.

Length 3 lines.

Hab. GUATEMALA (*coll. Jacoby*).

Of this very distinctly marked species I have received a single specimen from the Stuttgart Museum. The impunctate head, scarcely perceptibly punctured thorax, and very finely punctured elytra, as well as the peculiar coloration of the latter, will help to distinguish *T. limbata*. The fulvous colour of the sides of the elytra gradually extends inwards towards the apex, the greenish sutural portion terminating in a point. The femora have a small tooth.

PARIA (p. 182).

Paria nigritarsus (p. 184).

To the locality given, add:—PANAMA, Bugaba in Chiriqui (*Champion*).

Some differences which I attribute to local variation are to be found in the Chiriqui specimens, these being rather smaller and having neither the suture nor the tarsi black; in one of these examples, however, the tarsi are piceous.

6. **Paria picta.**

Fulvous, a spot on the head, three spots on the thorax, and two on the elytra, as well as the knees, black; thorax nearly impunctate; elytra with some strong punctures anteriorly, scarcely punctured posteriorly.

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

Head impunctate, the clypeus not separated from the face, the ocular grooves deep, the vertex with an elongate, posteriorly widened, spot; antennæ fulvous, each joint fuscous at its apex; thorax with a few very fine punctures, fulvous, the margins darker, the disc with three black spots placed transversely, of which the middle one is more elongate than the others; elytra with a slight depression below the base, the punctured striæ rather deep anteriorly, but diminishing gradually and scarcely visible near the apex, a short black streak at the centre of the base, and a longer one (widened anteriorly) below the middle; beneath fulvous, the apex of the femora and the base of the tibiæ black.

Hab. BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

In one of the specimens obtained the lateral margins of the elytra and the sides of the breast are also black.

7. Paria binotata.

Pale fulvous, the last five joints of the antennæ piceous; thorax finely but distinctly punctured; elytra finely punctate-striate, the punctures indistinct near the apex, a short elongate spot near the base, and a more rounded one at the middle, black.

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

Head impunctate on the vertex; the clypeus with a few fine punctures, not separated from the face; antennæ with the lower six joints fulvous, the others piceous or black; thorax much broader than long, the sides rather strongly deflexed, the surface not very closely but distinctly punctured; scutellum broader than long; elytra not visibly depressed below the base, more strongly punctured than the thorax, the punctures becoming almost obsolete towards the apex.

Hab. Mexico, Ventanas in Durango, Tupataro in Guanajuato (*Höge*).

This species, of which more than a dozen examples were obtained, agrees very nearly with the description of *P. lævicollis*, Crotch; this latter, however, is said to have the thorax impunctate. The basal spot on the elytra is elongate, and placed between the fourth and fifth striæ, the other being round, and situated a little nearer the lateral margin. No varieties are to be found amongst the specimens.

PHANÆTA (p. 185).

2. Phanæta (?) strigicollis.

Metallic greenish, æneous, or bluish; the basal joints of the antennæ and the base of the femora fulvous; thorax closely strigose-punctate; elytra strongly and closely punctate-striate, the sides with a longitudinal costa near the margin.

Length $1\frac{1}{4}$–$1\frac{3}{4}$ line.

Head strongly punctured, the interspaces finely granulate; eyes notched at their inner margin; antennæ with the terminal five joints strongly thickened, black, the lower six joints fulvous; thorax transversely convex, twice as broad as long, the sides straight at the base, strongly rounded in front, the posterior angles produced into a point, the surface crowded with elongate deep punctures which assume the shape of strigæ at the sides; elytra not wider at the base than the thorax, convex, subcylindrical, the punctuation stronger than that of the thorax, and placed in close rows, the interstices scarcely perceptibly punctured, the sides with a narrow but acute ridge extending from the shoulder to the apex; underside greenish-black, the breast metallic green; legs variable in colour—greenish-black with the base of the femora fulvous, or fulvous with black tarsi; the anterior margin of the prothoracic episterna strongly convex; prosternum longer than broad, widened at the apex.

Hab. Mexico, Puebla (*Sallé*), Tacambaro in Michoacan, Tonila in Colima, Acapulco in Guerrero, Yautepec and Cuernavaca in Morelos (*Höge*).

This insect bears a most striking resemblance in colour, shape, and sculpture to *Spintherophyta thoracica* (=*cyanea*, Lefèvre); it can scarcely be distinguished from that species without an examination of the anterior margin of the prothoracic episterna, this being straight in *Spintherophyta*, and strongly convex in *P. strigicollis*. For this reason I have placed the species in *Phanæta*, notwithstanding its somewhat different general appearance. The colour of the elytra varies from dark to lighter blue and from green to æneous.

3. **Phanæta (?) chrysodinoides.**

Blackish, above metallic dark blue or obscure æneous; the base of the antennæ, the apex of the tibiæ, and the tarsi more or less fulvous; thorax closely punctured, the punctures partly oblong; elytra closely punctate-striate; the apex of the anterior tibiæ produced into a tooth.

Var. Legs entirely fulvous.

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

Head rather closely and strongly punctured, the clypeus not separated from the face, the eyes notched at their inner margin; labrum fulvous, the disc piceous; antennæ extending to the middle of the elytra, the terminal joints gradually thickened, the lower six joints fulvous, the basal one stained with piceous above, the third and fourth joints equal; thorax transversely convex, narrowed in front, the sides rounded, the anterior angles acute, the surface rather closely punctured, the punctures somewhat elongate in shape at the sides; scutellum broad, smooth; elytra subcylindrical, convex, without basal depression, more strongly punctured than the thorax, the punctures arranged in close rows; legs robust, the apices of the tibiæ and the tarsi fulvous; the anterior tibiæ produced into an acute tooth at the apex; the anterior margin of the prothoracic episterna slightly convex.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Ventanas, Refugio, and Ciudad in Durango (*Höge, Forrer*).

This insect has the appearance of a species of *Chrysodina*. It possesses the principal structural characters of *Phanæta*; but is somewhat doubtfully included by me in that genus, owing to the more transversely-shaped thorax, the much less convex anterior margin of the prothoracic episterna, and the dentate anterior tibiæ. M. Lefèvre is of opinion that the species is best placed in *Phanæta*. The breast has generally a metallic greenish tint, but the rest of the underside is nearly black.

COLASPOIDES (p. 185).

Colaspoides chiriquensis (p. 186).

To the Panama locality given, add:—Bugaba (*Champion*).

This species proves to be very variable in colour, and amongst the numerous specimens since received the following varieties are to be found:—

a. Above bright cupreous or aureous.
b. The head and thorax aureous, the elytra dark blue with the apical margin aureous.
c. Above entirely dark blue, the legs piceous.

These additional examples vary in size from $2\frac{1}{2}$ to 3 lines. The dark blue form might easily be mistaken for *C. unicolor*, Jac.; but in that species the general shape is narrower, the head has a triangular groove, the antennæ have only the basal joints fulvous, and the thorax is strongly narrowed at the sides and more punctured.

4 (a). **Colaspoides fulgurans.**

Colaspoides fulgurans, Lefèvre, Revue et Mag. Zool. 1875, p. 138[1].

Hab. Costa Rica (*Van Patten*).—Brazil[1].

Two Costa Rican specimens before me agree entirely with a Brazilian one named by

Lefèvre, and contained in my collection. The entire upper surface of *C. fulgurans* is bright metallic aureous; the underside and legs are metallic violaceous blue, and the tarsi are fulvous.

PHÆDON (p. 188).

5. Phædon fusculum.

Ovate, obscure fusco-æneous, the basal joints of the antennæ and (sometimes) the head and thorax obscure fulvous; thorax irregularly and finely punctured; elytra finely punctate-striate, the interstices very finely coriaceous.

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

Head finely and somewhat closely punctured, the clypeus separated from the face by a narrow triangular groove; antennæ extending to the base of the elytra, fulvous, the terminal five joints black, transverse; thorax more than twice as broad as long, the sides straight at the base, slightly rounded anteriorly, the surface irregularly and very finely punctured, the punctures of elongate shape and closely placed along the posterior margin; scutellum impunctate; elytra nearly parallel, generally darker in colour than the thorax, fusco-æneous, the shoulders not prominent, but marked within by a rather distinct depression, the punctured striæ very distinct and regular, the interstices finely coriaceous; underside obscure fulvous with a slight æneous gloss.

Hab. MEXICO, Huetamo and Tacambaro in Michoacan, Acapulco in Guerrero (*Höge*).

P. fusculum may be principally distinguished by its obscure fulvous head and thorax and æneous or fuscous elytra; the basal joints of the antennæ are also obscure fulvous.

6. Phædon varicolor.

Subelongate, metallic green, the antennæ and tarsi black; thorax cupreous (or green), closely and finely punctured; elytra finely punctate-striate, the interstices very finely transversely rugose.

Length $1\frac{3}{4}$–2 lines.

Head greenish or cupreous, finely and rather closely punctured; the antennæ black, extending to the base of the elytra; thorax scarcely widened at the middle, transverse, the sides straight at the base, rounded in front, the surface punctured like that of the head, not more strongly so at the sides than at the middle; scutellum cupreous or green; elytra rather elongate in shape, the punctured striæ fine, the punctures themselves closely placed, the interstices very finely transversely strigose or wrinkled.

Hab. MEXICO, near the city (*H. H. Smith*).

Two examples. More elongate and less convex in shape than its allies from our region, and principally separated by the evenly distributed punctuation of the thorax, the finely transversely strigose elytral interstices, and the bright green metallic colour; one specimen has the head and thorax cupreous. In these particulars *P. varicolor* differs from any of its North-American congeners.

7. Phædon seticornis.

Obscure greenish-black, the antennæ and tarsi black; head and thorax greenish-cupreous, closely punctured; elytra obscure violaceous, finely punctate-striate.

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

Of ovate, convex shape; the head finely and rather closely punctured, without distinct depression between the eyes, obscure greenish-cupreous, semiopaque; antennæ black, the terminal joints gradually widened and strongly transverse, each joint furnished with a few erect hairs; thorax nearly three times as broad as

long, distinctly widened at the middle, the sides but slightly rounded at the base, more strongly so towards the apex, the surface closely and rather strongly but somewhat irregularly punctured, the disc reddish, the sides greenish-cupreous, semiopaque; scutellum metallic greenish; elytra narrowed at the base and apex, fusco-violaceous, finely punctate-striate, the interstices extremely finely coriaceous.

Hab. Mexico, Ventanas in Durango (*Forrer*).

More convex than *P. varicolor*, the thorax more transverse, the elytra differently punctured. A single specimen.

8. **Phædon multipunctatus.**

Dark æneous, the basal joints of the antennæ, the lower part of the head, the sides of the thorax, the legs, and the last two abdominal segments flavous; thorax impunctate; elytra strongly and very closely punctured.

Length 1½ line.

Of ovate, feebly convex shape; the head with a few minute punctures, rather deeply depressed between the eyes, the vertex dark æneous, the lower portion, labrum, and palpi flavous; antennæ scarcely extending to the base of the thorax, the lower six joints flavous, the others black and strongly transverse; thorax transverse, the sides nearly straight, narrowed in front, the disc impunctate, blackish-æneous, the lateral portion with a few fine punctures, flavous, and with an obsolete fovea near the margin; elytra widened towards the middle, strongly and extremely closely punctured in rows, with three or four indistinct longitudinal raised lines, the shoulders rather prominent; legs and the last two abdominal segments flavous; prosternum narrowed between the coxæ.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single specimen. The comparatively small size, the feebly convex shape, and the very close elytral punctuation separate *P. multipunctatus* from several somewhat similarly coloured species found in the more southern parts of America.

PLAGIODERA (p. 189).

14. **Plagiodera bis-tripunctata.** (Tab. XLI. fig. 1.)

Plagiodera bis-tripunctata, Duvivier, Comptes Rend. Soc. Ent. Belg. 1885, p. cxviii[1].

Hab. Panama, Volcan de Chiriqui (*Champion*), Chiriqui[1].

Of this comparatively large-sized species very many specimens were obtained by Mr. Champion. The head has one spot, the thorax has seven, and the elytra have three spots, those on the latter placed in a triangle below the base; the general ground-colour is fulvous; the antennæ and legs are partly or entirely black. In some specimens the thoracic spots are more or less confluent; in others the suture has a short black streak anteriorly. Common on bushes on the savanas in Chiriqui at an elevation of 4000 feet (*Champion*).

15. **Plagiodera viridimaculata.** (Tab. XLI. fig. 2.)

Testaceous, the apical joints of the antennæ and the tarsi black; thorax impunctate; elytra closely punctured, each with six metallic green round spots (1, 2, 2, 1).

Length 2 lines.

Head impunctate; the basal five joints of the antennæ fulvous, the other joints black, strongly transverse, the first joint thickened, the second elongate, the following three joints gradually shortened; thorax about three times as broad as long, slightly longer at the sides than at the middle, the lateral margins but little rounded, the disc impunctate; scutellum obscure piceous; elytra rounded, convex, rather strongly and closely punctured, the punctures arranged in very irregular rows, which are here and there separated by smooth longitudinal spaces, the lateral margins thickened and accompanied by an impressed line, which is very strongly marked towards the base, the suture very narrowly and six round spots on each elytron metallic green, the spots placed thus—one at the shoulder, two obliquely before, two others (more transversely) below the middle, and one near the apex; underside darker than above; the knees and tarsi black.

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

A single specimen.

16. **Plagiodera obscuripennis.**

Subrotundate, convex, fulvous, the apical joints of the antennæ black; thorax nearly impunctate; elytra blackish, finely and subremotely punctured, the lateral margins and the epipleuræ fulvous.

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

Head fulvous, entirely impunctate; the antennæ short, the last six joints strongly transverse, black, the others fulvous; thorax strongly transverse, the sides straight, greatly narrowed in front, the posterior margin oblique on each side, straight in front of the scutellum, the angles obtuse, the surface impunctate or with a few minute punctures; scutellum fulvous, its apex broadly rounded; elytra blackish, with a faint bluish gloss, the shoulders slightly raised, the surface finely but not closely punctured, the punctures arranged partly in double rows near the suture, the extreme lateral margins and the epipleuræ fulvous; underside and legs fulvous, impunctate.

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

The nearly impunctate thorax, the blackish elytra, and the extremely narrow fulvous margin of the latter principally distinguish *P. obscuripennis*.

17. **Plagiodera arizonæ.**

Plagiodera arizonæ, Crotch, Proc. Ac. Phil. 1873, p. 53[1].

Hab. NORTH AMERICA, Arizona[1].—MEXICO, Northern Sonora (*Morrison*).

The specimens received from Mr. Morrison, and named by him *P. arizonæ*, agree with the short description given by Crotch, who says that the species is extremely near *P. californica*, Rogers; this latter, however, belongs to the genus *Lina*, and differs totally in colour from the present insect, being entirely of a blackish-green hue. In *P. arizonæ* the head, thorax, underside (with the exception of the breast, which is dark bluish), and legs are fulvous, and the elytra are obscure greenish or bluish; the first four joints of the antennæ are fulvous, the rest black; the thorax is finely and very irregularly punctured (sometimes almost impunctate on the disc); the elytra may be described as rugosely punctate, the interstices being everywhere transversely wrinkled. *P. arizonæ* is omitted from Gemminger and Harold's Catalogue, and also from that of Duvivier.

LINA (p. 193).

Lina scripta (p. 194).

To the Mexican localities given, add:—Presidio de Mazatlan and Ventanas (*Forrer*), Guadalajara in Jalisco (*Höge*).

Found in abundance by Herr Höge at Guadalajara.

Lina depressa (p. 194).

To the localities given, add:—MEXICO, Atlixco (*F. D. G.*), Teapa (*H. H. Smith*); GUATEMALA, Panzos and Teleman (*Champion*).

A specimen of this species was found by Mr. Godman in the nest of *Œcodoma cephalotes*. Nearly all the numerous examples obtained by Mr. Smith belong to a variety in which the elytral markings are obsolete, or only just indicated.

Lina scabricula (p. 194).

To the localities given, add:—GUATEMALA, Chimaltenango (*Conradt*).

CALLIGRAPHA (p. 195).

Calligrapha diversa (p. 196).

To the Mexican localities given, add:—Atlixco in Puebla, Morelia in Michoacan, Tula in Hidalgo, Mexico city, Teapa in Tabasco (*Höge*), Tepetlapa, Amula, Chilpancingo, Xucumanatlan, Soledad, all in Guerrero (*H. H. Smith*).

Calligrapha multipustulata (p. 197).

To the Mexican localities given, add:—Ventanas in Durango (*Forrer*, *Höge*), Acapulco, Chilpancingo, Teapa in Tabasco, Tapachula (*Höge*).

Apparently, like *C. ancoralis*, a common insect at Ventanas.

Calligrapha notatipennis (p. 198).

To the localities given, add:—Temax in North Yucatan (*Gaumer*), Acapulco in Guerrero (*Höge*); GUATEMALA, Capetillo, Zapote (*Champion*).

Calligrapha labyrinthica (p. 199).

To the Mexican localities given, add:—Ventanas in Durango, Huetamo in Michoacan (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

Calligrapha suffriani (p. 199).

To the Mexican locality given, add:—Presidio de Mazatlan (*Forrer*), Ventanas in Durango (*Höge*).

The specimens from the above localities differ from the type in the greenish-æneous colour of the elytral markings; the markings themselves also vary somewhat in shape, thus, the sutural band is interrupted at a little distance from the base, and the small spots below the middle are often more or less confluent; the antennæ and legs in all these examples are, however, fulvous or piceous as in the type. *C. suffriani* may perhaps be most readily identified by the shape of the elongate mark at the shoulder, this being usually divided into three branches—one on the inner side and two behind.

Calligrapha suboculata (p. 200).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Tapachula in Chiapas (*Höge*); GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

Calligrapha ramulifera (p. 201).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Cerro Zunil, San Isidro (*Champion*).

12 (A). **Calligrapha fulvitarsis.** (Tab. XLI. fig. 3.)

Greenish-æneous, the antennæ, labrum, and tarsi dark fulvous; thorax sparingly punctured; elytra flavous, a broad sutural stripe with three lateral projections, an elongate shoulder-spot, a round spot near the scutellum, and nine or ten small spots on the disc, greenish-æneous.

Length 4 lines.

Head finely punctured; antennæ entirely fulvous, the terminal joints but gradually and slightly thickened; thorax twice as broad as long, scarcely widened at the middle, the sides straight at the base, very slightly rounded in front, the disc finely and sparingly, the sides more deeply, but not closely, punctured; elytra punctate-striate near the suture, the rest of the surface irregularly punctured, with a broad sutural stripe—narrowed towards the base, and with a short branch on each side, obliquely angulate below this branch, then narrowing, and below the middle suddenly widened again—and numerous spots—an elongate one, pointed behind, placed on the shoulder, a round one near the scutellum, three small ones placed obliquely before and two others below the middle, and a larger spot (sometimes divided) and two smaller ones near the apex, and, in addition to these, one joins the sutural stripe near the apex, and a thin elongate spot is placed near the lateral margin at the middle, all these markings being generally surrounded by a paler yellowish margin; the apices of the tibiæ and the tarsi fulvous or obscure fulvous.

Hab. PANAMA, Bugaba (*Champion*).

Numerous examples. *C. fulvitarsis* is very closely allied to *C. suboculata*, *C. ramulifera*, and several other species, but shows constant differences in the shape of the sutural stripe of the elytra, and in the colour of the antennæ and tarsi. The sutural stripe is obliquely angulate below the base, the angle pointing downwards, this character being constant in all the specimens obtained. The markings will be best understood from our figure.

Calligrapha argus (p. 201).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Tapachula in Chiapas (*Höge*); PANAMA, Bugaba, Volcan de Chiriqui, San Lorenzo (*Champion*).

Calligrapha tortilis (p. 202).

To the locality Guatemala, add:—Coban (*coll. Sallé*).

Calligrapha serpentina (p. 203).

To the Mexican localities given, add:—Northern Sonora (*Morrison*), Paso del Norte, Chihuahua city, Villa Lerdo in Durango, Iguala in Guerrero (*Höge*), Temax in North Yucatan (*Gaumer*).

Many specimens of a variety of this species have been received from Yucatan; these differ from the typical form in having the elytral markings fulvous-brown with a slight bluish gloss, and the lateral spots more or less confluent, and sometimes forming a broad irregular stripe.

Calligrapha viginti-maculata (p. 203).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Coban (*Sallé*).

Calligrapha multiguttata (p. 204).

To the localities given, add:—MEXICO, Amula and Tepetlapa in Guerrero, Cuernavaca in Morelos (*H. H. Smith*); GUATEMALA, Tepan, Chimaltenango (*Conradt*).

Calligrapha barda (p. 204).

To the Mexican localities given, add:—Tula in Hidalgo, Matamoros Izucar (*Höge*).

Found in numbers by Herr Höge.

Calligrapha fulvipes (p. 205).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Tapachula in Chiapas (*Höge*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

I cannot find sufficient differences between this species and *C. nupta*, Stål, to justify a separation according to the author's description. *C. fulvipes* is a common species in Chiriqui as well as in Guatemala and Mexico.

Calligrapha felina (p. 206).

To the localities given, add:—MEXICO, Tepetlapa, Soledad, Amula, and La Venta,

all in Guerrero (*H. H. Smith*), Colima city (*Höge*); GUATEMALA, Dueñas (*Champion*); NICARAGUA, Chontales (*Belt*).

Calligrapha dislocata (p. 208).

To the Mexican locality given, add:—Saltillo in Coahuila (*Dr. Palmer*), Villa Lerdo in Durango, Pachuca in Hidalgo (*Höge*), Mexico city (*Höge*, *Flohr*).

Calligrapha violaceo-maculata (p. 208).

To the locality given, add:—PANAMA, Volcan de Chiriqui (*Champion*).

Obtained in plenty by Mr. Champion. Some specimens have the elytral markings more or less confluent; in all the head is fulvous.

37. **Calligrapha femorata.** (Tab. XLI. fig. 4.)

Dark greenish-æneous, the labrum, antennæ, and legs fulvous; thorax with the sides straight; elytra testaceous, a broad sutural stripe (connected with a stripe at the middle), the lateral margins, a broad irregular mark at the shoulder, and five spots below the middle brownish-æneous; femora with a blackish spot at the base.

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

Head moderately closely punctured, the labrum and mandibles fulvous, their extreme apex black; antennæ rather long, entirely fulvous, the terminal six joints gradually dilated; thorax more than twice as broad as long, the sides almost straight, the anterior margin strongly concave, the disc sparingly, the sides deeply and more closely punctured; elytra only punctured round the dark markings, the testaceous portion impunctate, the sutural band joined to a curved stripe at the middle, and widened into a spot near the apex, the lateral margins also brownish-æneous (more broadly so near the middle), the shoulder-spot broad, extending downwards, and joined to the sutural stripe near the base and at the middle, its outer margin biangulate, two small spots placed obliquely near the sutural stripe, a larger one below the middle connected with the lateral stripe, a similar spot near the apex, and also joined to the lateral stripe, and a transversely-shaped spot between these brownish-æneous; legs bright fulvous, the base of the femora with a large greenish-black spot.

Hab. MEXICO, Xautipa in Guerrero (*H. H. Smith*).

A single specimen. The colour of the labrum, antennæ, and legs, and the straight sides of the thorax, in connection with the dark lateral margin of the elytra, separate *C. femorata* from any of its allies.

38. **Calligrapha marginipennis.** (Tab. XLI. fig. 5.)

Greenish-æneous, the basal joints of the antennæ fulvous; thorax foveolate-punctate at the sides, sparingly punctured on the disc; elytra testaceous, the suture, lateral margin, an elongate broad spot at the shoulder, and nine or more smaller spots at the sides, greenish-æneous.

Var. The antennæ and legs obscure fulvous.

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

Hab. MEXICO, Acapulco in Guerrero (*Höge*); GUATEMALA (*coll. Jacoby*).

C. marginipennis resembles in the pattern of its elytra *C. geographica*, *C. consputa*, and several other species; but differs from all these in having the sutural stripe entirely

uninterrupted, of equal width, and split or divided near the base, and in having a similar narrow stripe accompanying the lateral margin for its entire length. The usual mark at the shoulder is broad, and extends nearly to the middle of the elytra, its posterior edge being divided into two points, the outer one of which curves outwards; a large **V**-shaped or angulated spot is placed close to the suture below the middle, and the rest of the disc is occupied by nine or ten irregular spots; the lateral and sutural stripes are joined at the apex. A Guatemalan specimen received from the Stuttgart Museum is much larger, and has many more spots posteriorly.

ZYGOGRAMMA (p. 209).

Several of the Central-American representatives of this genus are now known to extend northwards to the United-States frontier. Most of the additional species described below are also from Northern Mexico.

Zygogramma piceicollis (p. 210).

To the localities given, add:—Mexico, Northern Sonora (*Morrison*), Cholula in Puebla, Aguas Calientes city, Yautepec in Morelos, Guadalajara in Jalisco (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

Zygogramma malvæ (p. 211).

To the Mexican localities given, add:—Northern Sonora (*Morrison*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Chihuahua city, Santa Clara in Chihuahua, Villa Lerdo in Durango, Irapuato in Guanajuato, Tacambaro in Michoacan (*Höge*), Amula in Guerrero, Mexico city (*H. H. Smith*).

Amongst the numerous specimens obtained there are some in which the thorax and the elytral markings are fulvous or piceous.

Zygogramma lemur (p. 212).

To the Mexican localities given, add:—Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

Zygogramma opifera (p. 213).

To the Mexican localities given, add:—Northern Sonora (*Morrison*).

Zygogramma bigenera (p. 213).

To the Mexican localities given, add:—Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Zygogramma conjuncta (p. 215).

To the Mexican locality given, add:—Durango city (*Höge*), Monclova and Parras in Coahuila (*Dr. Palmer*).

It is somewhat doubtful whether the Mexican examples are really conspecific with *Z. conjuncta* (Rogers). The elytral markings of the latter, as figured by the author, are not like those of our specimens, but agree exactly in pattern with *Z. tortuosa* (Rogers); the design of the thorax, however, resembles that of the Mexican insect, the thorax in *Z. tortuosa* being unicolorous.

Zygogramma lepidula (p. 216).

To the Mexican localities given, add:—Salazar, Huitzilac in Morelos, Cholula in Puebla (*Höge*).

Zygogramma morbillosa (p. 216).

To the Mexican localities given, add:—Chilpancingo in Guerrero (*H. H. Smith*).

The specimens obtained by Mr. Smith vary so much amongst themselves, and also from the type, in regard to the elytral design, that it is impossible to come to a decided opinion as to whether they really belong to one species or not; the shape and position of the spots cannot be described in words, as they are frequently asymmetrical.

30. **Zygogramma fasciatipennis.** (Tab. XLI. fig. 6.)

Obscure greenish-æneous; the head and legs fulvous; thorax closely punctured, flavous, the posterior portion fulvous; elytra strongly punctured, flavous, a sutural stripe (divided anteriorly), two stripes on the disc, joined at the apex, and the posterior portion of the lateral margin, piceous.

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

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

This insect resembles *Z. conjuncta* (Rogers), from which it differs in the strongly punctured elytra, and in their fulvous epipleuræ and dark posterior portion of the lateral margin; *Z. exclamationis* (Fabr.) and several other allied species are without a marginal stripe. The elytra are entirely devoid of spots; the terminal joints of the antennæ are black (as usual); the head is closely, the thorax more sparingly punctured (finely on the disc, strongly at the sides); the basal band of the thorax is much widened inwardly and sinuate or dentate on its anterior margin, though variable in this respect; the elytral stripes are of almost equal width and nearly black—the discoidal ones coalesce at the apex and are produced into a point, the outermost of the two being slightly sinuate exteriorly—and strongly and closely punctured, the interstices more sparingly so and somewhat convex; the underside has a more or less metallic æneous gloss over a dark fulvous ground-colour; the claws are united at the base.

31. **Zygogramma obscuro-fasciata.** (Tab. XLI. fig. 7.)

Blackish-æneous, the head, thorax, and legs fulvous; elytra pale flavous, the suture and a broad stripe towards the sides obscure fulvous, the disc with numerous round blackish spots.

Length 2 lines.

Hab. Mexico, Chilpancingo and Omilteme in Guerrero (*H. H. Smith*).

Very closely allied to *Z. guttulosa* and resembling it in colour, but differing thus:—The thorax, instead of being rather strongly punctured on the disc, is nearly impunctate or very sparingly punctured; and the elytra have an obscure broad fulvous stripe towards the sides and fewer spots, these being sometimes confluent and forming elongate marks here and there (in *Z. guttulosa* the entire disc is closely spotted and the fulvous stripe is absent). About thirty specimens were obtained.

32. **Zygogramma durangoensis.** (Tab. XLI. fig. 8.)

Dark fulvous, the terminal joints of the antennæ black; thorax foveolate-punctate at the sides; elytra flavous, a sutural and a marginal stripe, three spots placed triangularly at the base, a broad curved stripe extending from the shoulder to below the middle, and two rows of smaller spots at the sides, as well as several other spots near the suture, fulvous.

Length 3–3½ lines.

Head subremotely punctured; antennæ fulvous, the terminal five joints strongly thickened, black; thorax three times as broad as long, slightly widened at the middle, the sides nearly straight, strongly produced and rounded in front, the surface irregularly but not very closely punctured, the interspaces somewhat swollen, the sides foveolate and closely punctured; elytra punctate-striate near the suture and lateral margins, the disc irregularly punctured, the sutural stripe suddenly narrowed below the base, straight and of equal width posteriorly, the marginal stripe extending from the middle to the apex, the stripe at the shoulder broad, strongly curved, and reaching to below the middle but not to the suture, the three larger spots triangularly placed near the scutellum, a row of punctures running parallel with the suture posteriorly, and two rows of smaller punctures (unequal in size and numbers) running parallel to the lateral margin; underside and legs dark fulvous, the breast with a more or less distinct æneous gloss.

Hab. Mexico, Ventanas in Durango (*Höge*).

In its markings and general colour *Z. durangoensis* somewhat resembles *Z. lemur*, but differs from it in having the lateral portion of the thorax rather strongly produced in front, causing the anterior margin to be deeply concave behind the eyes; the three spots near the scutellum, the broad curved humeral stripe, and the even sutural stripe further distinguish the species. Several specimens.

33. **Zygogramma maculicollis.** (Tab. XLI. fig. 9.)

Fulvous, the terminal joints of the antennæ black; the head with a fulvous spot; thorax flavous, the sides and a V-shaped mark on the disc fulvous; elytra testaceous, marked with numerous black spots, the suture and a broad stripe at the sides, fulvous.

Length 3–3½ lines.

Head nearly impunctate, dark fulvous, the middle flavous; antennæ dark fulvous, the terminal five or six joints black, dilated; thorax about twice as broad as long, the sides rather rounded, but slightly produced anteriorly, the surface strongly punctured towards the sides and along the basal margin, the disc nearly impunctate, flavous, the lateral portion partly and a V-shaped mark on the disc dark fulvous; elytra very strongly and irregularly punctured, with a deep and regular row of punctures accompanying the lateral

margin, and a shallower row of punctures near the suture, the latter and a broad stripe towards the sides, extending from the base to near the apex, dark fulvous, the rest of the disc and the lateral portion pale testaceous, closely marked with small blackish spots of irregular shape and size, the epipleuræ testaceous; underside and legs dark fulvous.

Hab. MEXICO, Durango city (*Höge*), Soledad in Guerrero (*H. H. Smith*).

I cannot recognize in this species *Z. pustulosa* or *Z. guttaticollis* (Stål), which are described as testaceous or æneous, with testaceous bands to the elytra, and also differ in some other particulars; possibly Stål's descriptions are incorrect or taken from immature or discoloured specimens.

In one example of *Z. maculicollis* the sublateral stripe of the elytra joins the sutural one at the apex.

34. **Zygogramma militaris.** (Tab. XLI. fig. 10.)

Dark fulvous, the apical joints of the antennæ black; thorax deeply punctured at the sides; elytra testaceous, a sutural stripe (narrowed at the base) and a broader stripe extending from the shoulder to below the middle dark fulvous, several spots near the scutellum, two rows of spots at the sides, and a very narrow stripe near the lateral margin, piceous or fuscous.

Length 3 lines.

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

Similar in colour and markings to *Z. durangoensis*, and with the thorax similarly shaped and sculptured, but differing as follows:—The elytra (instead of having three spots placed triangularly near the scutellum) have two small spots at the base and several spots near the suture; the broad sublateral stripe (which in *Z. durangoensis* has its outer margin deeply concave) is of nearly equal width throughout, being only slightly sinuate towards the middle; the marginal stripe is absent, but is replaced by a very narrow brownish line which runs parallel with the epipleuræ. Several specimens, all agreeing in the above particulars.

35. **Zygogramma decempustulata.** (Tab. XLI. fig. 11.)

Dark fulvous; the thorax sparingly punctured on the disc, strongly so at the sides; elytra irregularly punctured, fulvous, the lateral margins, a spot placed at the middle on either side, and four irregular spots placed longitudinally near the suture, flavous, margined with fuscous.

Length 3–3½ lines.

Head subremotely punctured; antennæ fulvous, the terminal five joints black; thorax fulvous, strongly transverse, the sides considerably produced in front, the disc very finely and sparingly, the lateral portion very deeply punctured; elytra with a subsutural and a submarginal row of punctures, the disc irregularly punctured, dark fulvous, the lateral margins flavous, each elytron with four irregular spots placed close to the suture—the basal one often rounded and enclosing a round spot of the ground-colour, but sometimes angular, the second before the middle, the third triangular in shape and placed below the middle, the fourth near the apex, irregularly ovate, and connected with the flavous lateral margin—and a small spot extending inwards from the flavous margin at the middle, all the spots and the margin surrounded by a piceous or fuscous line; the epipleuræ, the underside, and legs dark fulvous.

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

Found in some numbers by Herr Höge.

36. **Zygogramma thoracica.** (Tab. XLI. fig. 12.)

Black; the thorax pale fulvous, the basal margin broadly marked with black, the disc impunctate; elytra flavous, a sutural stripe (divided anteriorly), two stripes on the disc, and the posterior portion of the lateral margin, black.

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

Head black, closely punctured near the eyes; palpi black, the terminal joint not longer than the preceding one; antennæ black, the terminal five joints pubescent, thickened, the others shining, the four or five basal joints obscure fulvous; thorax about twice as broad as long, rather strongly widened at the middle, the sides straight at the base, rounded in front, but scarcely produced at the apex, the disc with a few minute punctures, the lateral portion and base more closely and strongly punctured, pale fulvous, the lateral and apical margins very narrowly, the basal margin broadly black; scutellum black; elytra punctate-striate along the inner and outer margins of the dark stripes only, for the rest irregularly punctured, flavous, a narrow sutural stripe (divided below the base), two broader stripes on the disc (the inner one the shortest, the outer one not extending to the apex), and the lateral margin from the middle to the apex, black; underside and legs black with a bluish gloss, strongly punctured.

Hab. Mexico, Durango city (*Höge*).

A single specimen. Evidently allied to *Z. rustica* (Stål), but differing in the black palpi, the divided sutural stripe, and the colour of the lateral margin of the elytra; the basal black band of the thorax is strongly concave on its anterior edge.

STILODES (p. 221).

Stilodes cœlebs (p. 223).

To the localities given, add :—Mexico, Ventanas, Acapulco (*Höge*).

14. **Stilodes quadristriata.** (Tab. XLI. fig. 13.)

Black; head flavous; thorax sparingly punctured, the sides flavous; elytra distantly striate-punctate, flavous, each with a black subsutural and a submarginal stripe.

Var. One of the elytral stripes obsolete or entirely absent.

Length $3\frac{1}{2}$–4 lines.

Head with a few fine punctures, flavous; the terminal joint of the palpi scarcely shorter than the preceding one; antennæ rather slender, the terminal joints but slightly thickened, black, the basal joints stained with flavous beneath; thorax about twice as broad as long, the sides nearly straight, the anterior angles not very prominent and rather blunt, the disc with some scattered punctures, black, the sides flavous; scutellum black; elytra wider at the base than the thorax, parallel, each with about seven rows of fine punctures, the fourth and fifth rows much more widely separated than the others, the disc flavous, a narrow black slightly curved stripe placed close to the suture (not extending to the apex) and a similar stripe occupying the space between the fifth and sixth rows of punctures, the outer stripe extending nearly to the suture; underside and legs black.

Hab. Panama, Volcan de Chiriqui 4000 feet (*Champion*).

More than a dozen specimens were obtained by Mr. Champion, who states that the species inhabits the dense forest only. When the insect is alive the elytra are of a brilliant metallic golden colour, resembling in this respect many of the Cassididæ.

LEPTINOTARSA (p. 227).

Leptinotarsa chalcospila (p. 227).

To the locality Mexico, add :—Tacambaro in Michoacan (*Höge*), Huetamo (*Flohr*).

Leptinotarsa heydeni (p. 228).

To the Mexican localities given, add:—Temax in North Yucatan (*Gaumer*).

7. Leptinotarsa behrensi.

Leptinotarsa behrensi, Har. Mitth. Münch. ent. Ver. i. p. 16 (1877) [1].
Leptinotarsa modesta, huj. op. p. 229.

To the locality given, add:—North America, California [1].—Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Canelas in Durango (*Flohr*).

In the specimens from Pinos Altos the inner margin of the elytral epipleuræ is not fulvous, as it is in those from Guanajuato.

Leptinotarsa flavitarsis (p. 231).

To the locality Mexico, add:—Tapachula in Chiapas (*Höge*).

Leptinotarsa lineolata. (Tab. XLI. fig. 14.)

Leptinotarsa lineolata, Stål, Monogr. Chrys. Amer. p. 159 [1].
Chrysomela lineolata, Crotch, Proc. Acad. Phil. 1873, p. 47 [2].

Hab. North America, Texas [1 2].—Mexico, Northern Sonora (*Morrison*), Chihuahua city (*Höge*), Pinos Altos in Chihuahua (*Buchan-Hepburn*).

L. lineolata has hitherto only been recorded from the United States, but many specimens have now been received from the Mexican localities quoted above. The species varies in size, colour, and elytral markings. The type has the head, thorax, and elytral markings metallic green or æneous; but some of the Mexican examples before me have these parts fulvous. The elytra are flavous and have each four stripes, these being interrupted at the middle and varying in length, the posterior portion of one or the other of them being often obsolete. *L. lineolata* is smaller than *L. flavitarsis* and *L. nitidicollis*, which it resembles somewhat in colour and markings; but in these species there are only two stripes on each elytron anteriorly and three posteriorly, which are partly connected.

Leptinotarsa signaticollis (p. 232).

To the Mexican localities given, add:—Tacambaro and Morelia in Michoacan (*Höge*), Cuernavaca in Morelos, Amula and Xucumanatlan in Guerrero (*H. H. Smith*).

The elytral punctuation proves to be very variable in this species, the punctures being sometimes arranged in irregular double rows with the interstices more or less convex, and sometimes irregularly distributed over the entire surface.

Leptinotarsa decemlineata (p. 233).

To the Mexican localities given, add:—Monclova in Coahuila (*Dr. Palmer*), Chihua-

hua city, Durango city, Ventanas in Durango, Guadalajara in Jalisco, Matamoros Izucar in Puebla, Cuernavaca in Morelos, Tacambaro in Michoacan (*Höge*), Venta de Zopilote in Guerrero, Mexico city (*H. H. Smith*).

I refer all the specimens from the above-mentioned additional localities to *L. decemlineata*, all having fulvous legs, more or less marked or spotted with black. According to Crotch, *L. multilineata* (Stål) is specifically distinct; I believe, however, that it is only a variety of *L. decemlineata*. The locality "Costa Rica" quoted by me at p. 233 requires confirmation.

18 (A). **Leptinotarsa angustovittata.** (Tab. XLI. fig. 15.)

Leptinotarsa undecimlineata, huj. op. (partim).

Black; the head with two flavous spots; the thorax and elytra flavous, the former spotted with black, the latter with eight narrow black, strongly punctured, longitudinal stripes.
Length 5–6 lines.

Hab. MEXICO, Guanajuato (*Sallé*), Morelia and Tacambaro in Michoacan (*Höge*), Xucumanatlan in Guerrero (*H. H. Smith*).

This insect was previously treated by me as a variety of *L. undecimlineata*; but as we have now received about twenty additional specimens, all alike, I am compelled to treat it as a distinct species. It agrees in everything with *L. undecimlineata*, except that the elytra have eight very narrow black stripes, each of which is abbreviated at a short distance before the apex; these stripes are deeply punctured in single, sometimes in double and very closely contiguous, rows (this character separating the species from *L. undecimlineata*, in which each elytron has four much broader stripes, and the stripes singly or doubly punctured along their margins).

Both *L. angustovittata* and *L. undecimlineata* occur at Guanajuato.

Leptinotarsa melanothorax (p. 234).

To the Mexican localities given, add:—Monclova in Coahuila (*Dr. Palmer*), Ciudad in Durango (*Forrer*), Morelia in Michoacan, Toluca, Mexico city (*Höge*).

Leptinotarsa libatrix (p. 236).

To the Mexican localities given, add:—Xautipa, Mescala, Savana Grande, and Dos Arroyos, all in Guerrero (*H. H. Smith*), Huetamo in Michoacan, Chilpancingo, Tapachula in Chiapas (*Höge*).

36. **Leptinotarsa typographica.** (Tab. XLI. fig. 16.)

Greenish-black or greenish-fulvous, the basal joints of the antennæ, the head, thorax, and legs fulvous; elytra testaceous, two stripes near the suture (the outer one interrupted), two short transverse bands about the middle, a number of spots beyond the middle, and the lateral margins, black.
Length 4 lines.

Head sparingly punctured and very finely semirugose, the vertex with a blackish spot; antennæ black, the basal five joints fulvous; thorax three times as broad as long, widened at the middle, the anterior margin slightly convex, the posterior margin strongly rounded, the sides slightly converging towards the apex, the surface opaque, fulvous, finely and rather closely punctured, the interspaces exceedingly minutely punctate or coriaceous, all the margins (or the basal and apical ones only) very narrowly piceous; scutellum dark fulvous; elytra strongly convex, testaceous, their epipleuræ fulvous, a subsutural stripe, two shorter stripes placed anteriorly (the outer one connected with a stripe turned obliquely upwards), a transverse band about the middle, eight or ten spots beyond the middle, and a small spot at the shoulders, blackish; underside blackish-green, with the sides of the breast obscurely fulvous, sometimes paler; legs entirely fulvous.

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

Like several of its congeners, *L. typographica* has the elytra marked with dark stripes; these stripes, however, in the present species are confined to the anterior portion, the posterior part being spotted—five spots running parallel with the suture, and some others forming two additional rows on the outer portion of the disc, the spots bounded anteriorly by a transverse band at the middle; the short stripe near the shoulders is joined in front to the second discoidal one.

LABIDOMERA (p. 240).

Labidomera suturella (p. 240).

To the Mexican localities given, add:—Temax in Northern Yucatan (*Gaumer*).

PROSICELA (p. 241).

Prosicela tibialis (p. 241).

A renewed examination of this species, which proves to be apterous, has convinced me that the true place for it is in *Elytrosphæra*.

DORYPHORA (p. 242).

Doryphora semiambita (p. 245).

To the localities given, add:—MEXICO, Jalapa in Vera Cruz, Tapachula in Chiapas (*Höge*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, El Rincon in San Marcos (*Richardson*), San Juan in Vera Paz (*Champion*).

Apparently a common insect in Tabasco.

Doryphora decorata (p. 250).

To the locality given, add:—PANAMÁ, Volcan de Chiriqui (*Champion*).

27 (A). **Doryphora stabilis.** (Tab. XLI. fig. 17.)

Obscure æneous; the antennæ and legs fulvous; the thorax sparingly punctured, greenish-æneous; elytra flavous, finely punctate-striate, the suture broadly, the lateral margins, a large transverse patch anteriorly, connected with the sutural stripe at the middle, and an equally large subtriangular pointed patch below the middle, brownish-æneous.

Length $3\frac{1}{2}$–4 lines.

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

D. stabilis is a comparatively small species which may be best compared with *D. chontalensis*, Jac., an insect resembling it in size and, to a certain extent, in the elytral markings. The markings, however, in *D. stabilis* occupy almost the entire disc, and are interrupted only by narrow flavous stripes of the ground-colour; the anterior patch has the appearance of two broad elongate spots joined together and to the sutural stripe at the middle; the posterior spot is angulate and pointed at its apex. The underside and the femora are more or less stained with greenish-æneous; the mesosternal process is strong and rather long, and generally fulvous in colour.

ELYTROSPHÆRA (p. 260).

6. **Elytrosphæra tibialis.**

Prosicela tibialis, huj. op. p. 241.

To the Mexican locality given, add:—Chilpancingo in Guerrero (*H. H. Smith*).

The two specimens obtained by Mr. Smith differ considerably from the type in the elytral pattern: the posterior black bands are broken up into stripes, and there is an additional submarginal stripe; the posterior transverse black band is much narrower. The posterior portion of the elytra may be described as testaceous, with three narrow brown or black stripes, which are joined at the apex; all the femora are fulvous at the base. In other respects the Chilpancingo specimens agree with the type.

7. **Elytrosphæra marginicollis.** (Tab. XLI. fig. 18.)

Oblong-ovate, widened posteriorly, greenish-æneous; the basal joints of the antennæ, the base of the femora, and the apex of the tibiæ, more or less, fulvous; thorax minutely punctured, the lateral margins flavous; elytra testaceous, marked with narrow dark stripes, which are interrupted at the middle by a pale zigzag band.

Length 4–5 lines.

Head sparingly punctured, obscure æneous or purplish; antennæ more than half the length of the body, black, the lower two joints fulvous beneath; thorax transverse, the sides rather strongly rounded and dilated, the anterior angles produced, the surface obscure æneous, here and there with a purplish tint, extremely finely and sparingly punctured, the lateral margins rather broadly flavous, the flavous portion somewhat swollen; scutellum broad, impunctate, purplish or greenish; elytra widened posteriorly, finely punctured in rather regular double rows, each elytron with a subsutural and a submarginal purplish-æneous stripe, and about seven or eight other stripes scattered over the rest of the surface, the latter of irregular length, joined at the base and apex, and closely placed, but interrupted at the middle by a transverse zigzag band

of the ground-colour; beneath æneous with a more or less purplish gloss, the sides of the breast and the margins of the abdominal segments testaceous or obscure testaceous.

Hab. MEXICO, Omilteme, Chilpancingo, and Xautipa, all in Guerrero (*H. H. Smith*).

E. marginicollis resembles somewhat in the elytral pattern *E. tibialis*, but differs from that insect in the flavous thoracic margin and in the numerous elytral stripes; these stripes are more or less united about the middle, and form spots which limit the pale transverse band posteriorly, this band being strongly dentate in the centre (in *E. tibialis* its place is taken by small flavous spots placed much more in a line). The posterior portion of the elytra in *E. marginicollis* has also a more or less developed flavous spot on the lateral margin and a smaller spot near the apex.

8. **Elytrosphæra bifasciata.** (Tab. XLI. fig. 19.)

Oblong-ovate, widened posteriorly, æneous; the thorax opaque, impunctate; elytra semipunctate-striate, the interstices aciculate, fulvous, a very broad transverse band at the base and a narrow one at the middle, as well as the sutural and lateral margins, obscure æneous.

Length 4½–5 lines.

Of the same shape as *E. marginicollis*, obscure brownish or blackish-æneous; the head rather closely punctured near the eyes; the antennæ not extending much beyond the base of the elytra, black, the lower three joints stained with fulvous at the apex, the terminal joints gradually but moderately thickened; thorax more than twice as broad as long, the sides rounded and dilated towards the apex, the surface opaque, impunctate or nearly so on the disc, the lateral portion with a few fine punctures; scutellum impunctate; elytra with fine rows of punctures, which are arranged somewhat in double rows, more irregularly punctured towards the base, the interstices everywhere aciculate and coriaceous, fulvous, the basal portion occupied by a broad dark æneous band (slightly produced at the suture, and not extending to the lateral margin), and a narrow band placed at or immediately below the middle (sometimes extending to the lateral margin, but not to the suture, sometimes not to either), the suture and the lateral margin also æneous; underside and legs more or less tinged with purplish.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Several examples. The antennæ in this species have the terminal joints more thickened than in most of the allied forms.

9. **Elytrosphæra erratica.** (Tab. XLI. fig. 20.)

Obscure æneous, the head, antennæ, and legs fulvous; thorax strongly punctured, more or less marked with fulvous; elytra irregularly punctured, obscure violaceous or æneous, with very narrow, short, irregular, pale flavous or whitish transverse stripes.

Length 2½–3 lines.

Head fulvous, sparingly punctured, the vertex often spotted with obscure æneous; palpi and antennæ entirely fulvous, the latter with the terminal joints gradually thickened, and the last joint distinctly longer than broad; thorax rather more than twice as broad as long, the sides rounded, not much produced in front, the anterior angles obtusely rounded, the surface strongly punctured laterally, much more finely and sparsely so on the disc, the latter greenish-æneous, the sides often with a large fulvous spot, this colour sometimes extending over the entire surface; scutellum obscure fulvous; elytra convex, widened towards the middle, not strongly or closely punctured—the punctures here and there arranged in rows, but for the most part irregularly distributed,—of a very dark violaceous or æneous colour, with the following pale flavous or whitish markings—a narrow stripe along the basal margin near the scutellum, from which a short

branch extends downwards at its outer end, a narrow stripe along the lateral margin, curving inwards before the middle and then extending outwards again, a narrow oblique stripe on the disc before the middle, a transverse stripe below the middle, a transverse irregular angulated stripe before the apex, a shorter one at the apex itself, and several small spots near the shoulders.

Hab. MEXICO, Chilpancingo and Omilteme in Guerrero (*H. H. Smith*).

The markings of the elytra are very sharply defined, delicate, and thin, and of a somewhat opalescent or golden tint; they vary greatly, and are in some specimens interrupted or asymmetrical, but they generally follow the shape and position described. The colour of the legs and of the thorax and the fine elytral punctuation principally distinguish *E. erratica* from several of the allied forms; the different shape of the markings and the much finer punctuation separate it from *E. mexicana*, Jac. Numerous examples were obtained by Mr. Smith in Western Mexico.

DIPHAULACA (p. 263).

Diphaulaca intermedia (p. 264).

To the locality given add:—MEXICO, Amula, Chilpancingo, R. Papagaio, all in Guerrero (*H. H. Smith*).

The Mexican specimens differ somewhat from the type, and also vary amongst themselves, but they agree in the closely punctate-striate elytra and in the black tarsi; in some examples, however, the antennæ and the greater part of the legs are entirely black.

14. **Diphaulaca fossifrons.**

Diphaulaca fossifrons, Harold, Col. Hefte, xiv. p. 8 [1].

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).—COLOMBIA [1].

The single specimen obtained by Mr. Smith agrees perfectly with the author's description; it is a species of very bright metallic blue colour, and is principally distinguished by the deep fovea between the eyes, and the fulvous colour of the base of the four anterior femora.

LACTICA (p. 270).

6 (A). **Lactica inornata.**

Testaceous, the antennæ obscure fuscous; thorax transverse, the basal sulcus deep, the surface impunctate; elytra microscopically punctured.

Length $1\frac{3}{4}$ line.

Head with one or two punctures near the eyes, the latter widely separated and broadly emarginate, the frontal elevations absent, the clypeus broadly triangular; antennæ three-fourths the length of the body, slender, entirely pale fuscous, the fourth joint one half longer than the third; thorax more than twice as broad as long, the sides very slightly rounded, and with a narrow reflexed margin, the anterior angles obliquely truncate, the surface entirely impunctate, the basal sulcus deep, slightly sinuate in the middle, and

limited at the sides by a deep longitudinal groove; scutellum broad, impunctate; elytra elongate, nearly parallel, the shoulders prominent, the surface only visibly punctured when seen under a very strong lens; underside and legs entirely testaceous.

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

Larger and of a more obscure testaceous colour than *L. uniformis*; the eyes more widely separated; the antennæ unicolorous; the thorax much more transverse and its sides more rounded.

Lactica scutellaris (p. 273).

To the Mexican localities given, add :—Colima city, Tapachula in Chiapas (*Höge*), Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Dr. Horn in his "Synopsis of the Halticini of Boreal America" (Trans. Am. Ent. Soc. xvi. p. 231) remarks that *L. scutellaris* would be better placed in the genus *Haltica*, and that it is congeneric (and probably also specifically identical) with *H. rufa*, Illig. I cannot agree with this opinion; moreover, the present species was not described by myself in this work, as stated by Dr. Horn, but by Olivier, and at greater length by von Harold. The last-mentioned author also places the species in *Lactica*, although the thoracic depression is not so well marked as usual; but this is frequently the case in other members of the genus. In the broad (not acutely raised) clypeus *L. scutellaris* agrees entirely with the present genus. As regards *H. rufa*, Dr. Horn describes the third joint of the antennæ as distinctly longer than the fourth, and the entire antennæ as piceous; in *L. scutellaris* the third and fourth joints are equal or nearly so, and the basal two joints are rufous. With scarcely an exception, all the species of the genus *Haltica* have metallic blue or green elytra and a narrow thoracic groove; it is probable that *H. rufa* is a true *Lactica*.

Lactica minuta (p. 274).

To the localities given, add :—MEXICO, Teapa in Tabasco (*H. H. Smith*).

Lactica cupreata (p. 281).

To the locality Mexico, add :—Yolotepec, La Parada (*Sallé*).

The two additional specimens contained in the Sallé collection are more than double the size of the type, and they belong doubtless to the female sex; in one of them the elytra are minutely punctured.

Lactica frontalis (p. 283).

Clamophora salvini, huj. op. p. 339.

36. **Lactica crassicornis.**

Pale fulvous or testaceous, the antennæ (the basal three joints excepted) black; thorax impunctate, the basilar groove deep; elytra very finely punctured.

♂. Basal joints of the antennæ robust, the others with a fringe of long hairs.

♀. Elytra with two longitudinal costæ at the sides, the antennæ normal.

Length $1\frac{3}{4}$ line.

♂. Head with a few deep punctures near the eyes, the middle portion triangularly raised, the clypeus acutely raised, but not broad, the apex of the mandibles black; antennæ extending to a little beyond the middle of the elytra, black, the basal three joints fulvous, the first joint long, strongly thickened, the second short, the third and fourth equal, the others more slender and elongate, with a fringe of black hairs on their inner margin; thorax twice as broad as long, the sides very little rounded, the anterior angles somewhat oblique, the surface impunctate, with a transverse deep basal sulcus, which is sinuate at the middle and interrupted by a deep longitudinal groove at the sides; elytra with an obscure depression below the base, the punctures only visible under a very strong lens; legs rather robust.

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

This *Lactica* will not be difficult to recognize in either sex, the antennæ being robust and hairy in the male, and the elytra having two costæ in the female; these costæ are very strongly raised, and they arise from a common stem at the shoulder, and are joined at the apex; the raised middle portion of the head is another peculiarity of this species.

37. **Lactica quadrinotata.** (Tab. XLI. fig. 21.)

Ovate, pale testaceous; the antennæ, tibiæ, and tarsi piceous; head and thorax obscure fulvous, the basal sulcus of the latter almost obsolete; elytra extremely finely punctured, testaceous, with four small black spots placed transversely along the basal margin.

Length 2 lines.

Head entirely impunctate, fulvous, the eyes large, a single deep puncture in front of their inner margin, the clypeus strongly raised and widened anteriorly; the antennæ extending to about the middle of the elytra, piceous, the basal two joints fulvous, shining, the third joint much shorter than the fourth; thorax more than twice as broad as long, the sides straight, the anterior angles oblique, the surface entirely impunctate, the basal sulcus almost obsolete, the lateral impression at each end of it a little more distinct; elytra ovate, pale testaceous, very minutely punctured, each with two small round blackish spots close to the basal margin; underside and legs testaceous, the upper edge of the femora at the apex and the tibiæ and tarsi more or less piceous; the first joint of the posterior tarsi rather longer than the following two joints together.

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

One specimen.

38. **Lactica hypocrita.**

Lactica hypocrita, Harold, Col. Hefte, xiv. p. 22[1].

Hab. PANAMA, Bugaba in Chiriqui (*Champion*).—COLOMBIA [1].

The single example obtained at Bugaba agrees in every respect with the author's description. *L. hypocrita* may be known from the other species of *Lactica* from our region by the elytra having the anterior portion fulvous and the posterior portion black; it is only one line and a half in length.

39. **Lactica elegans ?**

Lactica elegans, Harold, Col. Hefte, xiv. p. 15 [1].

Hab. PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA [1].

A specimen from Chiriqui merely differs from von Harold's description in having the elytra black (the sutural and lateral margins excepted) instead of blue.

HERMÆOPHAGA. (To follow the genus *Lactica*, p. 284.)

Hermæophaga, Foudras, in Mulsant's Col. Fr. p. 299 (1860); Weise, Naturg. Ins. Deutschl. vi. p. 849 (1885).

The species belonging to this genus are few in number, and principally inhabit the Old World. In their general appearance and structure they resemble *Lactica* and *Diphaulaca*; the thorax has its posterior margin produced in the middle, and the sulcus is generally sinuate; the four anterior tibiæ are armed with a small spine. *Haltica minuta* and *H. parvula*, Jac., would, no doubt, be better placed in *Hermæophaga*.

1. **Hermæophaga parvula.**

Haltica parvula, huj. op. p. 299.

To the localities given, add:—MEXICO, Tuxtla (*Sallé*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Yzabal (*Sallé*).

2. **Hermæophaga minuta.**

Haltica minuta, huj. op. p. 299.

3. **Hermæophaga fulva.**

Fulvous, the legs black, the thorax impunctate, the elytra extremely minutely punctured.
Length 1 line.

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

This small species agrees entirely in its structural characters with *Hermæophaga*, but differs from all the other members of the genus, *H. semistriata* excepted, by its fulvous colour. The antennæ are long and slender, and have their third joint twice as long as the second. The thorax has the anterior angles oblique, and the posterior margin produced in the middle; the basal sulcus is deep, slightly sinuate, and interrupted by a short longitudinal groove at the sides, beyond which it extends to the posterior angles. The elytra are cylindrical in shape, scarcely perceptibly depressed below the base, with extremely fine punctures placed in rows, which disappear almost entirely near the apex. The legs are black.

A single specimen.

4. **Hermæophaga cyaneipennis.**

Black, the four or five basal joints of the antennæ, the head, thorax, and legs fulvous; thorax distinctly punctured; elytra dark blue, strongly punctured in semi-regular rows.

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

Of rather broad, subcylindrical shape; the head impunctate, the frontal elevations trigonate, distinct, the clypeus somewhat swollen; antennæ rather long, black, the lower four or five joints fulvous, the second and third joints equal, the fourth slightly longer; thorax transversely convex, the sides very nearly straight, the anterior angles oblique, the posterior margin moderately rounded, the median lobe broad, but not much produced, the basal sulcus deep, slightly sinuate, and extending to the posterior angles (but not interrupted by a longitudinal groove towards the sides), the surface finely but distinctly, and not very closely punctured; scutellum black; elytra convex, cylindrical, not depressed below the base, the punctures strong and placed in closely approached and rather regular rows, which become less distinct towards the apex; breast and abdomen black; legs fulvous, the posterior femora slightly darker.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Easily known from *H. parvula* by the distinctly punctured thorax and the strongly punctured elytra.

5. **Hermæophaga smithi.**

Black, above metallic green; thorax impunctate, the sulcus deep, sinuate, and interrupted laterally by a longitudinal groove; elytra convex, punctured in closely approached rows.

Length 1 line.

Of rather robust, subcylindrical shape, and bright metallic green colour; the head entirely impunctate, the frontal elevations in the form of narrow oblique ridges, the carina acute, the eyes very large; antennæ slender, filiform, black, joints 3 and 4 but slightly longer than 2; thorax transversely convex, the sides straight, the anterior angles oblique, the posterior margin arcuately produced at the middle, the basal sulcus deep, sinuate, and interrupted towards the sides by a longitudinal groove, beyond which it is continued to the lateral margin, the anterior portion also with an obsolete depression (only visible in certain positions), the surface entirely impunctate; elytra cylindrical, slightly broader at the base than the thorax, without basal depression, rather strongly punctured in closely approached rows, which become less distinct towards the apex; underside black, the breast with a metallic greenish gloss; legs black or piceous, the coxæ, the apices of the tibiæ, and the tarsi more or less dark fulvous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Lanquin in Vera Paz (*Champion*).

Broader and much more robust than *H. minuta*, and of a bright metallic green colour.

6. **Hermæophaga æneipennis.**

Black, above greenish-æneous; the basal three joints of the antennæ pale fulvous; thorax impunctate; elytra obscurely depressed below the base, rather strongly and regularly punctate-striate.

Length $\frac{3}{4}$ line.

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

Smaller, narrower, and of less robust shape than *H. smithi*; the colour of the upper surface darker, æneous (instead of metallic green); the antennæ with the basal joints pale fulvous; the thorax impunctate, slightly widened at the sides before the middle, the basal sulcus deep and sinuate; the elytra slightly depressed below the base, rather strongly

and regularly punctured in not very closely placed rows; the tibiæ and tarsi more or less piceous. The allied *H. teapensis* differs in having the five or six basal joints of the antennæ and the anterior and intermediate legs flavous.

7. **Hermæophaga semistriata.**

Entirely fulvous; the thorax with a few fine punctures; elytra obscurely depressed below the base, finely punctate-striate, the interstices finely punctured.

Length 1 line.

Head impunctate, the frontal elevations oblique; the antennæ scarcely extending to the middle of the elytra, the lower seven joints shining, the others more opaque, pubescent, and slightly infuscate, the third and fourth joints equal; thorax one half broader than long, the anterior angles oblique, the sides straight, the posterior margin produced in the middle, the basal sulcus moderately deep and extending to the posterior angles, the surface with a few very minute punctures; elytra with a shallow depression below the base, finely and regularly punctate-striate, the interstices finely punctured; underside and legs fulvous.

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

H. semistriata may be easily recognized by the punctate-striate elytra and the entirely fulvous colour; the striæ of the elytra are widely separated.

8. **Hermæophaga teapensis.**

Black, above obscure greenish-æneous; the basal joints of the antennæ and the legs (the posterior femora excepted) flavous; the thorax impunctate, the elytra distinctly and rather regularly punctate-striate.

Length $\frac{3}{4}$–1 line.

Head impunctate, the frontal tubercles in the form of narrow oblique ridges; eyes large, not narrower than the interocular space; antennæ very long and slender, the lower five or six joints flavous, the others fuscous, the second, third, and fourth joints equal; thorax transversely convex, the sides straight, slightly converging anteriorly, the anterior angles oblique, the posterior margin arcuately produced in the middle, the transverse sulcus deep and extending completely across, the surface impunctate; scutellum small; elytra cylindrical, slightly widened towards the middle, the disc with close rows of fine punctures which become entirely obliterated below the middle; underside black; legs flavous, the posterior femora piceous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

9. **Hermæophaga fulvitarsis.**

Ovate, convex, black, above metallic dark blue, the basal three joints of the antennæ and the tarsi fulvous; thorax finely, the elytra more distinctly, punctured.

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

Head impunctate; the frontal elevations strongly raised, transverse, each divided at the middle by a broad and deep depression; the carina acutely raised; antennæ slender, filiform, black, the lower three joints fulvous, the first joint long and slender, the third, fourth, and fifth joints each twice as long as the second, the others shorter; thorax transversely convex, the disc swollen, the sides straight, the anterior angles oblique, thickened, the posterior margin arcuately produced in the middle, the basal sulcus deep, sinuate, and bounded at the sides by a deep longitudinal groove, the surface very finely punctured, bluish-black; elytra widened towards the middle, not depressed below the base, convex, more strongly punctured than the thorax, the punctures somewhat regularly arranged in rows; underside and legs black, the extreme apex of the tibiæ and the tarsi fulvous.

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

In the shape of the thorax &c., this insect agrees with *Hermæophaga*, but it apparently has no spine on the anterior tibiæ. The form of the frontal tubercles and the colour of the tarsi are its most conspicuous characters.

PLECTROTETRA (p. 284).

Plectrotetra proxima (p. 286).

The locality for this species is Zapote, Guatemala, and not Bugaba, Panama, as stated on p. 286.

Plectrotetra guatemalensis (p. 288).

To the locality given, add :—MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

16. **Plectrotetra multipunctata.**

Obscure piceous, pubescent, the head, thorax, and legs fulvous; thorax remotely punctured; elytra metallic greenish, strongly punctate-striate, the interstices closely and finely punctured.

Var. Entirely pale testaceous.

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

Head with a few punctures, the vertex obscure piceous, the lower portion fulvous; the antennæ extending very little beyond the base of the elytra, black, the basal joint fulvous, the third and fourth joints equal, the terminal joints slightly thickened; thorax transverse, the sides rounded, slightly narrowed in front, the basal sulcus deep and sinuate, the surface remotely punctured and sparingly pubescent; elytra greenish, strongly punctate-striate, the interstices finely punctured throughout and clothed with greyish pubescence; beneath piceous; the breast in front and the legs fulvous, pubescent; the posterior tibiæ with a distinct spine; the claws obsoletely bifid.

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

This small species differs from its allies (*P. hirsuta* excepted) by the pubescence of the upper surface, and from all others of the genus by the closely punctured elytral interstices.

17. **Plectrotetra nigripennis.** (Tab. XLI. fig. 22.)

Broad and robust, fulvous, the antennæ, tibiæ, and tarsi black; thorax without basal groove, strongly transverse, sparingly punctured; elytra black, opaque, closely punctured, the interstices finely aciculate.

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

♂. Of broad, subdepressed shape; the head impunctate, the eyes oblique, entire, the frontal elevations broad, not much raised, bounded behind by a transverse groove, the labrum flavous; palpi slender; the antennæ extending to about the middle of the elytra, black, the basal joint fulvous below, the third joint slightly longer than the fourth, the apical joints shorter, slightly tapering; thorax very strongly transverse, the sides rounded towards the base, the anterior angles dentiform, produced outwards, the posterior angles obsolete, the disc with a short longitudinal groove on each side at the base (the usual transverse sulcus quite obsolete), a round fovea near the anterior angles, and an obsolete median channel, the surface very sparingly and finely punctured at the sides and at the middle, reddish-fulvous; scutellum broad, subtriangular, fulvous; elytra black, opaque, with a feeble basal depression near the suture, the entire disc closely and rather strongly punctured, the punctures near the suture arranged somewhat in rows, the interstices finely aciculate; underside and the femora and tibiæ fulvous, clothed with whitish pubescence;

the tibiæ dilated at the apex, canaliculate, the intermediate and posterior pairs mucronate; the tarsi black, the first joint dilated, the claws bifid.

Hab. MEXICO, Santiago Iscuintla (*Flohr*).

This species, the largest yet known of the genus, possesses the most important of the characters of *Plectrotetra*, viz. the transverse thorax and the bifid claws, but it wants the thoracic sulcus; the longitudinal groove on each side of the thorax, however, indicates the usual limit or interruption of the sulcus. The antennæ are formed as in the typical species of *Plectrotetra*. A single specimen of this insect has been kindly added to my collection by Mr. Flohr.

HEMIPHRYNUS. (To follow the genus *Phrynocepha*, p. 294.)

Hemiphrynus, Horn, Trans. Am. Ent. Soc. xvi. p. 212 (1889).

The generic name *Hemiphrynus* has been proposed by Dr. Horn to include *Phrynocepha intermedia*, Jac., this insect differing from *Phrynocepha* in the scarcely sulcate tibiæ. Two other species are now added to it. Dr. Horn remarks (*op. cit.*) that *P. elongata*, Jac., also probably belongs to *Hemiphrynus*; *P. elongata*, however, has distinctly sulcate tibiæ.

1. Hemiphrynus intermedius.

Phrynocepha intermedia, Jac. huj. op. p. 293.

Hemiphrynus intermedius, Horn, Trans. Am. Ent. Soc. xvi. p. 213 [1].

To the locality given, add:—NORTH AMERICA, Southern Arizona [1].

2. Hemiphrynus tenuicornis. (Tab. XLI. fig. 23, ♂.)

Fulvous, the antennæ (the basal four joints excepted), breast, and abdomen black; thorax impunctate; elytra dark violaceous, closely punctured, the interstices obsoletely longitudinally depressed.

♂. Antennæ as long as the body, the basal joints robust.

♀. Antennæ entirely filiform.

Length $1\frac{3}{4}$–2 lines.

♂. Head impunctate, the frontal elevations but little raised, elongate; antennæ as long as the body, black, the basal four joints fulvous, rather robust, the terminal joints gradually becoming thinner, the third joint very elongate, distinctly longer than the fourth; thorax about one half broader than long, narrowed in front, the sides rounded, the angles not prominent, the surface impunctate, with a shallow transverse basal sulcus on either side of the middle; scutellum black; elytra widened posteriorly, dark metallic violaceous, very finely and closely punctured, and with shallow longitudinal grooves; legs robust, fulvous, the tibiæ not channelled.

Hab. MEXICO, Yolotepec (*Sallé*).

H. tenuicornis may be at once distinguished from *H. intermedius* by the colour and sculpture of the elytra in connection with the long antennæ in both sexes; the elytral grooves are a little more strongly marked in the female than in the male.

3. **Hemiphrynus sulcatipennis.** (Tab. XLI. fig. 24.)

Black, the head, the basal joints of the antennæ, the thorax, and legs fulvous; thorax with the basal sulcus very feeble; elytra dark violaceous, closely punctured, the sides with a deep longitudinal groove.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Head somewhat rugosely punctured near the eyes, with a more or less distinct central ridge, the frontal elevations small but distinct, the carina short and feeble; palpi fulvous, the apical joint fuscous, acute; antennæ nearly two-thirds the length of the body, black, the basal four joints fulvous, the fourth joint distinctly longer than the third; thorax transverse, the sides rather strongly rounded, the angles not prominent, the surface very minutely and sparingly punctured, the basal sulcus only indicated towards the sides, shallow, not extending across the entire disc; scutellum black; elytra very closely and finely punctured, dark violaceous, shining, the sides with a deep longitudinal depression commencing below the shoulders and terminating at some distance from the apex; the breast and abdomen violaceous-black, the legs fulvous.

Hab. Mexico, La Parada (*Sallé*), Omilteme in Guerrero (*H. H. Smith*).

In the shape of the thorax and its obsolete transverse basal depression, in the ungrooved tibiæ, and in the system of coloration, this species agrees with *Hemiphrynus*. The elytra have a deep lateral depression in both sexes.

HALTICA (p. 294).

Haltica guatemalensis (p. 297).

To the locality given, add:—Mexico, Northern Sonora (*Morrison*).

The specimens from Sonora merely differ from the Guatemalan ones in being entirely blue in colour and in having the elytral costæ obsolete.

18. **Haltica foliacea.**

Haltica foliacea, Lec. Proc. Ac. Phil. ix. p. 86 [1]; Horn, Trans. Am. Ent. Soc. xvi. p. 228 [2].

Hab. North America, Texas [1 2], New Mexico [2], Arizona [2].—Mexico, Guanajuato, Orizaba (*Sallé*).

A North-American specimen kindly given to me by Dr. Horn agrees very nearly with those from Mexico; but in the latter there are scarcely any punctures near the eyes, and the fourth joint of the antennæ is slightly longer than the third, these joints being equal in length in the type.

19. **Haltica ignita.**

Haltica ignita, Illig. Magaz. vi. p. 117 [1]; Horn, Trans. Am. Ent. Soc. xvi. p. 221 [2].

Hab. North America, Pennsylvania [1], Hudson's Bay region to New England States south to Texas and Florida [2].—Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

I refer some specimens of a blue *Haltica* obtained by Mr. Smith at Atoyac to this species. *H. ignita* seems to have a remarkably wide distribution.

20. **Haltica marevagans.**

Haltica marevagans, Horn, Trans. Am. Ent. Soc. xvi. p. 226 [1].

Hab. NORTH AMERICA, Sea-coast region from Florida to New Jersey [1].—MEXICO, Northern Sonora (*Morrison*).

Sonoran specimens agree perfectly with an example kindly given to me by Dr. Horn.

21. **Haltica abdominalis.**

Reddish-fulvous, the terminal joints of the antennæ, the posterior femora partly, the tibiæ and tarsi more or less, and the abdomen black; thorax with the basal sulcus entire; elytra metallic blue, more or less regularly punctate-striate, the sides longitudinally depressed.

Length $1\frac{1}{2}$–2 lines.

Head impunctate, reddish on the vertex, flavous on the lower portion, the frontal elevations strongly raised, rather elongate; antennæ slender, the third and fourth joints equal, the lower three joints pale fulvous, the others black; thorax narrowed at the base, the basal sulcus entire, the surface impunctate, reddish-fulvous; scutellum fulvous; elytra with rather regular rows of punctures, which become much deeper laterally, the sides with a more or less distinct longitudinal depression, the apex nearly impunctate; underside and the anterior femora flavous or fulvous, the tibiæ entirely or at the apex, the tarsi, the apices of the posterior femora, and the abdomen black.

Hab. MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, La Tinta in Vera Paz (*Champion*).

H. abdominalis seems to be allied to *H. burgessi*, Crotch, from Florida; but differs by its larger size, the colour of the tibiæ and tarsi, and the punctate-striate elytra, this last-mentioned character giving it the appearance of a *Diphaulaca*. The blunt (not produced) anterior angles of the thorax will prevent its being mistaken for a species of that genus; there is also no depression whatever at the base of the elytra. The Guatemalan specimen is much larger than those from Mexico.

22. **Haltica satellitia.**

Oblong-ovate, dark metallic blue; the thorax blackish, impunctate, the basal sulcus entire; elytra closely and finely punctured in rows.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Head impunctate, the frontal elevations and the carina broad; the antennæ robust, extending to beyond the middle of the elytra, black; the thorax one half broader than long, not wider at the base than in front, the sides feebly rounded, the basal sulcus distinct, straight, and extending almost or entirely across the disc, the surface smooth except for a few punctures near the anterior angles, almost black; scutellum black; elytra punctured in close and rather regular rows, which are distinct to the apex; underside and legs black with a slight bluish tint.

Hab. MEXICO, Presidio de Mazatlan (*Forrer*), Jalapa (*Höge*); GUATEMALA, Dueñas (*Champion*).

The nearly black and entirely impunctate thorax and the almost regular punctuation of the elytra (the punctuation varying, however, in depth in different specimens, but always distinct to the apex) distinguish *H. satellitia* from the blue varieties of *H. ignita*, to which it is perhaps most nearly allied. The last ventral segment of the male has a

very slightly prominent median lobe, without depression. *H. satellitia* is of a more ovate shape than the examples I refer to *H. ignita*.

23. **Haltica simplex.**

Obscure æneous or blue, the antennæ and legs piceous or black; thorax in great part impunctate, the basal sulcus entire, the space behind it finely punctured; elytra rather strongly, closely, semi-regularly punctured.

Length $1\frac{3}{4}$ line.

Head impunctate, except for a few deep punctures near the eyes, the frontal elevations broad and not strongly raised, the carina also comparatively broad and distinct; antennæ extending to about the middle of the elytra, black, the terminal joints slightly thickened, the basal joints more or less stained with fulvous and gradually increasing in length; thorax about one half broader than long, the sides rather strongly rounded at the middle, the basal sulcus distinct and extending completely across the disc, the latter smooth, a few fine punctures near the anterior angles, the space behind the sulcus also more or less distinctly punctured; elytra with the shoulders rounded, finely and closely punctured, the punctures almost obsolete below the middle.

Hab. GUATEMALA, Rio Naranjo, Paso Antonio (*Champion*); PANAMA, Bugaba, David, Tolé (*Champion*).

Chiefly distinguished by the dull æneous or bluish colour, the comparatively broad frontal elevations and carina, and the finely punctured basal part of the thorax. Allied to *H. ignita* and *H. forreri*; the latter, however, has a rather longer thorax, and more distantly and regularly punctured elytra.

24. **Haltica amicula.**

Oblong, narrowed posteriorly, metallic green; thorax minutely punctured, the basal sulcus interrupted at the sides; elytra minutely granulate and very finely punctured, narrowed posteriorly.

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

Of a not very bright metallic green colour; the head entirely impunctate, the frontal elevations broad, the carina much swollen; the antennæ scarcely extending to the middle of the elytra, the terminal joints gradually thickened, the third and fourth joints equal, the basal joints more or less metallic green or cupreous; thorax of equal width before and behind, about one half broader than long, the sides evenly rounded, the surface extremely minutely and closely punctured (the punctuation only visible under a strong lens), the basal groove narrow and abbreviated on each side; elytra narrowed at the base and apex, finely granulate, and a little more distinctly punctured than the thorax; underside metallic greenish, the last ventral segment of the male with a slight depression at the apex.

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

Closely allied to *H. foliacea*, Lec., but less parallel, the thorax not narrowed in front and with the basal groove distinct.

25. **Haltica elongata.**

Narrowly elongate, greenish-bronze, the basal joints of the antennæ and the legs fulvous; thorax subquadrate, closely punctured, the basal sulcus almost entirely obliterated; elytra very closely and finely punctured in semi-regular rows.

Var. Antennæ entirely fulvous.

Length 2 lines.

Head rugosely punctured between the eyes, the frontal elevations broad, trigonate, the carina also widened, the mandibles fulvous; antennæ extending to the middle of the elytra, black, the lower four joints fulvous at the base, joints 2–4 gradually increasing in length; thorax nearly quadrate, comparatively long, the sides scarcely rounded, the basal groove almost entirely obliterated or only very faintly indicated, the surface rather closely but somewhat irregularly punctured, the interspaces slightly granulate; scutellum broader than long, smooth; elytra narrow and parallel, the shoulders scarcely prominent, the surface punctured like that of the thorax, but with the punctures arranged in close and rather regular rows which are distinct to the apex; underside finely granulate, without punctures; legs entirely fulvous; the last ventral segment of the male with a rounded scarcely projecting median lobe.

Hab. MEXICO, near the city (*H. H. Smith*), Guanajuato (*Sallé*).

The narrowly elongate shape, the quadrate thorax and its close punctuation, and the fulvous legs will help to distinguish this species. The variety with fulvous antennæ was obtained at Guanajuato.

26. **Haltica angulicollis.**

Narrowly elongate, black, above dark blue; antennæ slender, filiform, the basal two joints obscure fulvous; thorax finely granulate, the sulcus almost obsolete on the disc but more distinct at the sides; elytra very closely and irregularly punctured.

♀. Elytra with an acutely raised lateral ridge which is abbreviated near the apex.

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

Head somewhat rugose between the eyes, the latter large and prominent; the frontal elevations rather elongate, not strongly raised; the margins of the clypeus and labrum testaceous; antennæ long and filiform, the third and the following joints equal in length, the first and second joints more or less fulvous at the apex; thorax short, transverse, very little narrowed at the base, the sides feebly rounded, the anterior angles oblique, thickened, the surface minutely granulate, without punctures, but with some small irregular depressions, the basal sulcus very shallow, more distinct at the sides than at the middle, the basal margin slightly sinuate in the centre; scutellum black; elytra with a feeble basal depression, the shoulders rather prominent, the surface very closely and distinctly punctured throughout, the sides slightly longitudinally depressed in the male, but with an acute ridge, commencing at the shoulder, in the female; underside and legs black; last ventral segment in the male simple.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

The long and filiform antennæ, the short and finely granulate thorax, and the oblique anterior angles of the latter chiefly define this species. The female has an acutely raised lateral ridge to the elytra.

27. **Haltica fulvipes.**

Violaceous-black, the legs fulvous; thorax finely and sparingly punctured, the basal sulcus nearly obsolete; elytra closely and distinctly semi-regularly punctured, the apex nearly impunctate.

Length $1\frac{1}{2}$–2 lines.

Of a blackish colour with a slight violaceous tint; the head rugosely punctured between the eyes, the frontal elevations broad and but feebly raised; antennæ black, the basal joints more or less stained with fulvous, the second, third, and fourth joints gradually increasing in length, the terminal joints slightly thickened; thorax rather convex, about one half broader than long, widened at the sides before the middle, the base slightly narrowed, the surface finely but distinctly and not closely punctured, the basal sulcus only faintly visible at the sides; elytra with rather regular and closely placed rows of strong punctures, which gradually diminish towards the apex; underside nearly black; legs entirely fulvous.

Hab. NICARAGUA, Granada (*Sallé*); PANAMA, David in Chiriqui (*Champion*).

Evidently allied to *H. opulenta*, Horn; the latter, however, is described as having fulvous antennæ, a very wide thorax, and finely but not closely punctured elytra. The Nicaraguan specimens are of a bluish tint, and they have the elytra not quite so strongly punctured as in the Chiriqui examples. *H. elongata*, which also has fulvous legs, differs from *H. fulvipes* by the nearly quadrate thorax, and by the distinct punctuation at the apex of the elytra.

28. **Haltica gracilis.**

Oblong, dark violaceous-blue, the antennæ black; thorax impunctate, the basal margin obsoletely depressed in the middle and at the sides; elytra closely and finely punctured, the sides longitudinally costate in the female; underside black; the extreme base of the coxæ and the knees fulvous.

Length 1–1½ line.

Head with the usual deep punctures near the eyes, the frontal elevations strongly raised, the carina acute; antennæ with the terminal joints scarcely thickened, the third joint slightly longer than the second; thorax a little widened at the base, the sides nearly straight, the anterior angles oblique, the surface impunctate, the usual sulcus only indicated by a depression at the middle of the basal margin and by another on each side; scutellum large, triangular, black; elytra with a feeble depression below the base, very finely and closely punctured in rows, the sides with a distinct ridge extending from the shoulder almost to the apex in the female, simple in the male.

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

This small species may be known by the thorax being impunctate and without a well-defined groove. The laterally costate elytra in the female, and the fulvous colour of the base of the coxæ and knees, will further help to distinguish *H. gracilis*, which seems to vary greatly in size.

29. **Haltica purulensis.**

Black, above metallic blue, the first three joints of the antennæ fulvous; thorax impunctate, the sulcus only indicated at the base by a depression; elytra extremely minutely punctured, the base somewhat swollen.

Length 1 line.

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

Rather smaller than *H. gracilis*; the antennæ much more slender, with the third and following joints more elongate, and the basal three joints fulvous; the thorax with the usual transverse groove represented by a faint depression at the middle of the basal margin; the elytra scarcely perceptibly punctured (even when seen under a strong lens), and with the basal portion distinctly raised.

30. **Haltica longicornis.** (Tab. XLI. fig. 25, ♂.)

Dark violaceous-blue or greenish; the antennæ black, as long as or longer than the body in the male, much shorter in the female; thorax closely punctured and finely rugose, the basal sulcus very shallow; elytra extremely closely and distinctly punctured, the interstices in the female rugose.

Length 2–2½ lines.

Head finely rugose at the sides, with a single deep puncture near the eyes, the middle portion smoother and triangularly raised; the frontal elevations broad, feebly raised, and somewhat elongate; the clypeus

swollen anteriorly; the margin of the labrum testaceous; antennæ very long and slender, extending to the end of the elytra in the male, the first joint robust, more or less stained with fulvous, the second joint short, black (sometimes fulvous), the third and the following three joints very elongate and slender, the other gradually decreasing in length; thorax nearly twice as broad as long, the sides rounded near the middle, the anterior angles obliquely thickened, the basal groove very shallow, broad, and abbreviated on each side, the anterior portion of the disc obsoletely bi-impressed, the surface irregularly and not closely punctured, the interspaces minutely granulate; elytra very closely and rather strongly punctured throughout, the sides somewhat depressed longitudinally, the apex broadly rounded; the underside coloured as above.

Hab. GUATEMALA, Ostuncalco, Cerro Zunil, Zapote, Calderas, San Gerónimo (*Champion*).

This is a rather abnormal species, having very long and slender antennæ in the male, and a somewhat rugose upper surface, characters not to be found amongst other members of the genus *Haltica*. In the single specimen from Ostuncalco, a female, the colour is greenish, and the thorax and elytra are finely rugose.

31. **Haltica cupricollis.**

Obscure cupreous or æneous, the antennæ black; the thorax cupreous, semiopaque, the basal sulcus nearly obsolete; elytra dark blue, very finely and rather closely punctured.

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

Head minutely granulate, metallic greenish, the frontal elevations indistinct, the carina acute at its lower portion; antennæ black, the lower two joints more or less stained with fulvous, the others slightly and gradually thickened; thorax one half broader than long, the sides scarcely rounded, a little narrowed in front, the surface cupreous, more or less shining, extremely finely punctured, the basal groove only indicated at the sides; scutellum obscure cupreous; elytra dark blue, slightly widened towards the middle, the punctuation extremely fine and arranged in close rows, which become finer towards the apex; underside and legs obscure cupreous, clothed with fine whitish pubescence.

Hab. MEXICO, Ventanas in Durango (*Forrer*), Mexico city (*H. H. Smith*), Tupataro (*Sallé*).

The colour of the head and thorax and the almost entirely obliterated groove of the latter separate this species from any other *Haltica* from our region. In coloration *H. cupricollis* resembles *H. carinata*, Germ., the latter, however, has a very deep thoracic groove. The specimens obtained near the city of Mexico have the legs piceous and scarcely metallic, and the thorax shows some depressions at the side.

32. **Haltica rugosa.**

Elongate, greenish-æneous; the thorax finely rugose, without distinct basal sulcus; elytra closely punctured, the interstices transversely rugose; underside clothed with greyish pubescence.

Length $1\frac{3}{4}$–2 lines.

Of rather elongate, posteriorly widened shape; the head scarcely perceptibly punctured and finely rugose; antennæ blackish, rather robust, the third and following joints nearly equal; thorax about one half broader than long, the sides and the posterior margin rounded, the former rather broadly margined, the basal sulcus only indicated by a small median depression, the surface uneven, slightly raised at the sides, strongly and rather closely punctured, the interspaces finely granulate; scutellum smooth, black; elytra depressed, punctured like the thorax, with the interstices transversely rugose throughout; underside

darker than above, finely punctured, and covered with long greyish pubescence; the intromittent organ of the male deeply bifurcate at the apex.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Hacienda de San Miguelito (*Dr. Palmer*), Guanajuato (*Sallé*), Morelia in Michoacan (*Höge*).

An aberrant species, differing from its allies by the ungrooved thorax in connection with the rugosely sculptured upper surface. Some examples are of a more bluish colour and less strongly rugose. The description is taken from Dr. Palmer's specimens.

33. **Haltica sublævipennis.**

Fulvous, the terminal joints of the antennæ and the breast and abdomen black; thorax with the basal sulcus distinct only at the sides; elytra violaceous-blue, entirely impunctate.

Length 2 lines.

Of posteriorly widened shape; head impunctate, the middle of the vertex longitudinally raised, the frontal elevations very distinct; antennæ slender and filiform, extending nearly to the end of the elytra, the lower four joints fulvous, the rest black, the second and the following two joints gradually becoming more elongate; thorax twice as broad as long, the sides rounded at the middle, with a narrow margin, the base with a very obsolete depression at the sides and another at the middle, the surface entirely impunctate, fulvous; scutellum large, black; elytra dark violaceous, extremely finely and not closely punctured, the punctures only visible under a strong lens; breast and abdomen black, the legs fulvous.

Hab. MEXICO, Coscomatepec (*Sallé*).

This species deviates considerably from the typical members of the genus, not only in coloration, but in having very long antennæ and an impunctate, scarcely sulcate thorax. The specimens received are apparently all females. Labelled *Diphaulaca bicolor*, Chevr., in the Sallé collection.

SYPHREA (p. 301).

Syphrea pretiosa (p. 302).

To the localities given, add:—MEXICO, Ventanas in Durango (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

The Mexican specimens differ from the type in having entirely fulvous legs.

2. **Syphrea angustata.**

Elongate, subcylindrical, piceous or blackish, the head, the basal joints of the antennæ, and the thorax fulvous; elytra nearly parallel, metallic blue, very finely and closely punctured.

Length 2–2½ lines.

Hab. MEXICO, Monclova in Coahuila (*Dr. Palmer*), Acapulco, Matamoros Izucar, Jalapa (*Höge*).

S. angustata differs considerably in shape from *S. pretiosa*, but possesses all its structural characters and also a similar system of coloration; the antennæ, however, are more robust and have either the first or the basal three joints fulvous; the thorax is much less transverse, more elongate, and entirely impunctate; and the elytra are not

widened posteriorly but subcylindrical and parallel, and devoid of any basal depression, their punctuation being either very close and fine or nearly obsolete. The underside and legs are usually bluish-black or piceous, but in one specimen the legs are obscure fulvous.

EXOCERAS. (To follow the genus *Syphrea*, p. 302.)

Body oblong; antennæ very elongate, the first joint as long as the following three joints together; palpi slender; frontal tubercles very strongly raised, divided by a central groove; the lower portion of the face flattened, deflexed; the clypeus strongly raised, its apex forming an angle with the face; thorax subquadrate, deeply transversely grooved near the base, the groove extending to the sides; elytra punctate-striate; posterior femora moderately thickened; posterior tibiæ simple, with a small spine; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; prosternum narrow, elongate; anterior coxal cavities open.

1. **Exoceras facialis.** (Tab. XLII. figg. 1; 1 *a*, antenna.)

Dark fulvous, the head and thorax piceous with an æneous gloss; clypeus raised anteriorly; antennæ as long as the body; elytra convex, finely punctate-striate.

Length 1½ line.

Head impunctate, piceous; antennæ as long as the body, piceous, the first joint the longest, the second small, the third and fourth each twice as long as the second, the fifth and following joints much longer than the fourth; thorax piceous, with a slight æneous gloss, subquadrate, one half broader than long, the sides straight, slightly narrowed towards the base, the anterior angles tuberculiform, the posterior margin with a produced rounded lobe, the basal sulcus deep, slightly sinuate, punctured, the rest of the surface entirely impunctate; scutellum small, transverse; elytra broader at the base than the thorax, convex, subcylindrical, transversely depressed below the base, fulvous, with a slight metallic greenish gloss, strongly punctate-striate, the punctures diminishing in size towards the apex and not closely placed; underside and legs dark fulvous.

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

One example, apparently a male.

CACOSCELIS (p. 302).

Cacoscelis scriptipennis (p. 304).

To the locality given, add:—MEXICO, Ventanas in Durango, Acapulco in Guerrero, Tapachula in Chiapas (*Höge*).

Two specimens obtained at Tapachula agree perfectly with the type; the others have the thorax fulvous (instead of testaceous) and devoid of any darker markings, and the dark stripes of the elytra broader and connected with each other (instead of partially interrupted, as in the type).

7. **Cacoscelis varians.**

Flavous or fulvous, the antennæ (the basal joints excepted), tibiæ, and tarsi black; thorax impunctate; elytra finely and closely punctured, black, the lateral and sutural margins flavous.

Var. *a*. Legs entirely fulvous.
Var. *b*. Elytra with the lateral margins only flavous.
Length $2\frac{1}{2}$–3 lines.
Head broad, impunctate, flavous; antennæ filiform, extending to the middle of the elytra, black, the lower two or three joints fulvous, the third and following joints equal; thorax transversely subquadrate, the sides rather rounded, the angles not prominent, the surface impunctate, fulvous, the base with an obsolete transverse groove, a short indistinct transverse depression near the anterior angles; scutellum fulvous; elytra flattened, parallel, black, very closely and rather finely punctured, narrowly grooved along the suture, the lateral and sutural margins and the epipleuræ more or less flavous; underside and legs flavous, the tibiæ and tarsi in some examples black; last ventral segment of the male incised on each side.

Hab. MEXICO, Tuxtla, Santecomapan, Panistlahuaca, Playa Vicente (*Sallé*), Oaxaca, Cerro de Plumas (*Höge*); GUATEMALA, Dueñàs, Zapote (*Champion*).

The Guatemalan specimens are generally of small size, and have the sutural margin very narrowly, the lateral margin more broadly, flavous.

8. **Cacoscelis nigripes.**

Black, the head and thorax fulvous; elytra black, closely and distinctly punctured; legs black.
Length $2\frac{1}{2}$–3 lines.

Hab. GUATEMALA, Zapote, Dueñas (*Champion*); COSTA RICA (*Van Patten*).

Extremely close to *C. varians*, and possibly a variety of that species, from which it only differs in having the antennæ, elytra, underside, and legs entirely black.

DISONYCHA (p. 304).

Disonycha collata (p. 305).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

Some of the Mexican localities quoted by me belong to *D. politula*, Horn, and will be found mentioned under that species.

5 (A). **Disonycha maculipes.**

Flavous, the terminal joints of the antennæ, a spot at the apex of the femora, and the tibiæ and tarsi black; thorax impunctate; elytra dark metallic blue, closely and distinctly punctured.
Length 3 lines.
Head with some deep punctures near the eyes, flavous, the frontal elevations indistinct, the labrum and palpi piceous; antennæ not extending to the middle of the elytra, black, the lower three joints flavous, the fourth joint slightly longer than the third; thorax transverse, the sides nearly straight, the anterior and posterior angles oblique, the surface impunctate, flavous; elytra dark violaceous or greenish-blue, very closely and rather finely punctured; underside flavous; legs fulvous, the apices of the anterior femora, a spot at the extreme apex of the posterior femora, and the tibiæ and tarsi, black.

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

The flavous head and thorax, the distinctly and closely punctured elytra, and the spot at the apex of the posterior femora distinguish *D. maculipes* from any of its similarly-coloured congeners; its size is also proportionately large.

5 (B). **Disonycha affinis.**

Flavous, the base of the head, the antennæ, the tibiæ (partly), and the tarsi piceous; thorax and elytra impunctate, the latter metallic green.
Length $2\frac{1}{2}$ lines.

Hab. GUATEMALA, Dueñas (*Champion*).

Chiefly distinguished from its similarly coloured allies by the more transversely-shaped thorax; from *D. melanocephala* by the flavous colour of the anterior portion of the head and the colour of the tibiæ (which are piceous, except at the base); from *D. mellicollis* (Say) by the entirely yellow metasternum and abdomen, and the shining impunctate thorax.

5 (C). **Disonycha politula.**

Disonycha politula, Horn, Trans. Am. Ent. Soc. xvi. p. 211 (1889) [1].

Hab. NORTH AMERICA, New Mexico and Arizona [1].—MEXICO, Hacienda de Bleados in San Luis Potosi (*Dr. Palmer*), Chilpancingo in Guerrero (*H. H. Smith*), Capulalpam, Guanajuato, Cordova, Yolos (*Sallé*), Jalapa (*Höge*).

Very closely allied to *D. collata* (Fabr.), and perhaps a local variety of that species, from which it only seems to differ by the bicoloured posterior femora and the more distinct elytral punctuation.

11 (A). **Disonycha angulata.** (Tab. XLII. fig. 2.)

Fulvous, the terminal joints of the antennæ and the legs black; head and thorax distinctly punctured, the latter spotted with piceous; elytra closely punctured, flavous, the sutural and lateral margins, a spot at the shoulder, an angulated fascia before the middle, another near the apex, and the apex itself, black.
Var. The legs more or less fulvous.
Length 3–$3\frac{1}{2}$ lines.

Hab. MEXICO, Playa Vicente (*Sallé*), Teapa in Tabasco (*Höge*); GUATEMALA, Teleman in Vera Paz (*Champion*).

This species closely resembles *D. trifasciata* in its system of coloration; but differs from it by the distinctly punctured head and thorax, and by the anterior fascia of the elytra being angulate at the middle.

26 (A). **Disonycha horni.**

Disonycha crenicollis, huj. op. p. 316 (part.) (nec Say, Horn).

Pale fulvous and pubescent below, above flavous; the antennæ, the upper margin of the femora, the tibiæ and tarsi black; thorax with two black spots; elytra with the suture, a narrow discoidal vitta, and a narrower submarginal one, black.
Length 3–$3\frac{1}{2}$ lines.

Hab. MEXICO, Northern Sonora (*Morrison*), Puebla (*Sallé*), Misantla, Orizaba, Teapa (*H. H. Smith*).

After carefully studying Dr. Horn's description of *D. crenicollis* (Say) (Trans. Am. Ent. Soc. xvi. p. 204), I must conclude that the specimens formerly referred by me to that species, and many others since obtained at Teapa and elsewhere in Mexico, represent yet another closely-allied form. They differ from *D. crenicollis*, as defined by Dr. Horn, in having the black discoidal stripe of the elytra always narrower than the preceding yellow space, and in the abdomen not being densely punctured, the latter thickly clothed with silvery pubescence. It may be remarked here that Say's description was based upon Mexican specimens, and Dr. Horn's upon examples from the United States. In *D. horni* the thorax usually has two small black spots on the middle of the disc; but these spots are not present in the specimens from Orizaba. *D. caroliniana* (Fabr.) is another allied species; but it is described by Dr. Horn as having a pale labrum, a closely punctured abdomen, and yellow legs, the latter with the tips of the tibiæ only piceous.

27. **Disonycha quinquevittata.**

Altica 5-*vittata*, Say, Journ. Acad. Phil. iv. p. 85 (1824) [1]; Complete Writings, ii. p. 227.
Disonycha quinquevittata, Horn, Trans. Am. Ent. Soc. xvi. pp. 203, 315 (1889) [2].
Disonycha capitata, huj. op. p. 316.

To the localities given, add:—NORTH AMERICA [1], the entire region west of the Mississippi River from the northern boundary of the United States to Mexico [2].

31. **Disonycha limbata.**

Black; the head rugosely punctured; the thorax pale fulvous, closely punctured; elytra flavous, narrowly margined with black, almost imperceptibly punctured.

Length 3 lines.

Of proportionately convex shape; the head rugosely punctured, black, with some obscure flavous spots, the punctures on the vertex interrupted by a narrow smooth central space; antennæ short and robust, black; thorax transversely convex, the sides strongly rounded, the posterior angles oblique, the disc finely and rather closely punctured; scutellum broad, black; elytra pale flavous, very minutely punctured, the basal, sutural, and lateral margins narrowly black; underside and legs black, the sides of the breast and of the abdomen pale fulvous.

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

A single example. Quite distinct from any of its congeners by the rugosely punctured head, the colour of the elytra, and the convex shape.

ORODES. (To follow the genus *Disonycha*, p. 318.)

Body elongate; palpi slender; antennæ very long, slender, filiform; thorax transverse, with a very shallow transverse groove near the base; elytra punctured in rows; tibiæ simple, the posterior pair mucronate; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate; prosternum narrowly elongate, flattened; anterior coxal cavities open.

The single species for which this new generic name is proposed seems to be a transitionary form between *Disonycha*, *Systena*, and *Calliphron*, differing from each of

them by the long and filiform antennæ. The shape of the thorax and the punctate-striate elytra will also separate it from *Disonycha*, and the open coxal cavities from *Systena*. The thoracic groove is in some specimens quite obsolete.

1. **Orodes nigropictus.** (Tab. XLII. fig. 3.)

Testaceous, the antennæ (the basal joints excepted) and the vertex black; thorax impunctate; elytra with the basal portion raised, strongly and closely punctured in rows, testaceous, a common transverse patch at the base extending downwards along the suture, and a longitudinal band at the sides, widened behind and not reaching the apex, black.

Var. *a*. Elytra black, the lateral and apical margins testaceous.

Var. *b*. Elytra black, the apical margin testaceous.

Var. *c*. Elytra entirely testaceous.

Length 2 lines.

Head rather broad, not constricted behind the eyes, the latter moderately prominent; the frontal tubercles small, indistinct; the clypeus broad, flattened and strongly deflexed: the vertex remotely but distinctly punctured, its base sometimes black; antennæ extending to two-thirds the length of the elytra, black, the lower three joints, and sometimes the apical two also, testaceous, all the joints with the exception of the second elongate and slender, the terminal ones a little shorter; thorax scarcely twice as broad as long, the sides nearly straight, the angles not prominent, the surface impunctate, testaceous, with a slight transverse depression parallel to the basal margin, the latter rather sinuate at the middle; scutellum testaceous, its apex rounded; elytra with the basal portion distinctly swollen, strongly punctured in closely approached but not very regular rows, which become almost obliterated near the apex, testaceous, with a more or less extended common transverse black patch at the base, extending downwards along the suture, and a longitudinal black band at the sides, commencing at the shoulders and gradually widened, but not reaching the apex; underside and legs testaceous.

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

The last abdominal segment in the male has a broadly rounded median lobe, this being absent in the female. Many specimens. A typical example is figured.

NEPHRICA. (To precede the genus *Cæporis*, p. 318.)

Nephrica, Harold, Berl. ent. Zeitschr. 1877, p. 132.

A few species from Tropical America constitute this genus. It may be principally known by the deeply emarginate reniform eyes, the medially dilated or thickened antennæ, and the shape of the thorax. A single species is now known from the State of Panama.

1. **Nephrica inornata.** (Tab. XLII. fig. 4.)

Ovate, moderately convex, pale fulvous; the antennæ (the first joint excepted), the anterior and intermediate tibiæ, and the tarsi black; thorax nearly impunctate; elytra rather strongly and closely punctured.

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

Head impunctate, the surface somewhat uneven, the eyes very deeply and broadly emarginate at their inner margin, the clypeus thickened and rather broad; the penultimate joint of the maxillary palpi incrassate; antennæ short and robust, the first joint flavous, the others black, the fourth joint the longest, this and the following two joints thickened, the five terminal ones much shorter and thinner; thorax nearly three times as broad as long, the sides rounded at the middle, narrowed in front, the anterior angles obliquely produced, the base with a short oblique depression on either side near the posterior angles, the surface with a few minute punctures; scutellum broad, impunctate; elytra rather convex, strongly and closely punc-

tured, their epipleuræ broad at the base, very narrow below the middle; posterior femora very strongly incrassate; posterior tibiæ deeply channelled, with a spur at the tip, flavous at the base, black at the apex; the tarsi and the four anterior tibiæ black; claws appendiculate; anterior coxal cavities open.

Hab. PANAMA, Bugaba (*Champion*).

One specimen.

ACANTHONYCHA. (To precede the genus *Pelonia*, p. 318.)

Body elongate, metallic above; antennæ filiform; eyes large; palpi with the penultimate joint thickened; thorax subquadrate, subangulate at the sides, obsoletely transversely sulcate near the basal margin; elytra closely and irregularly punctured, their epipleuræ broad, continued to the apex; posterior femora but slightly incrassate; posterior tibiæ mucronate; the first joint of the posterior tarsi as long as the following three joints united; claws appendiculate; prosternum narrow; anterior coxal cavities open.

This new genus is proposed for *Pelonia elegantula*, Baly. It may be known from *Pelonia* by the very differently-shaped thorax, the metallic elytra, and other particulars mentioned above. From *Cacoscelis*, to which it is closely allied, it differs in the shape of the thorax, and in the very shallow and more flattened basal groove of the latter. *Pelonia elegantula* has the hind femora but little thickened, and the legs slender, these characters giving it the appearance of a Galerucid; but the broad elytral epipleuræ and the distinct prosternum show that it belongs to the Halticinæ.

1. **Acanthonycha elegantula.**

Pelonia elegantula, huj. op. p. 318, Tab. XVII. fig. 25, Tab. XIX. fig. 7.

To the localities given, add:—MEXICO, Teapa (*H. H. Smith*); BRITISH HONDURAS, R. Sarstoon, R. Hondo (*Blancaneaux*); GUATEMALA, Panzos, Teleman, Chacoj (*Champion*).

In addition to the varieties already noticed by me, another one, entirely reddish-fulvous in colour, has been obtained in numbers by Mr. Champion in the Polochic Valley and by M. Blancaneaux in British Honduras.

CALLIPHRON. (To follow the genus *Megasus*, p. 321.)

Body elongate; antennæ long and robust in the male, shorter and more slender in the female; thorax transverse, without basal depression, the sides rounded, the angles obsolete; scutellum large; elytra punctate-striate; posterior femora moderately thickened; posterior tibiæ not channelled, mucronate; anterior tibiæ unarmed; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; prosternum narrow, convex; anterior coxal cavities open.

Calliphron agrees in general appearance with *Plectrotetra*, but differs from it by the want of a thoracic groove and by the appendiculate claws.

1. **Calliphron ferrugineum.** (Tab. XLII. fig. 5, ♂.)

Dark fulvous, the antennæ and legs piceous or black; head and thorax nearly impunctate; elytra distinctly punctate-striate, the punctures indistinct near the apex, the interstices flat.

Length 2 lines.

♂. Head impunctate, the frontal elevations strongly raised, transverse, bounded behind by a deep transverse groove, the carina short; palpi rather robust, the terminal joint acute; antennæ nearly black, thickly pubescent, two-thirds the length of the body, the third and following joints nearly equal; thorax transversely convex, about twice as broad as long, the sides rounded, all the angles obsolete, the disc with a few punctures only near the base; scutellum broad, its apex rounded; elytra parallel, without any basal depression, each with nine not very regular but distinct rows of punctures; underside fulvous; legs black.

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

In the female the antennæ are much shorter, the terminal joints particularly so; in the male joints 3–5 are more elongate than the others, and the third and fourth are thickened at their apex. Many specimens.

IPHITROIDES. (To follow the genus *Prasona*, p. 322.)

Elongate, parallel; antennæ filiform, slender; thorax subquadrate, narrowed at the base, the disc with a transverse sulcus, terminated at the sides by a longitudinal groove; elytra glabrous, finely punctured, their epipleuræ broad at the base and continued to the apex; legs slender, the posterior femora but feebly dilated; posterior tibiæ with a small spine, not channelled; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate; prosternum narrow; anterior coxal cavities closed.

This genus is proposed to include some elongate species which somewhat resemble *Iphitrea*, Baly, in the form of the thorax; but differ from it by the non-pubescent upper surface and the appendiculate claws. The posterior femora are only feebly dilated; but the general facies, the sulcate thorax, the broad elytral epipleuræ, and the distinct prosternum are characteristic of the group Halticinæ.

1. **Iphitroides quadrimaculata.** (Tab. XLII. fig. 6.)

Pale fulvous; the antennæ nearly as long as the body; head and thorax impunctate; elytra very finely and closely punctured, a rounded spot at the shoulders, and a more elongate one near the apex, piceous.

Length 2–2½ lines.

Head impunctate, broader than long, the eyes very large and prominent, the frontal elevations narrowly elongate; palpi rather robust, the terminal joint very short, acute; antennæ extending to rather more than two-thirds the length of the elytra, fulvous, the first joint elongate and thickened, the second less than half the length of the first, the fourth joint longer than the third; thorax not broader than long, narrowed at the base, the angles not produced but distinct, the base with a distinct transverse sulcus bounded at the sides by a longitudinal groove, the surface impunctate, fulvous; scutellum rather long, its apex broadly rounded; elytra much wider at the base than the thorax, parallel, the surface rather flattened, extremely closely and finely punctured, with traces of feebly raised longitudinal lines, fulvous or flavous, each elytron with a rounded piceous spot at the shoulder, and a more elongate one near the apex, these spots not extending to either margin; underside and legs pale fulvous; the last abdominal segment of the male produced into a rounded lobe, and the preceding segment with a longitudinal median groove.

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

Numerous examples.

2. **Iphitroides quadripunctata.** (Tab. XLII. fig. 7.)

Flavous, the terminal joints of the antennæ fuscous; head and thorax impunctate; elytra scarcely perceptibly punctured, each with a small round spot near the scutellum, and another at the middle, black.
Length 2–3 lines.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*, *H. H. Smith*).

This species only differs from the preceding in the markings of the elytra: the anterior spot is placed at the basal margin near the shoulder; the second spot is equally small and placed nearer to the suture, at or immediately below the middle. The antennæ have the lower four or five joints flavous, the other joints fuscous. Numerous specimens.

3. **Iphitroides nigrocincta.** (Tab. XLII. fig. 8.)

Pale testaceous; the antennæ (the basal joint excepted) black, each joint pale at the apex; thorax margined with black and with a dark longitudinal stripe on the disc; elytra scarcely punctured, testaceous, narrowly margined with black.
Length 2–2½ lines.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

In shape and structural details this species closely resembles both the preceding. The antennæ in the male are equally long, and have the basal joint entirely testaceous, but all the other joints are of that colour at the apex only. The thorax is impunctate, narrowly margined with black, and has a black median vitta, the latter in one specimen extending only as far as the sulcus. The scutellum is black. The elytra are exceedingly finely punctured, of a pale testaceous colour, and are narrowly margined with black. The tibiæ are stained with fuscous at the base; the other parts of the legs, as well as the underside, are testaceous. Two specimens.

4. **Iphitroides violaceipennis.**

Fulvous; the antennæ (the basal three joints excepted) black; head and thorax impunctate; elytra violaceous-blue, extremely minutely punctured; legs fulvous; abdomen piceous.
Length 2½ lines.

Hab. Mexico (*coll. Duvivier*).

I. violaceipennis differs from the other species of the genus by the transverse sulcus of the thorax being almost obsolete; the longitudinal grooves at the sides of the thorax, however, are very distinct. The elytra are violaceous-blue in colour; the head and thorax are entirely impunctate; the antennæ extend almost to the end of the elytra, and are black, with the exception of the first three joints, these being fulvous; the posterior femora are scarcely thicker than the others.

The only specimen I have seen of this species was kindly given to me for description by M. Duvivier.

SYSTENA (p. 322).

Systena nigroplagiata (p. 324).

To the localities given, add:—MEXICO, Chilpancingo, Omilteme, Amula, Tepetlapa, Xucumanatlan, all in Guerrero (*H. H. Smith*); GUATEMALA, Dueñas (*Champion*).

Several other varieties of this species have since been obtained at Omilteme and Chilpancingo; in one of these the elytra have a sutural and also a submarginal longitudinal band, the former being widened at the base and at the middle, and the latter anteriorly widened below the shoulder (corresponding to the small spot at the same place in the type); in another variety the elytra are without spots, but have a narrow sutural and also a submarginal black stripe of equal width; in another variety the elytra are entirely testaceous, and in another they are entirely black. Of the two specimens figured on Tab. XIX., fig. 23 is taken from an example from Dueñas, fig. 24 from one from Juquila. *S. undulata*, Jac., a specimen of which from Cerro de Plumas was figured on Tab. XIX. fig. 22, is probably a variety of *S. nigroplagiata*.

12. Systena tæniata.

Altica tæniata, Say, in Long's Second Exped. p. 294[1]; Complete Writings, i. p. 195.
Systena tæniata, Horn, Trans. Am. Ent. Soc. xvi. p. 273, t. 7. figg. 5–8[2].
Systena elongata, huj. op. p. 327 (nec Fabr.)
Systena discicollis, huj. op. p. 331, Tab. XX. fig. 5.
Systena semivittata, huj. op. p. 335, Tab. XX. fig. 9.
Systena capitata, huj. op. p. 336, Tab. XX. fig. 6.

According to Dr. Horn (*op. cit.* p. 274), *S. discicollis*, *S. capitata*, and *S. semivittata* are probably varieties of the widely distributed and variable *S. tæniata* (Say). Dr. Horn has described the known varieties, and I have not much doubt about the correctness of his views. *S. tæniata* stands as a synonym of *Phyllotreta vittata*, Fabr., in Gemminger and Harold's Catalogue.

Systena chloropus (p. 328).

To the localities given, add:—GUATEMALA, between Tactic and Tucuru in Vera Paz (*Conradt*).

17 (A). Systena viridilimbata.

Black; the head and thorax closely punctured, the basal margin of the latter testaceous; elytra closely punctured, testaceous, the sutural and lateral margins greenish-black.

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

Head closely and somewhat rugosely punctured, black, the lower portion flavous, the carina acutely raised; the antennæ extending to the middle of the elytra, black; thorax about one half broader than long, the sides constricted near the base, rounded in front, the surface rather closely punctured, piceous, the basal margin testaceous, preceded by an obsolete transverse groove; scutellum black; elytra slightly widened

posteriorly, depressed, closely and distinctly punctured throughout, the disc testaceous, the suture and lateral margin rather broadly greenish, this colour diminishing in extent posteriorly; underside and legs black, shining.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single example. Of comparatively large size, and distinct from any other species from our region by the colour of the elytra and the close punctuation.

38. **Systena (?) minuta.**

Black, above metallic blue or greenish; the antennæ (entirely or partly) and legs (the posterior femora excepted) flavous; thorax and elytra very minutely punctured, and finely wrinkled or granulate.

Length $\frac{3}{4}$ line.

Head finely granulate, without punctures, the frontal tubercles very small; antennæ extending beyond the middle of the elytra in the male, flavous, the terminal two joints often fuscous, the third joint thinner and slightly shorter than the second, the following joints equal and rather stout, gradually thickened towards the apex; thorax nearly twice as broad as long, the sides rounded, the angles scarcely distinct, the base with a more or less well marked transverse groove not extending to the sides, the surface finely granulate and scarcely perceptibly punctured; scutellum black; elytra parallel, not very convex, and scarcely more distinctly punctured than the thorax; legs flavous, the posterior femora piceous; the first joint of the posterior tarsi as long as the following three joints together; anterior coxal cavities closed.

Hab. BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This very small species agrees in most of its characters with *Systena*, but differs from it by the short joints of the antennæ and the more transversely-shaped thorax. Some specimens have a nearly black thorax and dark blue elytra; those from British Honduras are entirely dark blue above, with an almost smooth head and thorax. Many examples were obtained by Mr. Champion in Chiriqui.

39. **Systena robusta.**

Entirely testaceous; the antennæ stout; thorax finely punctured, the basal sulcus distinct and sinuate; elytra very closely and finely punctured.

Length 4 lines.

Hab. MEXICO (*coll. Jacoby*).

This is a large and comparatively robust species. It differs from most of its congeners by the long and stout antennæ, the basal joints of which are thickened, the third longer than any of the following ones. The head is impunctate, broad, not constricted behind the eyes; the thorax is closely and finely punctured, of the usual shape, but with the basal groove sinuate at the middle and very distinctly marked; the elytra are depressed, with the basal portion somewhat swollen, extremely closely and finely punctured throughout; the underside and legs are testaceous.

A single specimen sent me by Dr. Pipitz of Graz, without nearer indication of locality.

40. **Systena sulphurea.**

Entirely pale greenish-yellow, the terminal joint of the antennæ excepted; thorax sparingly, the elytra more distinctly and closely, punctured.

Length 1½–2 lines.

Head impunctate, the frontal elevations indistinct; antennæ extending to a little beyond the middle of the elytra, pale flavous, the terminal joint fuscous, the fourth joint longer than the third, the apical joints thickened; thorax strongly narrowed at the base, with a narrow, distinctly impressed, transverse groove, sparingly and finely punctured; elytra punctured in closely approached rows.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*), Yautepec (*Flohr*).

Distinguished by the uniform sulphur-yellow colour of the upper- and undersides. Numerous examples.

CLAMOPHORA (p. 339).

Clamophora salvini (p. 339).

As stated, *anteà*, p. 259, this name is a synonym of *Lactica frontalis*.

CREPIDODERA (p. 342).

1 (A). **Crepidodera amplicollis.** (Tab. XLII. fig. 9.)

Black; the first joint of the antennæ, the head, thorax, and femora fulvous; thorax distinctly widened in front, finely punctured, with a very deep transverse sulcus; elytra bluish-black, finely, closely, semi-regularly punctate-striate.

Length 1¾ line.

Of narrow, parallel shape; the head impunctate, the frontal tubercles very strongly developed, broad, the labrum fulvous, the palpi obscure piceous; antennæ rather stout, extending to about the middle of the elytra, black, the first joint fulvous, thick, the second joint about one third shorter than the third, not longer than the fourth; thorax about one half broader than long, the sides concave at the base, strongly widened before the middle, the surface sparingly and very finely punctured, the transverse sulcus very deep and bounded at the sides by an equally deep longitudinal groove, a shallow longitudinal depression also extends upwards from the middle of the base; scutellum piceous; elytra dark bluish, wider at the base than the thorax, without any basal depression, rather finely but distinctly and irregularly punctate-striate, the rows of punctures closely placed, partly geminate, quite irregular at the apex; underside black; femora obscure fulvous, slightly stained with piceous; the first joint of the posterior tarsi as long as the following three joints united; claws widely separated and appendiculate; prosternum comparatively broad; anterior coxal cavities closed; the four posterior tibiæ with a distinct spine.

Hab. MEXICO, Mochitlan in Guerrero (*Baron*).

A single specimen. This species differs from most others of the genus by the thorax being strongly constricted behind and having a very deep basal sulcus; the intermediate and posterior tibiæ are each armed with a spine.

Crepidodera guatemalensis (p. 343).

To the localities given, add:—NICARAGUA, Leon (*Sallé*).

Crepidodera obliterata (p. 344).

To the localities given, add:—MEXICO, Teapa (*H. H. Smith*).

6. Crepidodera zapotensis.

Black, the basal joints of the antennæ and the first joint of the tarsi fulvous; thorax impunctate; elytra finely punctate-striate, the interstices very sparingly pubescent.

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

Head impunctate, black, the frontal tubercles oblique, the carina acutely raised, the labrum dark fulvous; antennæ half the length of the body, the lower six joints fulvous, the first joint black above, the others black; thorax scarcely more than one half broader than long, the sides straight at the base, slightly rounded before the middle, the basal sulcus deep and bounded at the sides by an equally deep longitudinal groove, the surface entirely impunctate, shining; elytra not depressed below the base, strongly punctured anteriorly, the punctuation nearly obsolete towards the apex, the interstices with a few stiff pale hairs; below and the legs black, the first joint of all the tarsi fulvous.

Hab. GUATEMALA, Zapote (*Champion*).

A single specimen.

7. Crepidodera tibialis.

♂. Piceous, the head, the basal joints of the antennæ, the thorax, and the anterior legs fulvous; thorax impunctate, its sulcus deep; elytra nearly black, finely punctate-striate; anterior tibiæ angulate at the middle.

Length $1\frac{3}{4}$ line.

Head longer than broad, deeply grooved between the eyes, the frontal elevations well-developed, the clypeus strongly raised; antennæ very long and robust, the lower three joints fulvous, the rest black, the third and fourth joints equal, the fifth longer than the fourth; thorax rather elongate, not more than one half broader than long, the sides rounded, the angles not produced, the surface impunctate, with a deep transverse sulcus at the base, bounded on either side by a longitudinal groove; scutellum fulvous; elytra with the basal portion raised, nearly black, finely punctate-striate, the apex impunctate; the four anterior legs and the posterior tibiæ and tarsi fulvous, the posterior femora piceous in the centre; the anterior tibiæ distinctly angulate at the middle externally, widened at the apex; the basal joint of the anterior tarsi much dilated; anterior coxal cavities closed.

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

A single specimen. Very distinct from the other species described here by the form of the anterior tibiæ in the male.

8. Crepidodera atra.

Elongate, parallel, black, the basal joints of the antennæ and the legs fulvous; thorax transverse, very remotely punctured; elytra moderately deeply punctate-striate, the punctures becoming obsolete posteriorly, the interstices sparsely pubescent.

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

Head impunctate, the frontal tubercles and the carina broad and distinct; the anterior edge of the labrum, the mandibles, and palpi fulvous; antennæ about half the length of the body, fulvous, the apical five joints fuscous, the second joint thick, equal in length to the third, the third and fourth joints equal; thorax twice as broad as long, rather convex, the sides rounded, narrowly margined, the surface very remotely punctured, the basal sulcus deep and bounded at the sides by a longitudinal groove; elytra slightly depressed below the base, the punctures very distinct and regular anteriorly, gradually diminishing posteriorly, where

only the striæ are visible, the interstices sparsely clothed with stiff whitish hairs; legs entirely fulvous.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

A single specimen.

9. **Crepidodera (?) flaveola.**

Pale flavous (sometimes piceous below), the last joint of the antennæ fuscous; thorax closely punctured and finely granulate, the transverse sulcus indistinct; elytra punctate-striate, the interstices minutely punctured.

Length ¾ line.

Of somewhat ovate, medially widened shape; the head rather remotely but strongly punctured, the frontal tubercles obsolete; antennæ two-thirds the length of the body, flavous, the last joint fuscous or black, the second joint short and stout, the third thin, shorter than the fourth, the following joints rather robust; thorax transverse, the sides nearly straight, the angles obsolete, the surface minutely granulate and strongly punctured, the transverse sulcus, as well as the lateral longitudinal groove, nearly obsolete; elytra slightly depressed below the base, punctate-striate, the first two striæ near the suture each formed by a double row of punctures, the others by a single row, the interstices very finely and sparingly punctured; anterior coxal cavities closed.

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

This small species has all the structural characters of *Crepidodera*, but differs from it by the indistinct thoracic sulcus. It is not advisable to separate it from *Crepidodera*, which has been already divided into several sections (*Ochrosis* &c.).

ORTHYGIA. (To follow the genus *Crepidodera*, p. 344.)

Body ovate, convex; palpi slender; antennæ filiform, long; thorax transverse, longitudinally grooved on either side at the base; elytra punctate-striate; legs rather robust; the tibiæ not channelled, each armed with a small spine; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; prosternum narrow between the coxæ, much widened towards the base; anterior coxal cavities closed.

In having a longitudinal groove on either side of the base of the thorax this genus approaches *Mantura*, from which it differs in the broadly ovate, convex shape, and the more transverse thorax.

1. **Orthygia nigritarsis.**

Fulvous or blood-red, the apical joints of the antennæ, the apex of the tibiæ, and the tarsi black; thorax microscopically punctured; elytra finely and regularly punctate-striate.

Length 1½–2 lines.

Head inserted as far as the eyes, the frontal elevations nearly obsolete, impunctate, the apex of the mandibles black; antennæ extending to the middle of the elytra, the lower four joints fulvous, the rest black, the third and following joints nearly equal, slender; thorax much broader than long, the sides rather rounded, the anterior and posterior margins nearly straight, the anterior angles slightly produced the surface extremely minutely punctured, a short longitudinal groove (sometimes nearly obsolete) on either side at the base; scutellum triangular, smooth; elytra with ten regular rows of punctures, the interstices flat; underside and legs fulvous, the posterior half of the tibiæ and the tarsi black.

Hab. Mexico, Amula in Guerrero (*H. H. Smith*).

Six examples, one of which is of a blood-red colour.

2. **Orthygia unifasciata.** (Tab. XLII. fig. 10.)

Ovate, widened posteriorly, testaceous, the apical joints of the antennæ and the breast black; thorax with a few punctures; elytra deeply punctate-striate, each with a narrow angulated red fascia below the middle.
Length 2 lines.

Hab. Mexico, Amula in Guerrero (*H. H. Smith*).

A single specimen. More dilated posteriorly than the preceding species; the thorax of similar shape, but impunctate, with the exception of three or four widely separated punctures on either side extending from the anterior margin downwards, the basal grooves indistinct; the elytra with rows of deep punctures, the rows near the suture sinuate, the interstices slightly convex, and with a narrow blood-red angulated fascia below the middle not extending to either margin; underside (the breast excepted) and legs entirely testaceous.

SUETES. (To precede the genus *Mesodera*, p. 344.)

Body narrowly elongate; head very broad; antennæ robust; thorax strongly transverse, with a very obsolete basal sulcus; elytra punctate-striate; posterior femora strongly incrassate; posterior tibiæ mucronate; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; anterior coxal cavities closed; prosternum narrow, but distinct.
♂. Antennæ very robust, the two basal joints greatly thickened, the following three dilated, the other joints short.
♀. Antennæ gradually thickened towards the apex.

This genus belongs to the group Crepidoderinæ, and is principally distinguished by the extraordinary development of the antennæ in the male sex. The thoracic sulcus is scarcely visible and limited at the sides by a rather more distinct longitudinal groove. The single species referred to it is of small size.

1. **Suetes niger.** (Tab. XLII. figg. 11, ♂; 11 *a*, antenna.)

Black, the basal joints of the antennæ and the tibiæ and tarsi flavous; head and thorax strongly punctured; elytra closely punctate-striate.
♂. The last six joints of the antennæ and the femora piceous or black.
♀. Antennæ, the four anterior legs, and the posterior tibiæ flavous.
Length 1 line.

♂. Head broader than long, not narrowed behind the eyes, the latter small, the vertex strongly punctured, the frontal tubercles obsolete, divided by a short longitudinal groove, the lower portion of the face deflexed; penultimate joint of the palpi moderately thickened, the last joint acute, short; antennæ extending to beyond the middle of the body, the lower five joints flavous, the others black, the first joint long and very stout, the second short, the following three joints longer and much widened, the others short, slightly longer than broad, laxly articulated to each other; thorax more than twice as broad as long, the sides nearly straight, very narrowly margined, the anterior angles slightly thickened, the disc strongly and irregularly but not closely punctured, the basal sulcus scarcely perceptible; scutellum rounded at the

apex, smooth; elytra parallel, subcylindrical, very obsoletely depressed below the base, with closely placed rows of strong punctures; underside and femora black, the knees, tibiæ, and tarsi flavous.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

In the female the antennæ are differently formed—shorter, the basal joints normal, the others gradually thickened; in this sex they are entirely flavous, as well as the four anterior legs and the posterior tibiæ and tarsi.

EPITRIX (p. 345).

4 (A). **Epitrix hirtula.**

Epitrix hirtula, Har. Coleopt. Hefte, xiv. p. 37 [1].

Hab. PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA [1].

Found in abundance by Mr. Champion in Chiriqui.

Epitrix cucumeris (p. 349).

To the localities given, add:—MEXICO, Chilpancingo, Omilteme, Orizaba, Fortin (*H. H. Smith*).

Epitrix minuta (p. 350)

To the locality given, add:—MEXICO, Atoyac (*H. H. Smith*), Teapa (*Sallé, H. H. Smith*).

Epitrix nigroænea (p. 350).

To the localities given, add:—PANAMA, Peña Blanca (*Champion*).

10 (A). **Epitrix metallica.**

Below black, above greenish-æneous, the antennæ and legs flavous; thorax nearly impunctate; elytra depressed below the base, regularly punctate-striate, glabrous.

Length 1 line.

Head impunctate, æneous, the labrum flavous; antennæ entirely flavous, the terminal joints thickened; thorax nearly twice as broad as long, the sides almost straight, very narrowly margined, the basal sulcus distinct but not deep, the lateral grooves well marked, the surface metallic æneous, the disc impunctate, the base with a few very fine punctures; elytra with the basal portion distinctly raised, strongly punctate-striate, the punctures obsolete near the apex, the interstices smooth, without pubescence.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*); PANAMA, Volcan de Chiriqui (*Champion*).

This *Epitrix* may be known from its allies by the metallic-æneous colour of the upper surface in connection with the raised basal portion of the elytra and the entire absence of pubescence.

10 (B). **Epitrix obliterata.**

Black, shining, the basal joints of the antennæ, the four anterior legs, and the posterior tibiæ flavous; thorax impunctate; elytra with an æneous lustre, distinctly punctured anteriorly, the punctuation nearly obliterated posteriorly.

Length $\frac{3}{4}$–1 line.

Head impunctate, the frontal elevations in the form of narrow oblique ridges; antennæ nearly as long as the body, the lower five joints flavous, the others black; thorax one half broader than long, the sides straight, the disc convex, very shining and impunctate, the basal sulcus deep, slightly sinuate, and limited laterally by an equally deep longitudinal groove; scutellum small, transverse; elytra convex, subcylindrical, with a slight transverse depression below the base, the punctures distinct anteriorly and arranged in rather close and not very regular rows, gradually diminishing posteriorly, where they are very fine, the interstices shining, glabrous, and with an æneous gloss, the apex rather broadly rounded; prosternum and abdomen impunctate.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

E. obliterata is chiefly distinguished by the long antennæ, the impunctate thorax, the glabrous upper surface, and the obsolete punctuation of the elytra.

Epitrix convexa (p. 351).

To the locality given, add :—MEXICO, Orizaba, Fortin, Atoyac, Teapa (*H. H. Smith*).

Many specimens from the above localities do not differ in any material way from the Guatemalan type.

14 (A). **Epitrix robusta.**

Robust, black, the antennæ and the four anterior legs fulvous; thorax very strongly and closely punctured; elytra very deeply punctate-striate, the interstices costate and pubescent.

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

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

This insect is allied to *E. intermedia* and is one of the largest species of the genus. The thorax is extremely closely and deeply punctured, and may almost be described as rugosely punctate; the transverse basal sulcus is very distinct, and limited at the sides by a longitudinal groove, the space behind it being strongly punctured. The punctures on the elytra are deep, round, and closely placed, and the interstices are costate. The antennæ and the anterior legs, as well as the posterior tibiæ (more or less), are pale fulvous. *E. robusta* also differs from *E. intermedia* in the colour of the antennæ.

Epitrix fulvifrons (p. 352).

To the locality given, add :—MEXICO, Chilpancingo and Omilteme in Guerrero, Cuernavaca in Morelos (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

The Mexican specimens agree in the dark fulvous head and other particulars with the Guatemalan type, but in several of them the elytra are dark brown. The antennæ, the four anterior legs, and the posterior tibiæ are pale fulvous; the upper surface is apparently glabrous.

17 (A). **Epitrix æneicollis.**

Black, the antennæ and legs fulvous; thorax with an æneous gloss, very finely and rather closely punctured; elytra with a slight basal depression, strongly punctate-striate, the interstices at the sides costate; posterior femora black.

Length $\frac{3}{4}$ line.

Hab. MEXICO, Chilpancingo in Guerrero, Fortin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chiacam (*Champion*).

Of rather ovate shape and differing from its allies from our region in the æneous colour of the thorax, the latter at least twice as broad as long and closely and finely punctured; also by the obscure basal depression of the elytra, which are, as usual, clothed with yellowish-white pubescence. The basal sulcus of the thorax is rather deep, and the median lobe is somewhat pointed and produced; the punctures of the elytra are closely placed and rather strong.

Epitrix castanea (p. 354).

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

20 (A). **Epitrix ferruginea.**

Black or piceous below, above ferruginous; thorax coarsely and closely punctured; elytra deeply and closely punctate-striate, the interstices costate.

Length 1 line.

Head very minutely punctured between the eyes, with some deeper punctures near their inner margin; antennæ rather short and robust, the last four joints dark, the others fulvous; thorax with straight sides, very closely and coarsely punctured, the transverse sulcus distinct, the space behind it also strongly punctured; elytra elongate, without basal depression, deeply and closely punctate-striate, the interstices minutely punctured, longitudinally costate, and clothed with rather long whitish pubescence.

Hab. MEXICO, near the city (*Höge*), Chilpancingo in Guerrero (*H. H. Smith*).

Amongst the pale-coloured species, *E. ferruginea* may be known by the very strongly and closely punctured thorax and elytra in connection with its parallel general shape.

Epitrix parvula (p. 355).

To the localities given, add:—MEXICO, Orizaba (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*).

According to Dr. Horn (Trans. Am. Ent. Soc. xvi. p. 247), this species occurs throughout the entire United States.

24. **Epitrix piceo-marginata.**

Ovate, convex, fulvous; thorax very finely punctured, the sides narrowly piceous; elytra glabrous, punctate-striate.

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

Head impunctate; antennæ entirely pale fulvous, about half the length of the body; thorax scarcely perceptibly punctured, the sides straight, the anterior angles oblique, the basal sulcus deep, as well as the lateral

grooves, the surface fulvous, the sides narrowly edged with piceous; elytra convex, somewhat widened at the middle, finely punctate-striate, glabrous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

In this small species the thorax is nearly impunctate and has the lateral margins piceous; and the elytra are glabrous and finely punctured.

25. **Epitrix subcrinita.**

Haltica subcrinita, Lec. Rep. Pacif. Survey, xii. 2, p. 68 (1860) [1].
Epitrix subcrinita, Horn, Trans. Am. Ent. Soc. xvi. p. 246 [2].

Hab. NORTH AMERICA, Oregon [2], California [1 2], Nevada [2], Arizona [2].—GUATEMALA, Quezaltenango (*Champion*).

DIBOLIA (p. 357).

1. **Dibolia ovata.**

Dibolia ovata, Lec. Proc. Acad. Phil. xi. p. 286 [1]; Horn, Trans. Am. Ent. Soc. xvi. p. 308 [2].
Dibolia borealis, huj. op. p. 358, Tab. XXI. fig. 10 (nec Chevr.).

Hab. NORTH AMERICA [1], California and Nevada [2].—MEXICO, Ventanas and Ciudad in Durango (*Forrer*), Orizaba, Guanajuato (*Sallé*).

Two species were confused by me under the name of *D. borealis*, Chevr., neither of which really belongs to it; one appears to be referable to *D. ovata*, Lec., the other is described below under the name of *D. constricta*. I am indebted to Dr. Horn for a typical specimen of *D. borealis*.

3. **Dibolia constricta.**

Narrowly elongate, black below, above æneous, cupreous, or blue; thorax bluish, impunctate; elytra scarcely perceptibly punctured in striæ anteriorly only; antennæ and legs dark.
Length 1–1¼ line.
Of narrowly elongate and nearly parallel shape; the head impunctate, the space between the antennæ raised; antennæ gradually thickened towards the apex, the lower three joints piceous or dark fulvous; thorax transverse, with straight sides, dark bluish, opaque, not or scarcely perceptibly punctured; elytra very finely rugose, with irregular rows of punctures on the anterior portion, cupreous or bluish; underside and legs black, the posterior femora metallic bluish.

Hab. MEXICO, Las Vigas, Jalapa (*Höge*).

Separable from *D. ovata* by the narrow elongate shape, the opaque, nearly impunctate thorax, the dark antennæ and legs, and the finely rugose elytra. Numerous specimens were obtained by Herr Höge at Las Vigas.

4. **Dibolia violacea.**

Oblong-ovate, black, the elytra metallic blue; thorax finely and sparingly punctured; elytra strongly punctate-striate, the interstices nearly impunctate.
Length 1¼ line.
Head deeply inserted in the thorax, the space between the eyes finely wrinkled, the clypeus triangularly

raised; antennæ robust, black, the basal two joints stained with fulvous, the third joint thin and small, the following joints gradually thickened; thorax short and very strongly transverse, the sides rounded, the surface black, sparingly and finely punctured, the punctures rather larger near the base; elytra dark metallic blue, oblong, nearly parallel, the punctures large and rather irregularly arranged near the suture, more regularly placed at the sides, the interstices with a few minute punctures only; underside and legs black; the posterior tibial spur long; abdomen impunctate.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

A single specimen.

PSEUDODIBOLIA. (To follow the genus *Dibolia*, p. 358.)

Body ovate, very convex; head inserted in the thorax as far as the eyes; antennæ short, the terminal joints submoniliform, the second and third joints short, equal; thorax transverse, short; elytra convex, punctate-striate, their epipleuræ concave, extending to below the middle; posterior femora very strongly incrassate; posterior tibiæ dilated, deeply channelled, serrate on their outer edge, the apex furnished with two strong spurs; the first joint of the posterior tarsi as long as the following joints together; claws appendiculate; prosternum rather broad, slightly widened posteriorly; mesosternum short; the first abdominal segment as long as the following three segments together; anterior coxal cavities open.

The species for which this genus is proposed closely resembles a *Homophyla* or *Sphæroderma*, but differs from either in the armature of the posterior tibiæ and in the short submoniliform antennæ. *Dibolia* has a double spur to the hind tibiæ, but the spur is only divided at the apex; in *Pseudodibolia* there are two entirely separated spurs, the inner one being longer than the other. In the present genus, moreover, the outer edge of the posterior tibiæ is serrate. The sectional characters given by me on p. 357 require modification to include this genus.

1. **Pseudodibolia picea.** (Tab. XLII. fig. 20.)

Piceous or black; the basal six and the apical two or three joints of the antennæ reddish-yellow, the other joints black; thorax finely longitudinally strigose; elytra strongly punctate-striate, the interstices finely punctured.

Length 1½ line.

Head closely and finely punctured, piceous or dark fulvous, the frontal elevations absent, the clypeus with a central ridge, fulvous, as well as the labrum; palpi scarcely thickened; antennæ only extending to the base of the elytra, reddish-yellow, the seventh to the ninth joints black, the apex of the terminal joint concave; thorax nearly three times as broad as long, slightly widened at the middle, the sides straight, the anterior angles oblique and a little thickened, the surface very closely and finely longitudinally strigose; scutellum transverse; elytra very convex, nearly black, rather closely and strongly punctate-striate, the interstices minutely punctured, the apices conjointly rounded; underside and legs piceous or dark fulvous, the first abdominal segment strongly punctured.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Numerous examples. Two specimens obtained by Mr. Smith at Dos Arroyos, Guerrero, are perhaps females of the same species; they are much larger, the antennæ are longer, with three or four of the intermediate joints black, and the first joint of the posterior tarsi is a little shorter. One of these specimens is black above, the other entirely fulvous.

LUPRÆA (p. 359).

Lupræa fulvicollis (p. 359).

To the localities given, add :—BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

3. Lupræa marginipennis.

Narrow, parallel, fulvous ; the antennæ, tibiæ, and tarsi black ; head and thorax impunctate ; elytra testaceous, impunctate, the lateral margins, and the apex to a greater or less extent, black.

Length $1\frac{1}{2}$–$1\frac{3}{4}$ line.

Head impunctate, fulvous, shining, the eyes large, the labrum piceous ; antennæ black, extending to two-thirds the length of the elytra, the fourth and following joints elongate-triangular in shape ; thorax fulvous, transversely subquadrate, the sides rounded, the surface shining, entirely impunctate ; scutellum triangular, fulvous ; elytra pale fulvous or testaceous, impunctate, shining, the sides, and a more or less distinct elongate sublateral patch at the apex, black ; underside and femora (the apex of the hind pair excepted) fulvous, the apex of the posterior femora and the tibiæ and tarsi black.

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

In its structural characters *L. marginipennis* agrees in every respect with the other species of the genus, having very narrow elytral epipleuræ, an invisible prosternum, open anterior coxal cavities, &c., thus forming a link between the groups Halticinæ and Galerucinæ.

PTOCADICA (p. 360).

Ptocadica straminea (p. 360).

Additional specimens of this species have been received from Bugaba and the Volcan de Chiriqui. These differ from the type and belong to two well-marked varieties :—

1. Elytra with a transverse band at the base and an arcuate mark at the middle piceous.
2. Elytra with a transverse band at the base only piceous.

2. Ptocadica bifasciata.

Yellowish-white ; the antennæ, breast, and apex of the femora, and the tibiæ and tarsi, black ; thorax and elytra impunctate, the latter with a transverse band at the base and another below the middle, black.

Length 2 lines.

Hab. COSTA RICA, Caché (*Rogers*).

This species, of which only a single imperfect example has been obtained, closely resembles *P. straminea* in shape and in its structural characters ; but it is of a creamy-white colour, and the posterior band on the elytra is placed below the middle.

APHTHONA (p. 360).

4 (A). Aphthona pacifica.

Elongate, parallel, black, the head, thorax, and legs fulvous ; antennæ with short joints ; thorax with an obsolete transverse groove ; elytra nearly impunctate.

Length $1\frac{1}{3}$ line.

Head impunctate, broader than long, the eyes widely separated, the frontal elevations and the carina entirely obsolete; antennæ scarcely extending to the middle of the elytra, the basal six joints fulvous, the others black, the first and second joints very stout, the third very small, the rest short, each joint thickened at the apex, the terminal one longer than the preceding and pointed; thorax transverse, twice as broad as long, the sides very slightly rounded, the angles obtuse, the surface obsoletely transversely grooved near the base, impunctate; scutellum dark fulvous; elytra narrow, parallel, black, with a few very minute punctures only near the suture; underside (the prothorax excepted) black; legs fulvous, the posterior femora sometimes piceous.

Hab. GUATEMALA, Pantaleon (*Champion*).

A narrow species, with short antennæ; the thorax transversely shaped and with an obsolete transverse groove; the elytra black, almost impunctate.

Two specimens, from the lower part of the Pacific slope.

Aphthona semipunctata (p. 363).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

This species is erroneously described as possessing "extremely finely punctate-striate elytra"; it should be "rather distinctly punctate-striate."

Aphthona pallipes (p. 364).

To the localities given, add:—MEXICO, Chilpancingo, Amula, Orizaba (*H. H. Smith*).

Aphthona maculipennis (p. 365).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui (*Champion*).

8 (A). **Aphthona substriata.**

Aphthona substriata, Har. Coleopt. Hefte, xv. p. 20 (1876) [1].

Hab. MEXICO, Chilpancingo, Atoyac, Teapa (*H. H. Smith*); PANAMA, Bugaba (*Champion*).—COLOMBIA [1].

I refer a very large number of specimens from the above localities to this species. The antennæ in most of the Mexican specimens are entirely flavous; some examples, however, have the apical joints stained with fuscous (as in the type). The legs are flavous, the posterior femora black.

8 (B). **Aphthona pectoralis.**

Fulvous; the head almost, the thorax entirely, impunctate, the latter strongly transverse; elytra metallic greenish, very finely punctured in irregular rows; the breast and the apex of the posterior femora piceous.

Length $\frac{3}{4}$ line.

Head fulvous, with a few fine punctures on the vertex, the frontal tubercles and the carina small but distinct; antennæ half the length of the body, fulvous, the terminal joints sometimes slightly darker, the third and fourth joints equal; thorax at least twice as broad as long, the sides distinctly rounded, the angles rather

obtuse, slightly thickened, the surface impunctate, with an obsolete transverse depression on either side at the base (only visible when viewed laterally); scutellum large, black; elytra broader at the base than the thorax, the shoulders prominent, the surface finely and closely punctured in semiregular rows; underside and legs fulvous, the breast piceous; the last abdominal segment of the male with a deep longitudinal excavation.

Hab. GUATEMALA, Pantaleon, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Tolé, San Feliz (*Champion*).

Principally distinguished by the transverse thorax, the piceous breast, and the excavate last abdominal segment in the male. In one specimen from Zapote the breast is fulvous, as well as the rest of the underside.

8 (c). **Aphthona dimidiaticornis.**

Below piceous, above obscure æneous; the antennæ (the intermediate joints excepted) and the legs flavous; thorax impunctate; elytra extremely finely punctate-striate, æneous or fulvous.

Length $\frac{3}{4}$–$1\frac{1}{4}$ line.

Head impunctate, obscure æneous; antennæ slender, more than half the length of the body, the basal four (the first and second sometimes slightly infuscate) and the apical three joints flavous, the others black, the third and fourth joints equal; thorax subquadrate, about one-fourth broader than long, the sides perfectly straight, the posterior angles tuberculiform, the anterior ones oblique, the surface entirely impunctate, æneous, fulvous towards the base and apex; elytra wider at the base than the thorax, æneous, with a fulvous tint in certain lights, scarcely perceptibly punctate-striate; legs flavous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This species may be separated from the allied forms by the colour of the antennæ and the æneous tint of the upperside. A single specimen, from the same locality, is much larger than the others, and has the third and fourth and the apical two joints of the antennæ only flavous; the elytra flavous, with a metallic gloss, and more distinctly depressed below the base. It is probably a variety of the same species.

Aphthona mexicana (p. 366).

To the localities given, add :—MEXICO, Chilpancingo (*H. H. Smith*); PANAMA, Bugaba (*Champion*).

14 (A). **Aphthona femorata.**

Dark fulvous; the antennæ (the basal two joints excepted) black; thorax impunctate; elytra finely punctate-striate; legs fulvous, the apex of the posterior femora and the posterior tarsi more or less black.

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

Head impunctate, the frontal tubercles distinct, transverse, the carina short; palpi slender; antennæ more than half the length of the body in the male, much shorter in the female, black, the basal two joints and part of the third fulvous, the others black, the third and fourth joints equal; thorax nearly twice as broad as long, the sides rounded, the anterior angles slightly oblique, the posterior ones forming a tooth or tubercle, the surface without any depression, entirely impunctate; scutellum pointed; elytra slightly widened posteriorly, with very fine punctures placed in rows, distinct nearly to the apex; underside and femora (the hind pair excepted) fulvous, the apical half of the posterior femora and the posterior tarsi black; the first joint of the posterior tarsi as long as the other joints united.

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

In the female the antennæ are much shorter and stouter, and the legs are almost entirely black, with the exception of the base of the posterior femora, which is fulvous.

14 (B). **Aphthona unicolor.**

Oblong-ovate, pale fulvous; thorax transverse, impunctate; elytra extremely finely and irregularly punctured.
Length 1 line.

Entirely of a pale fulvous colour; the head impunctate, the eyes very large, their diameter greater than the space dividing them, the frontal tubercles absent, the clypeus with a central ridge; the penultimate joint of the palpi thickened; antennæ more than half the length of the body, slender, flavous, the second and third joints small, equal in length, the fourth twice as long as the third; thorax twice as broad as long, narrowed anteriorly, the sides scarcely rounded, the anterior angles very slightly thickened, the posterior margin somewhat sinuate on either side, the surface impunctate, shining; scutellum rather broad; elytra moderately convex, extremely finely and rather closely punctured; underside and legs fulvous or flavous; the first joint of the posterior tarsi as long as the following joints united.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Broader and of more ovate shape than *A. fulvipennis*, Jac., and also differing from it in the transversely shaped thorax, and in the minutely, irregularly punctured elytra. In some specimens the apical joints of the antennæ are slightly stained with fuscous.

14 (C). **Aphthona castanea.**

Dark brown, the intermediate joints of the antennæ more or less fuscous; thorax transverse, strongly and remotely punctured; elytra with a distinct basal depression, strongly and closely punctured.
Length 1–1½ line.

Entirely castaneous; the head impunctate, except for a few punctures near the eyes; the frontal tubercles trigonate, distinct; the clypeus triangular, swollen; antennæ short, the apical joints thickened, fulvous, the seventh and eighth joints, and in one specimen the ninth also, fuscous; thorax transverse, the sides straight, the anterior angles oblique, the surface remotely and strongly punctured; elytra with a distinct depression below the base, strongly punctured in closely approached rows.

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

The coloration and the remotely punctured, transversely shaped thorax are the principal marks of distinction of this species. The female is considerably larger than the male, and has the thorax still more transverse and coarsely punctured. The prosternum is broad and impunctate. Two specimens.

16 (A). **Aphthona smithi.**

Black; the antennæ (the apical joints excepted) and legs dark fulvous; thorax metallic greenish, finely punctured; elytra brownish-æneous, strongly punctate-striate, the interstices slightly convex.
Length 1 line.

Head impunctate, metallic purplish, impressed with an oblique groove in front of the eyes, the frontal tubercles distinct; antennæ rather long, fulvous, the second to the fourth joints equal in length, the terminal two joints slightly infuscate; thorax subquadrate, about one half broader than long, the sides straight, the anterior angles oblique, the surface finely, distinctly, rather closely punctured; elytra wider at the base than the thorax, convex, without basal depression, very regularly and strongly punctate-striate, the punctures distinct to the apex; legs fulvous, the posterior femora rather darker.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single specimen. *A. smithi* is well distinguished by its metallic æneous colour and the strong and regularly punctured striæ of the elytra.

17 (A). **Aphthona purpurea.**

Dark purplish, above metallic purplish, the antennæ black; thorax transverse, closely punctured; elytra moderately strongly punctate-striate; legs fulvous.

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

Oblong-ovate, convex; the head metallic blue or purplish, with a few punctures, the frontal elevations transverse, distinct, the clypeus margined with flavous, the labrum piceous; antennæ rather robust, black, the apex of the basal joint, and the second joint entirely, flavous, the third joint very little shorter than the fourth, this and the following joints widened at the apex, the last two joints slender and cylindrical; thorax twice as broad as long, the sides rounded and narrowly margined, the surface of a metallic blue colour, strongly and remotely punctured, with an obsolete transverse depression near the base; scutellum black; elytra with a basal depression, purplish, regularly and rather strongly punctate-striate; underside obscure dark bluish or purplish; legs flavous, the posterior femora obscure purplish.

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

One specimen. Somewhat allied in shape and punctuation to *A. robusta*, Jac., but differing in the metallic purplish colour and the strongly punctured thorax.

18 (A). **Aphthona amulensis.**

Narrow, subparallel, black; the basal joints of the antennæ and the anterior tibiæ, more or less, flavous; thorax transverse, bluish-black, impunctate; elytra very finely and obsoletely punctured, bluish-black.

Length 1 line.

Head broad, bluish-black, entirely impunctate, the frontal tubercles and carina obsolete; antennæ rather robust, more than half the length of the body, the lower five joints flavous, the others black, the second joint stout, short, the following two joints more slender, but not longer than the second; thorax twice as broad as long, the sides rounded at the middle, the angles blunt, not produced, the surface smooth, impunctate, bluish-black, the base with a slight transverse depression at the sides only; elytra of the same colour as the thorax, exceedingly minutely punctured; underside black; the tibiæ more or less, the tarsi entirely, fulvous; prosternum very narrow; the first joint of the posterior tarsi as long as the following three joints united.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

The transverse, impunctate thorax and the minutely punctured elytra in connection with the system of coloration principally distinguish *A. amulensis* from its congeners. It is also of much more elongate parallel shape than is usual in this genus.

20. **Aphthona fulvitarsis.**

Oblong, very convex, black, the basal joints of the antennæ (the first excepted) and the tarsi fulvous; thorax transverse, strongly and remotely punctured; elytra strongly and closely punctate-striate.

Length $\frac{3}{4}$–1 line.

Head impunctate at the vertex, shining, the frontal tubercles strongly raised and rather broad, dark fulvous or piceous, the labrum included; antennæ scarcely half the length of the body, the first joint (its apex excepted), and the last six also, black, the other joints fulvous, the first and second joints very robust. the following three equal, short, the terminal joints gradually widened; thorax twice as broad as long, the sides perfectly straight, the anterior angles very oblique, thickened, and forming a sharp tooth, the surface convex, very strongly and remotely punctured, the posterior margin slightly rounded; elytra very convex,

the shoulders prominent, the punctuation arranged in closely approached rows, distinct nearly to the apex; legs piceous, the tarsi fulvous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

The prosternum in this species is narrowed between the coxæ and (like the abdomen) impunctate. The general shape is very convex.

21. **Aphthona (?) crassicornis.**

Below blackish, above metallic dark greenish, the basal joints of the antennæ and the legs dark fulvous; thorax strongly and remotely, the elytra deeply, more closely and semi-regularly, punctured.

Length 1 line.

Rather elongate, slightly narrowed posteriorly, of a very dark greenish metallic colour; the head broad, impunctate, the frontal tubercles small and obsolete, the labrum fulvous; the palpi rather robust, fulvous; antennæ only extending to about the basal third of the elytra, robust, the basal six joints fulvous, the rest black, the terminal four joints much thickened; thorax one half broader than long, the sides straight at the base, rounded at the middle, the anterior angles oblique, the surface convex, strongly and remotely punctured; elytra with an obsolete depression below the base, more closely punctured than the thorax, the punctures strong and arranged in irregular rows, but greatly diminishing towards the apex; legs dark fulvous; the first joint of the posterior tarsi as long as the following three joints united; prosternum rather broad, somewhat rugose.

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

This species has a broad prosternum and short, robust antennæ. It is, perhaps, generically distinct from *Aphthona*.

PHYLLOTRETA (p. 368).

Phyllotreta mexicana (p. 371).

To the locality given, add:—GUATEMALA, Sinanja (*Champion*).

Phyllotreta crotchi (p. 372).

To the locality given, add:—MEXICO, near the city (*H. H. Smith*).

The description of this species was taken from female specimens. A male has lately been obtained by Mr. Smith; it has the fifth joint of the antennæ much longer than the others, curved, and dilated, and the sixth joint very short. *P. crotchi* may be known from *P. robusta*, Lec., by the yellow vitta of the elytra not extending to the lateral and sutural margins at the apex.

9. **Phyllotreta lativitta.**

Greenish-black; the terminal joints of the antennæ gradually thickened; thorax closely punctured; elytra yellow, closely punctured, the sutural and lateral margins greenish.

♂. Antennæ with the apex of the first joint, and the second entirely, fulvous; the fourth joint triangularly widened.

Length 1 line.

Similar in shape to *P. vittata*, Fabr.; the head finely and sparingly punctured; the antennæ with the fifth joint distinctly longer than either the fourth or sixth; thorax about one half broader than long, the sides

rounded, the surface very finely and closely punctured, not very shining, greenish; elytra not more strongly punctured than the thorax, the punctures arranged in very close rows, a sutural band (gradually narrowed towards the base and apex), and the lateral and apical margins narrowly, greenish.

Hab. MEXICO, near the city (*H. H. Smith*), Guanajuato (*Sallé*).

In this species the elytral vitta occupies almost the entire disc, leaving the margins only greenish; the male has the fourth joint of the antennæ dilated.

10. **Phyllotreta subrugosa.**

Elongate, black, the basal joints of the antennæ and the base of the tibiæ fulvous; head and thorax æneous, closely punctured; elytra metallic greenish-blue, closely punctured, the interstices finely rugose.

Length 1 line.

Head greenish-æneous, very minutely punctured, the space between the antennæ swollen, longitudinally grooved; antennæ more than half the length of the body, the basal five joints fulvous, the first stained with piceous above, the apex of the fifth and of the following two joints fuscous, the rest entirely of that colour, the fifth joint slighter longer than either the preceding or following one; thorax about one half broader than long, the sides rounded, the surface greenish-æneous, finely and rather closely punctured; elytra slightly widened towards the middle, very closely punctured, the punctures partly arranged in double rows which are separated by very faint longitudinal grooves, the interspaces very finely rugose when viewed laterally; the base of the tibiæ and the tarsi fulvous.

Hab. MEXICO, near the city (*H. H. Smith*).

A single specimen. Evidently allied to *P. æneicollis*, Crotch, but with the elytra differently sculptured and the legs (the tarsi and the base of the tibiæ excepted) black.

11. **Phyllotreta ——?**

Hab. MEXICO, Guanajuato (*Sallé*), Teapa in Tabasco (*H. H. Smith*).

Some specimens of a *Phyllotreta* from these localities are perhaps referable to *P. albionica*, Lec., or *P. pusilla*, Horn. They are of elongate, depressed shape, and of a uniform brownish-æneous colour.

LONGITARSUS (p. 372).

Longitarsus subcinctus (p. 373).

To the Mexican localities given, add:—Atoyac in Vera Cruz (*H. H. Smith*).

L. heliophyti, Horn, according to the description, seems to me not to differ from *L. subcinctus*. Its food-plant *Helotropium* (*Heliophytum*) *indicum*, Linn., occurs in Mexico and Central America (*cf.* Biol. Centr.-Amer., Bot. ii. p. 375).

3 (A). **Longitarsus ovipennis.**

Ovate, apterous, above dark piceous; the antennæ fuscous, with the three or four basal joints fulvous; thorax impunctate; elytra ovate, very finely punctured in rather distantly placed rows; legs fulvous, the posterior femora piceous.

Length $\frac{3}{4}$–1 line.

Hab. MEXICO, Chilpancingo and Omilteme, both in Guerrero (*H. H. Smith*).

L. ovipennis differs from the other species with ovately-shaped elytra from our region by the dark piceous colour of the upperside. The thorax is slightly broader than long, a little narrowed at the base, and entirely impunctate; the elytra are strongly narrowed posteriorly, finely and rather remotely punctured; the antennæ are about two-thirds the length of the body, and are more or less fuscous from the fourth or fifth joint. *L. oopterus*, Har., from Colombia, seems to be a very closely allied species, but it is described as being of a pale castaneous colour.

3 (B). **Longitarsus haroldi.**

Obscure fulvous; the basal and the sixth to the ninth joints of the antennæ black, the other joints flavous; thorax finely rugose-punctate; elytra ovate, closely and irregularly punctured.

Length 1 line.

Head impunctate, without frontal tubercles, the labrum piceous; antennæ not more than half the length of the body, the intermediate joints rather broad, these and the basal one black, the other joints flavous, the third and fourth joints equal; thorax subquadrate, slightly broader than long, the sides straight, the surface finely rugose-punctate towards the base, the punctures somewhat elongate in shape; elytra widened at the middle, convex, the punctuation more distinct than that of the thorax, irregular; the pygidium prominent; the underside darker than above; legs flavous.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

One specimen. This species may be known from its allies by the colour of the antennæ and the ovately-shaped elytra. It is apparently apterous.

7 (A). **Longitarsus amulensis.**

Obscure testaceous, winged; the terminal joints of the antennæ more or less fuscous; head impunctate; thorax scarcely perceptibly punctured; elytra broader at the base than the thorax, irregularly and more distinctly punctured.

Length $\frac{3}{4}$ line.

Of somewhat subquadrate shape, gradually narrowed posteriorly, pale brownish in colour; the head impunctate, with an oblique groove over the eyes, the frontal tubercles obsolete, the carina short and connected with the clypeus; antennæ two-thirds the length of the body, the first joint long and curved, the second joint as stout as and nearly half the length of the first, the third shorter, the fourth and fifth joints more elongate, the apical ones more or less fuscous; thorax rather strongly transverse, the anterior angles oblique and forming an angle nearly as far down as the middle; elytra broader at the base than the thorax, the shoulders distinct but not prominent, very closely and finely punctured, the punctuation becoming obsolete near the apex; the first joint of the posterior tarsi scarcely equalling half the length of the tibia.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

Closely allied to *L. colombicus*, but less elongate; the head without a transverse ridge between the eyes, the antennæ with much shorter joints, and the thorax nearly impunctate.

8 (A). **Longitarsus teapensis.**

Oblong, scarcely narrowed posteriorly, winged; below piceous, above obscure dark brown; antennæ black, the lower three joints fulvous; thorax impunctate; elytra distinctly and irregularly punctured; legs testaceous, the femora slightly darker.

Length $\frac{3}{4}$ line.

Head impunctate, without frontal tubercles, the carina distinct; antennæ about two-thirds the length of the body, black, the lower three joints fulvous, the second and third joints equal, the fifth longer than any of the preceding joints; thorax only about one-fourth broader than long, not perceptibly punctured; elytra scarcely narrowed posteriorly, the shoulders just distinct but not prominent, the punctuation comparatively strong and closely and irregularly arranged, the punctures not so large as the spaces dividing them; posterior tibiæ slightly curved; the first joint of the posterior tarsi nearly equalling half the length of the tibia.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This species seems to differ from *L. bogotanus*, to which, however, it is closely allied, by the colour of the antennæ and the impunctate thorax.

12. **Longitarsus antennatus.**

Oblong, nearly parallel, winged, piceous; the antennæ entirely flavous; thorax impunctate; elytra very finely punctured in semi-regular rows.

Length 1 line.

Of comparatively broad, convex shape; the head impunctate, the frontal tubercles distinct but flat, the carina acutely raised; antennæ long and slender, entirely flavous, the fourth joint longer than the third; thorax broader than long, impunctate; elytra much broader at the base than the thorax, with very fine rows of punctures, which are rather closely placed and become indistinct towards the apex; the four anterior legs testaceous, the posterior femora and tibiæ darker; the first joint of the posterior tarsi equalling half the length of the tibia.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single specimen. *L. antennatus* differs from the other species from our region by the flavous antennæ in connection with the fine, seriately arranged punctuation of the elytra, which have the shoulders rather prominent.

13. **Longitarsus occidentalis.**

Testaceous, winged; thorax finely punctured; elytra nearly parallel, finely and closely punctured, testaceous, the suture narrowly piceous.

Length 1 line.

Head impunctate, rather darker than the elytra, without frontal tubercles, the labrum piceous; antennæ nearly as long as the body, fulvous, the terminal joints more or less fuscous, the third joint longer than the second, the fourth longer than the third; thorax about one half broader than long, slightly narrowed in front and at the base, the surface very finely punctured; elytra elongate, but little wider at the base than the thorax, the shoulders rounded, the surface very closely and finely punctured, the suture narrowly piceous, this colour slightly extended posteriorly; posterior femora infuscate.

Hab. MEXICO, Cuernavaca in Morelos, Xucumanatlan, Amula, and Chilpancingo in Guerrero (*H. H. Smith*), Guanajuato (*Sallé*).

Apparently the commonest species of the genus in Mexico. It may be chiefly distinguished by the long antennæ, the finely punctured thorax, and the dark suture of the elytra. *L. occidentalis* is exceedingly like several European species. A large number of specimens were obtained by Mr. Smith.

PALÆOTHONA (p. 377).

Palæothona guatemalensis (p. 377).

To the localities given, add:—MEXICO, Rincon in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

2 (A). **Palæothona elongata.**

Elongate, fulvous; the antennæ (the first joint excepted), tibiæ, and tarsi black; the head and thorax fulvous; elytra dark blue, more or less closely and strongly punctured; legs piceous.

Var. Legs partly or entirely fulvous.

Length $1\frac{3}{4}$–2 lines.

Hab. MEXICO, Tupataro (*Sallé*).

Very closely allied to *P. guatemalensis*, but evidently distinct therefrom. Larger and much more elongate in shape; the antennæ entirely black, or black with the first joint fulvous; the head and thorax impunctate; the elytra not swollen at the base, their punctuation very variable—in some specimens very fine, in others much stronger, and arranged in very close semi-regular rows. The first joint of the anterior tarsi is dilated in the male. Four specimens.

2 (B). **Palæothona imitans.**

Below black; the head, the basal joints of the antennæ, the thorax, and the anterior legs fulvous; thorax impunctate; elytra violaceous-blue, strongly and closely punctured.

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

Head broad, impunctate, the eyes very large, the frontal tubercles scarcely indicated, the carina short and distinct; antennæ nearly extending to the apex of the elytra, the basal two joints and part of the third fulvous, the rest black, the fourth joint much longer than the third; thorax transverse, slightly narrowed at the base, the sides rather evenly but not strongly rounded, the surface impunctate, slightly depressed in front of the scutellum; the latter black; elytra gradually widened posteriorly, rather swollen at the base, strongly punctured in closely arranged rows; anterior legs and the base of the posterior femora fulvous, the anterior femora with a dark streak on their upper edge.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

Two specimens. In the strong elytral punctuation this species approaches *P. guatemalensis*. It differs from that insect, however, by the antennæ being much longer, and with the fourth joint distinctly longer than the third; the thorax evenly rounded at the sides (instead of being considerably widened at the middle); and the legs differently coloured.

3 (A). **Palæothona flavicollis.**

Flavous; the thorax transverse, impunctate; scutellum black; elytra bright metallic green, closely and finely punctured; the breast and abdomen black.

Length 1 line.

Head deeply punctured round the eyes, the middle portion smooth, the frontal elevations broad and distinct, the clypeus strongly concave or deflexed; antennæ extending to the middle of the elytra, flavous, the fourth joint slightly longer than the third, the following joints scarcely thicker; thorax strongly trans-

verse, more than twice as broad as long, the anterior and posterior margins straight and parallel, the sides rounded at the middle, the anterior angles slightly thickened, the surface pale flavous, impunctate, with a shallow transverse depression on each side near the base; scutellum black; elytra slightly broader at the base than the thorax, metallic green, extremely finely and closely punctured, the interstices somewhat finely aciculate; the underside of the thorax and the legs pale flavous; the breast and abdomen black, shining.

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

This species resembles *P. longicornis* in colour; but the antennæ are shorter and entirely flavous; the elytral punctuation is much finer; the head, thorax, and legs are lighter in colour; and the general size is smaller. Three specimens.

5 (A). **Palæothona smithi.**

Black; the head, the basal joints of the antennæ, the thorax, and legs (the posterior femora excepted) fulvous; elytra metallic green, closely and semi-regularly punctured.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Of rather convex shape; the head impunctate, fulvous, the frontal elevations flat, somewhat indistinct; antennæ rather stout, scarcely extending to the middle of the elytra, black, the basal five joints fulvous, the third and following joints of equal length; thorax one half broader than long, the sides evenly and rather strongly rounded, the surface with a few very minute punctures, and a depression in front of the scutellum; the latter black or piceous; elytra rather convex, metallic green, distinctly punctured in irregular rows, the shoulders prominent; legs fulvous, the posterior femora piceous; the first joint of the posterior tarsi as long as the following joints united.

Hab. MEXICO, Xucumanatlan and Omilteme, both in Guerrero (*H. H. Smith*).

Differing from all its congeners, *P. longicornis* excepted, by the somewhat convex shape of the elytra and their metallic green colour; also by the rather robust antennæ, which have their third and following joints equal. *P. smithi* is also allied to *P. semifulva*, but it may be known from that insect by the dark scutellum and underside.

9. **Palæothona nigricollis.**

Elongate, black; the head and thorax impunctate; elytra metallic greenish-blue, closely and strongly punctured.

Length $1\frac{3}{4}$ line.

Hab. GUATEMALA, Calderas on the slope of the Volcan de Fuego 7000 feet (*Champion*).

A single specimen. This insect differs from any of its allies by the black head, thorax, antennæ, and legs in connection with the strongly and evenly punctured elytra; the antennæ are slender and elongate, the third and fourth joints equal; the thorax has a deep fovea in the middle at the base; the elytra have no basal elevation, and are of a metallic greenish colour, the punctuation being distinct to the apex.

10. **Palæothona viridis.**

Black; the basal three joints of the antennæ, and the tibiæ more or less, fulvous; thorax greenish-black, minutely punctured; elytra metallic green, closely punctured and finely rugose.

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

Elongate, slightly widened posteriorly; the head broad, impunctate, very finely granulate, the frontal tubercles small; antennæ two-thirds the length of the body, black, the basal three joints fulvous, the third joint only one half longer than the second, and much thinner than it, the fourth longer than the third; thorax short, transverse, the sides slightly rounded, the anterior and posterior margins straight, the latter with a depression in front of the scutellum, the surface minutely granulate and punctured, greenish-black, not very shining; scutellum greenish-black, pointed behind; elytra metallic green, closely and rather strongly punctured, the interstices finely rugose; below and the femora blackish, the knees and the tibiæ and tarsi more or less fulvous.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Quite distinct from most of its congeners by the system of coloration and sculpture; and from *P. nigricollis* by the finely punctured thorax and the rugose elytral interstices. The antennæ are shorter in the female than in the male. Found in some numbers by Mr. Champion, in a bamboo-thicket on the slope of the Volcan de Chiriqui at a high elevation.

11. **Palæothona godmani.**

Black; the antennæ long and slender (♂); the head and thorax impunctate; elytra metallic blue or greenish, finely and semi-regularly punctured; legs black, the tarsi sometimes obscure fulvous.
Length 1–1½ line.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chiacam in Vera Paz (*Champion*).

Of elongate, posteriorly slightly widened, shape; the antennæ black, with the third joint only a little longer than the second, the fourth twice the length of the third, and the other joints equal in length; the thorax rather convex, about one half broader than long, entirely impunctate, black, very shining; the elytra metallic blue, finely punctured, the punctures remotely placed and arranged in semi-regular rows. This species is principally distinguished amongst its allies by the black head and thorax. The female is considerably larger than the male, and has much shorter antennæ. *P. godmani* resembles *P. nigricollis* in colour, but it is much smaller and has the elytra finely (instead of strongly and rugosely) punctured.

12. **Palæothona dilaticornis.**

Fulvous; antennæ robust; head and thorax impunctate; scutellum piceous; elytra metallic green, strongly and closely punctured.
Length 1½ line.
Head rather broad, fulvous, impunctate, the frontal elevations strongly raised, subquadrate; antennæ more than two-thirds the length of the body, entirely fulvous, the joints slightly dilated, the third and fourth triangularly widened, nearly equal, the following joints more elongate; thorax rather convex, one half broader than long, the sides evenly rounded, the angles not prominent, the surface impunctate, fulvous; elytra much wider at the base than the thorax, metallic green, the punctures strong and placed in close rows, less distinct at the apex; underside and legs fulvous, the breast and abdomen slightly stained with fuscous at the sides; the first joint of the posterior tarsi as long as the following joints together.

Hab. MEXICO, Jalapa (*Höge*).

A single specimen only, a male, of this species has been received. It may be known by the long and robust antennæ in connection with the system of coloration.

CHRYSOGRAMMA (p. 380).

2. **Chrysogramma trifasciata.** (Tab. XLII. fig. 12.)

Obscure fulvous; the thorax with a metallic æneous gloss, finely punctured; elytra blackish-bronze, with three narrow angulated flavous fasciæ, very closely and finely punctured; underside and the base of the posterior femora spotted with greenish-æneous.

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

Hab. MEXICO, Yolotepec (*Sallé*).

One example. *C. trifasciata* differs from *C. octomaculata* and the following two species by the fulvous antennæ and the system of coloration of the elytra; the fasciæ of the latter are arranged thus—one a little below the base, with three branches extending upwards to the base (so as to enclose two spots of the ground-colour on each elytron), one just before the middle, connected with the first at the sides and slightly extended along the suture, and one before the apex, the latter deeply excised posteriorly and in the form of an arcuate mark on each elytron.

3. **Chrysogramma (?) septempunctata.** (Tab. XLII. fig. 13.)

Broad, oblong-ovate, flavous; the antennæ, tibiæ, and tarsi black; head and thorax fulvous, sparingly punctured; elytra closely punctured, flavous, each with seven small black spots (1.2.2.2).

Length 3 lines.

Robust; the head impunctate, fulvous, the frontal elevations flat, widely separated, the carina obsolete; antennæ extending to the middle of the elytra, black, the third and fourth joints equal, the fifth a little longer than the fourth; thorax transverse, the anterior margin straight, the posterior one strongly rounded, the sides rounded at the middle, the anterior angles slightly produced and each with a single seta, the surface dark fulvous, sparingly and irregularly punctured, with an obsolete depression near the anterior angles, and a still more obsolete transverse groove near the base; scutellum broad, piceous; elytra closely and rather finely punctured, flavous, a spot at the shoulder, two spots before, two below the middle, and two others near the apex, placed transversely in pairs, black—of these, the first spot near the suture forms with the corresponding spot on the other elytron a cruciform mark, extending upwards to the base and downwards for a short distance along the suture; epipleuræ broad, transversely wrinkled; underside flavous, the sides of the breast, the knees, tibiæ, and tarsi black; tibiæ mucronate; last abdominal segment fulvous, that of the male with a projecting tooth in the middle.

Hab. MEXICO (*Sallé*).

This species has a spine at the apex of all the tibiæ, and the angles of the thorax pointed and slightly produced (instead of being obtusely oblique); nevertheless, it is inadvisable to separate it from *Chrysogramma*. Three specimens.

4. **Chrysogramma (?) omiltemia.** (Tab. XLII. fig. 14.)

Oblong, testaceous; the vertex, antennæ, knees, tibiæ, and tarsi black; thorax with seven spots (4.3); elytra punctured in irregular rows, testaceous, each with a spot at the shoulder, two spots before and two below the middle, and two others near the apex, black.

Length 2 lines.

Head impunctate, the frontal tubercles obsolete, the vertex black, the lower portion pale fulvous; labrum and palpi black; antennæ nearly extending to the end of the elytra, black; thorax twice as broad as long, the sides rounded, the anterior angles slightly tuberculiform, the surface very sparingly punctured, testaceous, with seven spots placed transversely in two rows; scutellum black; elytra strongly punctured in irregular rows, a spot at the shoulder, another immediately below it on the lateral margin, a transverse mark below the scutellum across the suture, two almost confluent spots on each elytron below the middle, and two smaller and more rounded ones near the apex, black; below pale fulvous, a spot on the flanks of the thorax and another on the anterior coxæ black; the femora on their upper edge near the apex, and the tibiæ and tarsi, black; tibiæ mucronate; the last abdominal segment of the male deeply excavated, the apex in the form of a broad lobe, the anterior edge of which is sinuate.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

This species agrees with the preceding in having all the tibiæ mucronate; it also has the elytra very similarly marked, but their punctuation is arranged in irregular rows. The antennæ are very long; the first joint of the anterior tarsi is broad; the excavation of the last abdominal segment in the male is very large, and occupies the greater portion of its surface.

5. **Chrysogramma pictipennis.** (Tab. XLII. fig. 15.)

Black, the head fulvous, the basal joints of the antennæ and the thorax flavous; elytra very finely and closely punctured, flavous, all the margins, a spot at the shoulders, two spots below this, one near the apex, and an angulate longitudinal stripe extending from the middle of the disc to the lateral margin, black.

Var. The elytral spots and stripe more or less coalescent.

Length 3 lines.

Head rugose; the frontal elevations distinct, smooth; clypeus raised, forming a rather broad ridge between the antennæ; labrum and the basal joints of the palpi black; antennæ extending to about one-third the length of the elytra, black, the lower three joints and the apical one fulvous; thorax nearly three times broader than long, narrowed in front, the sides nearly straight and narrowly margined, the anterior angles obliquely rounded, the surface finely and closely punctured, the interspaces minutely rugose; scutellum broad, black; elytra moderately convex, nearly parallel, very finely punctured, the interspaces minutely rugose or wrinkled, flavous, narrowly margined with black, and with the following black markings—a subtriangular spot at the apex and another below the shoulders (connected with the lateral stripe), a spot on the basal margin, two spots placed one behind the other below the shoulders (the lower one larger than the upper one), a narrow longitudinal stripe extending from the middle of the disc downwards for a little distance and forming an angle where it joins the lateral stripe (the angulate portion being much broader than the longitudinal one), and a spot near the suture towards the apex; underside and legs black.

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

Not unlike *C. 8-maculata*, Jac., but with the elytra differently marked, and the underside and legs black. Fourteen specimens.

NOTOZONA (p. 382).

Of the five species of *Notozona* from Mexico or Honduras described by Clark, four have been figured by Mr. Waterhouse in his "Aid to the Identification of Insects," ii. t. 167—*N. elegans* (fig. 4), *N. humilis* (fig. 5), *N. rufofusca* (fig. 6), and *N. sparsa* (fig. 7). It is not unlikely that some of the species described by me under the genus

Blepharida may prove to be varieties of one or other of these; but till further material is obtained, it is impossible to speak with any certainty. I have already stated my opinion (huj. op. p. 384) that *N. sparsa* ought to be placed in *Blepharida*.

BLEPHARIDA (p. 385).

12. **Blepharida alternata.** (Tab. XLII. fig. 18.)

Fulvous, the apical joints of the antennæ fuscous; thorax very finely punctured, with several depressions; elytra geminate-punctate-striate, pale flavous, the disc longitudinally striped with fulvous, the shoulders with an oblong darker spot.

Length 3 lines.

Head nearly impunctate, with a transverse groove between the eyes, the latter elongate; antennæ inserted at some distance from the inner margin of the eyes, less than half the length of the body, fulvous, the last three or four joints fuscous, the third and fourth joints equal, the fifth the longest, the following joints shorter; thorax nearly three times as broad as long, the sides almost straight, the anterior margin concave, the surface with a few punctures at the sides only and two foveæ at the same place; elytra convex, deeply and closely geminate-punctate-striate, the disc fulvous, this colour divided by very narrow longitudinal pale flavous stripes, the sutural and lateral margins more broadly of that colour, the shoulders with an oblong obscure fulvous spot.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

A single specimen.

CYRSYLUS. (To follow the genus *Pseudogona*, p. 391.)

Ovately-subquadrate; antennæ filiform, the terminal joints slightly thickened; palpi slender; eyes large; thorax transversely subquadrate, without transverse sulcus; elytra punctate-striate; tibiæ simple, the posterior pair mucronate; prosternum rather broad, flattened, longer than broad; anterior coxal cavities closed; claws appendiculate.

This genus is proposed for several small species which agree in some respects with *Systena*, but differ from it by the thorax being without trace of a transverse sulcus, and by the elytra being punctate-striate; the eyes are also larger than in *Systena*, and the thorax is scarcely broader than long and of different shape. *C. recticollis* appears to be one of the commonest and most widely distributed species of Halticinæ in Central America.

1. **Cyrsylus recticollis.** (Tab. XLII. fig. 16.)

Black or piceous; the antennæ and the four anterior legs more or less fulvous; the head impunctate; the thorax extremely finely punctured, subquadrate; elytra finely and regularly punctate-striate.

Var. *a*. Thorax fulvous, the elytra more or less piceous.

Var. *b*. Entirely fulvous or testaceous.

Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.

Head impunctate, the frontal elevations in the shape of narrow oblique ridges, the carina very short; antennæ rather short, not extending to the middle of the elytra, fulvous, the terminal joints more or less fuscous, the second joint as stout as but only half the length of the first, the third and fourth equal, the following joints gradually thickened; thorax one half broader than long, the sides perfectly straight, the anterior angles oblique, the surface without depression, with a few minute punctures at the sides and near the base, for the rest impunctate, the base distinctly margined; scutellum small, triangular; elytra broader at

the base than the thorax, with a very shallow depression below the base, regularly punctate-striate, the punctures distinct nearly to the apex; posterior femora strongly thickened; the first joint of the posterior tarsi as long as the following joints united.

Hab. MEXICO, Vera Cruz (*H. H. Smith*), Teapa in Tabasco (*Sallé*, *H. H. Smith*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, San Isidro, Zapote, San Gerónimo, Cahabon, San Juan in Vera Paz (*Champion*); NICARAGUA, San Juan (*Sallé*), Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).

Found in the greatest profusion at Teapa by Mr. Smith. The species is very variable in colour.

2. **Cyrsylus crassicornis.** (Tab. XLII. fig. 17, ♂.)

Fulvous, the apical joints of the antennæ black, and thickened (♂); thorax subquadrate, impunctate; elytra metallic green, coarsely and closely punctured in rows.

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

♂. Head fulvous, impunctate, the frontal tubercles broad; palpi slender; antennæ very long, extending to two-thirds the length of the elytra, the lower five joints fulvous, the others black, the second joint half the length of the first, the following joints twice the length of the second, the last two joints dilated and slightly shorter than the preceding, the terminal one acutely pointed; thorax subquadrate, about one half broader than long, the sides strongly rounded, the angles slightly thickened, the posterior ones somewhat oblique, the surface impunctate, fulvous, the base with a slight depression in front of the scutellum; the latter piceous; elytra wider at the base than the thorax, metallic green, with a slight brassy gloss, strongly and closely punctured in double rows near the suture, singly so at the sides; underside and legs fulvous; abdomen piceous, the last segment with a central furrow; anterior coxal cavities closed; the first joint of the posterior tarsi as long as the following joints united.

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

A single male specimen, at once distinguishable by the length and structure of the antennæ. *C. crassicornis* is extremely like some of the species of *Palæothona*, and it has a depression at the base of the thorax in the centre as in that genus; the closed anterior coxal cavities will separate it, however, from *Palæothona*.

3. **Cyrsylus fulvipes.**

Fulvous; the head and thorax impunctate, the sides of the latter rounded; elytra bluish-black, finely punctate-striate, with a slight depression below the base.

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

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

In this species, which resembles in all its essential characters the preceding one, the sides of the thorax are rounded, not straight; the thorax itself is scarcely one half broader than long, rather convex, impunctate; the elytra are regularly and finely punctate-striate, bluish-black; the underside and legs are entirely fulvous. The male has a very narrow longitudinal groove on the middle of the last abdominal segment. Four examples.

4. **Cyrsylus basalis.**

Fulvous; the head and thorax black or piceous, impunctate; elytra dark brown, the basal portion black or piceous, very finely punctate-striate.

Length 1–1¼ line.

Head nearly black, impunctate, the frontal tubercles small but distinct; palpi flavous; the antennæ extending to the middle of the elytra, the lower six joints flavous, the others black, the third and fourth joints equal, scarcely longer but thinner than the second, the terminal joint slender, much more elongate than the preceding one; thorax about one half broader than long, very convex, the sides rounded, narrowly margined, the surface entirely impunctate; elytra broader at the base than the thorax, depressed below the base, very finely punctate-striate, the interstices with a few minute punctures, the basal fourth black or piceous, the rest of the surface dark brown; legs fulvous, the anterior pair rather lighter.

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

Three examples.

5. **Cyrsylus vittatus.** (Tab. XLII. fig. 19.)

Black, the head, antennæ, thorax, and legs fulvous; thorax finely and closely punctured; elytra punctate-striate, flavous, the sutural and lateral margins and a short longitudinal stripe on the disc behind the middle black, this latter connected posteriorly with the sutural stripe.

Length 1¼ line.

Of elongate and rather flattened shape; the head finely but not very closely punctured, the interspaces minutely granulate, without frontal tubercles, the carina distinct; antennæ slender, more than half the length of the body, fulvous, the outer joints stained with fuscous at the apex, the second and third joints small, equal, the fourth joint one half longer than the third; thorax scarcely one half broader than long, the sides moderately, the posterior margin more strongly, rounded, the hind angles oblique, the surface rather depressed, closely and finely punctured (more strongly so than the head), the base with a very shallow transverse depression; scutellum black; elytra flattened, scarcely wider at the base than the thorax, regularly punctate-striate, the punctures near the suture more confused anteriorly, the lateral and sutural margins black, the disc of each elytron also with a more or less well-marked black streak below the middle, which is joined posteriorly to the sutural stripe, the rest of the surface flavous; underside, and the posterior femora partly, black, the base of the latter fulvous; pygidium black, not covered by the elytra; tibiæ mucronate.

Hab. MEXICO, Guanajuato (*Sallé*), Amula in Guerrero (*H. H. Smith*).

Two specimens.

HOMOPHYLA.

Homophyla, Harold, Berl. ent. Zeitschr. 1877, p. 138.
Euplectroscelis, huj. op. p. 392 (nec Crotch).

Dr. Horn has been kind enough to send me a typical example of *Euplectroscelis xanti*, Crotch, which proves that both Baly and myself have wrongly identified Crotch's genus. All the species described in this work under the generic name of *Euplectroscelis* belong to *Homophyla*. A single species, from Peru, was referred to *Homophyla* by its author.

1 (A). **Homophyla nigrita.**

Ovate, very convex, piceous, above black; the three basal joints of the antennæ, and the terminal joint also, fulvous; the head and thorax impunctate; elytra rather distantly punctate-striate, the apex nearly impunctate; the anterior legs fulvous.

Var. Entirely obscure fulvous.

Length 1 line.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This small species differs from *H. variabilis* by its general smaller size, the colour of the antennæ, and the more distinct and more scattered elytral punctuation; these characters are constant in the numerous specimens obtained. *H. variabilis* also occurs at Teapa.

1 (B). **Homophyla fulvifrons.**

Piceous or black, the head, antennæ, and anterior legs fulvous; thorax extremely closely and finely punctured; elytra finely and regularly punctate-striate.

Length 1–1½ line.

Head very finely and rather closely punctured, fulvous, without frontal tubercles, the carina distinct, broad; antennæ scarcely half the length of the body, entirely fulvous, the second and third joints small, equal, the others slightly longer and thickened; thorax more than twice as broad as long, narrowed in front, the sides straight, the surface extremely closely and finely punctured; elytra regularly and distinctly punctate-striate, the striæ rather widely separated; posterior tibiæ deeply sulcate, with the usual acute tooth below the middle; the first joint of the posterior tarsi rather longer than the other joints together.

Hab. MEXICO, Xucumanatlan in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*).

This insect seems to differ from all the numerous varieties of *H. variabilis*, and also from *H. nigrita*, by the fulvous and closely punctured head, the fulvous antennæ, and the regularly and remotely punctured elytra. The male is of subparallel, somewhat cylindrical shape, the female being more broadly ovate. Two specimens, one of each sex, were obtained at Atoyac; a female of much larger size, but not differing in any other way, was captured at Xucumanatlan.

1 (C). **Homophyla chiriquensis.**

Oblong, slightly narrowed posteriorly, black; antennæ fulvous; the thorax nearly impunctate; the elytra strongly and closely punctate-striate.

Length 1 line.

Head impunctate; antennæ entirely fulvous, extending to the middle of the elytra, the second and third joints equal; thorax transverse, short, the sides straight, the anterior angles thickened but scarcely oblique, the posterior margin sinuate on each side, the surface extremely minutely punctured, the punctuation only visible under a strong lens; elytra comparatively strongly and closely punctured in rows; legs piceous or black, the coxæ and the knees more or less dark fulvous; posterior tibiæ strongly dilated beyond the middle, toothed before the apex; prosternum impunctate.

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

Closely allied to *H. fulvifrons*; the head black, the thorax scarcely perceptibly punctured, the elytra more strongly punctate. From *H. nigrita* it may be distinguished by the colour of the antennæ and legs.

4. **Homophyla pallida.** (Tab. XLII. fig. 21.)

Ovate, convex, pale fulvous; the seventh to the ninth joints of the antennæ black, the other joints flavous; thorax twice as broad as long, the sides straight, the surface impunctate; elytra very minutely punctured in rows; posterior tibiæ robust, slightly curved, deeply channelled, and dentate before the apex.

Length 1 line.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

H. pallida cannot be mistaken for a pale variety of *H. variabilis*, the coloration of the antennæ being different; but it is possible that the normal colour of the species is black or piceous. A single specimen.

SPHÆRODERMA. (To follow the genus *Homophyla*, p. 393.)

Sphæroderma, Stephens, Ill. Brit. Ent., Mand. iv. p. 328 (1834).

Sphæroderma, confined, so far as our knowledge goes, almost entirely to the Old World, has a single species in North America. The only representative of the genus obtained by Mr. Champion does not seem to differ structurally from the European forms, except in its more oblong (instead of rounded) shape and metallic blue coloration.

1. **Sphæroderma cærulea.** (Tab. XLII. fig. 22.)

Oblong, subcylindrical, convex, black, above dark metallic blue; thorax very closely and finely punctured; elytra strongly punctate-striate.

Length 1 line.

Head entirely impunctate, without frontal elevations, but with a narrow oblique ridge on each side above the insertion of the antennæ; clypeus swollen, triangular, extending upwards in the form of a ridge between the antennæ; antennæ about half the length of the body, black, the second and third joints more or less fulvous, equal in length but not in thickness, the fourth scarcely longer, the others stouter, gradually thickened; thorax twice as broad as long, rather convex, the sides nearly straight, the anterior angles oblique, not thickened or produced, the posterior margin sinuate on each side, the surface dark blue, closely and finely impressed with somewhat oblong punctures, the basal lobe rather broadly rounded; scutellum broad, small; elytra strongly convex and subcylindrical, dark blue, very regularly and moderately strongly punctured, the punctures distinct to the apex; underside and legs black; posterior femora somewhat strongly incrassate; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; prosternum subquadrate, coarsely punctured; mesosternum extremely short; metasternum strongly punctured anteriorly; abdominal segments sparingly punctate.

Hab. Panama, Bugaba in Chiriqui (*Champion*).

PHYDANIS. (To follow the genus *Sphæroderma*.)

Phydanis, Horn, Trans. Am. Ent. Soc. xvi. p. 198 (1889).

This genus has very little affinity with any of the known groups of Halticinæ. Its author places it in the Aspicelites of Chapuis; but in this I cannot agree with him, the shape, structural characters, punctuation, &c., being quite foreign to that group. Dr. Horn, in his diagnosis of the group "Aspicelæ" (*op. cit.* p. 195), gives the antennæ

as ten-jointed: this is evidently a misprint, as both *Aspicela* and *Phydanis* have these organs eleven-jointed. A single species is now added from Mexico; it is closely allied to the North-American *P. bicolor*.

1. **Phydanis nigriventris,** (Tab XLII. fig. 23.)

Black, the head, antennæ, thorax, and legs fulvous; elytra metallic violaceous-blue, punctate-striate, the interstices finely punctured.

Length 1 line.

Head broad, the vertex convex and with a few fine punctures, the frontal tubercles broad, not strongly raised, the space below the eyes deeply excavated for the reception of the basal joint of the antennæ; the antennæ extending to two-thirds the length of the elytra, fulvous, rather robust, the third joint slightly longer than the fourth; thorax transversely convex, nearly three times as broad as long, the sides rounded, the angles obtuse, the posterior margin sinuate on each side, the surface very minutely and finely punctured, fulvous; scutellum black; elytra short, subcylindrical, convex, dark blue, distinctly punctate-striate, the interstices minutely punctured; underside (that of the thorax excepted) black; legs fulvous; the tibiæ deeply channelled; claws appendiculate; anterior coxal cavities open.

Hab. Mexico, Chilpancingo and Amula, both in Guerrero (*H. H. Smith*).

Two specimens. This species resembles *P. bicolor*, Horn, in the coloration of the upper surface; but it differs from it in having the underside black, and the elytra strongly punctate-striate, the punctures distinct to the apex. *P. nigriventris* is not unlike *Gastrophysa polygoni* in its general facies, though it is very much smaller than that insect.

PSYLLIODES (p. 393).

This genus possesses closed (not open) anterior coxal cavities, and it must therefore be placed in the same section as *Chætocnema* &c. Weise gives the claws as appendiculate, in opposition to Chapuis and Horn, who describe them as simple; they are certainly simple in the American species which have come under my observation.

3. **Psylliodes mexicana.**

Below black, above bronze-coloured; the basal joints of the antennæ and the tibiæ more or less fulvous; thorax very strongly and closely punctured: elytra deeply punctate-striate.

Length 1 line.

Head minutely granulate, with some very fine and distantly placed punctures; antennæ about half the length of the body, the lower five joints fulvous, the others fuscous; thorax about one half broader than long, narrowed anteriorly, the sides straight, the anterior angles oblique, sharp, the surface closely and almost rugosely punctured, the punctures irregularly placed, large, intermixed with smaller ones; elytra deeply and regularly punctate-striate, the punctures somewhat transverse in shape, the interstices scarcely wider than the punctures and slightly wrinkled (when viewed laterally); underside black, finely pubescent; the femora at the apex and the tibiæ and tarsi fulvous, more or less stained with fuscous.

Hab. Mexico, near the city (*H. H. Smith*).

The anterior tarsi of the male are distinctly dilated and the last abdominal segment is slightly concave in this sex. The species seems to be closely allied to *P. punctulata*,

Melsh., but differs from it by the very closely punctured thorax, the impunctate elytral interstices, and the colour of the antennæ. Numerous examples.

4. **Psylliodes melanocephala.**

Black, the basal joints of the antennæ obscure testaceous; head impunctate; thorax very minutely punctured; elytra metallic dark blue, finely punctate-striate, the interstices impunctate.

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

Of elongate, subcylindrical shape; the head black, entirely impunctate, shining; antennæ with the lower three joints obscure testaceous, the others black, the fourth joint the longest; thorax nearly twice as broad as long, the sides rather strongly deflexed, straight, the anterior angles oblique, acute, the surface extremely finely and closely punctured, black, with a slight greenish gloss; elytra with feeble punctured striæ, dark blue, the interstices flat and impunctate; femora and tibiæ black, the latter testaceous at their base, the tarsi obscure testaceous.

Hab. Mexico, near the city (*H. H. Smith*).

The single specimen obtained seems to be a female, the anterior tarsi showing no dilatation.

5. **Psylliodes capitata.**

Below black; the head and antennæ obscure fulvous; the thorax obscure æneous, closely punctured; elytra blackish, moderately strongly punctate-striate, the interstices each with a single row of minute punctures; the four anterior legs fulvous.

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

Head distinctly but not closely punctured, fulvous, with an æneous gloss; antennæ dark fulvous, rather robust, the terminal joint distinctly emarginate on its outer edge; thorax twice as broad as long, the sides straight, the anterior angles oblique, the surface closely punctured throughout, the punctures fine, slightly larger at the sides than on the disc; elytra with a slight bluish tint, elongate, rather finely punctate-striate, the punctures becoming still finer near the apex, the interstices each with a single row of very fine punctures; the anterior legs entirely fulvous; posterior femora black, the extreme apex fulvous.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

A single specimen.

6. **Psylliodes sublævis** (?).

Psylliodes sublævis, Horn, Trans. Am. Ent. Soc. xvi. p. 312 [1].

Hab. North America, Utah [1].—Mexico, Omilteme in Guerrero (*H. H. Smith*).

A *Psylliodes* obtained by Mr. Smith at Omilteme agrees very well with Dr. Horn's description of *P. sublævis*. It has the head almost impunctate; the thorax extremely finely and sparingly punctured on the disc, more closely so at the sides, and with a slightly raised central ridge (of this Dr. Horn makes no mention); the elytra finely and rather remotely punctured, the punctures becoming almost obsolete below the middle; and the four anterior legs and the posterior tibiæ entirely fulvous.

CHÆTOCNEMA (p. 394).

12. **Chætocnema smithi.**

Dark æneous; the basal joints of the antennæ, the four anterior legs, and the posterior tibiæ and tarsi fulvous, the posterior femora æneous; head and thorax rather remotely punctured; elytra deeply punctate-striate, the interstices flat and impunctate.

Length 1 line.

Of rather elongate and robust shape; the head distinctly but not closely punctured; the antennæ rather short, the five lower joints fulvous, the others piceous, thickened; thorax at least twice as broad as long, the sides but feebly rounded, with indications of a thickened angle before the middle, the anterior angles not oblique, the surface remotely impressed with somewhat oblong punctures, which are a little larger and more rounded in shape at the sides; elytra convex, pointed at the apex, very regularly and deeply punctate-striate, the interstices flat, except near the lateral margin, impunctate.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single specimen. *C. smithi* seems to be very closely allied to *C. protensa*, Lec., but in that insect the thorax at the base is only one third wider than long and the femora are all bronze (according to Horn); in the present species the thorax is scarcely narrower in front than at the base.

13. **Chætocnema fulvilabris.**

Obscure æneous; the labrum, antennæ, and legs fulvous, the posterior femora piceous; head impunctate; thorax finely and closely punctured; elytra finely punctate-striate, the interstices flat and impunctate.

Length $\frac{3}{4}$ line.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single example. In this species the head is entirely impunctate, the labrum and antennæ are fulvous, and the thorax, as in *C. smithi*, has not oblique anterior angles, the latter being, however, slightly thickened. It differs from *C. smithi* in having the thorax much more closely and finely punctured, and with a row of very fine punctures along the basal margin; the elytra are also more finely punctured, and the interstices are flat throughout.

14. **Chætocnema interstitialis.**

Oblong-ovate, robust, dark bronze-coloured, the basal joints of the antennæ, the tibiæ, and tarsi pale fulvous; head and thorax strongly punctured; elytra pointed at the apex, deeply punctate-striate, the interstices minutely punctured.

Length 1 line.

Head strongly but not very closely punctured, the clypeus rugosely punctate; antennæ extending to the base of the thorax only, black, the lower six joints fulvous; thorax twice as broad as long, the sides rounded, without oblique angulation anteriorly, the surface deeply and closely punctured laterally, less closely so on the disc; elytra with regular and deeply punctured striæ, the interstices extremely finely punctured, the punctures on each arranged in a single row; prosternum closely punctured, the abdomen more sparingly so.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single specimen. Of the same robust and comparatively broad shape as *C. capitata*

and *C. transversicollis*, differing from the former by the densely punctured, rugose clypeus, the broader thorax, the sides of which are more rounded, and the punctate elytral interstices; and from the latter by the deeply punctured head and flat elytral interstices. From the allied *C. denticulata* (Ill.), the brighter bronze-colour and the less closely and strongly punctured head and thorax sufficiently distinguish it.

15. Chætocnema horni.

Ovate, black, the antennæ, tibiæ, and tarsi flavous; head impunctate; thorax transverse, the anterior angles oblique, the surface finely and closely punctured; elytra with a slight æneous lustre, strongly punctate-striate, the interstices rather convex, impunctate.

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

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This small species seems to resemble in many respects *C. quadricollis*, Schwarz, and *C. decipiens*, Lec., but differs from both these in usually having all the femora dark and the elytral interstices impunctate. The head is rather opaque, without any trace of punctuation; the thorax may be described as transversely convex, with the sides very nearly straight and not converging in front, and the base without marginal line; the elytra are widened towards the middle, their interstices rather strongly convex and impunctate. In some specimens the four anterior femora are almost entirely flavous.

16. Chætocnema balyi.

Ovate-oblong, obscure æneous, the basal six joints of the antennæ, the tibiæ, and tarsi fulvous; head strongly, the clypeus coarsely, punctured; thorax closely and strongly punctured; elytra deeply punctate-striate, the interstices finely granulate, impunctate.

Length 1 line.

Head broad, strongly but not closely punctured, without carina, the clypeus coarsely and closely punctured; antennæ short, the lower six joints fulvous, the others black; thorax twice as broad as long, the sides straight, the punctures deep and of somewhat elongate shape, but not very closely placed, with a more or less distinct smooth central space; elytra deeply punctate-striate, the punctures closely placed, the short subsutural row straight, the interstices entirely impunctate; tibiæ and tarsi fulvous; prosternum strongly narrowed between the coxæ.

Hab. MEXICO, near the city (*Höge*).

Closely allied to *C. gravida*, Baly, but smaller, and differing in the straight (not rounded) sides of the thorax. From *C. denticulata* (Ill.), it may be distinguished by the shining and much more strongly punctured head, and the different shape of the thorax.

17. Chætocnema costatipennis.

Black, above obscure dark æneous, the basal joints of the antennæ, and the tibiæ more or less, dark fulvous; head minutely granulate, scarcely punctured; thorax with straight sides, finely granulate and closely punctured; elytra with deep striæ, the latter closely punctured, the interstices costate.

Length 1 line.

Of rather elongate, somewhat medially widened shape; the head opaque, finely granulate, with a few very

minute punctures, the clypeus also extremely finely punctured, but more shining; antennæ with the basal six joints fulvous, the others black; thorax twice as broad as long, the sides straight, the anterior angles thickened and slightly oblique, the surface very closely and finely punctured, the interspaces minutely granulate; elytra slightly depressed near the suture, deeply striate, the punctures within the striæ very closely placed and sometimes obsolete, the interstices strongly costate.

Hab. MEXICO, Guanajuato (*Sallé*).

The thorax in this species is not at all narrowed in front, but of even width; this character in connection with the costate elytra will help to distinguish *C. costatipennis.*

18. Chætocnema parcepunctata.

Chætocnema parcepunctata, Crotch, Proc. Ac. Phil. 1873, p. 74[1]; Horn, Trans. Am. Ent. Soc. 1889, p. 265[2].

Hab. NORTH AMERICA, Lake Superior[1] to Florida[2] and Texas[2].—MEXICO, near the city (*H. H. Smith*).

Dr. Horn's description of this species agrees well with some specimens from the neighbourhood of Mexico city. The impunctate head, the finely, sparingly punctured, alutaceous thorax, which is twice as broad as long, and the deeply punctured elytra, with impunctate interstices, are the principal structural characters of *C. parcepunctata.*

ASPHÆRA (p. 399).

Asphæra abdominalis (p. 400).

Homophœta abdominalis, Horn, Trans. Am. Ent. Soc. 1889, p. 197[1].

To the localities given, add:—NORTH AMERICA, Texas[1].—MEXICO, Cuernavaca in Morelos, Xautipa in Guerrero (*H. H. Smith*), Tula in Hidalgo, Tacambaro in Michoacan (*Höge*).

HOMOPHŒTA (p. 405).

Dr. Horn (Trans. Am. Ent. Soc. 1889, p. 196) sinks the name *Asphæra* as a synonym of this genus, and perhaps rightly so; there is, however, always the distinguishing character of the white frontal patch present in *Homophœta* (unless the entire head is pale, as in some species), which I have never observed in *Asphæra.* For the present I prefer to retain the two genera as distinct, *Homophœta* possessing but few, *Asphæra* a great many, species. I may here remark that the name *Asphæra* is five years older than *Homophœta,* and that if they are put together the first-mentioned name should be retained.

Homophœta recticollis (p. 405).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Tapachula in Chiapas (*Höge*).

6 (A). **Homophœta simulans.** (Tab. XLII. figg. 24, 25.)

Fulvous; the antennæ, the four anterior legs, and the posterior tibiæ black; elytra metallic bluish, each with six more or less elongate pale flavous spots (2 . 2 . 2).

Var. *a*. The elytral spots partly coalescent.

Var. *b*. The elytra entirely metallic blue.

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

Hab. MEXICO, Ventanas in Durango, Tapachula in Chiapas (*Höge*).

This species, at first sight, closely resembles *H. æquinoctialis*, but differs from it in the following particulars: the antennæ are much shorter, only reaching a little beyond the base of the elytra, all the joints being much less elongate; the elytra are more depressed, and the spots (although similarly placed) are more elongate and often partly confluent.

In the var. *b* the elytra are entirely metallic blue.

8. **Homophœta violacea.**

Black, the base of the head, the clypeus, thorax, femora, and last abdominal segment fulvous; elytra violaceous or dark blue, scarcely perceptibly punctured.

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

Of broad, moderately convex shape; the head with a few fine punctures, a large frontal patch and the clypeus fulvous, the rest of the surface and the palpi black; antennæ black, not quite extending to the middle of the elytra, the third and fourth joints equal, wider than the others; thorax more than twice as broad as long, the sides but slightly rounded, narrowed in front, very narrowly margined, the anterior angles blunt, but little produced forwards, the surface convex, entirely impunctate, fulvous; elytra very slightly depressed below the base, extremely minutely punctured, the punctuation only visible under a strong lens; underside black, the flanks of the thorax, the sides and apex of the last abdominal segments, and the femora fulvous; metatarsus of posterior legs long, the claw-joint but little swollen.

Hab. MEXICO, Omilteme and Xucumanatlan, both in Guerrero (*H. H. Smith*).

The system of coloration, the characteristic fulvous frontal patch, the scarcely margined thorax, and the structure of the posterior tarsi are the chief characters of this *Homophœta*, of which two specimens were obtained. It cannot be mistaken for the blue variety of *H. simulans*, as it is very much wider, has a more transversely shaped thorax, and is black (instead of fulvous) below.

ŒDIONYCHIS (p. 407).

Œdionychis reichei (p. 408).

To the Mexican localities given, add :—Tapachula in Chiapas (*Höge*).

Œdionychis ceracollis (p. 408).

Œ. ceracollis is not mentioned by Crotch or Dr. Horn, and it is therefore probable that it is not an *Œdionychis* at all.

The specimens I referred to it were labelled *Œ. ceracollis*, Say, in Sallé's collection.

Œdionychis acutangula (p. 409).

To the localities given, add:—Mexico, Ventanas in Durango, Acapulco (*Höge*), Chilpancingo, Dos Arroyos, Acaguizotla, and Mescala, all in Guerrero (*H. H. Smith*).

Œdionychis frontalis (p. 410).

To the localities given, add:—Mexico, Amula and Xucumanatlan, both in Guerrero (*H. H. Smith*).

The Mexican specimens differ from those from Guatemala in the rather larger amount of fulvous on the head, and by the thorax having three very obscure piceous spots placed triangularly on the disc.

6 (a). Œdionychis clypeata.

Fulvous, the antennæ and tibiæ more or less piceous, the head (the clypeus excepted) dark blue; thorax impunctate; elytra metallic dark blue, violet, or greenish, very finely and rather closely punctured.

Length $2\frac{3}{4}$–3 lines.

Of ovate, medially rather widened shape; the head impunctate, except for a few punctures near the eyes, dark metallic blue; the clypeus raised, forming an acute transverse ridge, pale fulvous; antennæ long and slender, piceous or black, the basal three joints more or less pale; thorax strongly transverse, the sides greatly rounded and with a broad flattened margin, the anterior angles but slightly dentiform, the surface impunctate; scutellum variable in colour; elytra with a shallow depression below the base, very finely but not very closely punctured; underside and legs fulvous, the tibiæ black or piceous, the posterior pair sometimes fulvous; prosternum rather strongly longitudinally raised.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Tacambaro in Michoacan, Tapachula in Chiapas (*Höge*).

Closely allied to *Œ. frontalis*, but with the head almost impunctate, the thorax with much more strongly rounded sides, and the elytra more finely and less closely punctured. Many specimens.

Œdionychis lateralis (p. 412).

To the Mexican localities given, add:—Ventanas in Durango, Cuernavaca in Morelos (*Höge*), Tierra Colorada in Guerrero (*H. H. Smith*).

19 (a). Œdionychis æmula.

Œdionychis æmula, Horn, Trans. Am. Ent. Soc. xvi. p. 185, t. 5. fig. 7 (1889)[1].

Hab. North America, Arizona[1].—Mexico, Northern Sonora (*Morrison*).

A single specimen obtained by Mr. Morrison agrees in every respect with Dr. Horn's description and figure, except that it has the third antennal joint shorter than the fourth instead of longer, as stated by that author.

19 (b). Œdionychis tenuilineata.

Œdionychis tenuilineata, Horn, Trans. Am. Ent. Soc. xvi. p. 186 (1889)[1].

Hab. North America, Southern Arizona[1].—Mexico, Acapulco (*Höge*).

24 (A). Œdionychis haroldi.

Obscure piceous, the head and the antennæ black; thorax fulvous, impunctate; elytra extremely minutely punctured anteriorly, obscure fulvous, the suture and a broad longitudinal stripe on the disc black.

Length 2–2½ lines.

Of broad and rather convex shape; the head nearly black, with a few punctures near the eyes only, the frontal tubercles broad and distinct, the eyes large and widely separated; antennæ short and robust, black, the lower three joints often obscure fulvous; thorax strongly transverse, the sides rounded in front only and rather broadly margined, the surface entirely impunctate, somewhat convex, and shining; scutellum black; elytra rather short, broad, and convex, extremely finely and closely punctured, fulvous, with two broad longitudinal black stripes—one sutural, generally narrowed towards the apex, the other discoidal, of nearly equal width, but slightly narrowed at the shoulders; underside and anterior legs more or less piceous, the posterior legs fulvous.

Hab. MEXICO, Tepetlapa in Guerrero, Cuernavaca in Morelos (*H. H. Smith*), Jalapa (*Höge*).

Numerous examples. *Œ. haroldi* may be known from the other striped species of *Œdionychis* by its short convex shape and the width of the black elytral stripes, these being as wide as, or in some specimens even wider than, the fulvous intervening spaces; the discoidal stripe is always wider than the lateral fulvous portion. In one specimen the sutural stripe is greatly narrowed before the apex, and the discoidal one interrupted at the same place.

33. Œdionychis interjectionis.

Œdionychis interjectionis, Crotch, Proc. Acad. Phil. 1873, p. 61 [1]; Harold, Berl. ent. Zeitschr. 1881, p. 129 [2]; Horn, Trans. Am. Ent. Soc. 1889, p. 184 [3].

Œdionychis gracilis, huj. op. p. 420, Tab. XXIV. fig. 14.

Hab. NORTH AMERICA, Texas [1 2 3].—MEXICO [3]; GUATEMALA.

Œdionychis tredecim-maculata (p. 431).

To the Mexican locality given, add :—Dos Arroyos in Guerrero (*H. H. Smith*), Acapulco, Iguala, and Chilpancingo, all in Guerrero, Huetamo in Michoacan (*Höge*).

Very variable in size, some specimens being nearly twice as large as others; the spots are sometimes confluent and form two transverse bands. This form greatly resembles in its markings *Œ. maculata*, Sturm, but that species has a black vertex and more strongly punctured elytra. In nearly all the specimens obtained by Herr Höge the two subapical spots of the elytra are wanting, so that only eleven spots are visible.

70. Œdionychis durangoensis.

Broadly ovate, subdepressed, testaceous, the sixth to the tenth joints of the antennæ black; thorax minutely punctured; scutellum black; elytra finely and closely punctured, with twelve small black spots placed transversely in three rows (six on each elytron), the last row oblique.

Length 2½–2¾ lines.

Head impunctate, the eyes rather closely approached; antennæ about half the length of the body, the lower five joints and the apical one also testaceous, the others black; thorax more than twice as broad as long,

with a broad flattened lateral margin, the posterior angles thickened but scarcely produced, the surface extremely minutely punctured; scutellum black; elytra much widened at the middle, with a very broad flattened margin, each with six small black spots—two at the base, two before, and two below the middle, the latter placed obliquely, the surface very finely and closely punctured, the interstices finely wrinkled, the flattened margin more strongly punctate, the epipleuræ very broad and concave; underside and legs rather darker than above; claw-joint piceous.

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

Many specimens. The position and number of the spots and the colour of the antennæ separate this species from any of its allies.

71. **Œdionychis pavonina.** (Tab. XLIII. fig. 1.)

Testaceous, the intermediate joints of the antennæ fuscous; thorax impunctate; elytra extremely minutely punctured, fulvous, a transverse band near the middle, a lateral spot below it, and a spot at the apex, flavous, margined with piceous.

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

Head scarcely perceptibly punctured, the frontal tubercles indistinct, the eyes large, the interocular space not broader than their diameter; antennæ slender, extending to the middle of the elytra, testaceous, the fifth joint partly and the following three joints entirely obscure fuscous; thorax at least twice as broad as long, the sides broadly and flatly margined, strongly rounded, the anterior angles slightly dentiform, the surface impunctate, testaceous; scutellum fulvous; elytra microscopically punctured, narrowly margined, fulvous, with a transverse band immediately before the middle (composed of two coalescent spots), a round spot near the apex laterally, and the apex itself, pale flavous, these markings surrounded by a narrow piceous margin; underside and legs testaceous; claw-joint strongly swollen.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single male specimen.

ALLOCHROMA (p. 436).

17 (A). **Allochroma teapense.** (Tab. XLIII. fig. 2, ♂.)

Black, the face and the basal and terminal joints of the antennæ fulvous; thorax finely and sparingly punctured; elytra fulvous, deeply punctate-striate, the interstices more or less costate, the base with a transverse black band.

Var. The legs and underside fulvous.

♂. Antennæ with the sixth joint strongly swollen and elongate.

Length 2 lines.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Very closely allied to *A. guatemalense*, and with similarly formed antennæ in the male, but of different coloration. The legs (the posterior tibiæ excepted) are black; the elytra have a transverse black band extending to one-third of their length, and the interstices are costate, but more distinctly so near the sides. The variety has fulvous legs. Two specimens.

24. **Allochroma flohri.** (Tab. XLIII. fig. 5, ♂.)

Fulvous; the antennæ black, with the apical two or three joints flavous; thorax finely and sparingly punctured; elytra fulvous, with a broad posteriorly narrowed black sutural stripe, punctate-striate, the interstices flat.

♂. Antennæ with the sixth joint strongly thickened and elongate.
Var. The breast and the legs more or less piceous.
Length 2 lines.

Hab. MEXICO (*Flohr*).

Of comparatively small size; the head longitudinally strigose on the vertex; the antennæ (♂) formed as in the males of several of the allied species; the elytra with a black sutural stripe which is widened anteriorly, gradually narrowed behind, and does not extend to the apex. The elytra have a distinct transverse depression below the base, and the base itself is rather strongly raised. In the female the antennæ are simple, with the terminal joints only gradually thickened. I have lately received several specimens from Mr. Flohr, without particular locality.

MONOPLATUS (p. 452).

Monoplatus quadraticollis (p. 453).

This name must be erased. The single specimen from which I drew the description being gummed to a card, I unfortunately overlooked the simple claws; a re-examination of the insect proves that it is an immature example of *Sangaria haagi* (huj. op. p. 340).

2. **Monoplatus puncticollis.**

Pale fulvous, the head and thorax strongly punctured, the latter with a distinct transverse sulcus; elytra depressed below the base, strongly punctate-striate.
Length $1\frac{1}{4}$–$1\frac{1}{2}$ line.
Of narrowly elongate, depressed shape; head remotely and distinctly punctured, without frontal elevations, the clypeus thickened and convex between the point of insertion of the antennæ, the palpi filiform, but slightly thickened; antennæ slender, extending to the middle of the elytra, entirely fulvous, the first joint long, gradually thickened towards the apex, the second short, the third and fourth joints slender and long, the others gradually shortened, the terminal joints thicker and often darker in colour; thorax one-half broader than long, all the margins straight, the anterior angles slightly thickened, the posterior ones acute, the surface strongly and rather closely punctured, the basal sulcus distinct, but not extending to the sides; elytra depressed, narrowly margined, with the suture depressed below the base, the punctures rather strong and arranged in regular rows, distinct nearly to the apex, the interstices flat, the epipleuræ very broad and concave; posterior femora strongly incrassate; posterior tibiæ finely dentate externally, and with a distinct apical spur; the first joint of the posterior tarsi as long as the following joints together; claw-joint moderately swollen, appendiculate.

Hab. MEXICO, Omilteme, Amula, and Chilpancingo, all in Guerrero (*H. H. Smith*).

Principally distinguishable by the strongly punctured head and thorax.

RHINOTMETUS (p. 455).

6. **Rhinotmetus modestus.**

Obscure fulvous, clothed with silvery-grey pubescence; head elongate; thorax slightly narrowed and rounded anteriorly, not perceptibly punctured; elytra darker than the thorax, finely punctate-striate, opaque, the interstices slightly raised.
Length $1\frac{1}{2}$ line.

Head produced in front, finely granulate, sparingly pubescent, the frontal tubercles obsolete, the clypeus with a distinct central ridge; the antennæ long, entirely fulvous, joints 1–10 (the second excepted) of nearly equal length, the apical one more elongate and pointed; thorax subquadrate, the sides straight, obsoletely angulate before the middle, and slightly narrowed in front, the surface pale fulvous, clothed with silvery-grey pubescence, not visibly sculptured; scutellum very small; elytra broader than the thorax at the base, and darker in colour, punctate-striate, the punctures not very closely placed, the interstices slightly costate; below and the legs pale fulvous.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

Allied to *R. canescens*, but smaller, and with the pubescence silvery instead of golden-yellow. One specimen.

7. **Rhinotmetus minutus.**

Narrowly elongate, fulvous; the antennæ with thickened terminal joints; thorax finely rugose, scarcely pubescent; elytra shining, sparingly pubescent, punctate-striate anteriorly only.

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

Head finely rugose, not longer than broad, the frontal elevations indistinct; antennæ fulvous, scarcely extending to the middle of the elytra, all the joints of nearly equal length, the fifth and following ones gradually (the terminal joints rather considerably) thickened; thorax a little longer than broad, slightly constricted behind, the sides subangulate before the middle, the anterior angles tuberculiform, the surface rather flat, finely rugose, dark fulvous, sparingly clothed with very short yellowish pubescence; elytra with a distinct depression below the base, punctate-striate to the middle, the punctures indistinct beyond, the surface shining, fulvous, very sparingly covered with yellowish hairs; legs fulvous, the tarsi nearly black; claws appendiculate.

Hab. MEXICO, Orizaba (*Sallé*, *H. H. Smith*).

A small and narrow species, distinguished by the non-produced head, the thickened antennæ, and the shining and only anteriorly punctured elytra. Notwithstanding the appendiculate claws, *R. minutus* seems to me to belong to the present genus. Two specimens.

PHYSIMERUS (p. 459).

Physimerus pygmæus (p. 462).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Some of the Mexican specimens are paler than those obtained in Chiriqui; they have the elytral spots scarcely perceptible, and the antennæ almost entirely pale.

14. **Physimerus elongatulus.**

Obscure fulvous, opaque, pubescent; thorax broader than long; elytra finely punctate-striate, the suture obscure fuscous; the posterior femora with an obscure spot at the apex.

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

Head not visibly punctured, clothed with greyish pubescence; palpi with the penultimate joint slightly thickened; antennæ nearly two thirds the length of the body, entirely fulvous, the second joint thicker but scarcely shorter than the following one, the fourth and fifth joints a little longer, the others very gradually thickened and shorter; thorax about one half broader than long, the sides straight, the surface somewhat depressed on the disc, closely covered with short yellowish pubescence, entirely obscuring the

sculpture, the disc slightly stained with fuscous; elytra wider at the base than the thorax, very elongate and subdepressed, the punctures very fine, the surface depressed below the base, pubescent like the thorax, fulvous, with an obscure fuscous sutural stripe, which is gradually narrowed towards the apex; underside and legs fulvous, the posterior femora with an obscure apical spot; claws appendiculate.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

Two specimens.

15. **Physimerus flavo-pilosus.**

Fulvous, opaque, clothed with golden-yellow pubescence; antennæ piceous, long and robust; thorax subquadrate, granulate and pubescent; elytra very finely punctured, with an obscure spot below the middle.

Length 2 lines.

Head broad, extremely finely punctured on the vertex, the eyes large, the frontal elevations not strongly raised, divided by a distinct longitudinal groove, the clypeus in the form of a transverse ridge, the lower portion of the face glabrous, shining; the palpi with the penultimate joint slightly thickened; antennæ robust, extending to two thirds the length of the body, piceous, shining, furnished with scattered hairs, the third, fourth, and fifth joints elongate, slightly curved at the base, and of nearly equal length, the terminal joints shorter; thorax scarcely broader than long, the sides straight, the anterior angles with a small tubercle, the middle of the disc obsoletely transversely depressed, the sides clothed with very short silky golden-yellow pubescence, the disc finely granulate, partly denuded of hairs, fulvous; elytra with a slight depression below the base, very finely punctate-striate, the punctures for the most part obscured by the silky golden pubescence, which is more distinct below the middle, a small brownish spot is placed at some distance from the apex near the sides; posterior tibiæ obsoletely dentate externally, the apex with a robust spur.

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

The robust and shining antennæ and the golden pubescence of the upper surface in connection with the size will help to distinguish this species.

OMOTYPHUS (p. 470).

11. **Omotyphus suturalis.** (Tab. XLIII. fig. 3.)

Black, sparingly pubescent, the fifth and sixth joints of the antennæ and the base of the tibiæ flavous; head and thorax strongly rugose-punctate, the thorax with two small elevations; elytra with a deep depression near the middle, strongly punctate-striate, the suture narrowly fulvous-pubescent.

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

Of elongate, robust shape, convex, black; the head broad, deeply and strongly rugose, without frontal tubercles or carina, the palpi slightly incrassate; the antennæ short, only extending to the base of the elytra, the terminal joints widened, joints 1–4 piceous, 5 and 6 flavous, 7–10 black, and 11 obscure fulvous, 7–10 transversely shaped; thorax but slightly broader than long, with all the margins straight, a small tubercle on each side near the apex, the surface sculptured like the head, sparingly clothed with blackish hairs; scutellum clothed with golden-yellow pubescence; elytra much wider at the base than the thorax, with a deep oblique depression extending from the shoulder to near the middle, where it is more plainly marked, the punctures comparatively large and deep, the surface rather shining, pubescent like the thorax, the pubescence at the suture forming a narrow fulvous margin; legs piceous, the base of the tibiæ and the tarsi paler, the posterior femora clothed with yellowish pubescence near the apex.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single specimen.

12. **Omotyphus carinatus.** (Tab. XLIII. fig. 4.)

Subquadrate, black; the antennæ fulvous, the sixth and seventh joints fuscous; thorax with two high triangular ridges; elytra scarcely pubescent, deeply punctured, with longitudinal tubercles at the base and near the apex.

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

Head finely rugose, the frontal tubercles in the shape of small oblique dark fulvous ridges, the intermediate space with some short pale fulvous pubescence; palpi moderately thickened; antennæ extending very little beyond the base of the elytra, fulvous, the sixth and seventh joints fuscous, the fourth and fifth of equal length, shorter than the third, the following joints transversely subquadrate; thorax nearly quadrate, the sides straight, obsoletely angulate before the middle, the surface here and there clothed with some very short fulvous hairs, granulate, with two very highly raised, acute, triangular ridges, the intermediate space with some obsolete transverse elevations, the sides with an obsolete longitudinal one; scutellum thickly clothed with yellow pubescence: elytra much wider at the base than the thorax, subquadrate, black, opaque, the punctures deep and not very regularly placed, with scattered spots of very short silvery pubescence, which are more distinct below the middle, and the following tubercles or ridges—one, strongly raised, at the centre of the base, three, less distinct, below the middle, placed transversely, and two near the apex,—the apex perpendicularly deflexed, and with its surface concave; underside black, sparingly covered with fulvous hairs; tibiæ and tarsi obscure fulvous.

Hab. GUATEMALA, Coban in Vera Paz (*Conradt*).

One specimen.

HYPOLAMPSIS. (To follow the genus *Omotyphus*, p. 476.)

Hypolampsis, Clark, Cat. of Halticidæ, p. 230 (1860).

More than thirty species have been placed in this genus by Clark. Its principal distinguishing characters are the subquadrate thorax, the incrassate palpi, the single spine to the posterior tibiæ, and the appendiculate claws.

1. **Hypolampsis inornata.**

Subdepressed, black, very finely pubescent; thorax subquadrate, finely granulate; elytra depressed near the suture and at the sides, punctate-striate anteriorly, the punctures becoming obsolete posteriorly; legs more or less fulvous, the posterior femora darker.

Length 2 lines.

Head finely rugose, black, the lower portion more or less flavous, the frontal elevations short, the clypeus in the shape of a triangular ridge; penultimate joint of the palpi but moderately incrassate, flavous; antennæ extending to about the middle of the elytra, black or piceous, the lower joints more or less flavous at their apex, the third, fourth, and fifth joints nearly equal, more elongate than the following ones; thorax about one fourth broader than long, narrower at the base, the sides being slightly widened and rounded before the middle, the anterior angles a little thickened, and each with a single hair, the surface somewhat depressed at the base, finely granulate, and clothed with thin, short, yellowish-grey pubescence; scutellum broad, pubescent; elytra obsoletely depressed below the base, and more distinctly and longitudinally so near the lateral margins, the pubescence similar to that of the thorax, the punctures rather strong anteriorly, becoming gradually more obsolete towards the apex, where the striæ are more prominent; legs pale fulvous, the femora sometimes darker, the posterior tibiæ with a small spine at the apex; claws appendiculate.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

This species is of a sombre black colour; and the fine silky pubescence, which covers the entire upper surface, gives it an opaque appearance. Two specimens.

CORAIA (p. 482).

3. **Coraia apicicornis.** (Tab. XLIII. fig. 6.)

Pale fulvous, the antennæ (the apical joint excepted), the middle of the breast, and the legs partly, black; thorax with seven spots, strongly rugose; elytra obscure fusco-æneous, rather strongly rugose, glabrous.

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

Head longitudinally grooved in the middle in front, with a blackish patch on the vertex, the latter strongly rugose, the rest of the surface pale fulvous; labrum and palpi black; antennæ extending to about the middle of the elytra, black, the apical joint fulvous, the third and fourth joints equal, the seven basal joints shining, the others opaque; thorax twice as broad as long, the sides strongly widened or subangulate at the middle, the posterior angles acute, the surface obsoletely impressed at the sides, strongly rugose, testaceous, with four piceous spots placed transversely before and three others, larger, below the middle; scutellum black, strongly punctured; elytra obscure æneous or nearly black, closely rugose, the epipleuræ distinct nearly to the apex; underside pale fulvous, the middle of the breast black; the knees, the lower portion of the tibiæ, and the tarsi black; tibiæ distinctly sulcate; the first joint of the posterior tarsi as long as the following two joints together.

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

A species easily known by the seven-spotted thorax and the variegated legs. It agrees with *Coraia* in having the third and fourth joints of the antennæ equal in length; the epipleuræ, however, are prolonged beyond the middle of the elytra, and the surface of the latter is glabrous and rugose. Numerous examples.

NESTINUS (p. 483).

5. **Nestinus longicornis.**

Obscure fuscous or fulvous, finely pubescent, the antennæ, tibiæ, and tarsi nearly black; thorax irregularly rugose, with two foveæ and three black spots; elytra very finely rugose, pubescent.

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

♂. Head finely rugose on the vertex, the frontal elevations smooth and shining; antennæ nearly extending to the apex of the elytra, black, the fourth joint much longer than the third, the following joints gradually shortened; thorax nearly three times broader than long, the sides rounded at the middle, the angles tuberculiform, the surface with an oblique fovea on each side, rather shining, irregularly rugose and punctured, with three small blackish spots placed transversely; scutellum fuscous, pubescent, its apex truncate; elytra parallel, convex, very finely and evenly rugose, and sparingly clothed with short greyish pubescence, the epipleuræ rather narrow, disappearing below the middle; the first joint of the posterior tarsi as long as the following two joints together; claws bifid.

Hab. MEXICO, Matamoros Izucar and Atlixco, both in Puebla (*Höge*).

N. longicornis might easily be mistaken for *Coraia maculicollis*. It is, however, less robust; the structure of the antennæ is different; and the elytra have no trace of the bluish hue peculiar to *Coraia*. The female is more dilated posteriorly, and the antennæ in this sex are, as usual, shorter.

TRIRRHABDA (p. 484).

1 (A). **Trirrhabda vicina.**

Pale flavous, the antennæ black; head and thorax strongly punctured, the former with the vertex, and the

latter with three spots, greenish; elytra finely rugose, bluish, æneous, or purplish, the disc with some obsolete longitudinal ridges, the lateral and apical margins flavous.

Length $2\frac{1}{2}$–3 lines.

Hab. MEXICO, Amula, Chilpancingo, Omilteme, Xucumanatlan, all in Guerrero (*H. H. Smith*).

T. vicina is very closely allied to *T. variabilis*, and is equally variable as regards the colour of the elytra; it differs from it in the following particulars:—The antennæ are less robust, the thorax is much more strongly (almost rugosely) and closely punctured, and the elytra are more distinctly rugose (in *T. variabilis* they are extremely finely coriaceous), and have three or four obsolete (sometimes more distinctly marked) longitudinal ridges. In some specimens the spots on the thorax are confluent. The elytra are similarly pubescent in both species. Numerous examples.

1 (B). **Trirrhabda högei.** (Tab. XLIII. fig. 8.)

Pale fulvous; the head and thorax sparingly punctured, the latter with two impressions; elytra green, finely rugose and pubescent.

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

Of broad and robust shape; the head with a few punctures on each side, the vertex impunctate; antennæ extending to the middle of the elytra, fulvous, slender, the fourth joint longer than the third or fifth; thorax more than twice as broad as long, the sides strongly rounded and widened at the middle, the surface deeply transversely depressed, irregularly and sparingly punctured; scutellum fulvous; elytra clothed with very short pale fulvous pubescence, light green, finely rugose, with a rather broad and well-marked lateral margin, the epipleuræ indistinct below the middle; underside and legs fulvous; the last abdominal segment of the male with a deep triangular emargination, that of the female much less strongly emarginate.

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

A large, robust species, with entirely green elytra and an unspotted thorax. Many specimens.

2 (A). **Trirrhabda sublævicollis.** (Tab. XLIII. fig. 7.)

Flavous, the antennæ black; the thorax with three blackish spots, nearly impunctate; elytra obscure purplish or æneous, with the lateral margins flavous, the disc finely punctured, the interspaces strongly transversely rugose or wrinkled.

Length 3 lines.

Head with a few fine punctures on the vertex, the latter æneous or purplish, the lower portion of the face flavous; antennæ extending beyond the middle of the elytra, black, the fourth joint one-half longer than the third; thorax transverse, the sides but little rounded at the middle, the disc with a deep transverse depression, which is sometimes interrupted in the centre, the surface with only a few fine irregularly distributed punctures, flavous, with a spot on each side and a median stripe blackish; scutellum smóoth, black; elytra glabrous, dark metallic purplish, finely punctured, and rather strongly rugose throughout, the lateral and apical margins flavous; legs flavous, the upper edge of the femora and the tibiæ and tarsi piceous or black.

Hab. MEXICO, Omilteme, Xautipa, and Chilpancingo, all in Guerrero (*H. H. Smith*).

Allied to *T. œnea*, but with the thorax nearly impunctate and the elytra much more strongly wrinkled.

9. **Trirrhabda semiviridis.** (Tab. XLIII. fig. 9.)

Obscure testaceous, the antennæ and tarsi fuscous; head rugose on the vertex; thorax transversely depressed, sparingly punctured; elytra obscure greenish, closely punctured, shining.

Length 3 lines.

Elongate, rather convex, parallel; the head fulvous on the vertex, the latter closely rugose, the frontal tubercles well-developed, piceous, the lower portion of the face testaceous; antennæ extending beyond the middle of the elytra, black, the basal joints testaceous beneath, the fourth joint the longest, more than one-half longer than the third, the following joints gradually shortened; thorax transverse, the sides strongly rounded, the angles obtuse, the surface deeply obliquely depressed at the sides, finely and sparingly punctured; elytra very closely and finely punctured, and finely wrinkled, obscure greenish, rather shining; underside and legs testaceous, the sides of the breast, the apex of the tibiæ, and the tarsi more or less fuscous.

Hab. GUATEMALA, Quiche Mountains, Totonicapam (*Champion*).

T. semiviridis may be known from its allies by the obscure greenish elytra, which are glabrous and have a varnished appearance. Three specimens.

10. **Trirrhabda rugosa.** (Tab. XLIII. fig. 10.)

Fuscous, the antennæ black; thorax coarsely punctured, æneous, narrowly margined with flavous; elytra æneous, strongly rugose and closely punctured, the lateral margins obscure flavous; legs flavous, the outer edge of the femora, the tibiæ, and tarsi piceous.

Length 2 lines.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

Distinct from any of its congeners by the strongly rugose head, thorax, and elytra in connection with the æneous upper and the dark under surface. Two specimens.

11. **Trirrhabda guatemalensis.**

Fulvous, the base of the head, the antennæ, breast, and tarsi more or less piceous; thorax transversely sulcate, strongly punctured; elytra pale greenish, grey, or fulvous, opaque, finely rugose, clothed with very short pubescence.

Length $2\frac{1}{2}$–3 lines.

Of rather robust and convex shape, the base of the head piceous or fuscous, rugosely punctured, the lower portion pale fulvous, shining; antennæ nearly extending to the apex of the elytra, piceous or black, shining, the joints elongate, the fourth longer than the third; thorax transverse, the sides strongly rounded, the angles obtuse, the surface deeply transversely sulcate, the sulcation not quite extending to the sides, strongly punctured, pale fulvous: scutellum fuscous; elytra slightly widened posteriorly, the entire surface finely rugose and clothed with scarcely perceptible pubescence.

Hab. GUATEMALA, Dueñas (*Champion*).

T. guatemalensis varies greatly in the colour of the elytra; the latter are coriaceous throughout, but more strongly so than in the other members of the genus from our region. This character in connection with the unspotted thorax will assist in the recognition of the present species. Many specimens.

GALERUCELLA (p. 488).

Galerucella godmani (p. 492).

To the locality given, add:—MEXICO, Acapulco in Guerrero (*Höge*).

8. **Galerucella amabilis.** (Tab. XLIII. fig. 11.)

Pale fulvous, the base of the head, the antennæ, and tarsi piceous or black; the thorax sparingly punctured, deeply depressed at the sides; elytra bright green, subopaque, finely rugose throughout.

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

Head finely rugose on the vertex, the latter fuscous or black, the lower portion of the face fulvous, the eyes widely separated; the antennæ extending to the middle of the elytra, black, the lower joints more or less testaceous at their base, the third twice the length of the second, the fourth longer than the preceding, the fifth as long as the third; thorax transverse, short, the sides very strongly rounded at the middle, the angles obsolete, the surface with a deep depression on each side, somewhat uneven, and very sparingly and finely punctured; scutellum fuscous; elytra scarcely wider at the base than the thorax, gradually widened posteriorly, finely and evenly rugose, semi-opaque, bright metallic green; underside and legs pale fulvous, the tarsi fuscous.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

Three specimens.

9. **Galerucella terminalis.**

Pale flavous; the antennæ piceous, with the terminal three joints flavous; head and thorax strongly punctured, the latter deeply depressed at the sides; elytra fuscous or obscure purplish, finely rugose and pubescent.

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

Head strongly punctured on the vertex, the frontal elevations distinct; the antennæ rather widely separated at their point of insertion, extending to the middle of the elytra, piceous, the terminal three joints more or less distinctly flavous, the third and fourth joints equal; thorax transverse, more than twice as broad as long, the sides rounded, all the angles obtuse, the surface deeply excavated at the sides, rather strongly and closely punctured, shining; scutellum pale; elytra opaque, obscure dark purplish or fuscous, finely rugose and pubescent, the epipleuræ continued below the middle; the first joint of the posterior tarsi as long as the following two joints together; tibiæ unarmed; claws bifid; anterior coxal cavities open.

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

The pale terminal joints of the antennæ, the deeply impressed and strongly punctured thorax, and the colour of the elytra will help to distinguish this species.

OPHRÆA (p. 492).

8. **Ophræa opaca.**

Ophræa elongata, huj. op. p. 495 (partim).

Elongate, black; thorax rufous or fulvous, with a broad black median stripe; elytra opaque, very finely rugose.

Length 3 lines.

Head finely rugose, without frontal elevations or carina; antennæ short and robust, only extending to the base of the elytra; thorax more than twice as broad as long, the sides rounded, the surface obsoletely depressed at the sides and at the middle, finely rugose and pubescent, rufous, the middle of the disc occupied by a black stripe; elytra black, finely rugose throughout.

Hab. MEXICO, Acapulco in Guerrero (*Höge*); GUATEMALA, Cerro Zunil, Capetillo (*Champion*).

Additional specimens of this insect prove that it is quite distinct from *O. elongata*, from which it may be distinguished by the entirely black, opaque (not metallic) elytra, and their much finer sculpture; the antennæ are also shorter and more robust. Both species occur at Capetillo. *O. elongata* appears to be not uncommon at Guanajuato, whence we have received numerous examples.

DIABROTICA (p. 502).

2. **Diabrotica fraterna.**

Diabrotica morosa, huj. op. p. 503 (partim) (excl. fig.).

The name *morosa* proposed by me for this species is not required, as the previously described *D. fraterna*, Baly, belongs to the genus *Dircema*, Clark (*cf.* Baly, Trans. Ent. Soc. London, 1891, p. 428). According to Baly, *op. cit.* 1890, p. 6, I have incorrectly identified our Panama examples with his species, the type of which is from Guatemala; the Panama localities quoted by me must be transferred to the following, *D. lacordairei*.

2 (A). **Diabrotica lacordairei.**

Diabrotica lacordairei, Kirsch, Berl. ent. Zeitschr. 1883, p. 199 [1]; Baly, Trans. Ent. Soc. Lond. 1890, p. 6 [2].

Diabrotica morosa, huj. op. p. 503 (partim), Tab. XXVIII. fig. 19.

To the localities given, add:—COLOMBIA [1 2]; UPPER AMAZONS [2].

Baly states [2] that his *D. fraterna*, from Guatemala, is much narrower than *D. lacordairei*, and quite distinct from it.

11. **Diabrotica pulchra.**

Crioceris pulchra, Sahlb. Peric. Ent. Sp. Ins. p. 68, t. 4. fig. 3 (1823) [1] (nec Baly).

Diabrotica albosignata, Baly, huj. op. p. 506, Tab. XXIX. fig. 14.

To the localities given, add:—BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); HONDURAS [1].

28. **Diabrotica litterata.**

Crioceris litterata, Sahlb. Peric. Ent. Sp. Ins. p. 70, t. 4. fig. 5 (1823) [1]; Gahan, Trans. Ent. Soc. Lond. 1891, p. 523, nota.

Diabrotica delineata, huj. op. p. 514, Tab. XXIX. fig. 10.

The locality given by Sahlberg is Mexico [1].

Diabrotica tripunctata (p. 516).

According to Baly (Trans. Ent. Soc. Lond. 1890, p. 13), *D. tripunctata* is synonymous with the previously described *D. melanocephala* (Fabr.).

40 (A). **Diabrotica sedata.**

Diabrotica sedata, Baly, Trans. Ent. Soc. Lond. 1890, p. 48[1].

Hab. GUATEMALA[1]; BRAZIL[1].

Evidently closely allied to, if not identical with, *D. apicicornis*, or some other closely allied Central-American species. We may be permitted to doubt if the insects from these widely separated localities are really conspecific.

59 (A). **Diabrotica speciosa.**

Galeruca speciosa, Germ. Ins. Spec. i. p. 602 (1824)[1].
Diabrotica speciosa, Baly, Trans. Ent. Soc. Lond. 1890, p. 41[2].
Diabrotica hexaspilota, Baly, Journ. Linn. Soc., Zool. xix. p. 228[3].
Var. *Diabrotica vigens,* Er. in Wiegm. Archiv, xiii. 1, p. 167 (1847)[4].
Var. *Diabrotica simoni,* Jac. P. Z. S. 1889, p. 280[5].
Var. *Diabrotica amabilis,* Baly, loc. cit. p. 222[6].
Var. *Diabrotica simulans,* Baly, loc. cit. p. 222[7].

Hab. MEXICO (*Baly*[2]).—SOUTH AMERICA[1–7] to Peru.

I have not seen specimens of this species from our region.

60 (A). **Diabrotica curvipustulata.**

Diabrotica curvipustulata, Baly, Trans. Ent. Soc. Lond. 1890, p. 44[1].

Hab. NICARAGUA (*Janson*[1]).—COLOMBIA[1].

Unknown to me; evidently closely allied to *D. selecta*, Jac.

61. **Diabrotica viridula.**

Crioceris viridula, Fabr. Syst. Eleuth. i. p. 453.
Diabrotica viridula, Baly, Trans. Ent. Soc. Lond. 1890, p. 40.
Diabrotica optiva, Erichs. in Wiegm. Archiv, xiii. 1, p. 169 (1847).
Diabrotica fusco-maculata, huj. op. p. 528, Tab. XXIX. fig. 25.

The correction of the synonymy of this species is given on Baly's authority.

Diabrotica rufo-maculata (p. 529).

To the Mexican locality given, add:—Omilteme in Guerrero 8000 feet (*H. H. Smith*).

The additional specimens received agree perfectly with the type.

69 (A). **Diabrotica innuba.**

Cistela innuba, Fabr. Syst. Ent. p. 117[1].
Diabrotica innuba, Baly, Journ. Linn. Soc., Zool. xix. p. 230[2]; Gahan, Trans. Ent. Soc. Lond. 1891, p. 418[3].

Hab. MEXICO[2 3].—SOUTH AMERICA[2 3], Colombia[2 3], Cayenne[2 3]; WEST INDIES[2 3].

I have not seen a specimen of this species from within our limits, and the locality "Mexico," therefore, requires confirmation.

75 (A). **Diabrotica kirschi.**

Diabrotica kirschi, Baly, Journ. Linn. Soc., Zool. xix. p. 231[1]; Gahan, Trans. Ent. Soc. Lond. 1891, p. 421[2].

? *Diabrotica demissa,* Er. in Wiegm. Archiv, xiii. 1, p. 169 (1847)[3].

Hab. Mexico[2].—Colombia[1 2]; Peru[3].

Diabrotica difformis (p. 536).

To the localities given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*).

Found in some numbers by Mr. Herbert Smith.

Diabrotica setosa (p. 537).

Mr. Herbert Smith has sent us specimens of this species from Teapa, and we are thus able to verify the original locality quoted by Baly.

91 (A). **Diabrotica smithi.**

Black, above flavous; thorax strongly punctured; elytra very strongly and closely punctured, flavous, with a narrow sutural and a broader lateral stripe, the latter not extending to the apex, black; legs pale, the femora streaked with black above.

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

Head fulvous, the vertex with a deep fovea and two small black spots; antennæ extending to the middle of the elytra, black, the lower joints flavous at the base, the third joint much longer than the second, but shorter than the fourth; thorax twice as broad as long, the sides obsoletely angulate at the middle, the surface strongly and closely punctured, shining, the disc with a rather obsolete depression on either side; scutellum black; elytra rather convex, much more strongly punctured than the thorax, the punctures deep and round, the suture narrowly black, the lateral stripe broader, commencing at the shoulder and not quite reaching the apex; underside black; the femora above and the outer edge of the tibiæ, as well as the tarsi, more or less black.

Hab. Mexico, Omilteme in Guerrero (*H. H. Smith*).

A single specimen. Differs from the allied similarly-coloured species by the strong and close punctuation of the thorax and elytra.

100 (A). **Diabrotica peregrina.** (Tab. XLIII. fig. 12.)

Black, the basal and apical joints of the antennæ pale; thorax quadrate, shining, black, nearly impunctate, without fovea; elytra flavous, the suture, and a broad fascia before and a narrower one below the middle, black; the base of the femora pale flavous.

Length $1\frac{3}{4}$ line.

Head impunctate, black; antennæ only extending to the base of the elytra, the basal and the apical three joints testaceous, the first joint stained with piceous above, the others black, the third joint more than twice as long as the second; thorax quadrate, the sides straight, the surface smooth, shining, black, with a few very minute punctures; scutellum black; elytra strongly punctured in very close irregular rows, flavous, with a broad fascia before the middle (widened at the sides and not extending to the lateral margins), and a much narrower one near the apex, as well as the suture, black, the interstices sparsely pubescent; underside and legs black, the basal half of the femora pale testaceous.

Hab. MEXICO, Venta de Pelegrino in Guerrero (*H. H. Smith*).

A single specimen. Somewhat allied in coloration to *D. dohrni* and *D. subsignata*, but differing in the elytral pattern.

109 (A). **Diabrotica guerreroensis.** (Tab. XLIII. fig. 13.)

Black, the antennæ and legs flavous; thorax fulvous, scarcely impressed, impunctate; elytra finely punctured, flavous or fulvous, an elongate humeral spot, the suture at the base, a transverse band below the middle, and the extreme apex, black.

Length 3 lines.

Of posteriorly widened shape; the head impunctate, black or partly fulvous, the lower portion forming a plane surface, without any elevations; antennæ extending to about the middle of the elytra, fulvous or flavous, the third and fourth joints nearly three times as long as the second; thorax subquadrate, rather convex, slightly narrowed in front, the surface obsoletely obliquely impressed at the sides, impunctate; scutellum black; elytra convex, widened posteriorly, finely punctured in semi-regular rows, fulvous, with an elongate spot at the shoulder (widened posteriorly, and extending to a third of the length of the elytra), a somewhat similar spot surrounding the scutellum, a broad transverse band below the middle (not quite extending to either margin), and a transverse spot at the apex, black; underside and pygidium black.

Hab. MEXICO, Xautipa and Soledad, both in Guerrero (*H. H. Smith*).

Differing in the elytral pattern from any of its allies in this section.

111 (A). **Diabrotica blattoides.**

Broadly depressed, pale flavous; the antennæ, underside, tibiæ, and tarsi black; thorax bifoveolate, impunctate; elytra closely and rather strongly punctured.

Length 3 lines.

Head broad, foveolate on the vertex; the antennæ extending to two-thirds of the length of the elytra, black, rather robust, the third joint elongate, slightly shorter than the fourth, the terminal joints gradually shorter; thorax one-half broader than long, the sides straight, the surface rather flat, with a small but deep fovea on each side and a more shallow depression at the base, the disc impunctate; scutellum very broad, concave in the middle; elytra not wider at the base than the thorax, very closely and strongly punctured; legs long and slender, the femora pale flavous, the tibiæ and tarsi black.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*). A single specimen.

Of the same depressed shape as *D. sublævicollis*, but without any darker markings.

112. **Diabrotica tricincta.**

Galleruca tricincta, Say, Journ. Acad. Phil. iii. p. 457 (1824)[1].

Diabrotica tricincta, Lec. Proc. Acad. Phil. 1865, p. 212[2].

Diabrotica suffriani, huj. op. p. 55, Tab. XXXII. fig. 3.

To the locality given, add :—NORTH AMERICA [1], Arizona [2].

Diabrotica sexplagiata (p. 553).

This species, as noted by Mr. Gahan (Trans. Ent. Soc. Lond. 1891, p. 524), belongs to the genus *Neobrotica*.

Diabrotica hirsuta (p. 552).

To the Mexican locality given, add :—Teapa in Tabasco (*H. H. Smith*).

130 (A). **Diabrotica quatuordecim-punctata.** (Tab. XLIII. fig. 14.)

Black, the antennæ and legs fulvous; the head testaceous; thorax testaceous, with four black spots; elytra closely punctured, testaceous, each with seven black spots (1, 2, 2, 2).

Length 3 lines.

Head with a deep fovea on the vertex, the latter with two black spots; the antennæ extending to the middle of the elytra, fulvous, the third joint twice as long as the second, the fourth much longer than the preceding one; thorax one-half broader than long, the sides rounded anteriorly, the surface impunctate, with two foveæ and four black spots, the latter placed transversely before the middle; scutellum black; elytra closely and rather strongly punctured, testaceous, each with seven black spots—one at the shoulder, two immediately below it, placed transversely, one near the lateral margin below the middle, another near the suture a little lower down, and two near the apex, placed transversely; underside black; legs fulvous.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single specimen. The elytral spots are placed in two longitudinal rows, the four outer spots at equal distances near the lateral margin, and the three inner ones at unequal distances near the suture. In the position of the spots the present species differs from any of its congeners in this section.

Diabrotica nitidula (p. 563).

To the localities given, add:—MEXICO, Cordova (*Sallé*, *Höge*).

150 (A). **Diabrotica semiopaca.**

Piceous, the head in part, the thorax, and femora flavous; elytra black or bronze-black, opaque, closely and finely punctured in rows, the interstices finely transversely rugose; the third joint of the antennæ elongate.

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

Head piceous on the vertex, the latter minutely granulate, and with a central depression, the lower part of the face flavous, rather convex, with a central ridge, the labrum piceous; the antennæ extending to the middle of the elytra, piceous, the lower four joints fulvous, the third joint nearly three times as long as the second and as long as the fourth; thorax twice as broad as long, the sides narrowly margined, slightly constricted at the base, the disc with a deep oblique depression on either side, the surface impunctate, flavous; scutellum black; elytra with very close and distinct rows of punctures, the interstices minutely granulate and finely rugose; underside piceous; legs fulvous, the posterior tibiæ and the tarsi nearly black.

Hab. MEXICO, Acapulco in Guerrero (*Höge*), Yautepec in Morelos (*Flohr*).

The head and the underside vary in colour. The long third joint of the antennæ, and the blackish, opaque, and slightly rugose elytra are the chief characters of this species.

Diabrotica longitarsis (p. 567).

To the localities given, add:—MEXICO, Jalapa (*M. Trujillo*).

159 (A). **Diabrotica ribbei.**

Black; antennæ fulvous, the third joint elongate; thorax flavous, depressed at the sides, impunctate; elytra finely and irregularly punctured, flavous, a spot on the suture at the base and the posterior third black.

Length 2 lines.

Hab. PANAMA, Chiriqui (*coll. Jacoby*).

D. ribbei may be chiefly recognized by the pattern of the elytra. The head is impunctate; the antennæ extend to the middle of the elytra, and have their fourth joint slightly longer than the third, both being of elongate shape; the thorax is nearly twice as broad as long, impunctate, and with a distinct fovea on each side; the elytra are finely and not very closely punctured, and the sutural spot surrounds the scutellum, the entire posterior third being black and shining; the underside and legs are black, the extreme base of the femora having a yellow spot. A single specimen.

165. **Diabrotica (?) antennata.** (Tab. XLIII. fig. 15.)

Black; the antennæ, head, thorax, and legs fulvous; thorax bifoveolate, impunctate; elytra finely punctured, flavous, the suture anteriorly, a sublateral band, and three spots placed longitudinally near the suture, black.

♂. Face excavated anteriorly; the third joint of the antennæ very elongate, and thickened towards the apex.

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

Hab. MEXICO (*Sallé, ex coll. Sturm*).

Of this curious species there is a single specimen in Sallé's collection; it is labelled *Diabrotica scutellata*, Sturm. The claw-joints being all broken off I am unable to say whether the species really belongs to *Diabrotica*. The head is transversely excavate at its lower portion; the palpi are strongly incrassate; and the antennæ have their third joint extremely long and gradually thickened, the other joints being comparatively short. The thorax is about one-half broader than long, impunctate and bifoveolate. The sutural stripe of the elytra extends to one-third of their length and is pointed at its apex; the lateral band does not quite reach the apex and is indented at the middle; of the three spots placed near the suture, the first is small and antemedian, the second is large, ovate, and placed below the middle, and the third is elongate and does not extend to the apex.

AGELASTICA. (To follow the genus *Diabrotica*, p. 569.)

Agelastica, Redtenbacher, Fauna Austriaca, ed. 1, p. 525 (1849).

I refer, with some doubt, a single species from Mexico to this genus, which contains but few representatives, and has not hitherto been recorded from our region. In the Mexican insect, however, the tibiæ are all armed with a spine, the first joint of the posterior tarsi is as long as the following two joints together, the claws are appendiculate, and the anterior coxal cavities are open. In its general shape and appearance *A. viridis* differs considerably from the European *A. alni*.

1. **Agelastica viridis.**

Fulvous, the antennæ piceous; thorax subquadrate, shining, impunctate; scutellum black; elytra metallic green, finely and closely punctured, the interstices here and there minutely wrinkled.

Length 2 lines.

Of elongate, parallel shape; the head impunctate, fulvous, the vertex with a faint metallic gloss, and a more or less distinct dark central spot, the frontal elevations narrowly oblique; the clypeus in the shape of a triangular ridge; the palpi slender, piceous; the antennæ rather widely separated at their point of insertion, scarcely extending to the middle of the elytra, piceous, the lower three or four joints fulvous, the third joint one-half longer than the second, the following joints slightly longer than the third and nearly equal; thorax about one-half broader than long, rather convex, the sides slightly constricted at the base and rounded before the middle, the anterior angles in the shape of a small tubercle, and furnished with a single seta, the surface shining, impunctate, fulvous; elytra a little wider at the base than the thorax, with a scarcely perceptible post-basal depression, rather convex and parallel, metallic green, very closely and finely punctured, the interstices minutely granulate and transversely wrinkled, the epipleuræ distinct nearly to the apex; underside and legs fulvous, the breast metallic greenish at the sides; all the tibiæ mucronate; the prosternum not visible between the coxæ.

Hab. MEXICO, Chilpancingo and Acapulco, both in Guerrero (*Höge*).

PSEUDODIABROTICA. (To precede the genus *Microbrotica*, p. 569.)

Elongate; antennæ long and slender; the thorax quadrate, with two oblique depressions; elytra narrow, parallel, irregularly punctured, their epipleuræ broad anteriorly and extending below the middle; legs very long and slender: the intermediate and posterior tibiæ mucronate; the first joint of the posterior tarsi as long as the following joints together; claws bifid; anterior coxal cavities open.

This genus is proposed for a single species from Western Mexico. *Pseudodiabrotica* possesses nearly all the structural characters of *Diabrotica*, but is narrower and more slender. The legs are more elongate than is generally the case in *Diabrotica*, and the first joint of the posterior tarsi is much longer than in that genus. The male is further distinguished by the curious excavation at the apex of the elytra.

1. **Pseudodiabrotica metallica.** (Tab. XLIII. fig. 16, ♂.)

Black, above metallic green; head and thorax impunctate; elytra finely punctured, the interstices here and there transversely wrinkled.

♂. Elytra with a deep longitudinal excavation before the apex, and the surface in front of this swollen, the apex itself pointed.

Length 2–2½ lines.

♂. Head impunctate, the frontal elevations small and indistinct, the clypeus with a strongly raised central ridge extending between the point of insertion of the antennæ; the penultimate joint of the palpi incrassate, the apical joint acutely pointed; antennæ black, extending to the middle of the elytra, all the joints (with the exception of the second) long and slender, and of nearly equal length; thorax slightly broader than long, the sides coverging towards the base, the anterior angles furnished with a small tubercle and a single seta, the surface rather flat, metallic green, impunctate, and with a deep oblique fovea on each side, the anterior and posterior margins straight; scutellum black; elytra narrowed posteriorly, wider at the base than the thorax, the shoulders scarcely prominent but distinct, the surface metallic green, finely and closely punctured in irregular rows, the interstices minutely granulate, the apex with a deep longitudinal excavation, and the surface in front of this much swollen; legs black, slender, elongate.

Hab. MEXICO, Omilteme and Chilpancingo, both in Guerrero (*H. H. Smith*).

In the female the elytra are devoid of the apical excavation.

TRIARIUS (p. 571).

1. **Triarius lividus.**

Phyllobrotica livida, Lec. Trans. Am. Ent. Soc. xii. p. 28 (1885) [1].
Triarius mexicanus, huj. op. p. 571 (1887).

Dr. Horn has kindly given me a specimen of *Phyllobrotica livida*, Lec., and it proves to belong to the species described by myself under the name of *Triarius mexicanus*. The insect is incorrectly referred to *Phyllobrotica* by Leconte, the tibiæ being mucronate and the claws bifid.

NEOBROTICA (p. 571).

22. **Neobrotica pallida.**

Pale fulvous, the antennæ, tibiæ, and tarsi black; thorax with a deep transverse depression, impunctate; elytra pale fulvous, impunctate.

Length 2 lines.

Head impunctate, the frontal elevations indistinct; eyes large and convex, occupying almost the entire side of the head; antennæ elongate, extending beyond the middle of the elytra, black (the apical two joints wanting), the second joint very short, the fourth longer than the third; thorax subquadrate, about one-half broader than long, slightly narrowed towards the base, impunctate, the disc with a deep, somewhat curved, broad depression; elytra with a deep post-basal depression and the suture depressed below the scutellum, entirely impunctate; below and the femora fulvous, the apical portion of the femora above and the tibiæ and tarsi black; the first joint of the posterior tarsi longer than the following three joints together; claws appendiculate.

Hab. Mexico, Panistlahuaca (*Sallé*). Two specimens.

23. **Neobrotica ruatanæ.** (Tab. XLIII. fig. 17.)

Fulvous, the antennæ (the lower two joints excepted) black; thorax obsoletely impressed, impunctate; elytra extremely minutely punctured, fulvous, the suture broadly, and the posterior portion black.

Length 2 lines.

Head impunctate, flat, without any elevations; antennæ black, the lower two joints fulvous, the fourth longer than the preceding two joints together; thorax scarcely broader than long, slightly constricted at the base, the surface impunctate, with two shallow but large depressions; scutellum fulvous; elytra scarcely perceptibly punctured in irregular rows, with a distinct flattened margin, fulvous, a sutural stripe, widening anteriorly, and the posterior portion (the lateral margin excepted) violaceous-black; legs fulvous; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate.

Hab. Honduras, Ruatan Island (*Gaumer*).

The system of coloration in this species is very different from that of the other members of the genus. Four specimens.

24. **Neobrotica sexplagiata.**

Diabrotica sexplagiata, huj. op. p. 553, Tab. XXXI. figg. 14, 15.
Diabrotica bivittaticollis, Baly, Journ. Linn. Soc., Zool. xix. p. 257.

EXTRA

MALACOSOMA (p. 580).

M. Allard, Compt. Rend. Soc. Ent. Belg. 1889, p. lxvii, gives Mexico as a locality for *M. narense*, Har.; it is probable, however, that this determination is incorrect.

MALACORHINUS (p. 582).

Malacorhinus apicalis (p. 587).

To the localities given, add:—MEXICO, Amula and R. Papagaio, both in Guerrero (*H. H. Smith*).

20. **Malacorhinus cobanensis.** (Tab. XLIII. fig. 18, ♂.)

Black, above fulvous; thorax impunctate; elytra very minutely punctured, with a subtriangular spot at the base and a transverse one below the middle, black.

♂. Elytra strongly widened at the middle, the sides with a deep fovea before this, and the lateral margin turned inwards at the same place.

Length 2 lines.

Hab. GUATEMALA, Coban in Vera Paz (*Conradt*).

Closely allied to several other species, especially to *M. plagiatus* and *M. godmani*; but differing from the first mentioned in the shape of the elytral spots, and in the elytral fovea of the male being placed before (instead of below) the middle, and from *M. godmani* in the colour and structure of the antennæ, which are entirely black and have the intermediate joints in the male undilated. The anterior elytral spot is of elongate subtriangular shape, the species differing in this respect from all its allies. The female is of more parallel shape, and devoid of the elytral fovea.

21. **Malacorhinus exclamationis.** (Tab. XLIII. fig. 19, ♂.)

Testaceous, the antennæ, tibiæ, and tarsi black; head and thorax impunctate; elytra extremely minutely punctured, pale testaceous, the sutural and apical margins, and a narrow longitudinal stripe extending from the shoulder to the middle of the disc, usually connected with a post-median spot, fuscous or piceous.

♂. Elytra with a deep elongate fovea at the middle of the lateral margin, bounded anteriorly and posteriorly by a tubercle, the tubercles fulvous in colour.

Length $1\frac{3}{4}$ line.

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

This small species, of which several specimens of both sexes were obtained, may be easily recognized by the pale testaceous colour, and by the ¡-like elytral markings. These markings, however, are sometimes more or less interrupted, or, on the contrary, confluent. The female is devoid of the elytral fovea, but has a slight humeral ridge instead.

LUPERODES (p. 590).

13. **Luperodes salvini.**

Flavous, the antennæ, tibiæ, and tarsi black; thorax impunctate, flavous, narrowly margined with black; elytra finely and closely punctured, the suture and lateral margins piceous or black.

Length 2 lines.

Head impunctate, deeply transversely grooved above the point of insertion of the antennæ, the vertex obscure fulvous, the frontal elevations strongly raised, the eyes large; antennæ rather slender, black, the third joint one-half longer than the second; thorax one-half broader than long, impunctate, the sides rounded,

the disc flavous, the sides and the posterior margin narrowly black; scutellum black; elytra closely punctured, flavous, the black sutural stripe suddenly widened below the base, then gradually narrowed to the apex, the basal and lateral margins more or less narrowly black or piceous, the epipleuræ indistinct below the middle; underside and the femora flavous; posterior tibiæ with a long spine; the first joint of the hind tarsi longer than the following three joints together; anterior coxal cavities open.

Hab. GUATEMALA, Llano grande (*mus. Stuttgart*).

Of this species I have received two specimens from the Stuttgart Museum.

METACYCLA (p. 601).

All the tibiæ in this genus are armed with a spine, not the four hinder ones only as stated by Chapuis.

5. Metacycla rugipennis.

Black; the thorax flavous, impunctate; elytra bluish-black, finely rugose and closely punctured.
Length 3 lines.

Hab. MEXICO, Amula and Chilpancingo, both in Guerrero (*H. H. Smith*).

M. rugipennis is so closely allied to *M. cæruleipennis*, Jac., that it may only be a local variety of that species; it differs from it, however, in the duller, more strongly punctured, rugose elytra. The antennæ extend nearly to the apex of the elytra in both species. Three examples, all males.

PTELEON (p. 603).

2. Pteleon pubescens.

Bluish-black, finely pubescent above; thorax very finely and sparingly punctured; elytra closely punctured and finely rugose throughout.

♂. Elytra widened at the sides, each with a triangular elevation at the middle near the suture.

♀. Elytra parallel, simple.

Length 3 lines.

♂. Head with a few minute punctures, the frontal tubercles well developed; antennæ short, the first joint robust, the second short, the third nearly twice as long as the preceding one, subtriangular; thorax about one-half broader than long, rounded at the sides, rather convex, with an obsolete transverse depression near the base, finely and sparingly punctured and pubescent; elytra much wider at the base than the thorax, flattened and widened at the sides, finely rugose, and clothed with greyish pubescence, the disc with a highly raised subtriangular elevation near the suture, the epipleuræ extremely wide.

Hab. MEXICO, near the city (*Höge, Flohr*).

Of this interesting species I have received several examples of both sexes from M. Flohr, who states that the insect is found upon the flowers of a species of *Convolvulus*. *P. pubescens* may be at once known from *P. semicæruleus* by the finely pubescent upper surface, and by the subtriangular elevation on the disc of the elytra in the male. The elytra are bluish in this sex, and nearly black in the female. Herr Höge only obtained one female specimen.

CNEORANE (p. 604).

3. **Cneorane nigripes.**

Cneorane nigripes, Allard, Compt.-Rend. Soc. Ent. Belg. xxxiii. p. lxxi (1889) [1].

Hab. Mexico [1].

From the short diagnosis given, it is impossible to say whether this species is correctly placed in *Cneorane*.

METACORYNA (p. 605).

4. **Metacoryna lævipennis.**

Black, the head, antennæ (the last two joints excepted), thorax, and anterior legs flavous; head and thorax impunctate; elytra dark violaceous, impunctate.

♂. Antennæ with the ninth joint enormously dilated, concave below, the apical two joints short and pointed.

Length 1½ line.

Hab. Guatemala (*coll. Jacoby*).

Of this species I have received a single male specimen from the Stuttgart Museum. It may be known from *M. fulvipes* and the allied forms by the flavous antennæ (the last two joints excepted, which are black); and by the ninth joint in the male being enormously dilated (instead of the eighth, as in *M. fulvipes*). In this respect *M. lævipennis* agrees with *M. guatemalensis*, but in that species the antennæ are nearly black, and the dilated joint is pear-shaped (not rounded). It also differs from *M. guatemalensis* in the thorax being much shorter and transverse, and the elytra entirely impunctate and of a metallic violaceous colour. The four anterior legs are flavous; the posterior femora are piceous (the posterior tibiæ and tarsi are broken off).

5. **Metacoryna pretiosa.** (Tab. XLIII. fig. 20, ♂.)

Black, the head metallic violaceous; the thorax flavous, impunctate; elytra violaceous, very finely punctured anteriorly.

♂. Antennæ with the eighth and ninth joints very greatly thickened.

Length 2 lines.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

A single specimen. *M. pretiosa* (♂) agrees in the structure of the antennæ with the corresponding sex of *M. fulvipes*, but differs from it in the colour of the head, elytra, and legs. The antennæ have their lower joints more or less stained with fulvous; in the male sex the fifth to the seventh joints are gradually widened, the eighth joint greatly dilated and pear-shaped, and the ninth smaller. The head and thorax are impunctate, and the elytra have a small longitudinal depression close to the suture near the base.

CYPHOTARSIS. (To follow the genus *Scelida*, p. 609.)

Body elongate, glabrous; eyes entire, small; antennæ with the second and third joints subequal, the eighth, ninth, and tenth thickened (♂); thorax subquadrate, narrowed at the base; elytra depressed, parallel; epipleuræ broad, indistinct at the apex; legs long and slender; tibiæ unarmed; the first joint of the four anterior tarsi broadly dilated and elongate, that of the posterior pair longer than the following three joints together; claws appendiculate; anterior coxal cavities open.

This genus is proposed for the reception of a single species allied to *Scelida* and *Chthoneis*. It differs from *Scelida* in the short third joint of the antennæ, and in the structure of these organs in the male; and from *Chthoneis* in the subquadrate thorax, and the differently formed antennæ. The elytral epipleuræ are also much broader than in either of these genera, and the anterior tarsi have their first joint more than usually widened in the male.

1. **Cyphotarsis niger.**

Entirely black, the head and thorax impunctate, the elytra microscopically punctured.
Length 3 lines.

♂. Head rather produced, entirely impunctate, the frontal tubercles broad and strongly developed; the palpi filiform and pointed; antennæ extending to the middle of the elytra, the third joint about one-half longer than the second, both short, the fourth joint twice the length of the third, the following three joints gradually widened, the eighth strongly thickened, robust and cylindrical, the apical joints shortened and becoming gradually thinner; thorax scarcely one-half broader than long, rounded at the sides before the middle, narrowed at the apex, the angles very slightly produced, the surface rather flat, with a shallow depression at the base, entirely impunctate; scutellum rather broad; elytra elongate and parallel, subdepressed, extremely minutely punctured, the punctuation only visible under a strong lens; legs long and slender; the first joint of the four anterior tarsi broadly dilated.

Hab. Mexico, Ixtlan (*Flohr, in coll. Jacoby*).

Mr. Flohr has kindly sent me a male specimen of this species; it is probable that the female has simple antennæ and tarsi.

SCELIDOPSIS (p. 609).

4. **Scelidopsis (?) violacea.**

Black; the thorax subquadrate, impunctate, without depressions; elytra metallic dark blue, closely punctured, the interstices slightly rugose.
Length 2 lines.

Of elongate, parallel shape; head black, impunctate, the frontal elevations elongate in shape, strongly raised, the labrum obscure piceous; the palpi long and slender; antennæ black, extending to the middle of the elytra, the lower three joints obscure piceous, the third joint one-half longer than the second, the fourth much longer than the third, the following joints rather shorter; thorax scarcely broader than long, constricted at the base, the sides narrowly margined, the surface impunctate, without depressions, black; scutellum black; elytra metallic blue, rather strongly and closely punctured, the interstices sometimes transversely rugose; epipleuræ moderately broad, extending to the apex of the elytra; legs and underside black; tibiæ unarmed; the first joint of the posterior tarsi as long as the following three joints together; claws appendiculate; anterior coxal cavities open, the prosternum extremely narrow but visible.

Hab. Mexico, Chilpancingo and Xucumanatlan, both in Guerrero (*H. H. Smith*).

S. violacea agrees with *Scelidopsis* in the very narrow prosternum; but differs from it in the thorax being without depressions, the elytra metallic and strongly punctured, and the epipleuræ not so broad. It may have eventually to be separated from this genus.

MIRACES (p. 611).

Miraces æneipennis (p. 611).

To the localities given, add:—MEXICO, Amula in Guerrero (*H. H. Smith*).

MONOLEPTA (p. 619).

12 (A). **Monolepta morosa.**

Violaceous-black; thorax obsoletely impressed at the sides, finely wrinkled and punctured; elytra extremely minutely punctured, opaque.

Length 1½–2 lines.

Of elongate shape, entirely violaceous-black, opaque; head with a few fine punctures; the antennæ extending beyond the middle of the elytra, the second and third joints short, the third slightly longer than the second: thorax one-half broader than long, very slightly rounded at the sides, the anterior angles thickened, the posterior ones rounded and obsolete, the surface with an obsolete depression on either side, extremely finely wrinkled and punctured; elytra very similarly sculptured, bnt less distinctly wrinkled, the epipleuræ indistinct below the middle; legs slender; the first joint of the posterior tarsi nearly equalling half the tibia in length.

Hab. MEXICO, Amula and Xucumanatlan, both in Guerrero (*H. H. Smith*).

Many specimens.

ADDENDA.

LEMA (p. 2, and Suppl. p. 8).

3 (D). **Lema smithi.**

Black, above blue, green, or dark violaceous; head impunctate; thorax broader than long, punctured anteriorly and on the disc; elytra with a distinct basal depression, strongly punctate-striate, the ninth stria entire, the interstices costate at the apex.

Length 2 lines.

Head not constricted behind the eyes, impunctate, the anterior portion pubescent, the eyes not deeply notched; antennæ black, extending only a little beyond the base of the elytra, the fourth joint scarcely longer than the third, the following joints gradually thickened; thorax broader than long, moderately constricted at the sides, the basal sulcus deep and impressed with a fovea at the middle, the disc with a double row of punctures at the middle and some others near the anterior angles; elytra with a rather deep sutural depression below the base, strongly and regularly punctate-striate; underside and legs black, clothed with silvery-grey pubescence.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

From other similarly-coloured species from our region belonging to Lacordaire's first division, *L. smithi* is distinguished by the short antennæ, in connection with the punctured thorax, the basal depression of the elytra, and the black underside. Six examples.

3 (E). **Lema fulvipes.**

Æneous, the antennæ and legs fulvous; thorax broad, strongly and irregularly punctured; elytra deeply depressed below the base, strongly and regularly punctate-striate, the ninth stria entire, the interstices costate at the apex.

Length 2 lines.

Head rather long, very sparingly and finely punctured on the vertex, more closely and strongly so between the eyes, the latter but slightly notched, the interocular space divided by a longitudinal groove, the surface in front of the eyes rugosely punctured; antennæ scarcely extending to the middle of the elytra, fulvous, the apex of the terminal joint fuscous, the third and fourth joints equal; thorax metallic æneous, broader than long, the sides but moderately constricted, the anterior angles rather prominent, the disc somewhat uneven, obsoletely raised at the sides, and irregularly impressed with coarse and fine punctures; elytra much broader than the thorax, depressed within the shoulders and below the base near the suture, the punctures coarse anteriorly, fine posteriorly, and distantly placed, the interstices broadly raised near the apex, the extreme apical and sutural margin obscure fulvous; underside more obscure æneous, clothed with yellowish pubescence; legs fulvous.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single specimen, apparently allied to *L. xanthopus*, Lac., and distinguished by the uniform brilliant metallic æneous colour of the upper surface, the shape and sculpture of the thorax, and the fulvous antennæ and legs.

22 (A). **Lema quinquelineata.**

Flavous, the antennæ (the basal and apical joints excepted) black; thorax nearly impunctate; elytra very deeply punctate-striate, with a sutural and two narrow lateral stripes, not extending to the apex, black.

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

Head impunctate, the orbital grooves very deep, the eyes not very deeply notched; antennæ extending to about the middle of the elytra, black, the basal two joints flavous, the apical one obscure fulvous, the fourth joint one-half longer than the third; thorax slightly broader than long, moderately constricted at the sides, the basal sulcus distinct, the surface impunctate, except for a few punctures near the anterior angles; scutellum margined with black; elytra almost foveolate-punctate, the punctures very closely placed, the ninth stria entire, the interstices with a few minute punctures, a narrow stripe commencing a little below the shoulders, another one placed between the fourth and fifth rows of punctures (commencing from the middle of the base), and a sutural stripe, all of equal length and abbreviated before the apex, black; underside and legs flavous, the breast with a small black spot in front, the tarsi stained with fuscous.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

A single example.

35 (A). **Lema sponsa.**

Fulvous; the antennæ (the first joint excepted), a lateral thoracic spot, the sides of the breast, the base and apex of the femora, and the tibiæ and tarsi, black; elytra with the ninth stria entire, a rounded spot at the shoulder and another at the middle, an oblong mark on the suture before the middle, and the lateral margin, anteriorly, black.

Var. The lateral margin entirely fulvous.

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

Head entirely impunctate, reddish-fulvous, the orbital grooves deep, the eyes not very deeply notched; the antennæ only extending to the base of the elytra, black, the basal joint fulvous, the fourth joint twice as long as the third; thorax not longer than broad, the disc with a double row of fine punctures, and a few others near the anterior angles, the basal sulcus indistinct at the middle, the lateral constriction with a black mark; scutellum fulvous, margined with black; elytra convex, deeply punctate-striate anteriorly, the punctures becoming very much finer posteriorly, the interstices slightly costate at the apex, a common short sutural stripe or spot below the base, a round spot at the shoulder, and another at the middle, black, the lateral margin from below the base to the middle also black; below fulvous, the upper and lateral portion of the breast and a spot at the side of each abdominal segment black; the base and apex of the femora, the tibiæ, and tarsi black.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

L. sponsa belongs to Lacordaire's division containing *L. nupta*, *L. varipes*, and others, from all of which the position and number of the elytral spots distinguish it.

Two specimens.

CRIOCERIS (p. 14, and Suppl. p. 44).

13 (A). **Crioceris aterrima.**

Entirely black, shining, sparingly pubescent; head finely rugose; thorax scarcely constricted, finely transversely strigose; elytra sparingly and irregularly punctured anteriorly, more closely and regularly so posteriorly, the interstices towards the apex rugose.

Length 4 lines.

Head rugosely punctured round the eyes, finely strigose on the vertex; antennæ not extending to the middle of the elytra, the basal four joints shining, the rest opaque, the fourth joint one-half longer than the third, the terminal joints thickened, longer than broad; thorax not longer than broad, subquadrate, finely transversely strigose; elytra remotely punctured anteriorly, the punctures more closely and semi-

regularly placed below the middle, the interstices at the apex subrugose, the sides sparingly clothed with yellowish hairs, the disc with two obsolete depressions placed transversely below the middle, and a less distinct one below the base near the suture; underside and legs finely pubescent.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

This may be readily known from all the other species of *Crioceris* from our region by its shining black colour. Two specimens.

MASTOSTHETUS (p. 19, and Suppl. p. 57).

22 (A). **Mastosthethus angusto-vittatus.**

Fulvous, the antennæ, a spot on the vertex, and two or three spots on the thorax, black; elytra flavous, not very closely punctured, the suture and a narrow submarginal stripe, as well as a spot at the middle of the base, black; tibiæ and tarsi black.

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

♀. Head reddish-fulvous, rugosely punctured near the eyes, the middle of the vertex with a black spot, the labrum and palpi black; antennæ extending to the base of the thorax, black, the lower four joints shining, the others opaque, transverse; thorax twice as broad as long, very sparingly punctured anteriorly, the posterior angles slightly produced outwards, the anterior transverse sulcus distinct at the sides, the posterior one indicated by a deep fovea at the angles, the surface fulvous, the anterior margin narrowly and three spots on the disc (one median and two lateral) black; scutellum black; elytra sparingly clothed with yellowish hairs, distinctly but not closely punctured, with a narrow sublateral stripe (commencing at the base but not quite reaching the apex), the suture very narrowly, and a spot at the middle of the base, black; underside reddish-fulvous, clothed with long yellowish hairs, a spot at the sides of the breast black; the base of the femora, the tibiæ, and tarsi black; metasternum triangularly raised in front.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

In the male insect the thoracic spots are smaller and the median one is obsolete, and the posterior tibiæ are fulvous and broadly sulcate. Two specimens.

MEGALOPUS (p. 26, and Suppl. p. 64).

4. **Megalopus basalis.**

Black, clothed with greyish pubescence; the head closely, the thorax sparingly punctured; elytra very strongly and irregularly punctate, black, the base with a triangular red patch covering the shoulders.

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

Of nearly parallel shape, flattened above; the head closely punctured at the sides, leaving a narrow longitudinal space in the centre smooth, the eyes deeply notched, the labrum edged with a fringe of fulvous hairs; antennæ black, extending to the base of the thorax, the lower four joints shining, the others opaque, transversely widened, the third joint very long and slender; thorax one-half broader than long, narrowed in front, the sides straight, the surface very sparingly punctured, with a rather well-marked transverse groove behind the anterior margin and an obsolete one near the base; scutellum obscure fulvous; elytra slightly depressed below the base at the suture, very strongly punctured, rather sparingly clothed with long greyish pubescence, black, with a red triangular patch at the shoulders, extending to the scutellum and downwards to about one-fourth from the base; underside and legs more closely covered with grey pubescence; posterior femora moderately thickened, not extending to the end of the abdomen; tibiæ rather curved.

Hab. MEXICO, Tepetlapa in Guerrero (*H. H. Smith*).

Of this very distinct species three specimens (apparently representing both sexes) were obtained.

PACHYBRACHYS (p. 64, and Suppl. p. 136).

Pachybrachys reticulatus (p. 73).

To the localities given, add :—PANAMA (*Boucard*), David (*Champion*).

Found in abundance by Mr. Champion at David.

COLASPIS (p. 135, and Suppl. p. 220).

8 (A). **Colaspis chapuisi.**

Colaspis chapuisi, Jac. Stett. ent. Zeit. 1884, p. 127[1].

Hab. MEXICO, Misantla (*Flohr*[1], *in coll. Jacoby*).

One of the largest species of the genus; the specimen described is a female.

HOPLACERUS. (To follow the genus *Diphaulaca*, p. 269.)

Body elongate; head rather deeply inserted; eyes small; frontal tubercles and carina strongly developed; antennæ long and robust; thorax transverse, the angles strongly produced outwards, the base with a transverse sulcus, bounded on either side by a longitudinal groove; elytra punctate-striate and costate; legs robust, the posterior femora but moderately incrassate; tibiæ very broadly triangularly dilated, distinctly channelled, the posterior pair mucronate; the first joint of the posterior tarsi strongly widened, not much longer than the second; claws appendiculate; prosternum narrow but distinct; the anterior coxal cavities open.

The single species for which this new genus is proposed is one of the most peculiar amongst the numerous tribe of Halticinæ; it has the angles of the thorax acutely produced, the elytra deeply punctate-striate and costate, and the tibiæ very broadly dilated.

1. **Hoplacerus tibialis.** (Tab. XLIII. fig. 21.)

Pale fulvous, the antennæ (the first joint excepted) black; thorax deeply and remotely punctured; elytra deeply and closely punctate-striate, the interstices costate.

Length 2 lines.

Head impunctate, the frontal elevations strongly raised, the lower portion of the face rather concave, the clypeus in the shape of a narrow but strongly raised triangular ridge extending upwards between the point of insertion of the antennæ; palpi slender; antennæ about two-thirds the length of the body, black, the first joint pale fulvous, robust, the second one-half shorter, the third joint slightly longer than the fourth, the following joints nearly equal, the terminal one more elongate and pointed; thorax twice as broad as long, strongly rounded at the sides, the anterior angles produced outwards into a long and acute tooth, the posterior angles also produced but to a less extent, the surface irregularly convex in places, deeply and remotely punctured, with a deep sulcus at the base, not extending to the sides; scutellum triangular, impunctate; elytra parallel, scarcely wider at the base than the thorax, deeply and closely impressed with transversely-shaped punctures, the interstices strongly costate throughout; epipleuræ broad, extending to the apex of the elytra; underside sparsely pubescent; the posterior femora only a little more thickened than the others; the four anterior tibiæ broadly triangularly dilated, their edges acute; the first joint of the posterior tarsi nearly circular, broadly widened.

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

A single specimen, apparently of the male sex.

PIASUS. (To precede the genus *Lactica*, p. 270.)

Body ovate; antennæ robust, the basal joints swollen (♂); thorax transverse, the anterior angles oblique, the base with a deep sinuate transverse groove bounded at the sides by a longitudinal impression; elytra irregularly punctured, their epipleuræ very broad, continued to the apex; tibiæ robust, sulcate, the posterior pair mucronate; claws appendiculate; prosternum narrowly elongate; anterior coxal cavities open.

This genus has most of the characters of *Lactica*, but differs from it in the form of the frontal elevations and carina, and in the shape of the thoracic sulcus; the antennæ in the male are also very pubescent and have their basal joints swollen.

1. **Piasus fulvus.** (Tab. XLIII. fig. 25, ♀.)

Fulvous, the antennæ black (the three basal joints excepted); thorax impunctate; elytra extremely finely and sparingly punctured, the basal portion convex.

♂. The antennæ fimbriate, their basal joints strongly thickened; the first joint of the tarsi dilated.

♀. Antennæ more slender; the elytra with three strongly raised lateral costæ.

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

♂. Head impunctate, the eyes rather narrow and oblique, the frontal elevations somewhat swollen, scarcely divided, the clypeus strongly raised, deflexed in front; palpi slender, scarcely thickened, the terminal joint very short; antennæ rather narrowly separated at their point of insertion, extending to a little beyond the middle of the elytra, black, the lower three joints fulvous, the third and fourth joints equal, these as well as the basal one thickened towards their apex, all the joints furnished with a fringe of long hairs on their lower edge; thorax twice as broad as long, the sides rounded at the middle, the anterior angles oblique, the posterior ones acute, all furnished with a single seta, the base with a deep transverse sulcus bounded at the sides by a longitudinal groove; scutellum broad; elytra ovate, the basal portion slightly raised, the surface very sparingly and finely punctured.

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

In the females the elytra have three strongly raised costæ, of which the external two are joined below the shoulder. Numerous examples.

LACTICA (p. 270, and Suppl. p. 258).

40. **Lactica vittatipennis.** (Tab. XLIII. fig. 22.)

Piceous, the lower part of the head, the thorax, and legs testaceous; elytra finely punctured, black, with a longitudinal yellowish stripe near the suture extending from the base to near the apex.

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

Head black on the vertex, the latter impunctate, opaque, with an obscure central ridge, the eyes very large, the lower portion of the face and the clypeus testaceous; antennæ extending to beyond the middle of the elytra, black, pubescent, the fourth joint longer than the third; thorax very short and transverse, nearly three times as broad as long, the sides straight, the anterior angles obliquely thickened, the surface impunctate, with a deep transverse sulcus behind, bounded on either side by an equally deep longitudinal groove; scutellum black; elytra parallel, finely and rather closely punctured, black, with a longitudinal yellowish stripe near the suture, this stripe abbreviated and widened at a short distance from the apex; legs testaceous, the apex of the tibiæ and the tarsi more or less fuscous or black.

Hab. GUATEMALA, Panima in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

This insect resembles greatly in coloration certain species of *Phyllotreta*, *Systena*, and *Pseudoepitrix*.

41. **Lactica hidalgoensis.**

Pale flavous, the apical eight joints of the antennæ fuscous; head and thorax impunctate, the transverse sulcus of the latter distinct; elytra metallic bluish, extremely minutely punctured.

Length 2 lines.

Head pale fulvous on the vertex, impunctate, except for a few fine punctures near the eyes, without frontal elevations or carina; the penultimate joint of the palpi robust; antennæ long and slender, the third joint one-half longer than the second, the lower four joints pale, the others fuscous; thorax transverse, more than twice as broad as long, the basal sulcus deep and bounded at the sides by a longitudinal groove, the surface impunctate; elytra with a longitudinal depression within the shoulders, scarcely perceptibly punctured; underside and legs flavous; the basal joint of the anterior tarsi strongly widened in the male.

Hab. Mexico, Zacualtipan in Hidalgo (*Höge*).

Differing from its allies in the pale head, thorax, underside, and legs, in connection with the transverse shape of the thorax and the colour and punctuation of the elytra.

42. **Lactica (?) varicornis.** (Tab. XLIII. fig. 24.)

Fulvous, the head black; antennæ robust, the apical five joints black; thorax quadrate, with a deep transverse sulcus, impunctate; elytra impunctate, each with a small black spot at the base and another near the apex; apex of the posterior femora black.

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

Head black, impunctate, the frontal elevations obsolete, the carina distinct; penultimate joint of the palpi rather robust; antennæ narrowly separated at their point of insertion, extending to about the middle of the elytra, all the joints robust, subtriangular, and elongate, the third joint one-half longer than the second, the following joints of nearly equal length, the lower six joints flavous, the others black; thorax quadrate, the sides nearly straight, the posterior angles slightly produced outwards and each furnished with a single hair, the surface with a deep transverse sulcus at the base, bounded at the sides by a longitudinal groove, the disc impunctate; elytra entirely impunctate, fulvous, with a roundish spot at the shoulder and a more transversely shaped one near the apex; underside and legs fulvous, the posterior femora black at the apex; the first joint of the posterior tarsi as long as the following two joints together; claws appendiculate; anterior coxal cavities open.

Hab. Mexico, Vera Cruz (*H. H. Smith*); Guatemala, Paso Antonio (*Champion*).

The robust antennæ and quadrate thorax give this insect a different appearance from *Lactica*, in which genus I somewhat doubtfully include it.

CACOSCELIS (p. 302, and Suppl. p. 273).

Cacoscelis varians (Suppl. p. 273). (*Prasona nigripennis*, Tab. XVII. fig. 22, var.)

The insect figured on Tab. XVII. fig. 22 is a variety of this species.

9. **Cacoscelis cæruleipennis.**

Fulvous, the antennæ, tibiæ, and tarsi black; thorax minutely punctured, obsoletely grooved at the base; scutellum piceous; elytra dark metallic blue, closely and finely punctured.

Length 3 lines.

Head impunctate, fulvous, the frontal elevations strongly raised; antennæ extending to two-thirds the length of the elytra, black, the lower three joints more or less testaceous, the fourth joint slightly longer than the third; thorax one-half broader than long, reddish-fulvous, shining, the sides straight at the base,

rounded before the middle, the anterior angles slightly tuberculiform, the surface very finely and sparingly punctured, with an obsolete transverse depression at the base, limited by a short longitudinal groove at the sides; elytra dark metallic blue, very closely and finely punctured in irregular rows; underside and legs fulvous, the tibiæ and tarsi black or piceous; the posterior tibiæ mucronate; the first joint of the posterior tarsi as long as the following two joints together; prosternum narrow but distinct; the last abdominal segment grooved in the middle in the male.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Allied to *C. nigripes*, but with differently coloured elytra and legs.

BLEPHARIDA (p. 385, and Suppl. p. 306).

13. **Blepharida singularis.** (Tab. XLIII. fig. 23.)

Flavous, the legs and abdomen fulvous; thorax strongly punctured, with a broad central mark and two small lateral spots; elytra closely and strongly punctured, a humeral and a lateral spot, a common triangular patch on the suture below the middle, and several small spots on the anterior and posterior portions, dark fulvous.

Length 3 lines.

Head fulvous, strongly punctured on the vertex, the clypeus and labrum testaceous; antennæ long and slender, flavous, the fourth joint slightly longer than the third, the tenth only half the length of the preceding joint; thorax more than twice as broad as long, the posterior angles rounded, the basal margin sinuate, the sides very slightly rounded before the middle, the surface closely and strongly punctured, pale flavous, the disc with a broad quadrate spot in the centre, the sides with two smaller spots placed one below the other; scutellum dark fulvous; elytra very strongly and closely punctured in irregular rows, pale flavous, with a spot at the shoulder, another surrounding the scutellum, a subovate spot below the middle near the lateral margin, a common triangular patch on the suture nearly in a line with it, and some small spots placed irregularly on the anterior and posterior portions, dark fulvous, the interior of the punctures also dark fulvous; legs dark fulvous; tibiæ broadly sulcate, the posterior pair emarginate at the apex; the first joint of the tarsi broadly dilated; claws bifid; the last abdominal segment of the male trilobate.

Hab. MEXICO (*Flohr*), Atlixco in Puebla (*Höge*).

Differs from all of its congeners in the markings of the thorax and elytra.

MESODERA (p. 344).

2. **Mesodera brevicollis.**

Piceous, the head, antennæ, thorax, and legs fulvous or flavous; thorax transverse, impunctate; elytra dark fuscous or piceous, finely punctate-striate, the punctures obsolete near the apex, the base with a depression.

Length 1½ line.

♂. Rather broadly ovate; head broad, not narrowed at the base, the frontal tubercles very strongly developed, the clypeus triangularly raised; antennæ extending a little below the middle of the elytra, fulvous or flavous, robust, tapering towards the apex, the third and following joints rather flattened at the base, nearly equal, each joint furnished with some hairs at the apex; thorax twice as broad as long, the sides slightly dilated towards the apex and rounded, the basal sulcus deep, sinuate at the middle, and not extending to the lateral margins, the surface impunctate, fulvous or flavous; scutellum flavous; elytra depressed below the base, distinctly punctate-striate anteriorly, more finely so towards the apex, the interstices flat and impunctate; epipleuræ very broad, extending to the apex of the elytra; legs robust; posterior tibiæ mucronate; anterior coxal cavities closed.

Hab. MEXICO, Zacualtipan in Hidalgo (*Höge*).

This species agrees with the type of the genus, *M. fulvicollis* from Guatemala, in the strongly developed frontal tubercles and the robust and gradually tapering antennæ, in connection with the punctate-striate elytra and closed coxal cavities; the thorax, however, is much more transverse and the elytral epipleuræ are broader. The female has the antennæ much thinner, the third and fourth joints being slender and elongate, and the lateral interstices of the elytra costate. The elytra in both sexes have a slight metallic æneous lustre. Numerous specimens of both sexes.

PACHYBRACHYS (p. 64, and Suppl. pp. 136, 344).

32. **Pachybrachys lecontei.**

Pachybrachys brevicollis, Suppl. p. 152 (nec Lec.).

Just as we are closing this volume Dr. Horn has called my attention to the fact that my name *brevicollis* is preoccupied by Leconte; I therefore propose to change it as above.

INDEX.

[Names in small capitals refer to Families &c.; those in roman type to the chief reference to each species included in the work; those in italics to species incidentally mentioned, synonyms, &c.; the numbers placed after the letter "s" refer to the pages in the Supplementary Volume.]

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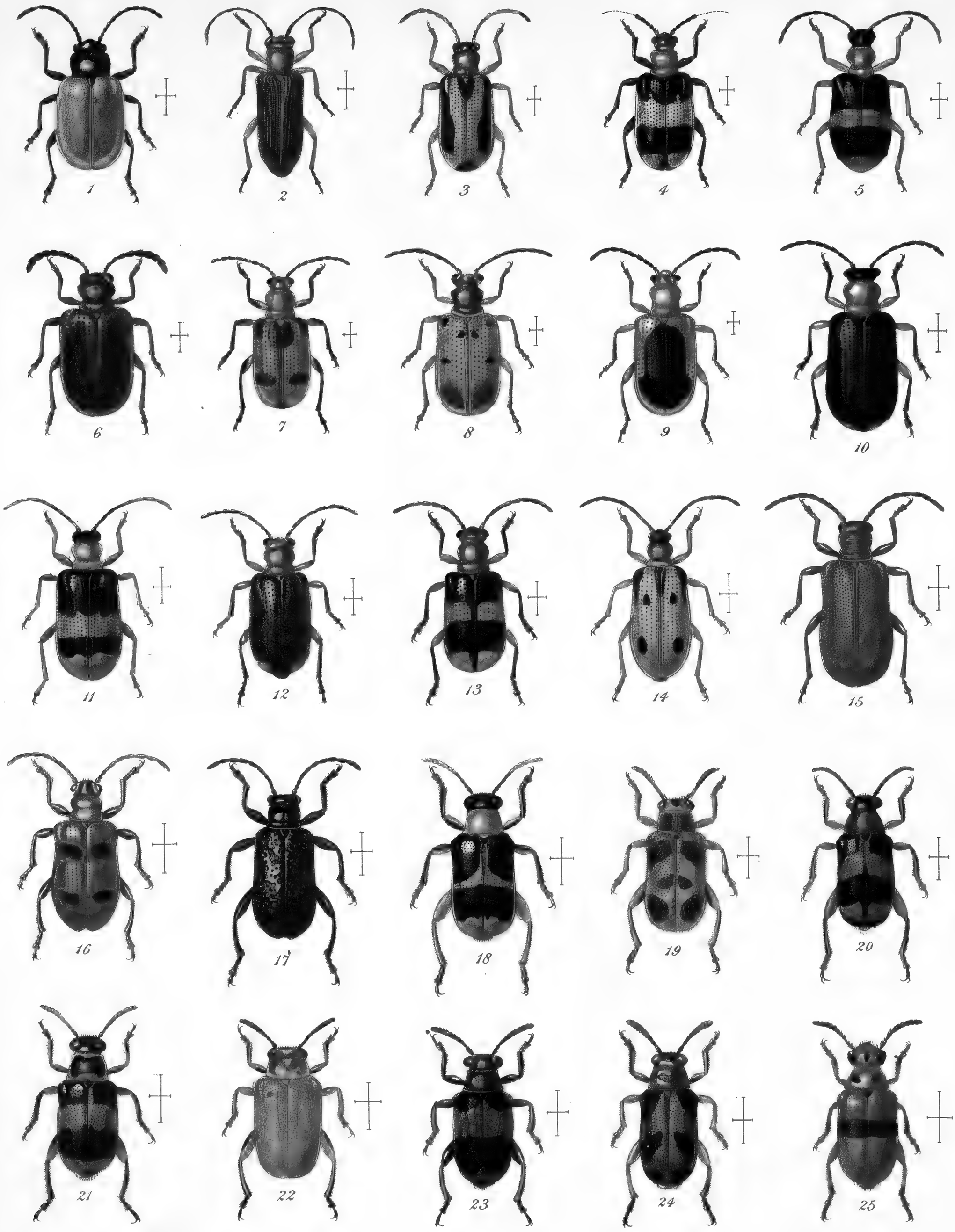

1 AULACOSCELIS MELANOCEPHALA.
2 MEGASCELIS PURPUREICOLLIS.
3 LEMA ORNATA.
4 „ ELEGANTULA.
5 „ CHAMPIONI.
6 „ ANTENNALIS.
7 „ NIGROMACULATA.
8 „ SEXNOTATA.
9 „ DORSALIS.
10 LEMA BOUCHARDI, *var.* PROBLEMATICA.
11 LEMA TRANSVERSO-FASCIATA.
12 „ SUBAPICALIS.
13 „ NICARAGUENSIS.
14 „ SUFFRIANI.
15 CRIOCERIS SALLÆI.
16 „ INTERMEDIA.
17 CRIOCERIS SCABROSA.
18 MASTOSTETHUS SALVINI.
19 „ NOVEM-MACULATUS.
20 „ RUBRICOLLIS.
21 „ CHONTALENSIS.
22 „ PLACIDUS.
23 „ ROGERSI.
24 „ SEXPLAGIATUS.
25 „ NIGROFASCIATUS.

W. Purkiss lith. Hanhart imp

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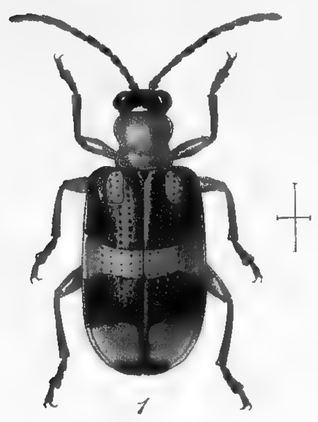
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19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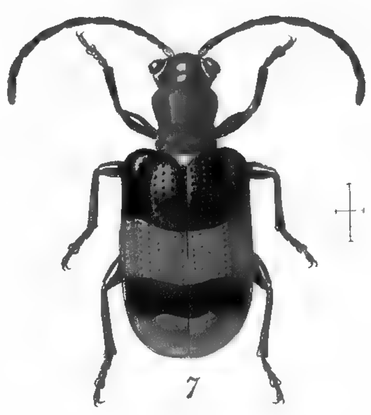
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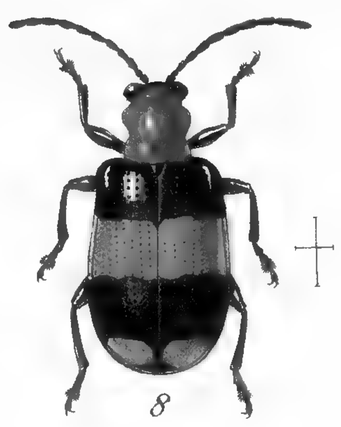
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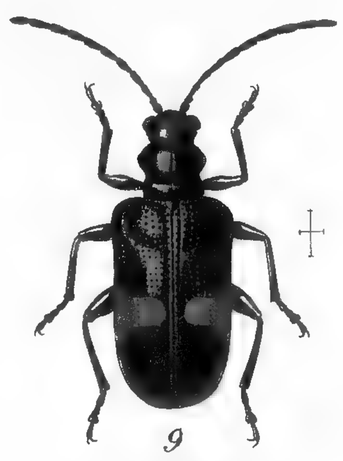
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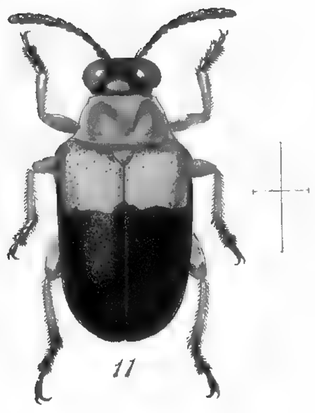
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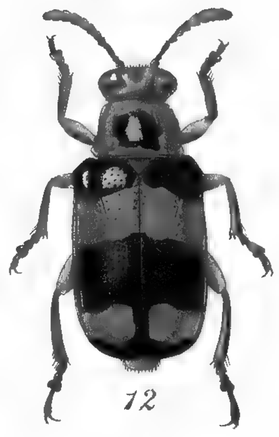
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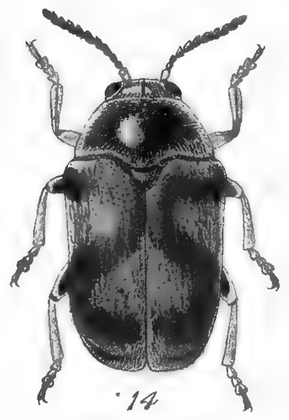
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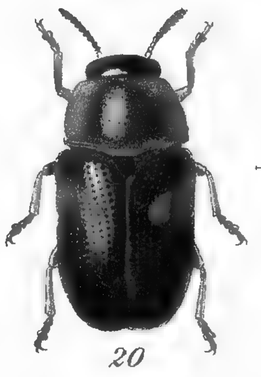
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25

1 LEMA BIORNATA.
2 „ QUINQUENOTATA.
3 „ MINUTA.
4 „ GODMANI.
5 „ HOEGEI.
6 „ SCUTARIA.
7 „ MEXICANA.
8 „ EQUESTRIS.
9 LEMA PUSTULIGER.
10 „ BIPUSTULATA.
11 MASTOTETHUS FRATERNUS.
12 „ CHAMPIONI.
13 MEGALOSTOMIS FLAVIPENNIS.
14 „ DIMIDIATA, *var.*
15 „ SPLENDIDA.
16♂,17♀ ANOMOEA SANGUINIPENNIS.
18 GYNANDROPHTHALMA AVICULUS.
19 DACHRYS BIPARTITA.
20 EURYSCOPA PILATEI.
21 SAXINIS GUATEMALENSIS.
22 GYNANDROPHTHALMA AGILIS.
23 CHLAMYS PAVONINA.
24 „ SEXTUBERCULATA.
25 „ STIGMULA.

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Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

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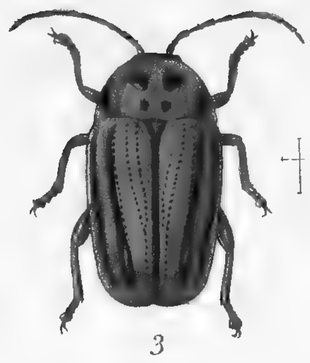
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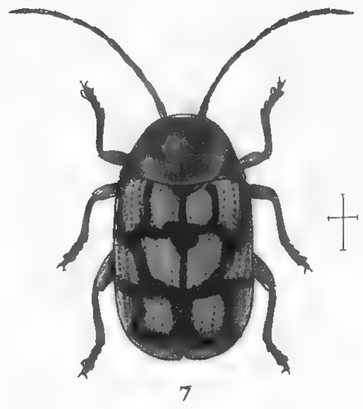
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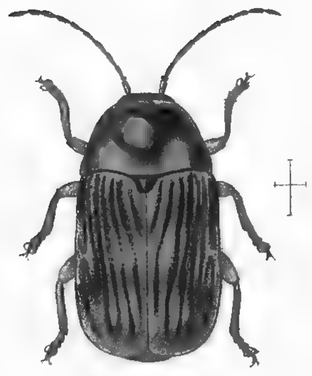
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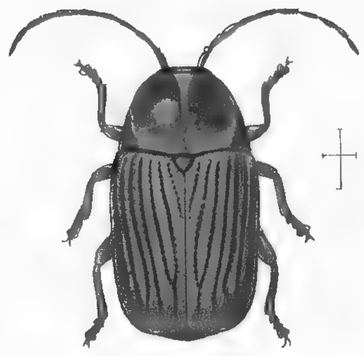
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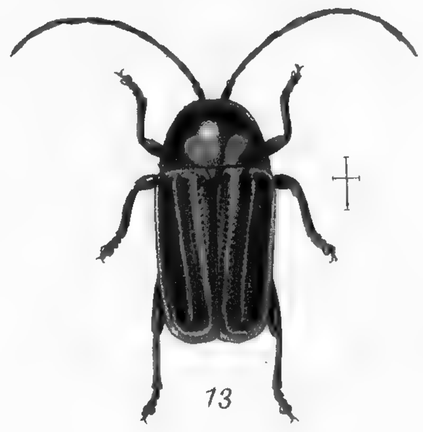
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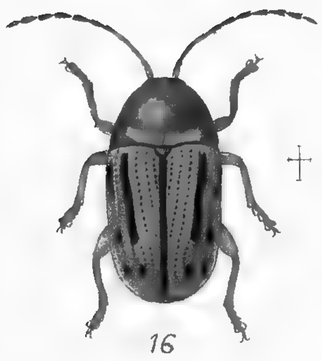
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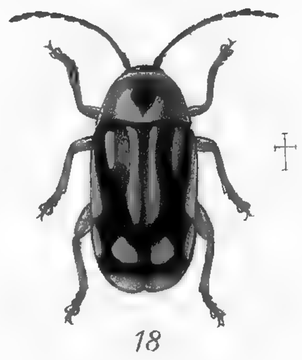
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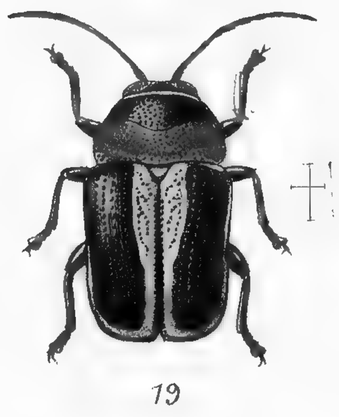
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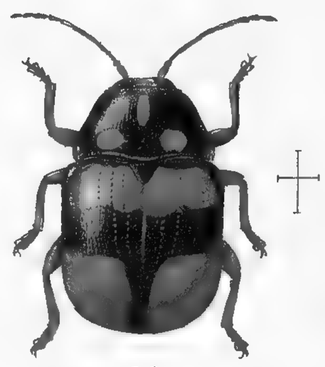
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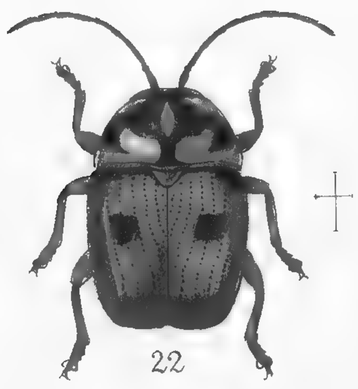
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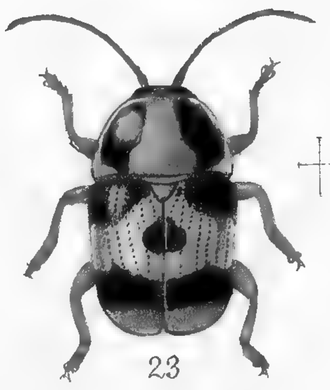
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1	MONACHUS GUATEMALENSIS.	9	CRYPTOCEPHALUS	IRRORATUS.	18. CRYPTOCEPHALUS LÆVIPENNIS.
2	" BIMACULATUS.	10	"	GUATEMALENSIS.	19. SCOLOCHRUS MONTEZUMA.
3	CRYPTOCEPHALUS SEMIMARGINATUS	11	"	OBSCURIPENNIS.	20 " PERSONATUS.
4	" POROSUS.	12	"	INCONSPICUUS.	21 " PURPURASCENS.
5	" MILITARIS.	13	"	CHAMPIONI.	22 " PERSONATUS *var.*
6	" 18-PUNCTATUS.	14	"	STIGMATIPENNIS.	23 " DECORATUS.
7	" TESSERATUS.	15	"	QUATERNARIUS.	24 " CACICUS.
8	" TRIZONATUS.	16	"	NIGROVITTATUS.	25 " ERRANS.
		17	"	PATHETICUS.	

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Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters Inches

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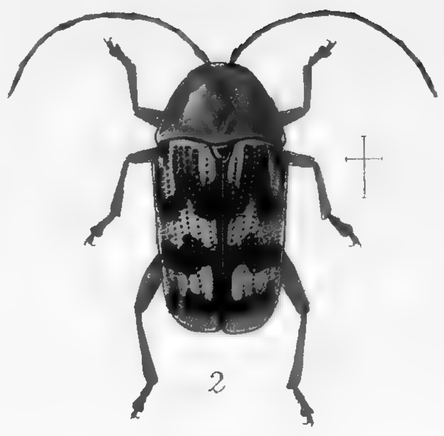

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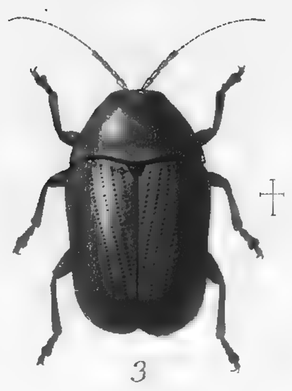

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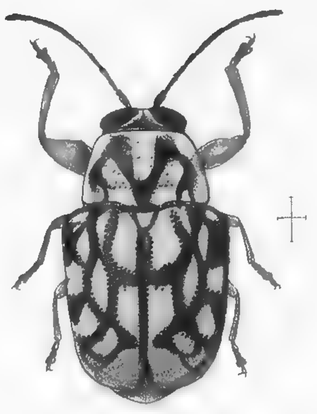

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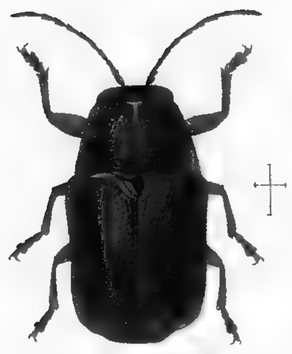

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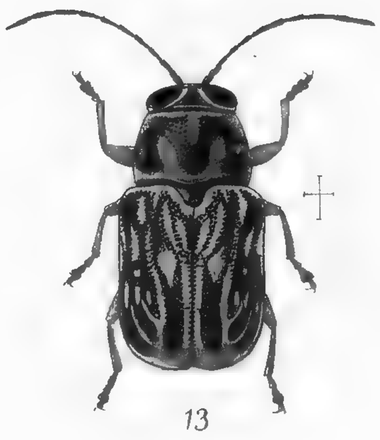

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1 CRYPTOCEPHALUS QUADRIVITTATUS
2 " ATROFASCIATUS
3 " SALVINI.
4 " BASALIS
5 " ZAPOTENSIS.
6 " BASALIS, *var.*
7 SCOLOCHRUS SUFFRIANI.
8 " BOUCARDI.
9 SCOLOCHRUS SULCIPENNIS.
10 PACHYBRACHYS RETICULATUS.
11 " HÆMATODES.
12 " IRREGULARIS.
13 " GREGARIUS.
14 " UMBRACULATUS.
15 " REGULARIS.
16 " LATICOLLIS.
17 " BIFASCIATUS.
18 PACHYBRACHYS RUBRONOTATUS.
19 " RUBROORNATUS
20 " PUNCTATISSIMUS
21 CHLAMYS HYPOCRITA.
22 " TRAGULUS.
23 " SALLÆI.
24 " BIPUNCTATUS.
25 " PARDALIS.

W. Purkiss. lith.

Hanhart imp

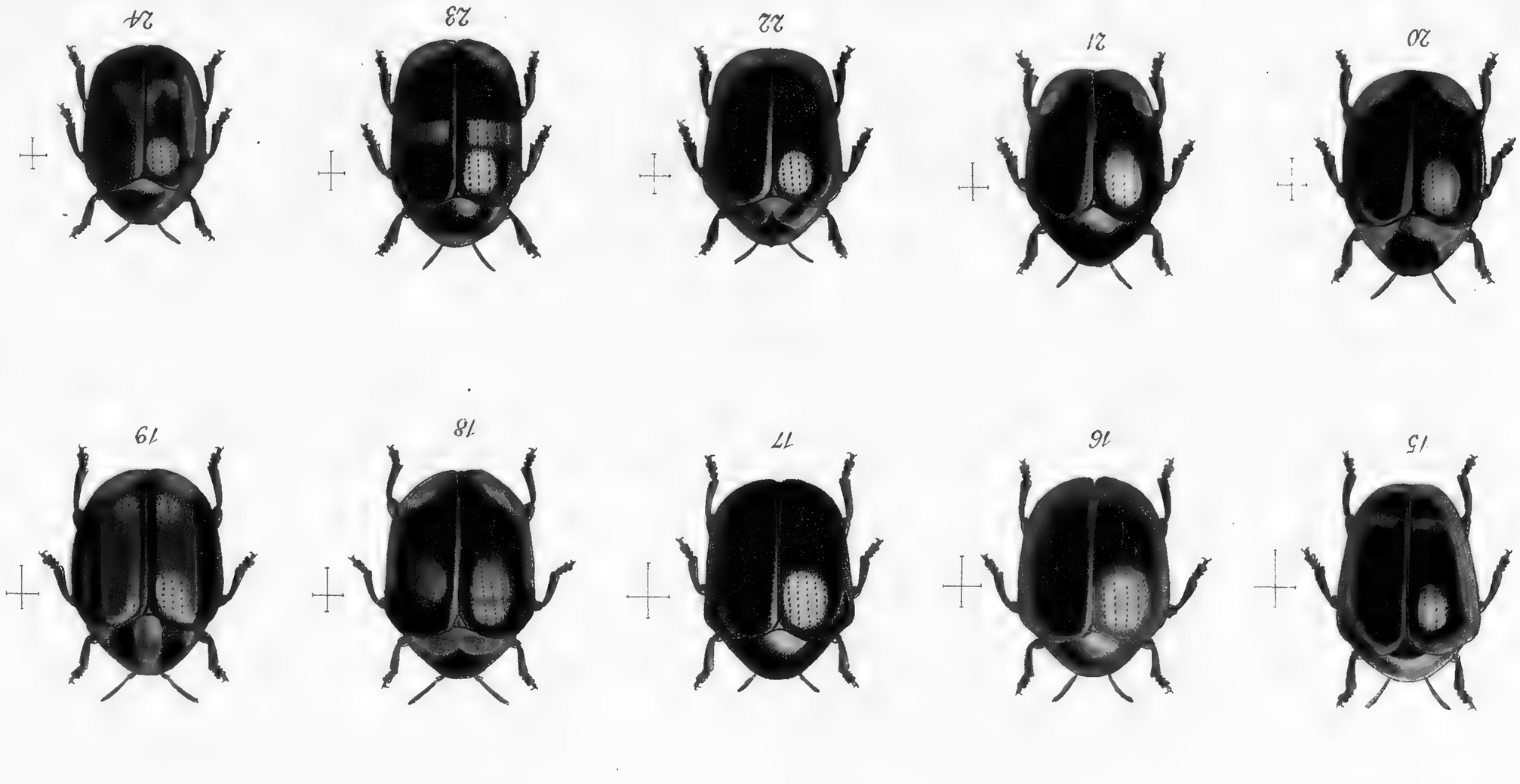
245

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak
LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1. CHLAMYS STICTICA.
2. DIASPIS PARADOXA.
3. CHLAMYS EPISCOPALIS.
4. " AMŒNA.
5. " FERRUGATA.
6. " FULVICOLLIS.
7. " FASCIATICOLLIS.
8. " PILATEI.
9. CHLAMYS MACULICOLLIS.
10. " MACULIPES.
11. " KRAATZI.
12. " INSULARIS.
12a. " FRONTALIS.
13. " LUTEOLA *var.*
14. LAMPROSOMA SALLÆI.
15. " BALYI.
16. " SPLENDIDUM.
17. LAMPROSOMA HYPOCHRYSEUM.
18. " INSIGNE.
19. " BIFASCIATUM.
20. " CHLORIZANS.
21. " CHAPUISI.
22. " REFULGENS.
23. " OPULENTUM.
24. " PEDICULUS.

W.Purkiss lith. Hanhart imp 267



Biol. Centr.-Am. Coleoptera Vol. VI. Pt. 1. Pl. 5.

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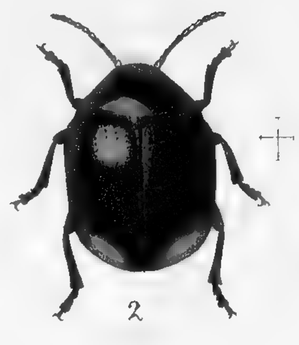
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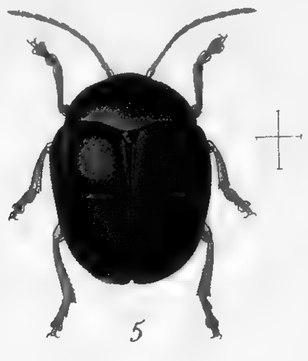
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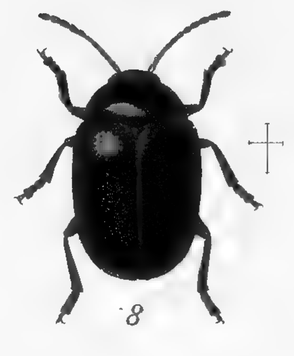
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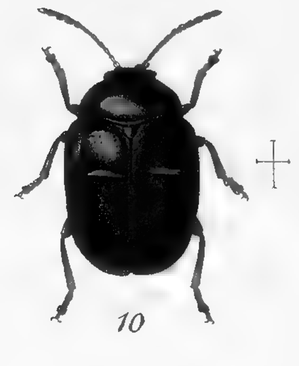
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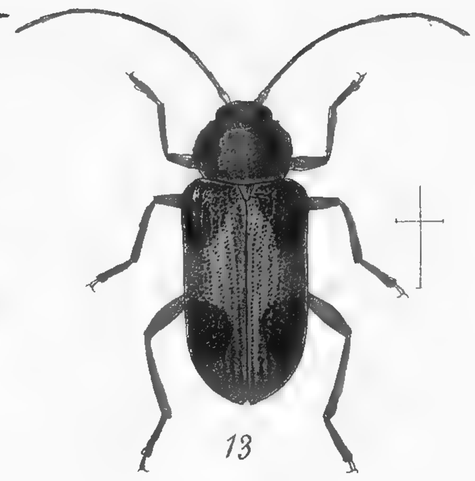
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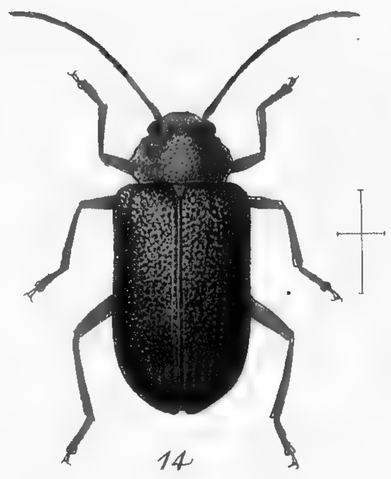
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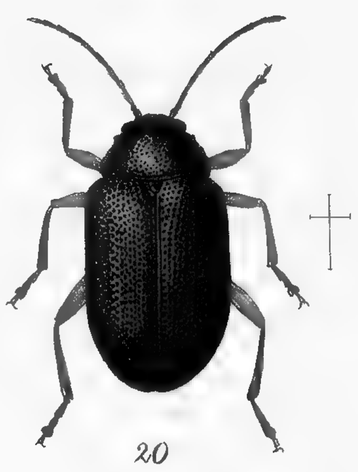
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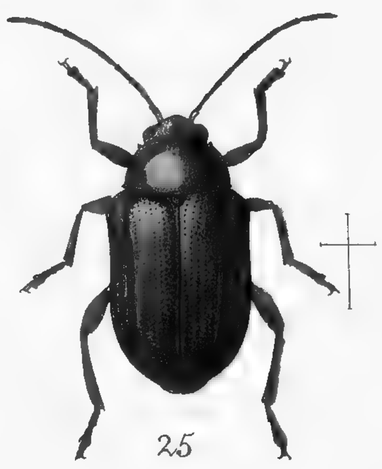
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1. CHRYSODINA IGNITA.
2. „ CORRUSCA.
3. 4. „ CUPRICEPS.
5. PHÆDRA MAXIMA.
6. „ DIVES.
7. CHRYSODINA PUBESCENS.
8. NODA OPACA.
9. NODA CURTULA.
10. „ CRETIFERA.
11. „ ATRA.
12. METAXYONYCHA TRIDENTATA.
13. „ GODMANI.
14. „ AMASIA.
15. COLASPIS GEMMINGERI.
16. „ PRASINA.
17. COLASPIS SPLENDIDA.
18. „ HYPOCHLORA.
19. „ SUTURALIS.
20. „ PRASINA *var.*
21. „ BELTI.
22. 23. 24. CHALCOPHANA MUTABILIS.
25. „ DISCOLOR.

Purkiss lith. Hanhart imp 272

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

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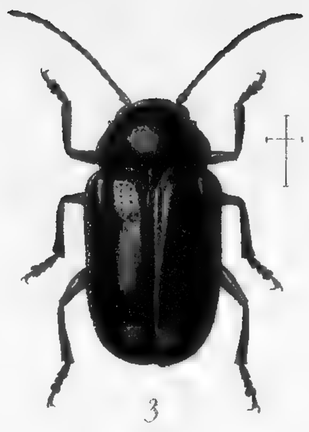
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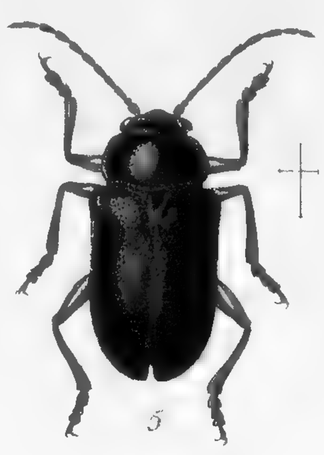
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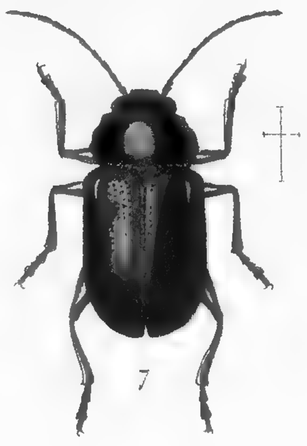
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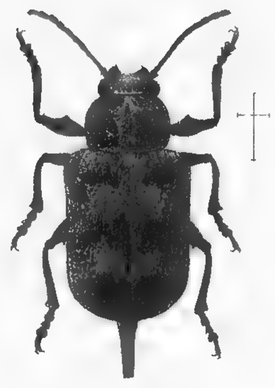
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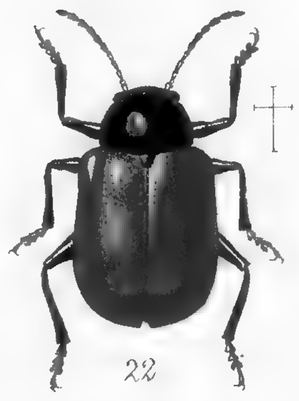
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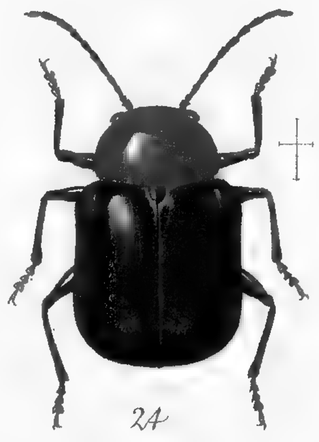
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1 2 ♀ SPINTHEROPHYTA CEPHALOTES.
3. CORYSTHEA HÖGEI.
4. GLYPTOSCELIS ALBICANS.
5. ALETES MEXICANUS.
6. COLASPIS LATICOLLIS
7. „ SUBMETALLICA.
8. RHABDOPHORA RUGOSA.
9. CHALCOPHANA CINCTA.
10. „ GODMANI
11. FIDIA SPURIA.
12 „ PEDESTRIS.
13. „ HUMERALIS.
14 15. „ PLAGIATA.
16. „ ALBOVITTATA.
17. „ SALLÆI.
18. MYOCHROUS MELANCHOLICUS.
19. „ SALLÆI.
20 XANTHONIA GUATEMALENSIS.
21 TYPOPHORUS STURMI.
22.23. „ HUMERALIS
24. „ MEXICANUS.
25. EUPHRYTUS ÆNEUS.

W. Purkiss lith. Hanhart imp 286

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

1. 2 PROMECOSOMA ABDOMINALE.
3 " DISPAR.
4 " SCUTELLARE.
5 " NOBILITATUM.
6 " CINCTIPENNE.
7 " SALLÆI.
8 " DUGESI.
9 " INFLATUM.
10. PROMECOSOMA DILATATUM.
11. " FERVIDUM.
12. " LUGENS.
13. " LEPIDUM.
14. " VIRIDE
15. COYTIERA FULVIPES.
16. " RUGIPENNIS.
17. CHALCOPHANA RUFIPENNIS.
18. EUPHRYTUS OPACICOLLIS.
19. " FULVICOLLIS.
20. PRIONODERA SALVINI.
21. " HIRTIPENNIS.
22. RHABDOPHORUS GUATEMALENSIS.
23. COLASPIS IMPRESSA.
24. RHABDOPHORUS MEXICANUS.
25. BELTIA NICARAGUENSIS

W. Purkiss lith. Hanhart imp 288

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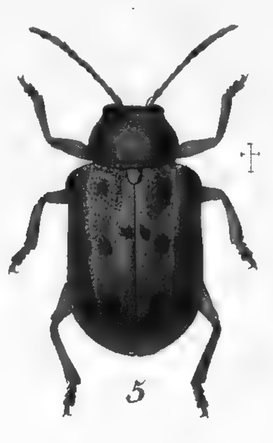
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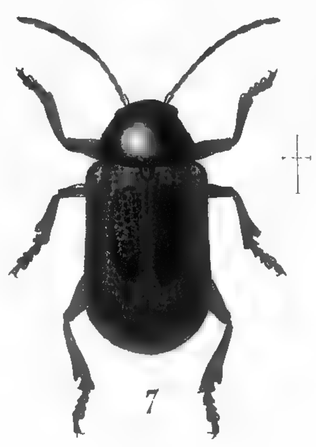
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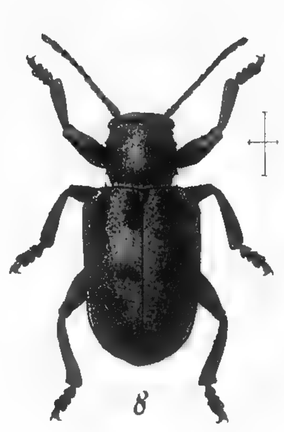
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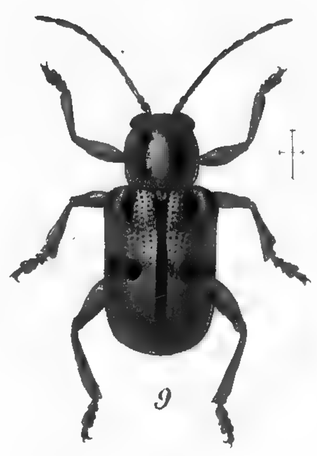
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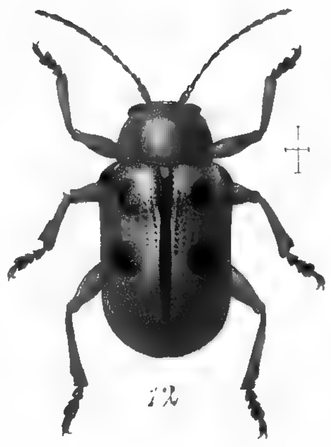
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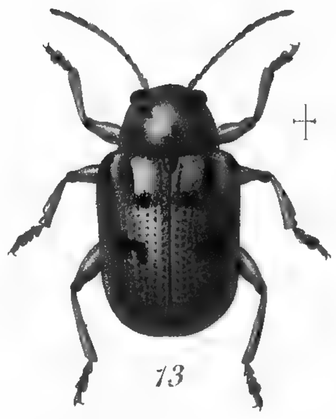
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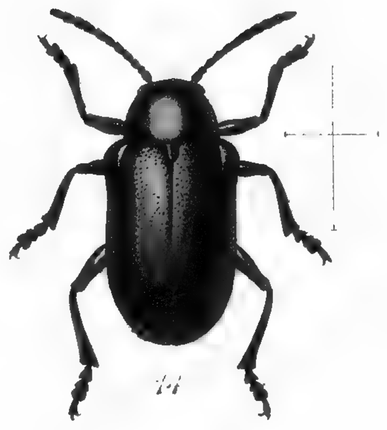
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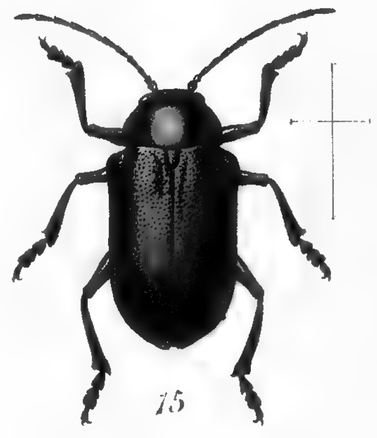
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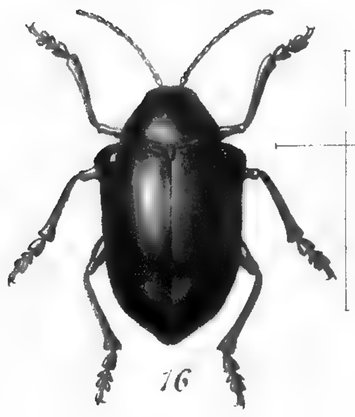
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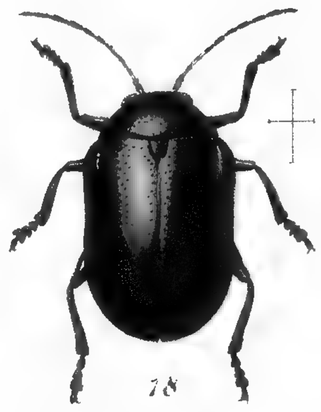
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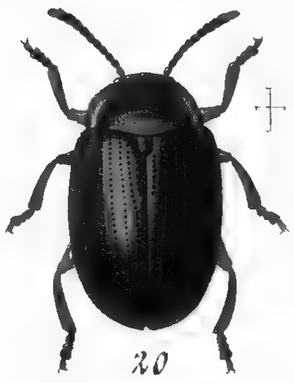
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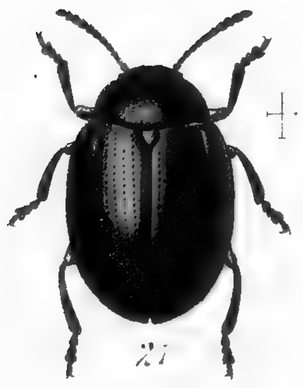
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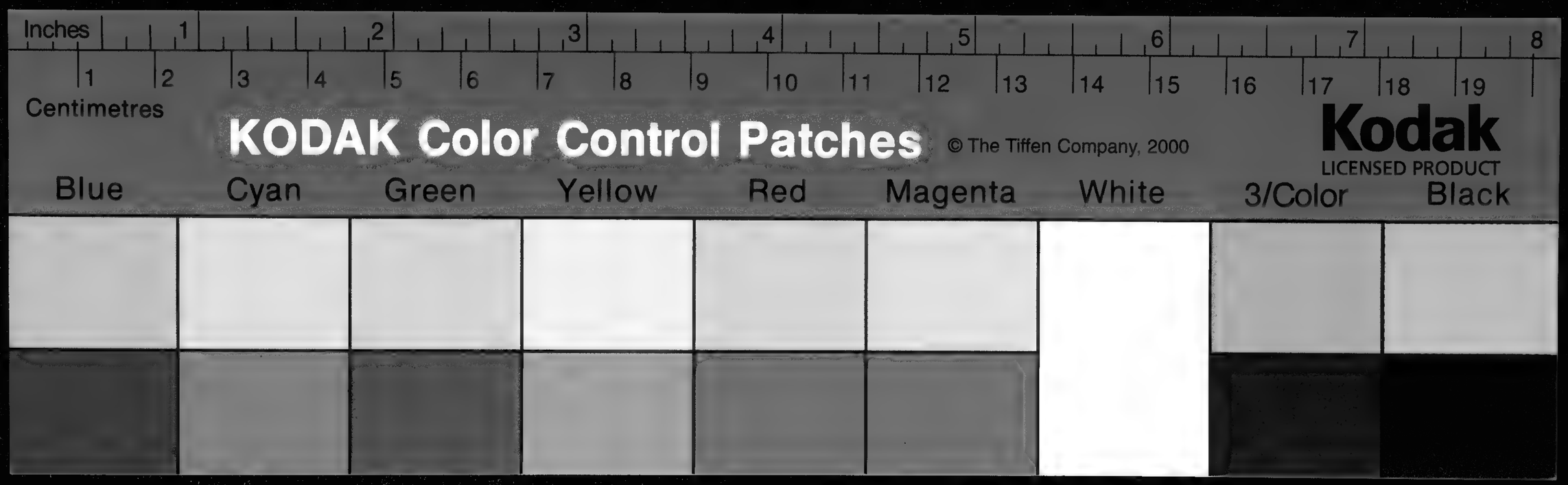
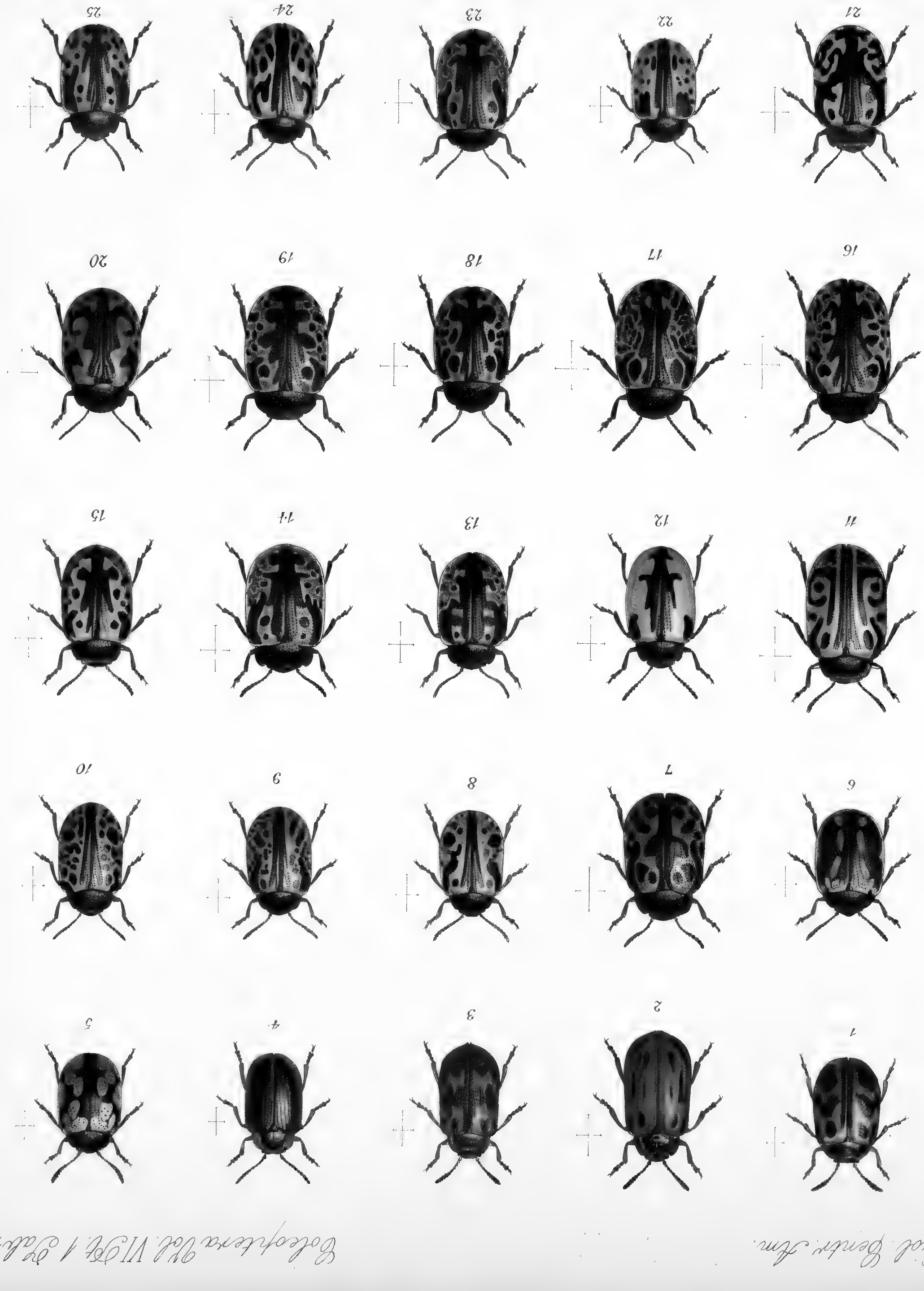
1 ALETES VARIABILIS.
2 RHABDOPHORUS SALVINI.
3 CORYSTHEA VIOLACEA.
4 XANTHONIA TUBEROSA.
5 „ MARMORATA.
6 FIDIA GUATEMALENSIS.
7 METACHROMA VARIABILIS.
8 MYOCHROUS TIBIALIS.
9,10 PARIA VITTICOLLIS.
11 METACHROMA MEXICANA.
12 PARIA NIGRITARSUS.
13 „ LÆVIPENNIS.
14 EUMOLPUS SURINAMENSIS.
15 „ SPECIOSUS.
16 „ SURINAMENSIS.
17 COLASPOIDES BATESI.
18 COLASPOIDES UNICOLOR.
19 TYMNES VERTICALIS.
20 PHÆDON MEXICANUM.
21 „ CYANESCENS.
22 PLAGIODERA PUNCTIGERA.
23 „ SEMIVITTATA.
24 „ CONGESTA.
25 „ MACULATELLA.

W.Purkiss lith

Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8





1. FLAGIODERA ÆNEIVENTRIS.
2. LINA SCRIPTA.
3. " DEPRESSA.
4. PHÆDON CYANOPTERUM.
5. 6. CALLIGRAPHA MULTIGUTTATA.
7. " BILLBERGI.
8. " FULVIPES.
9. " PANTHERINA.
10. CALLIGRAPHA FELINA.
11. " SERPENTINA.
12. " ÆNEOPICTA.
13. 14. " SUBOCULATA.
15. " DIVERSA.
16. " MULTIPUSTULATA.
17. " CONSPUTA.
18. CALLIGRAPHA GEOGRAPHICA.
19. " FAMULARIS.
20. " ANCORALIS.
21. " TORTILIS.
22. " EUPATRIS.
23. " SUBOCULATA *var.*
24. " QUENSELI.
25. " NOTATIPENNIS.

W. Funkiss lith.

Hanhart imp
297

Bibl. Centr. Agric.

Coleoptera Tab. VIIIe. 1 Atlas.

1 2 3 CALLIGRAPHA LABYRINTHICA.
4 „ RAMULIFERA.
5 „ EUPLECTA.
6 „ SCALARIS.
7 „ SYLVIA.
8 9 „ LIMBATICOLLIS.
10 CALLIGRAPHA GYLLENHALI.
11 „ 20 MACULATA.
12 13 „ BARDA.
14 15 „ STILLATIPENNIS.
16 „ SUFFRIANI.
17 „ MATRONALIS.
18 CALLIGRAPHA PNIRSA.
19 „ INTERMEDIA.
20 „ 9 MACULATA.
21 ZYGOGRAMMA NICARAGUENSIS.
22 „ BIGENERA.
23 24 25 „ PICEICOLLIS.

W. Purkiss. lith. Hanhart imp

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

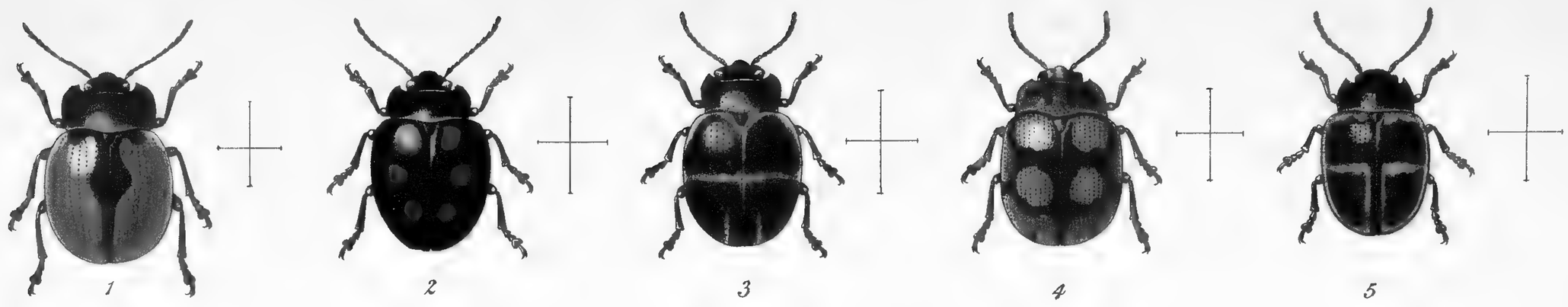
1 ZYGOGRAMMA DULCIS.
2 „ MALVÆ.
3 „ ÆNEOVITTATA.
4 „ STÅLI.
5 „ NOVEMVIRGATA.
6 „ CHAMPIONI.
7 „ MEXICANA.
8.9. ZYGOGRAMMA LEMUR.
10.11 „ OPIFERA.
12 „ GUTTULOSA.
13 „ POPA.
14.15. „ LENTIGINOSA.
16 „ LEPIDULA.
17. ZYGOGRAMMA MORBILLOSA.
18.19. „ CLATHRATA.
20 „ HYPOCRITA.
21 „ QUINQUEVIRGATA.
22.23 „ ORNATA.
24 STILODES NEPTIS.
25 „ CÆLEBS.

W. Purkiss lith. Hanhart imp
308

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1. STILODES NIGROMARGINATA.
2. " NIGRICOLLIS.
3. " FUSCOLINEATA.
4. " MOTSCHULSKYI.
5. " STÅLI.
6. " LEOPARDA.
7. " PALLIDIPENNIS.
8. " ATROMACULATA.
9. LEPTINOTARSA CHALCOSPILA.
10. " LACERATA.
11. " HEYDENI.
12. " PUNCTICOLLIS.
13. " MODESTA.
14. " CALCEATA.
15. " OBLITERATA.
16. " DILECTA.
17. " FLAVOPUSTULATA.
18. LEPTINOTARSA BELTI.
19. " ZETTERSTEDTI.
20. " SIGNATICOLLIS.
21. " DEFECTA.
22. " MELANOTHORAX.
23. " DAHLBOMI.
24. " DECEMLINEATA.
25. " PUDICA.

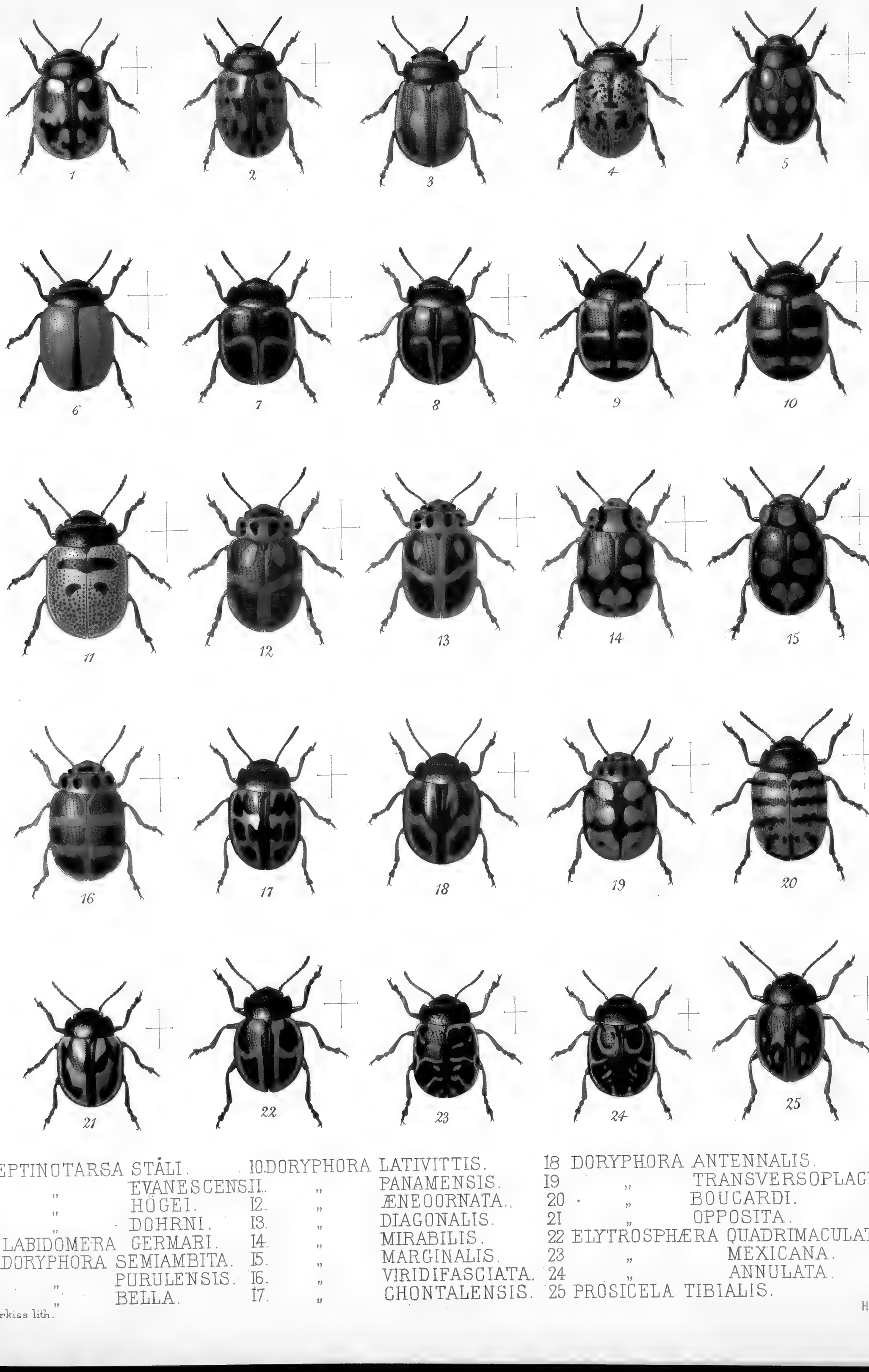
W Purkiss lith. Hanhart imp 318.



1 DORYPHORA DORSOMACULATA.
2 „ FLAVOGUTTATA.
3 „ PUNCTIPENNIS.
4 „ OCELLATA.
5 „ BICOLOR.
6 „ SALVINI.
7 „ SPECTANDA.
8 „ BISBIMACULATA.
9 DORYPHORA ORNATUS.
10 „ IMPAR.
11 „ DECORATA.
12 LEPTINOTARSA FLAVITARSIS.
13 DORYPHORA LIGATA.
14 „ SALLÆI.
15 „ PETULANS.
16 „ PAYKULLI.
17 „ INSIGNICORNIS.
18 CALLIGRAPHA ELEGANS.
19 DORYPHORA SPECTABILIS.
20 „ 12 GUTTATA.
21 „ 10 STILLATA.
22 CALLIGRAPHA VIOLACEOMACULATA.
23 LEPTINOTARSA CACICA.
24 CALLIGRAPHA SIGNATIPENNIS.
25 „ DISTINGUENDA.

W. Purkiss lith. Hanhart imp. 167

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

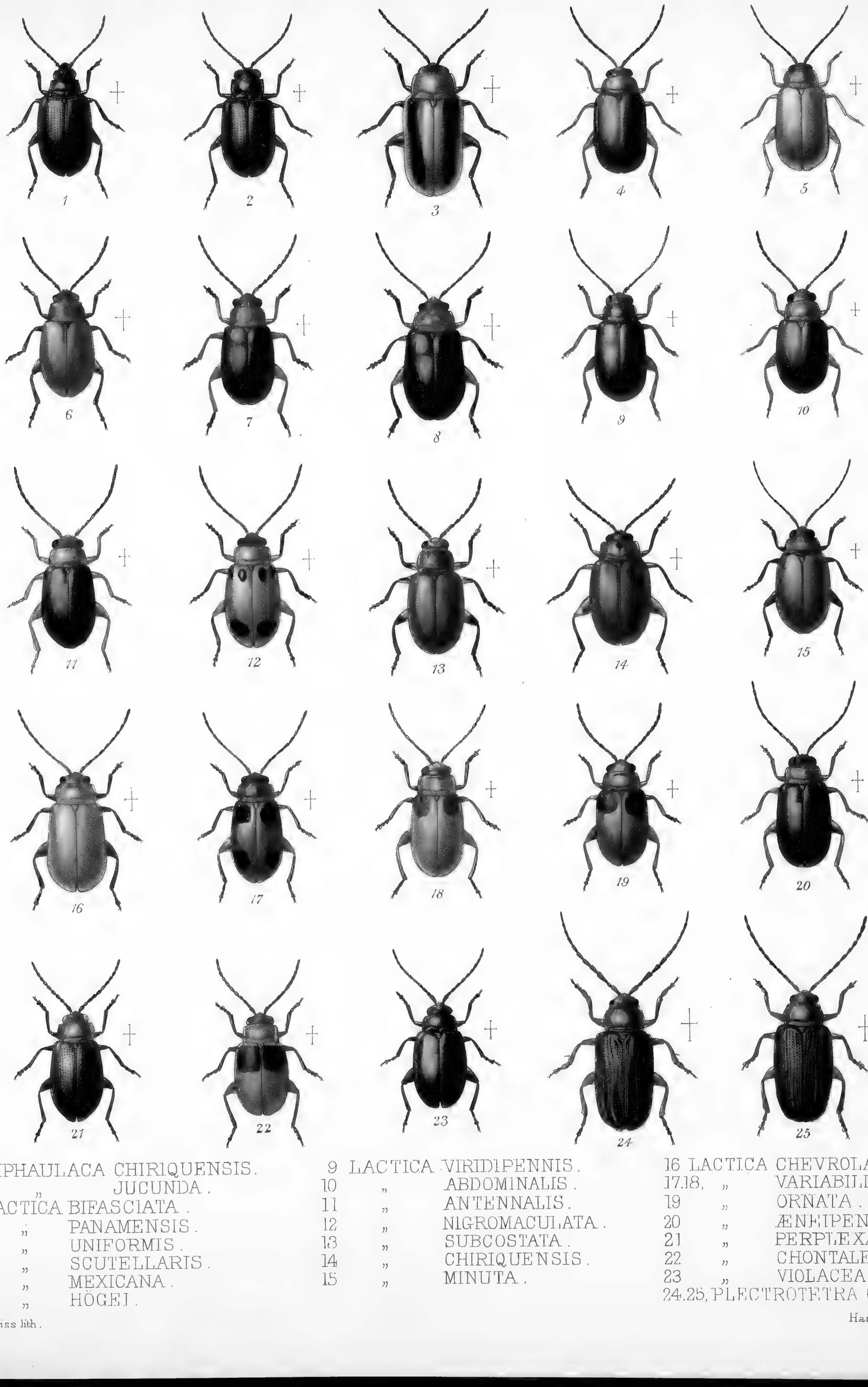


1 LEPTINOTARSA STÅLI.
2 „ EVANESCENS.
3 „ HÖGEI.
4 „ DOHRNI.
5.6 LABIDOMERA GERMARI.
7 DORYPHORA SEMIAMBITA.
8 „ PURULENSIS.
9 „ BELLA.
10 DORYPHORA LATIVITTIS.
11 „ PANAMENSIS.
12 „ ÆNEOORNATA.
13 „ DIAGONALIS.
14 „ MIRABILIS.
15 „ MARGINALIS.
16 „ VIRIDIFASCIATA.
17 „ CHONTALENSIS.
18 DORYPHORA ANTENNALIS.
19 „ TRANSVERSOPLAGIATUS.
20 „ BOUCARDI.
21 „ OPPOSITA.
22 ELYTROSPHÆRA QUADRIMACULATA.
23 „ MEXICANA.
24 „ ANNULATA.
25 PROSICELA TIBIALIS.

W Purkiss lith.

Hanhart imp
319.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

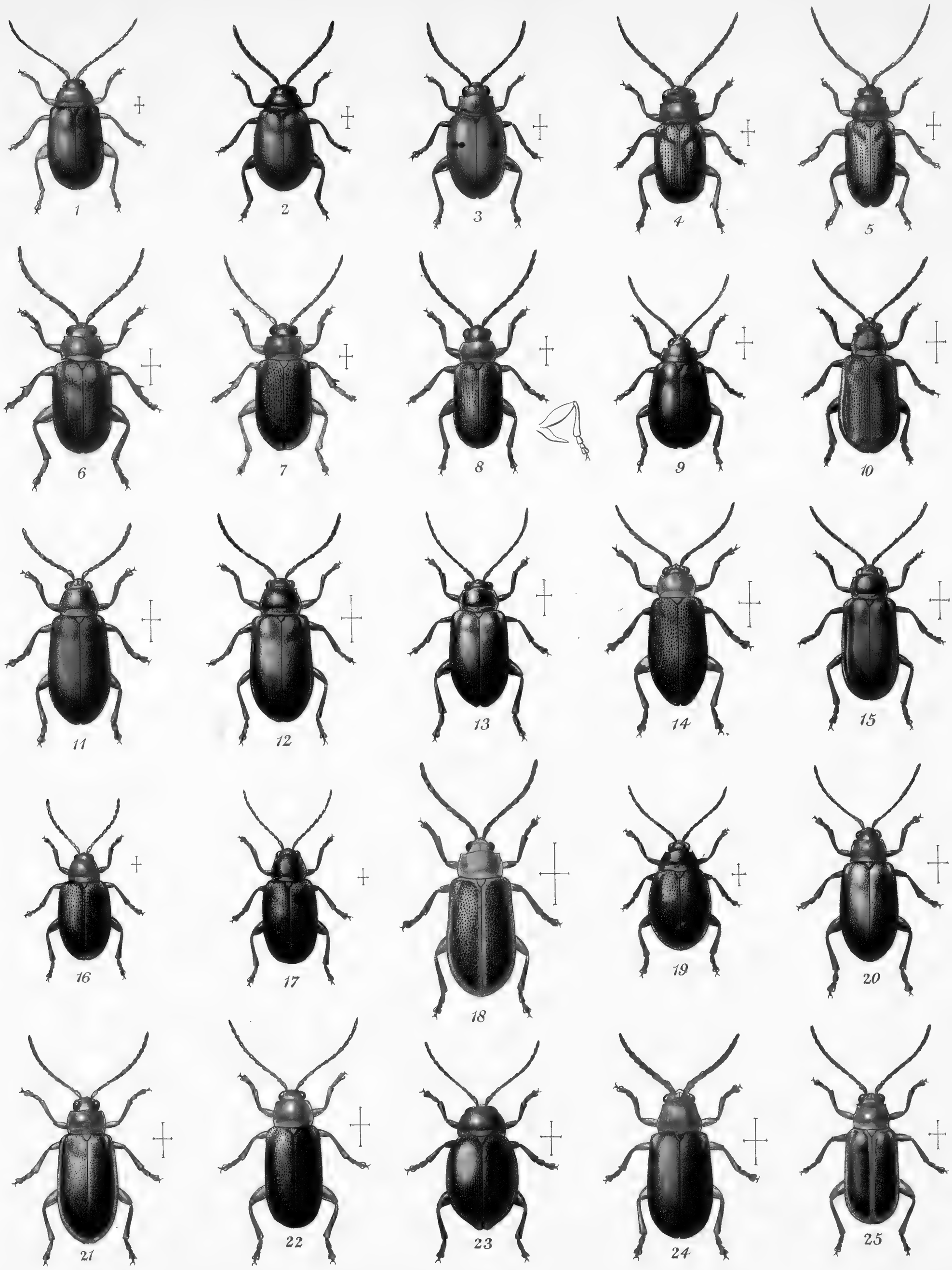


1 DIPHAULACA CHIRIQUENSIS.
2 „ JUCUNDA.
3 LACTICA BIFASCIATA.
4 „ PANAMENSIS.
5 „ UNIFORMIS.
6 „ SCUTELLARIS.
7 „ MEXICANA.
8 „ HÖGEI.
9 LACTICA VIRIDIPENNIS.
10 „ ABDOMINALIS.
11 „ ANTENNALIS.
12 „ NIGROMACULATA.
13 „ SUBCOSTATA.
14 „ CHIRIQUENSIS.
15 „ MINUTA.
16 LACTICA CHEVROLATI.
17.18, „ VARIABILIS.
19 „ ORNATA.
20 „ ÆNEIPENNIS.
21 „ PERPLEXA.
22 „ CHONTALENSIS.
23 „ VIOLACEA.
24.25, PLECTROTETRA CLARKI.

W.Purkiss lith.

Hanhart imp.
350.

Kodak LICENSED PRODUCT
KODAK Color Control Patches © The Tiffen Company, 2000
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches



1 LACTICA GODMANI.
2 „ CUPREATA.
3 „ BINOTATA.
4 PLECTROTETRA PROXIMA.
5 „ SUBMETALLICA.
6 „ REGULARIS.
7 „ CHIRIQUENSIS.
8 „ MONSTROSA.
9 LACTICA GERMARI.
10 HALTICA COMPLICATA.
11 „ PATRUELIS.
12 „ AMETHYSTINA.
13 „ MEXICANA.
14 CACOSCELIS SALLÆI.
15 HALTICA JAMAICENSIS.
16 „ PARVULA.
17 „ MINUTA.
18 CACOSCELIS COMPTA.
19 HALTICA BREVIS.
20 PRASONA MEXICANA.
21 „ MARGINATA.
22 „ NIGRIPENNIS.
23 SYPHREA PRETIOSA.
24 PHRYNOCEPHA PULCHELLA.
25 PELONIA ELEGANTULA.

W.Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak
LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

W. Purkiss lith. Hanhart imp. 363.

1,2 PHRYNOCEPHA ELONGATA . 10 DISONYCHA MELANOCEPHALA . 18 DISONYCHA AUSTRIACA .
3 " LEVICOLLIS . 11 " DORSATA . 19 " SEXMACULATA .
4 CACOSCELIS FLAVA . 12 " SALLEI . 20 " CORDOVANA .
5 " QUINQUELINEATA . 13 " SUBÆNEA . 21 " DIMIDIATA .
6 " SCRIPTIPENNIS . 14, 15 " TRIFASCIATA . 22 " CRENICOLLIS .
7 DISONYCHA NIGRIPES . 16 " APICALIS . 23 " BREVILINEATA .
8 " MEXICANA . 17 " PALLIDICORNIS . 24 " FIGURATA .
9 " NIGRIPENNIS . 25 " RECTICOLLIS .

W. Purkiss lith. Hanhart imp. 363.

Biol. Centr. Am. *Coleoptera. Pl. VI. Vol. I. Pt. 18.*

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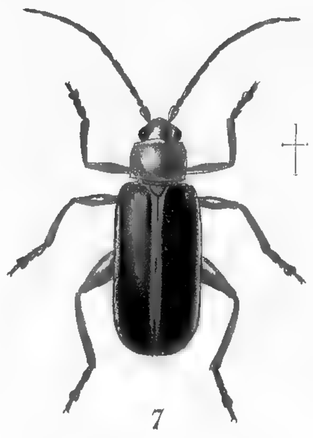
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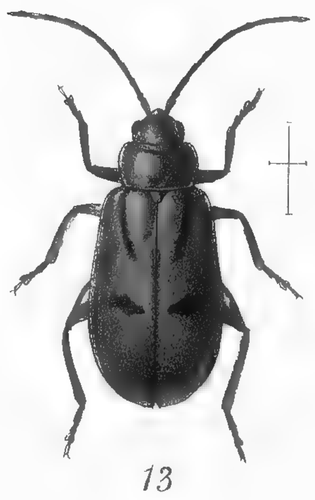
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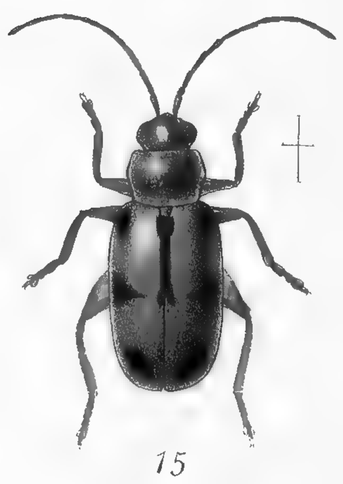
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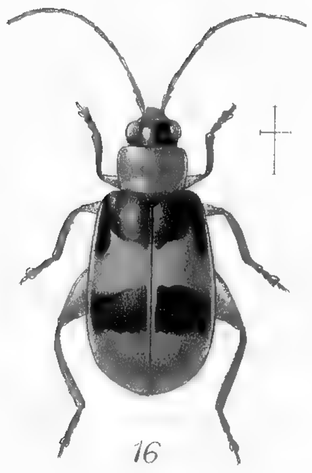
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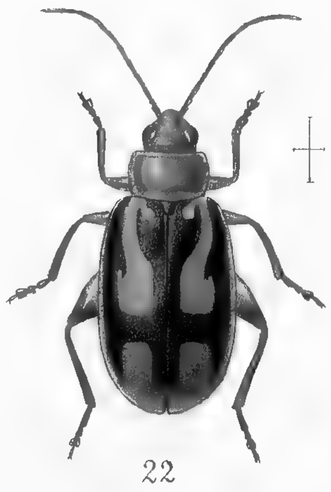
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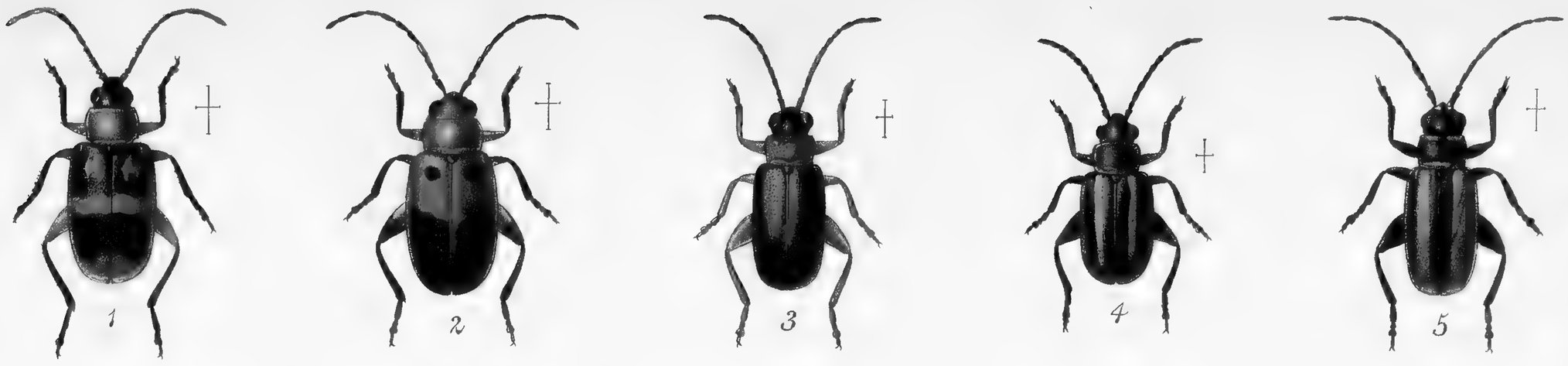
1 DISONYCHA PANAMENSIS.
2 „ HÖGEI.
3 „ ABBREVIATA.
4 „ ANTENNATA.
5 „ MILITARIS.
6 PELONIA SEMINIGRA.
7 PELONIA ELEGANTULA.
8 „ BALYI.
9 „ CLARKI.
10 CÆPORIS SUBCOSTATA.
11 APHANOCERA FULVEOLA.
12 MEGASUS BIMACULATUS.
13 PRASONA VIRIDIS.
14 SYSTENA CHLOROPUS.
15 „ OBERTHURI.
16-21 „ VARIABILIS
22 „ UNDULATA.
23,24 „ NIGROPLAGIATA.
25 „ CONTIGUA.

W. Purkiss lith Hanhart. imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 SYSTENA APICICORNIS.
2 „ POSTICATA.
3 „ VIRIDIPENNIS.
4 „ THORACICA.
5 „ DISCICOLLIS.
6 „ CAPITATA.
7 „ BOHEMANI.
8 „ SALVINI.
9 SYSTENA SEMIVITTATA.
10 „ LATICOLLIS.
11 „ CHAMPIONI.
12 „ DILATIPENNIS.
13 „ METALLICA.
14 „ REGULARIS.
15 „ BRUNNEOVITTATA.
16 „ LONGICORNIS.
17,18 SYSTENA USTULATA.
19 „ COXALIS.
20 SANGARIA HAAGI.
21 CLAMOPHORA NIGRITARSIS.
22 PSEUDOEPITRIX HIRTIPENNIS.
23 „ VITTATIPENNIS.
24 MESODERA FULVICOLLIS.
25 CREPIDODERA CHIRIQUENSIS.

W.Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

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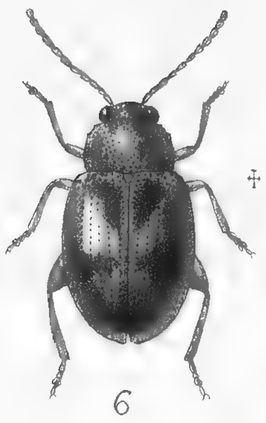
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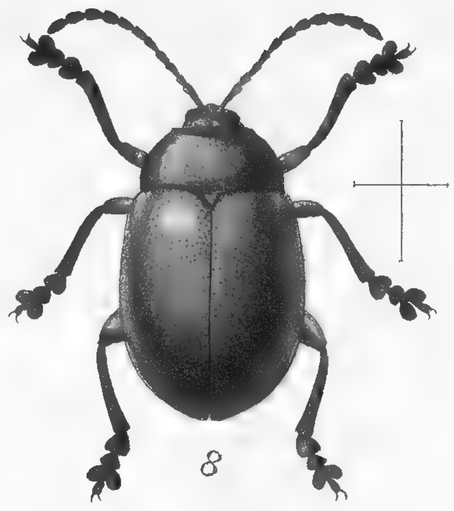
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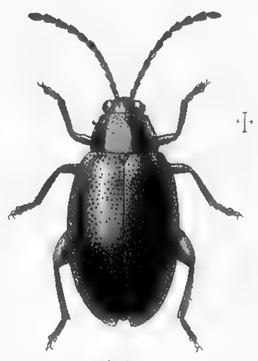
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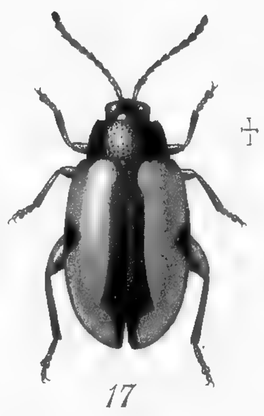
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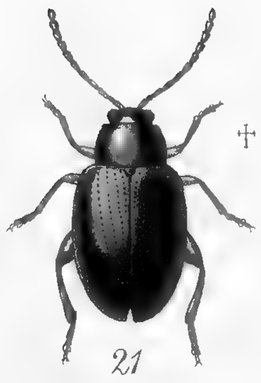
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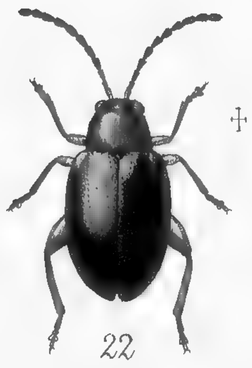
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1 EPITRIX VIOLACEA.
2 „ THORACICA.
3 „ INTERMEDIA.
4 „ DILATICORNIS.
5 „ SUBCOSTATA.
6 „ PARVULA.
7 TRICHALTICA BOGOTANA.
8 CRIMISSA CRURALIS.
9 TRICHALTICA VARIABILIS.
10 DIBOLIA BOREALIS.
11 LUPRÆA FULVICOLLIS.
12 PHYLLOTRETA ABDOMINALIS.
13 „ MEXICANA.
14 „ GUATEMALENSIS.
15 „ NIGRICOLLIS.
16 „ SUBMETALLICA.
17 „ CROTCHI.
18 APHTHONA PALLIPES.
19 „ OBSCURIPENNIS.
20 „ DIVERSA.
21 „ MEXICANA.
22 „ SEMIPUNCTATA.
23 „ ATERRIMA.
24 „ FULVIPENNIS.
25 „ CHIRIQUENSIS.

W. Purkiss lith. Hanhart imp.
393

Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches

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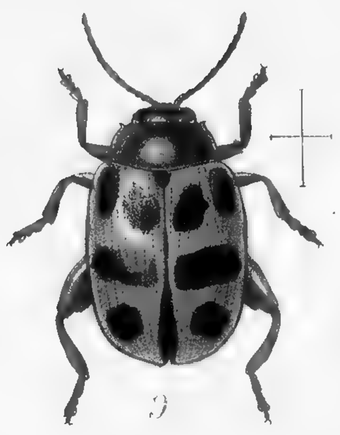
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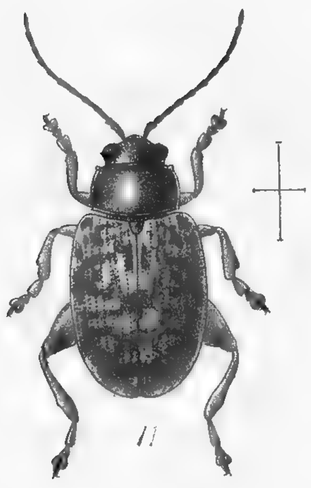
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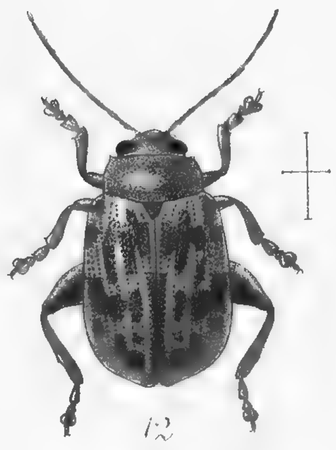
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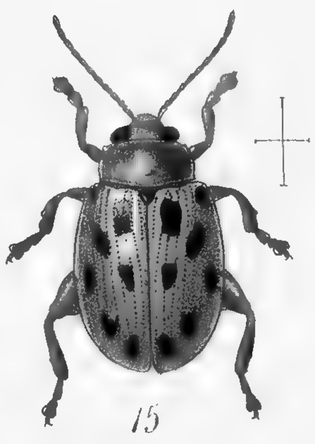
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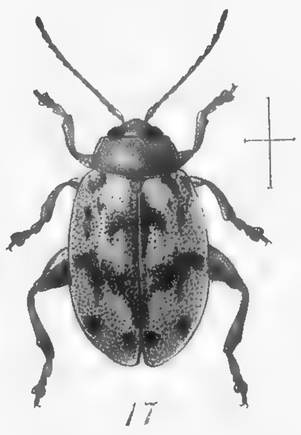
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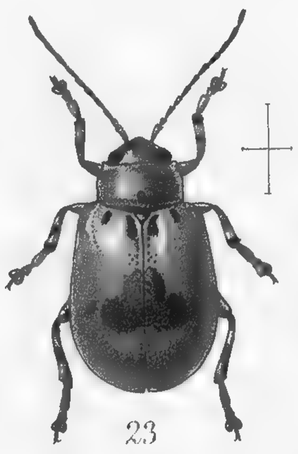
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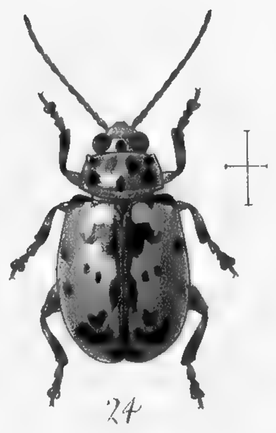
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1,2 EUPLECTROSCELIS VARIABILIS.
3 " BREVICORNIS.
4 CHÆTOCNEMA TRANSVERSICOLLIS.
5 " CAPITATA.
6 PALÆOTHONA RUGIFRONS.
7 " LONGICORNIS.
8 CHRYSOGRAMMA OCTOMACULATA.
9 NOTOZONA HISTRIONICA.

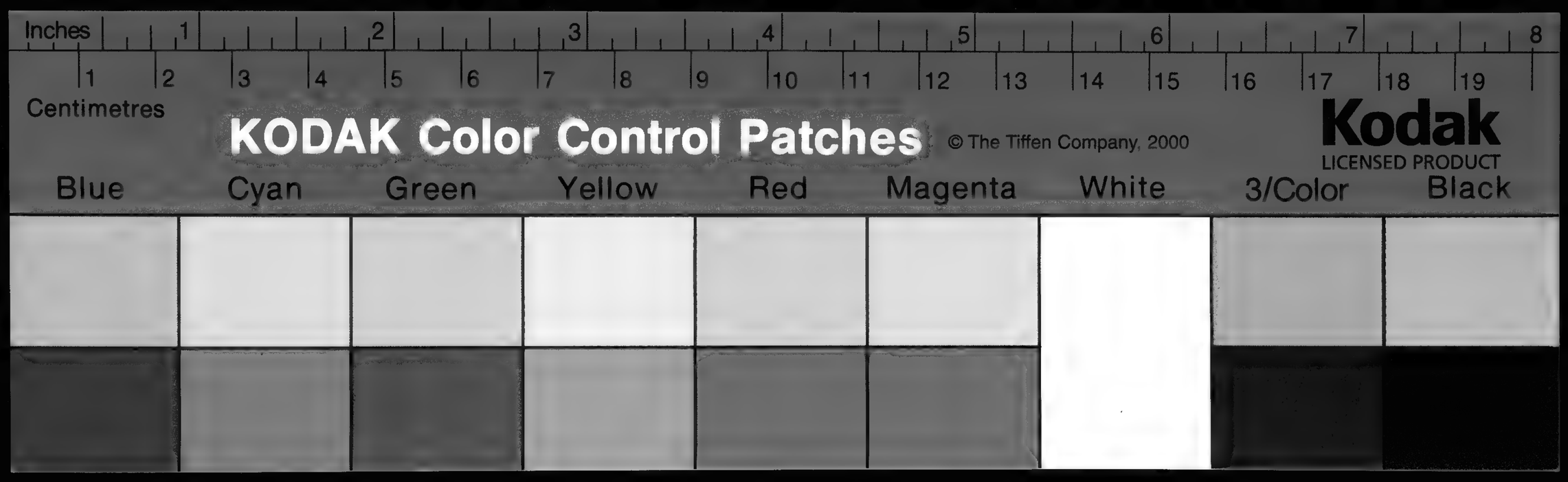
W Purkiss lith

10 NOTOZONA SEMIFASCIATA.
11 BLEPHARIDA RETICULATA.
12 " SUTURALIS.
13 " MARMORATA.
14 " TRIFASCIATA.
15 " 14-PUNCTATA.
16 " MEXICANA.
17 " PUNCTATISSIMA.

18 BLEPHARIDA GODMANI.
19 " MACULICOLLIS.
20 " FLOHRI.
21 " UNICOLOR.
22 PSEUDOGONA CHIRIQUENSIS
23 ACROCYUM DORSALIS.
24 " MACULICOLLIS.
25 " SALLÆI.

Hanhart imp
400

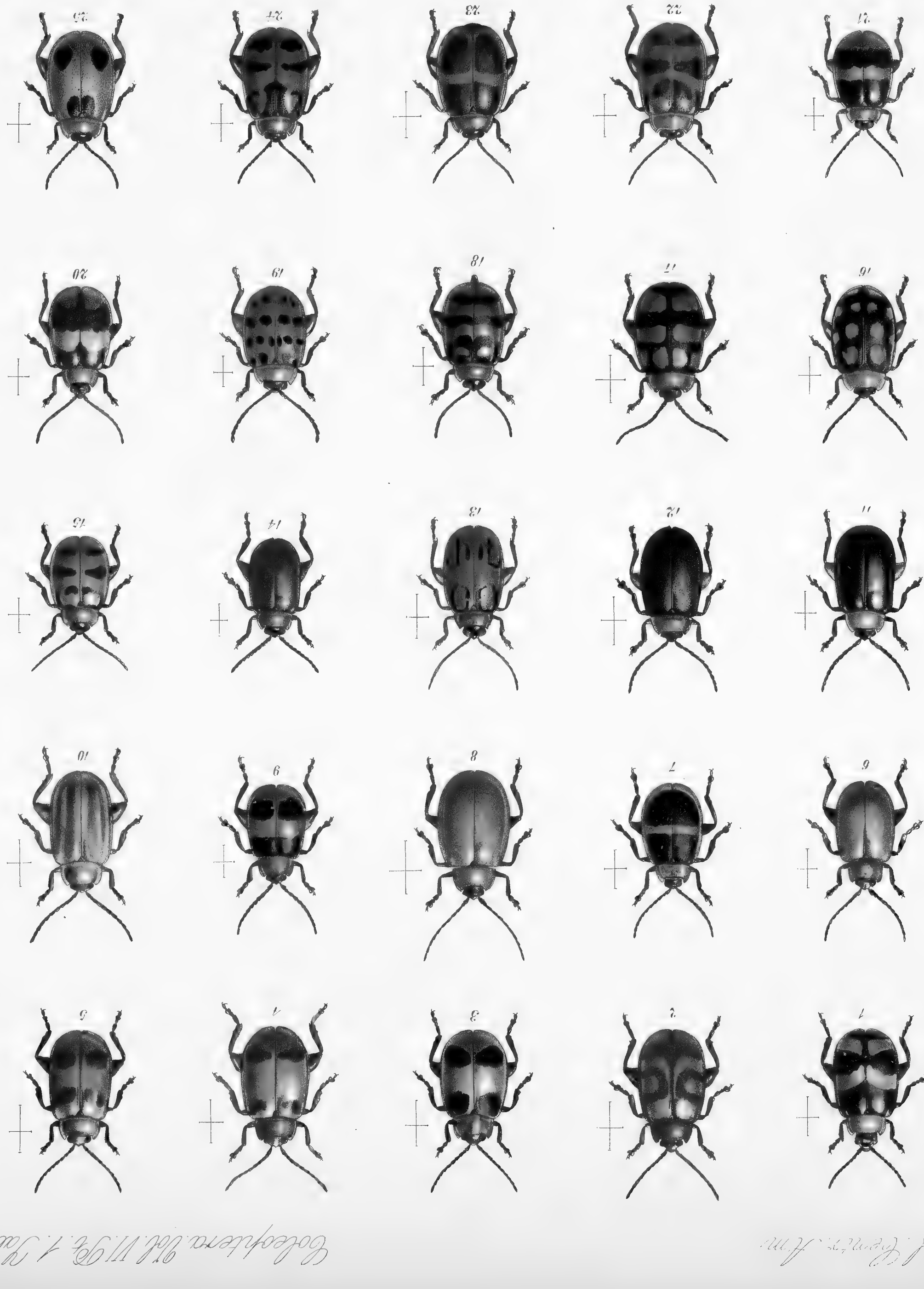
KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



1 HOMOPHŒTA ALBOFASCIATA. 9 ASPHÆRA CYANOPIS. 17 ŒDIONYCHIS PANAMENSIS
2 " VARIABILIS. 10 ŒDIONYCHIS INFIRMA. 18 " 10-GUTTATA, *var.*
3 " RECTICOLLIS. 11 " REICHEI. 19 " QUÆRUI.A.
4 " CHAMPIONI. 12 " ICTERIDERA. 20 ASPHÆRA SEMIFULVA.
5 " AFFINIS. 13 " BIARCUATA. 21 ŒDIONYCHIS ILLIGERI.
6 " CINCTIPENNIS. 14 " FRONTALIS. 22 " 10-GUTTATA, *var.*
7 ASPHÆRA TRANSVERSOFASCIATA. 15 " 10-GUTTATA, *var.* 23 " GODMANI.
8 " PALLIDA. 16 " 12-MACULATA. 24, 25 " SALVINI.

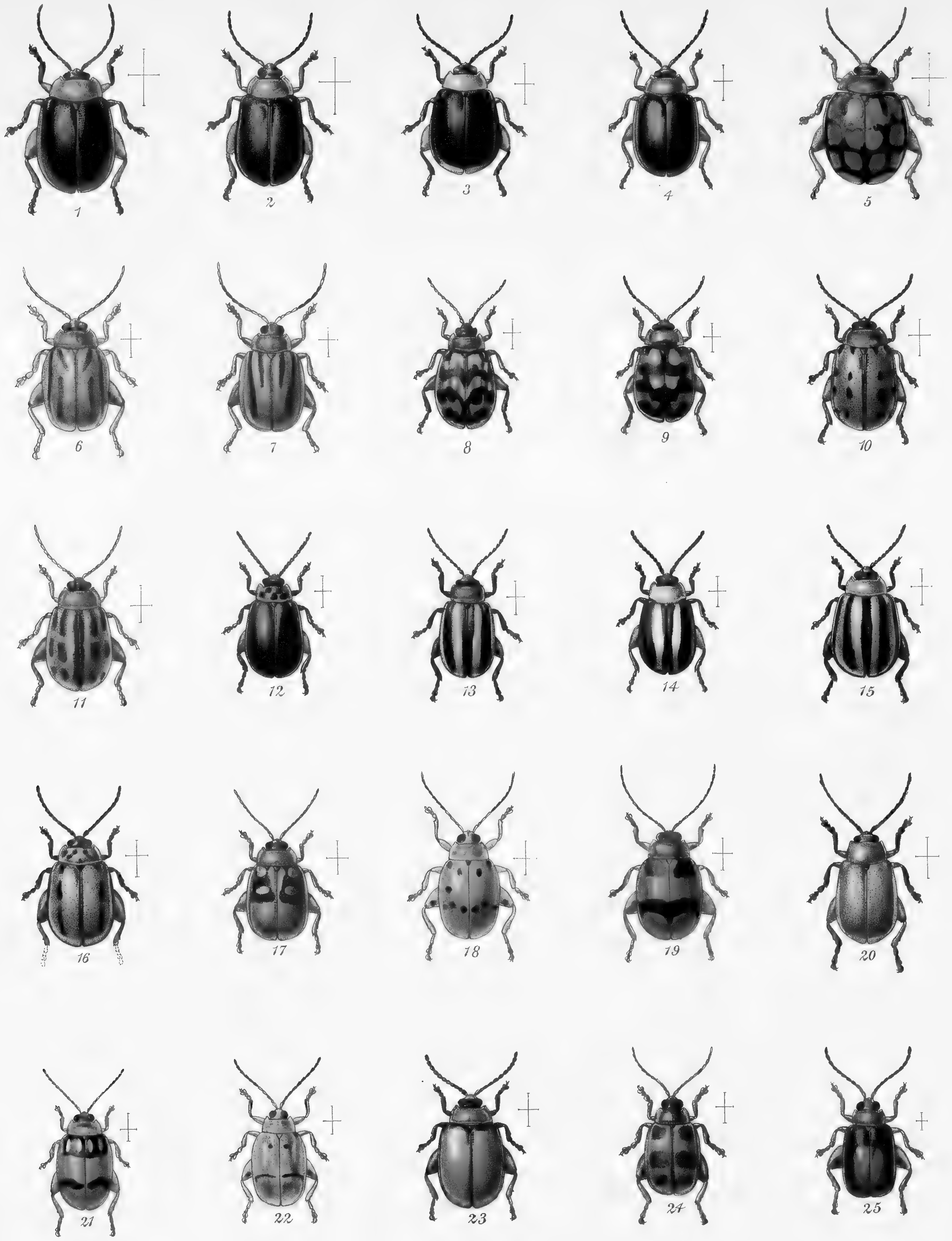
W. Purkiss lith.

Hanhart imp
414



Coleoptera. Pl. IV. Vol. 1 Pl. 23.

Biol. Centr.-Am.



1 ŒDIONYCHIS LIMBATIPENNIS.
2 „ ACUTANGULUS.
3 „ PURULENSIS.
4 „ ANTENNALIS.
5 „ EXQUISITA.
6 „ OCULATA.
7 „ SUBLINEATA.
8 „ CONSPURCATA.
9 ŒDIONYCHIS MACULATA.
10 „ SERIATA.
11 „ DISCOIDEA.
12 „ DUGESI.
13 „ QUADRILINEATA.
14 „ GRACILIS.
15 „ CHEVROLATI.
16 „ ORNATA.
17 „ TRANSVERSALIS.
18 ŒDIONYCHIS CHAMPIONI.
19 „ PROXIMA.
20 „ LONGICOLLIS.
21 „ INSCRIPTA.
22 „ TENUICINCTA.
23 „ VIOLACEOMARGINATUS.
24 „ JANSONI.
25 „ HONDURENSIS.

W.Purkiss lith.

Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

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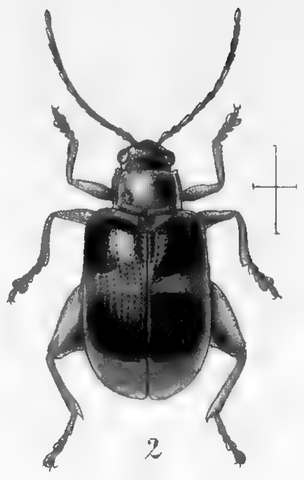
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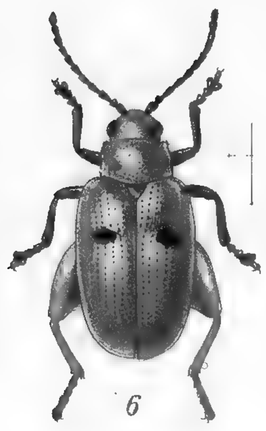
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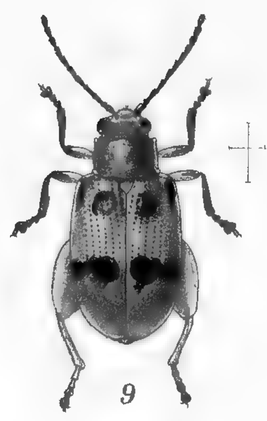
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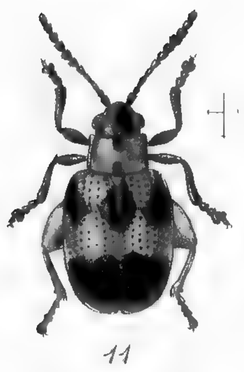
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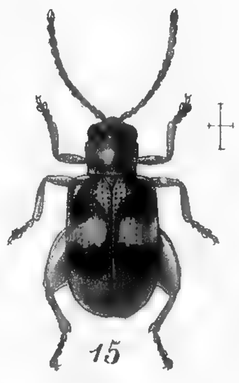
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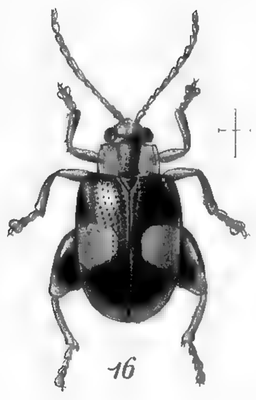
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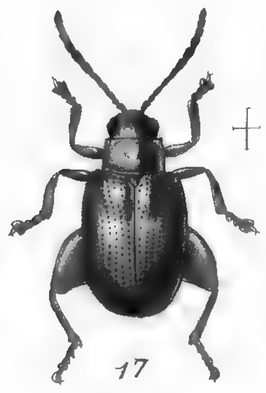
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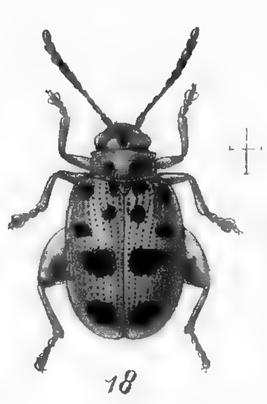
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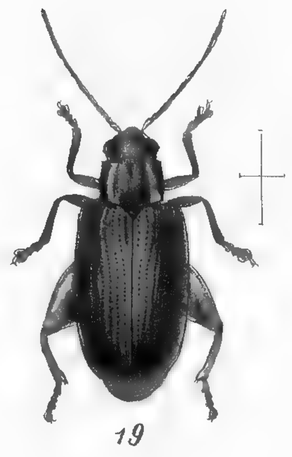
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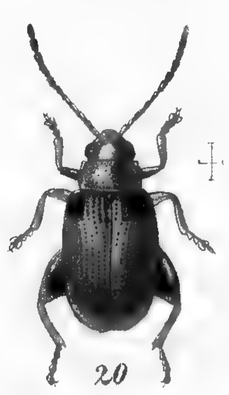
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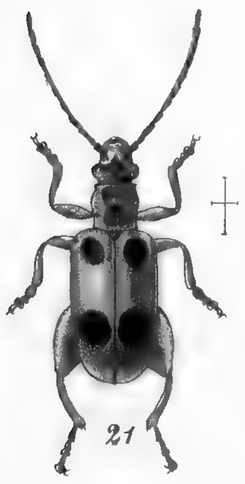
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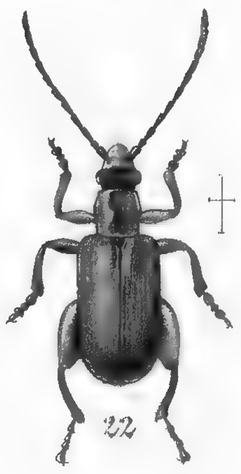
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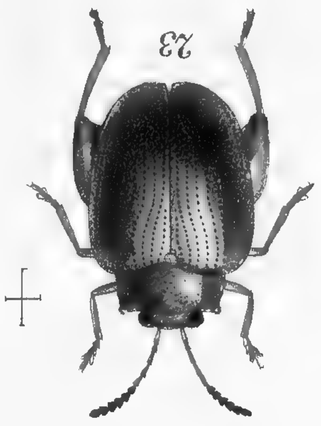
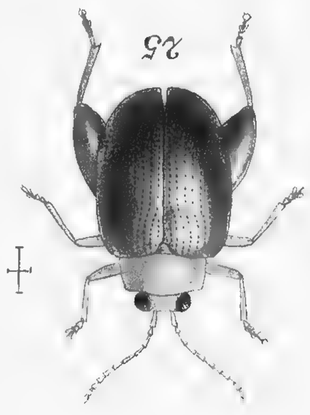
1,2,3 ALLOCHROMA SEXMACULATUM.
4 " FASCIATUM.
5 " BALYI.
6 " BIMACULATUM.
7 " FESTIVUM.
8 " MEXICANUM.
9 ALLOCHROMA SEXSIGNATUM.
10 " CHIRIQUENSE.
11 " POSTICATUM.
12,13 " GODMANI.
14 " COCCINEUM.
15 " FLAVONOTATUM.
16 " BIPLAGIATUM.
17 ALLOCHROMA CASTANEUM.
18 " NIGROPLAGIATUM.
19 PHYLACTICUS MAJOR.
20 CLEOPHES UNIFASCIATA.
21,22 TETRAGONOTES OCULATA.
23,24,25 " MILITARIS.

W. Purkiss lith. Hanhart imp. 419.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak
LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

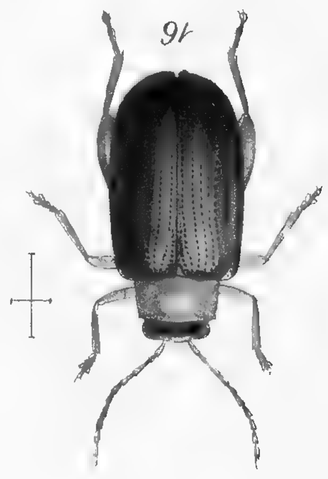


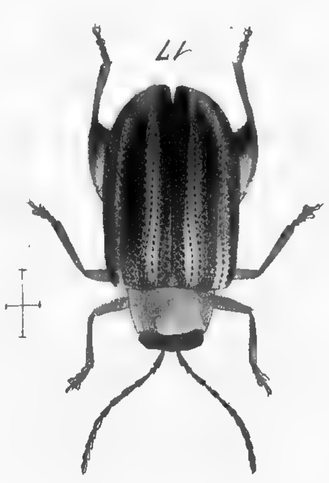


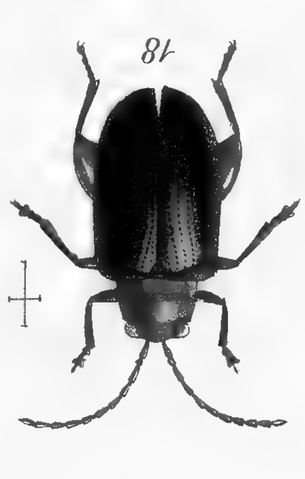
1 RHOICUS OCTOMACULATUS.
2 " UNIFASCIATUS.
3 CERICHRESTUS CLARKI.
4 OCTOGONOTES FULVOMARGINATUS.
5 METRIOTES NIGRICOLLIS.
6 " APICICORNIS
7 ZETETICUS PANAMENSIS
8 IDMOSYNE CLARKI.
9 IDMOSYNE PANAMENSIS.
10 OCTOGONOTES RUFIPENNIS.
11, 12 " FULVOMARGINATUS.
13 OMOTYPHUS ASPER.
14 " SEMIFASCIATUS.
15 OMOTOTUS ALBOMACULATUS.
16 THRASYGEUS CORDOVENSIS.
17 THRASYGEUS FEMORALIS.
18, 19 " SCABROSUS.
20 PHYSIMERUS CONSTRICTICOLLIS.
21 " BRUNNEUS.
22 " (?) NIGRIPENNIS.
23 SPARNUS CHIRIQUENSIS.
24 " APICALIS.
25 " FLAVICOLLIS.

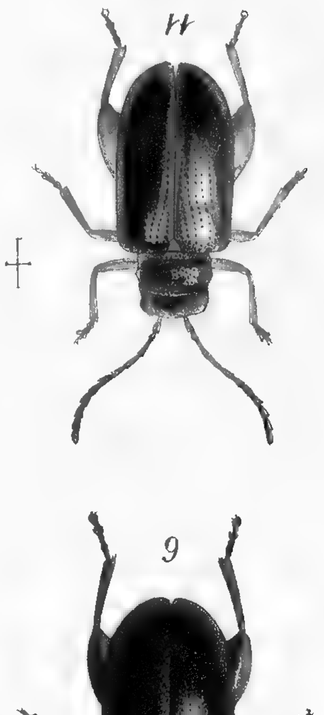
W. Purkiss lith.

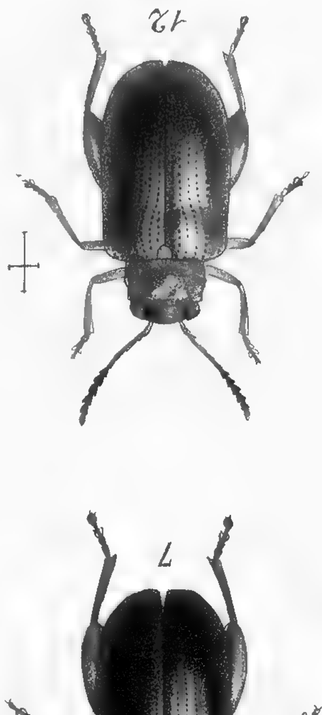
Hanhart imp.
424





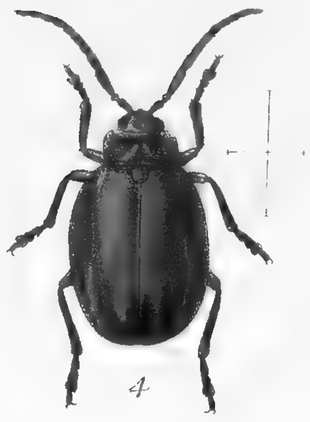


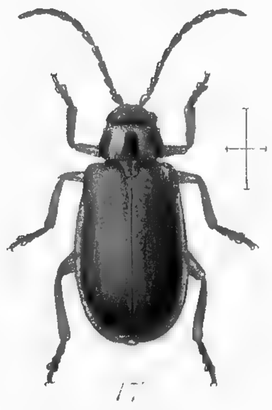


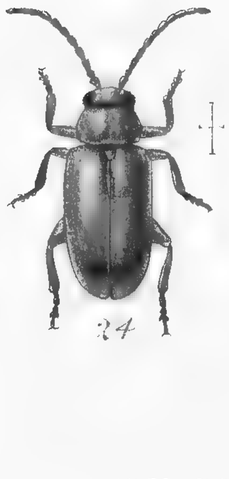


Godefroy. Gentr. Lith.

Coleoptera. Pl. VI. Fig. 1. Tab. 26.





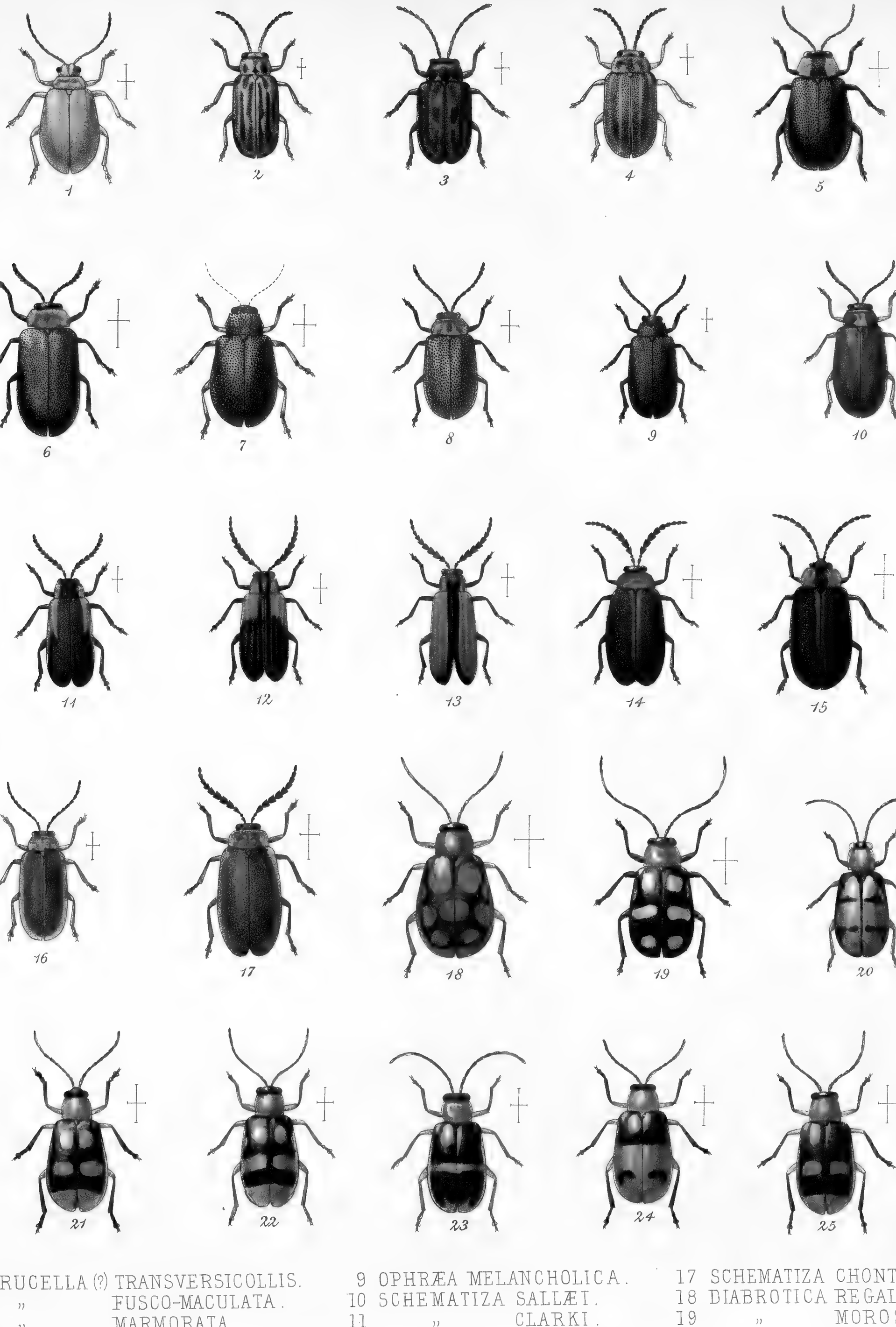


1 MONOCESTA DUCALIS.
2 » JANSONI.
3,4 » DEPRESSA.
5 » PALLIDA.
6 » CLARKI.
7 » CYANEO-MACULATA.
8 CŒLOMERA NIGRICOLLIS.
9 CŒLOMERA OLIVIERI.
10 » GODMANI.
11 » PUNCTATICOLLIS.
12 » ATRO-CÆRULEA.
13 CORAIA MACULICOLLIS.
14 NESTINUS AURIQUADRUM.
15 » BIMACULATUS
16,17 TRIRRHABDA VARIABILIS.
18,19 CORAIA CLARKI..
20 TRIRRHABDA MODESTA.
21 » MEXICANA.
22 » OBSCUROVITTATA
23 » FOVEICOLLIS.
24 MONOXIA OBTUSA
25 » GUTTULATA

W.Purkiss lith

Hanhart imp

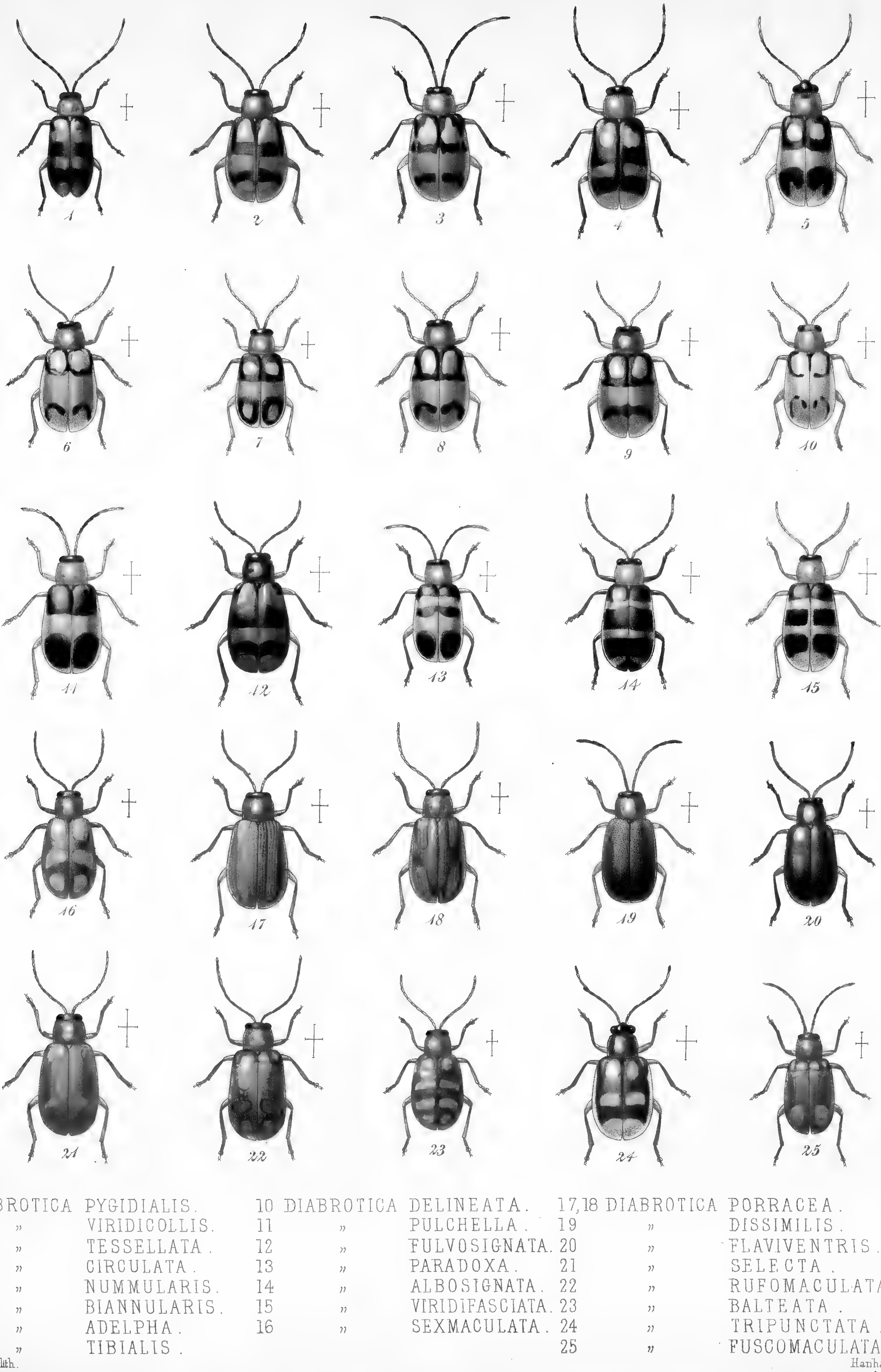
KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 GALERUCELLA (?) TRANSVERSICOLLIS.
2 „ FUSCO-MACULATA.
3 „ MARMORATA.
4 „ GODMANI.
5 OPHRÆA SUBCOSTATA.
6 „ RUGOSA.
7 „ ÆNEA.
8 „ METALLICA.
9 OPHRÆA MELANCHOLICA.
10 SCHEMATIZA SALLÆI.
11 „ CLARKI.
12 „ THORACICA.
13 „ SUTURALIS.
14 „ BICOLOR.
15 „ COLLARIS.
16 „ LATERALIS.
17 SCHEMATIZA CHONTALENSIS.
18 DIABROTICA REGALIS.
19 „ MOROSA.
20 „ FENESTRALIS.
21 „ ELEGANTULA.
22 „ GRATIOSA.
23 „ MILITARIS.
24,25 „ ROGERSI.

W. Purkiss lith. Hanhart imp

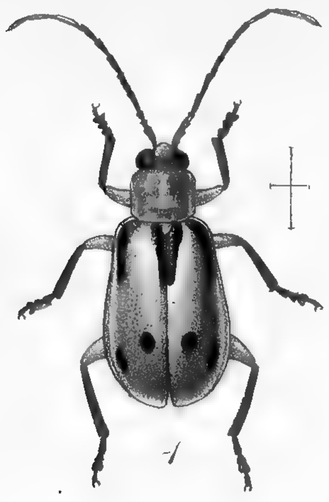
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



1 DIABROTICA PYGIDIALIS.
2 „ VIRIDICOLLIS.
3,4 „ TESSELLATA.
5 „ CIRCULATA.
6 „ NUMMULARIS.
7 „ BIANNULARIS.
8 „ ADELPHA.
9 „ TIBIALIS.
10 DIABROTICA DELINEATA.
11 „ PULCHELLA.
12 „ FULVOSIGNATA.
13 „ PARADOXA.
14 „ ALBOSIGNATA.
15 „ VIRIDIFASCIATA.
16 „ SEXMACULATA.
17,18 DIABROTICA PORRACEA.
19 „ DISSIMILIS.
20 „ FLAVIVENTRIS.
21 „ SELECTA.
22 „ RUFOMACULATA.
23 „ BALTEATA.
24 „ TRIPUNCTATA.
25 „ FUSCOMACULATA, *var.*

W. Purkiss lith.
Hanhart imp.
446.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8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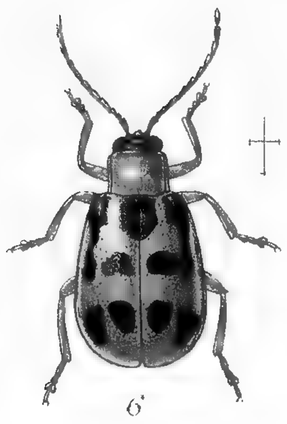
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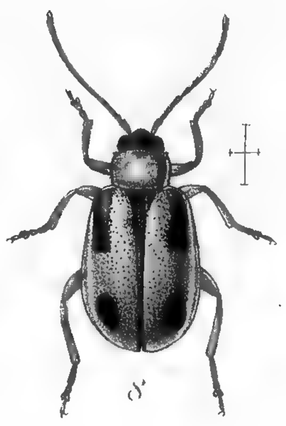
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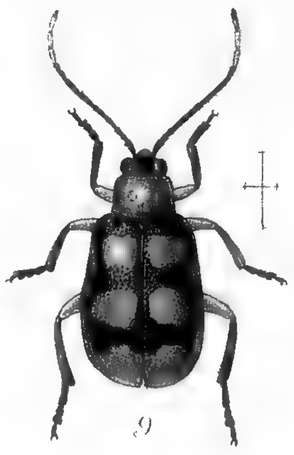
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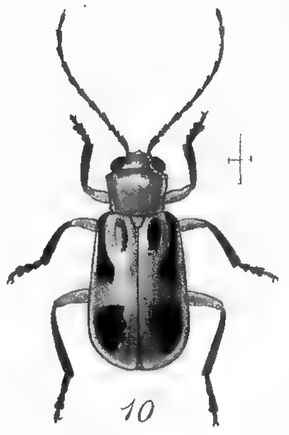
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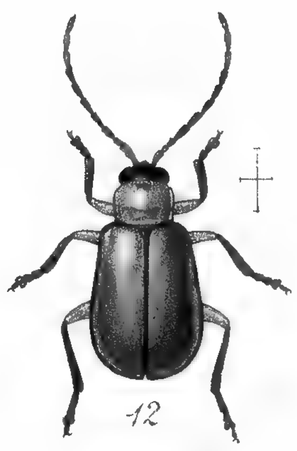
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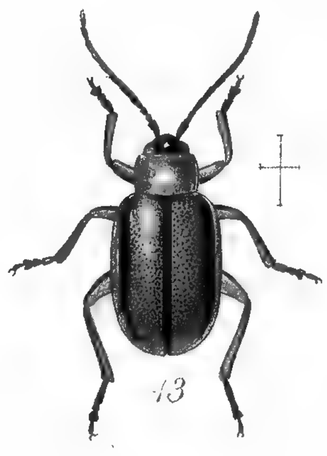
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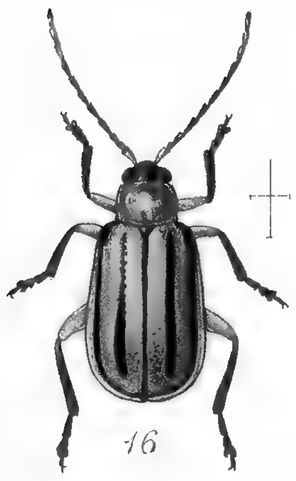
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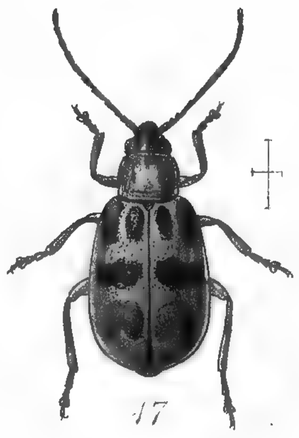
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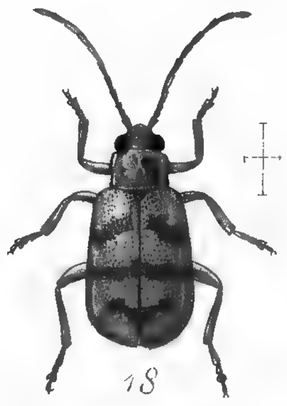
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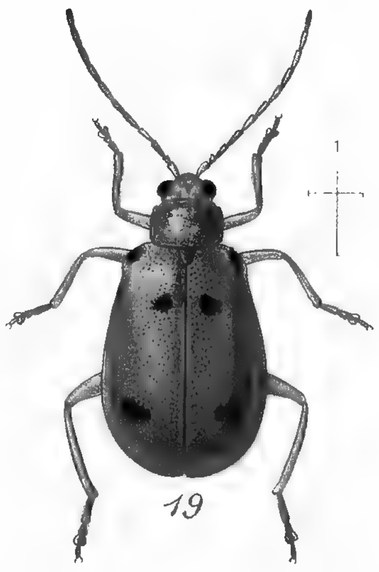
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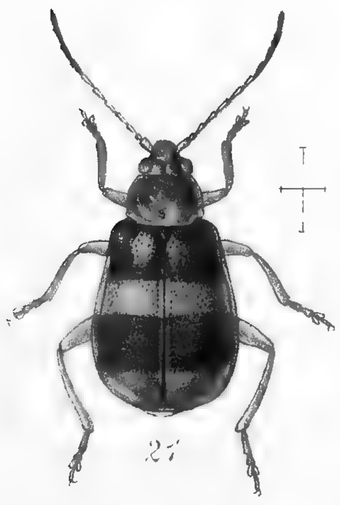
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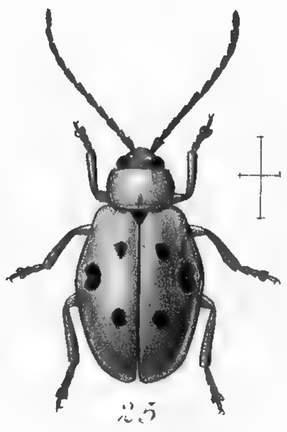
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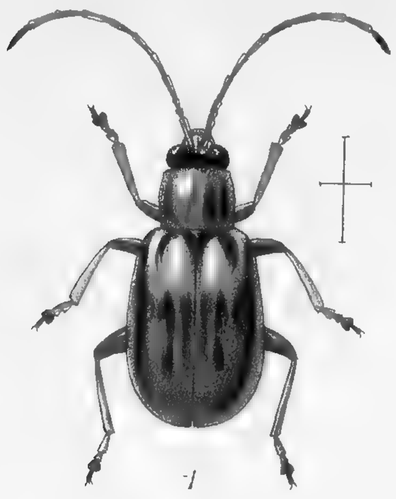
1 DIABROTICA APICICORNIS.
2 » FULVICORNIS.
3 » BREVILINEATA.
4 » TRIFURCATA.
5 » 12-NOTATA.
6 » SPILOTA.
7 » DUPLICATA.
8 » CYANEO-MACULATA.
9 DIABROTICA VIRIDICOLLIS
10 » NIGROSIGNATA.
11 » SEXLINEATA.
12 » HÖGEI, *var.*
13 » TRILINEATA.
14 » UNILINEATA.
15 » CURVILINEATA.
16 » NIGROLINEATA.
17 » OCTOPLAGIATA.
18 DIABROTICA TORTUOSA.
19 » SEXPUNCTATA.
20 » QUADRICOLLIS.
21 » RUFOFASCIATA.
22 NEOBROTICA HONDURENSIS.
23 DIABROTICA OCTOSIGNATA, *var.*
24 » WATERHOUSEI.
25 MALACOSOMA TRIPUNCTATA.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19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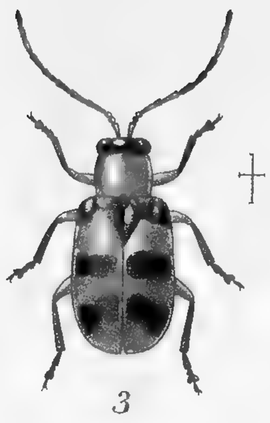
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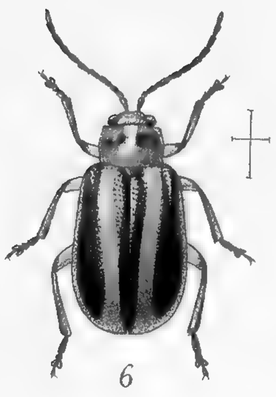
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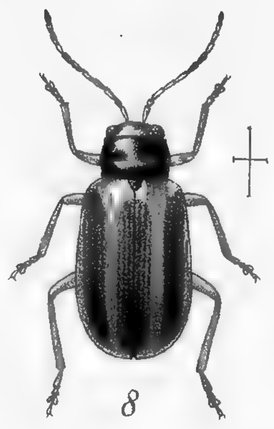
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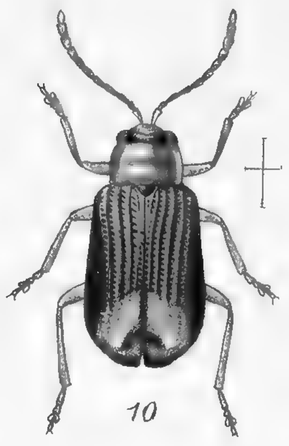
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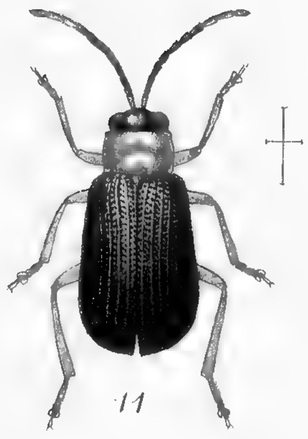
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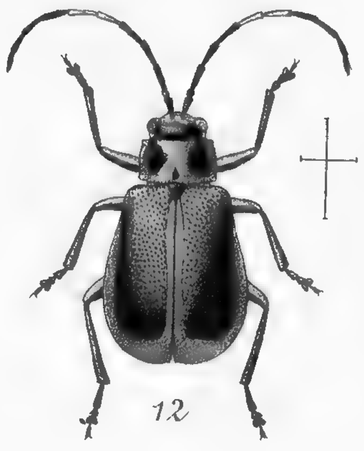
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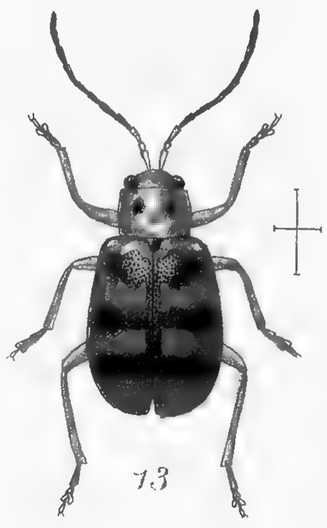
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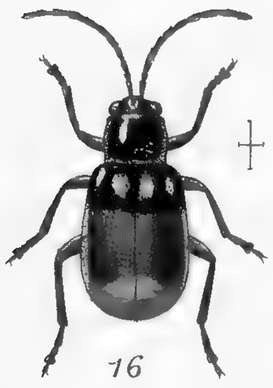
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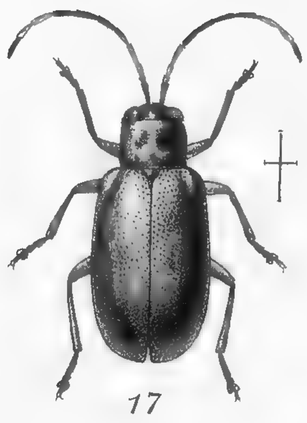
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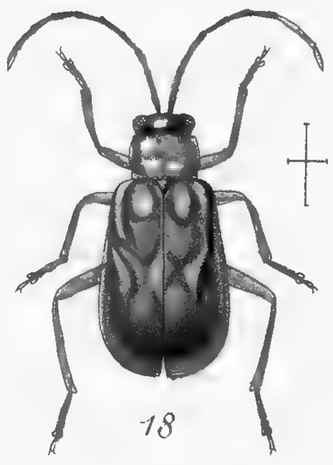
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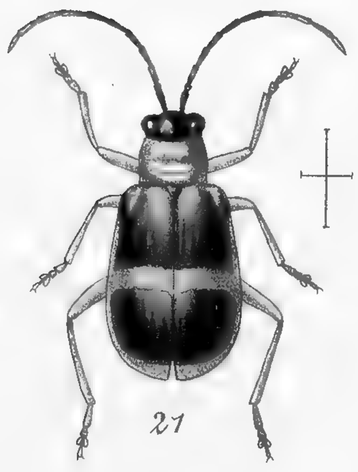
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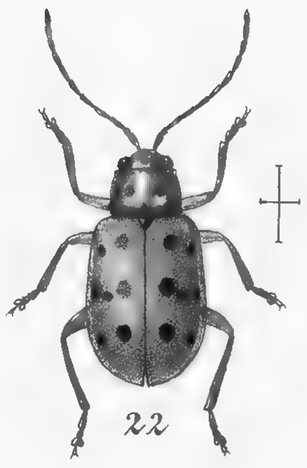
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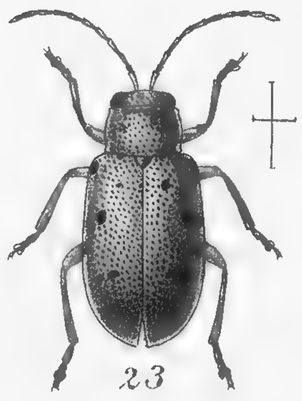
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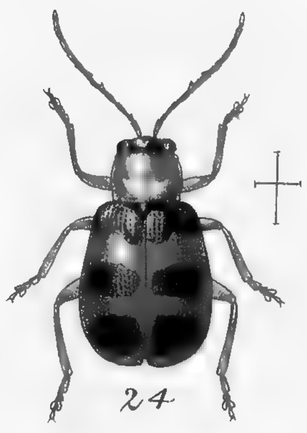
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1 DIABROTICA PICEO-NOTATA.
2 „ VARIEGATA.
3 „ SIGNIFERA.
4 „ GRANULATA.
5 „ VITTATA.
6 „ DECORATA.
7 „ CAVA.
8 „ CORNUTA.

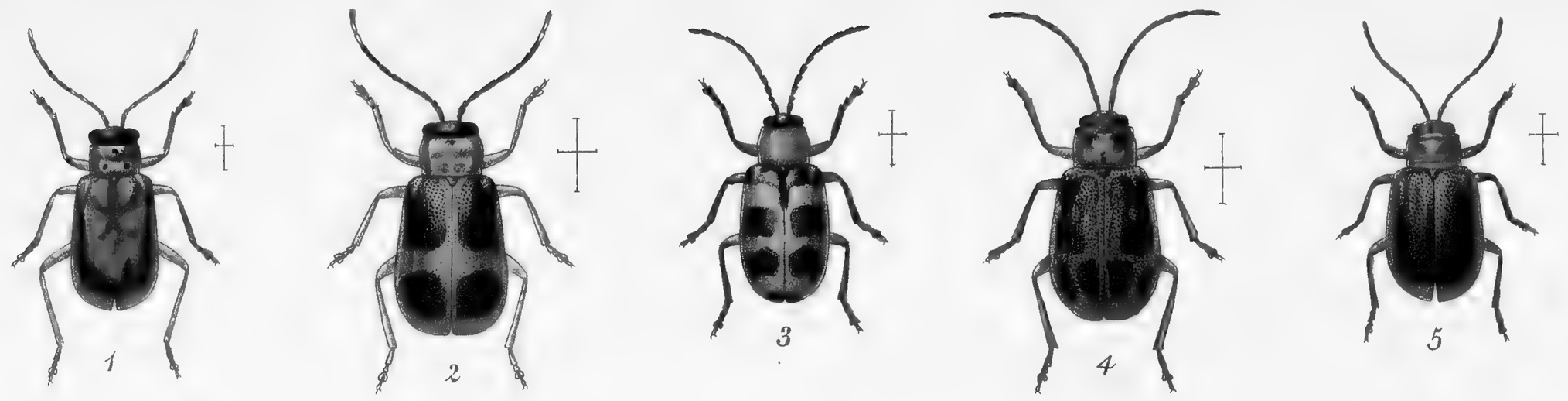
9 DIABROTICA POROSA.
10 „ CURTISI.
11 „ LONGITARSIS.
12 „ MARGINELLA.
13 „ INTERRUPTO-FASCIATA.
14 „ SEXPLAGIATA.
15 „ ,var.
16 „ TRICOLOR.
17 „ IMPRESSIPENNIS.

18 DIABROTICA NIGRICEPS.
19 „ FUSCO-MARGINATA.
20 „ JANSONI.
21 „ ADONIS.
22 „ MEXICANA.
23 „ SEPTEMPUNCTATA.
24 „ NIGROFASCIATA.
25 „ ,var.

W. Purkiss lith.

Hanhart imp.
471.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



1 DIABROTICA SMARAGDINA.
2 » CRUCIATA.
3 » SUFFRIANI.
4 » LÆVICOLLIS, *var.*
5 » DISTINGUENDA.
6 » BICOLOR.
7 » GEMMULA.
8 » FEMORATA.

9 DIABROTICA DIFFORMIS.
10 » SUBSIGNATA.
11 » MACULATA.
12 » LATERITIA.
13 » BOHEMANI.
14,15 » FIGURATA.
16 » HIRTA.
17 » CORALLINA.

18 DIABROTICA V-NIGRUM.
19 » SETOSA.
20 » CONNEXA.
21 » IRREGULARIS.
22 » FLAVIFRONS.
23 » BIFASCIATA.
24 » DORSOPLAGIATA, *var.*
25 » VENTRICOSA.

W. Purkiss lith.
Hanhart imp.
473.

Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

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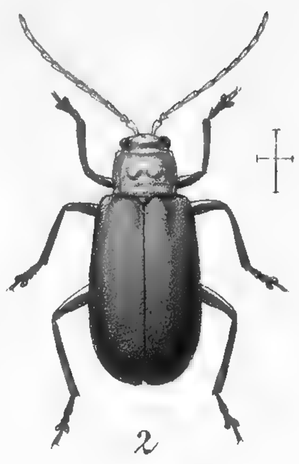

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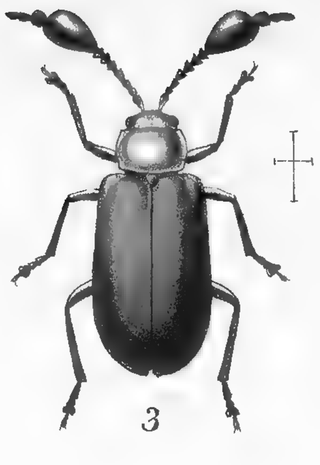

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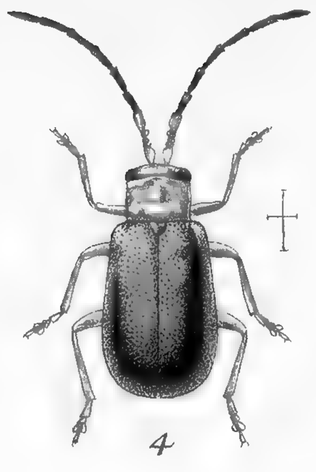

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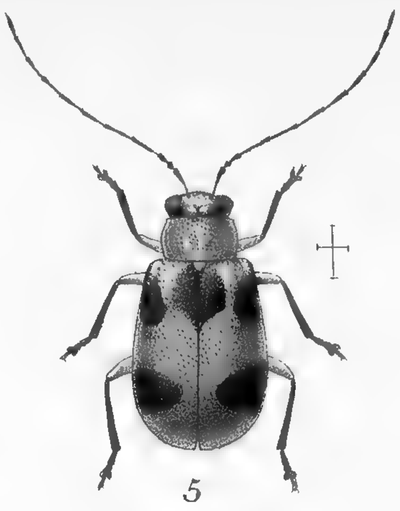

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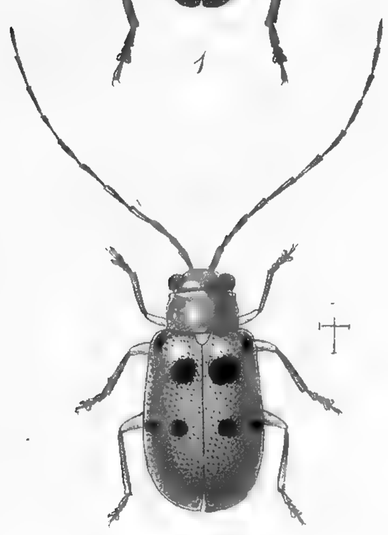

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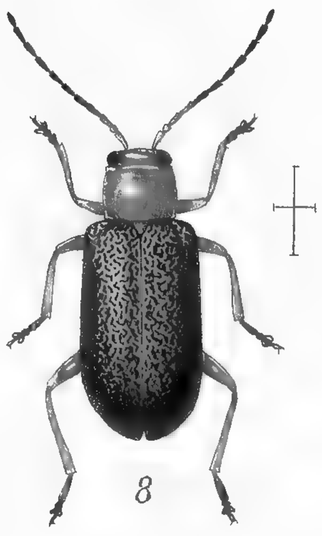

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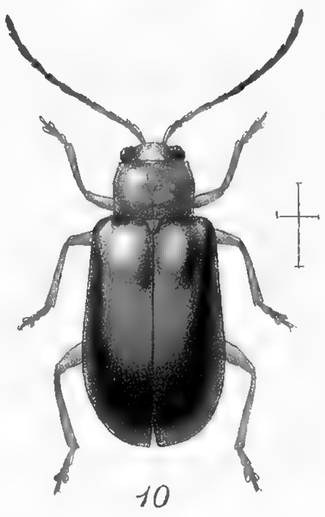

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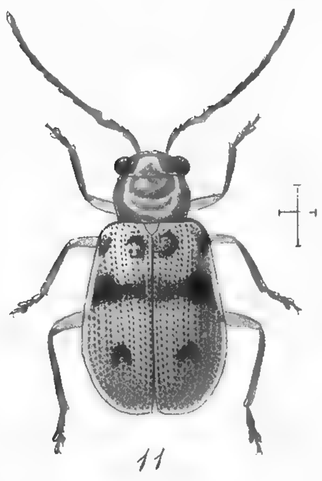

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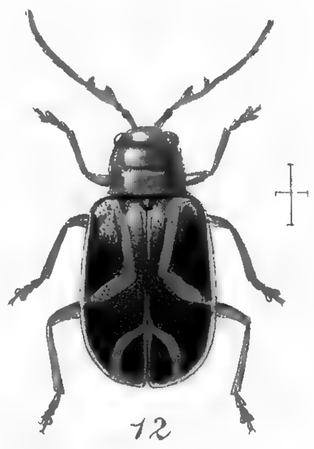

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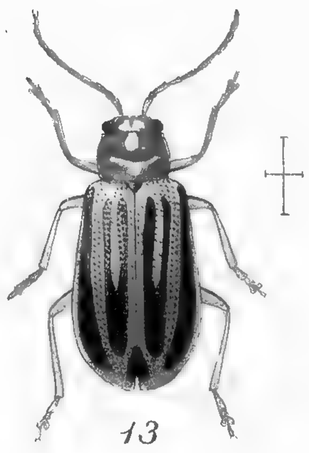

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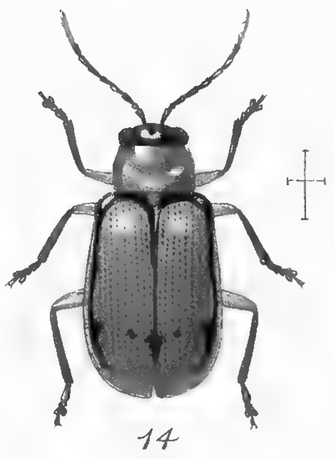

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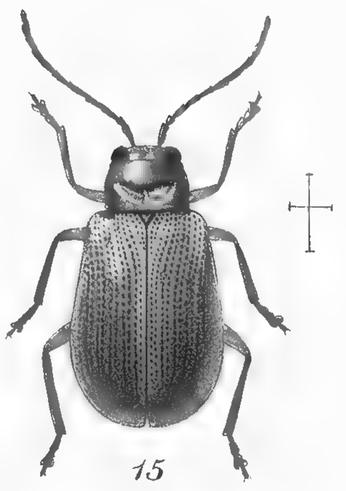

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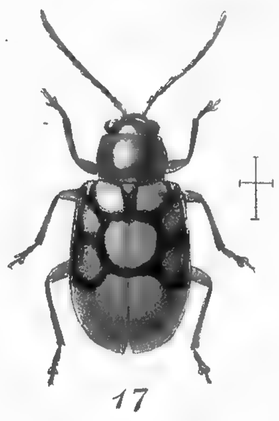

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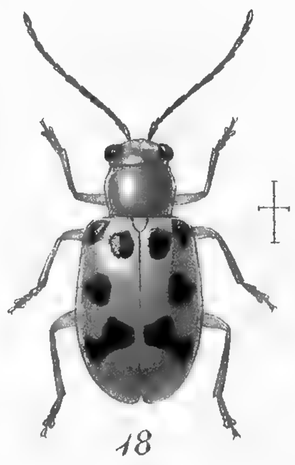

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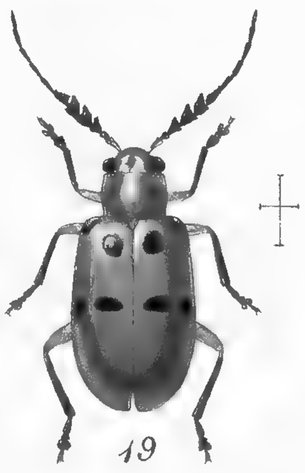

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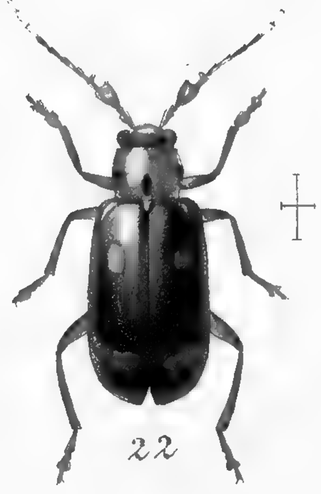

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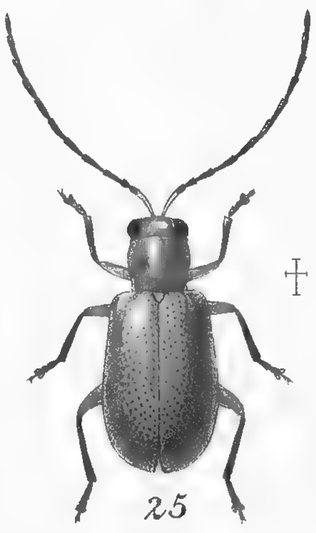

25

1 PHÆSTUS CHIRIQUENSIS.
2 SCELIDOPSIS SUBCOSTATA.
3♂ METACORYNA FULVICOLLIS.
4♂ ORŒTES FLAVICOLLIS.
5♀ ELYCES NIGROMACULATUS.
6♂ " QUADRIMACULATUS.
7 PYESIA MEXICANA.
8 SCELIDA RUGOSA.

W. Purkiss lith.

9 SCELIDA BELLA.
10 " METALLICA.
11♂ NEOBROTICA DENTICORNIS.
12♂ " CAVIFRONS.
13 " VITTATIPENNIS.
14 " MELANOCEPHALA.
15 " SEMICOSTATA.
16♂ MALACORHINUS IRREGULARIS.
17♂ " RETICULATUS.

18 MALACORHINUS DECEMPUNCTATUS.
19♂ " ANTENNATUS.
20♂ " BIPLAGIATUS.
21 " SEXPUNCTATUS.
22♂ " DILATICORNIS.
23 HECATÆUS NIGRICOLLIS.
24♂ CHTHONEIS DILATICORNIS.
25 MICROBROTICA SUBGLABRATA.

Hanhart imp.
483.

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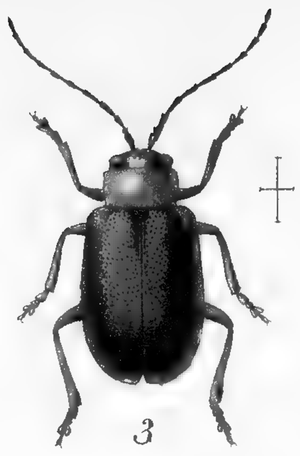
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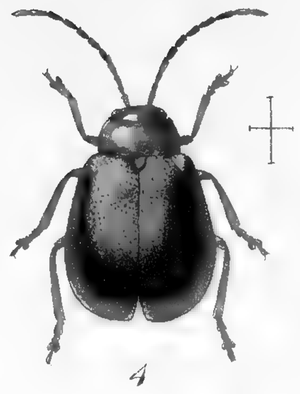
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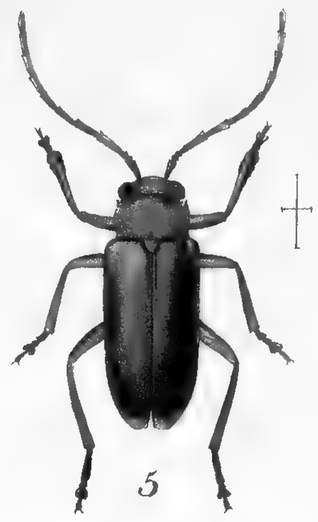
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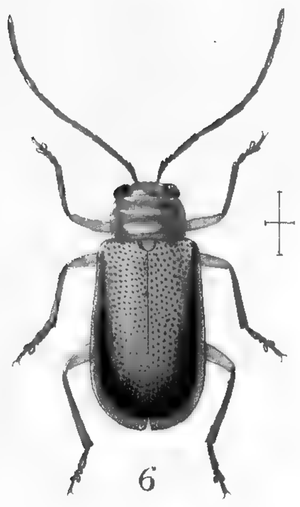
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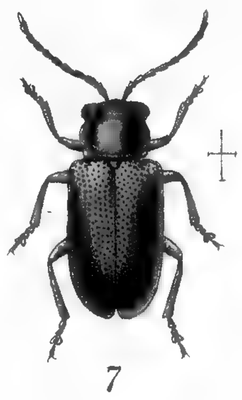
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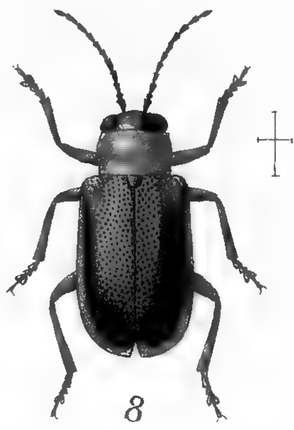
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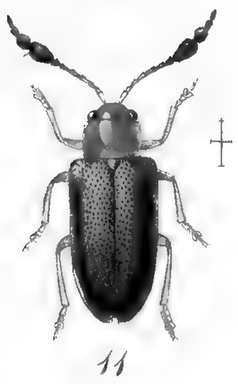
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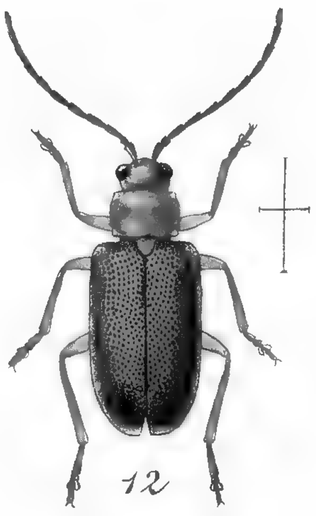
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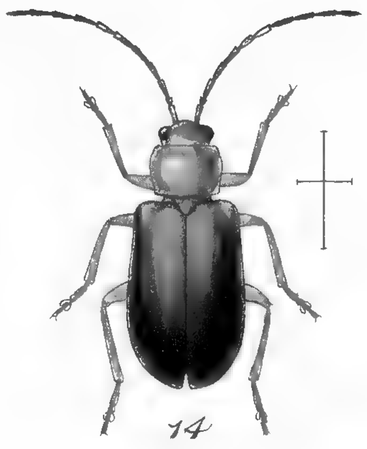
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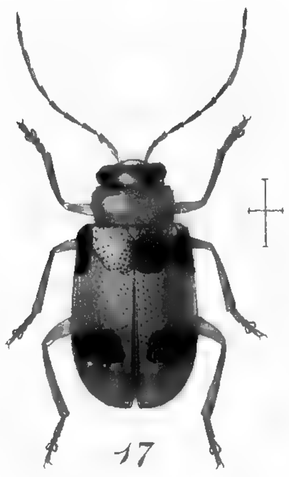
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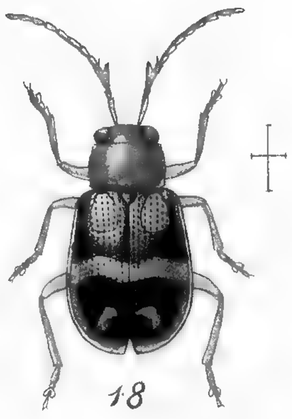
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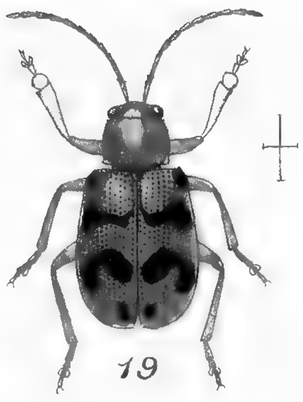
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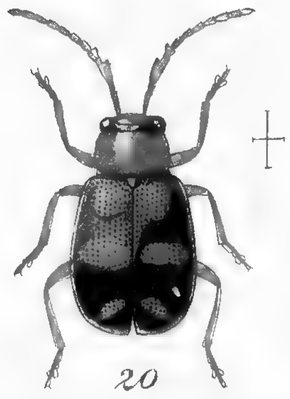
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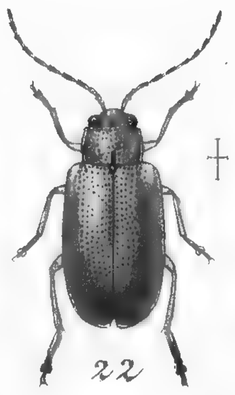
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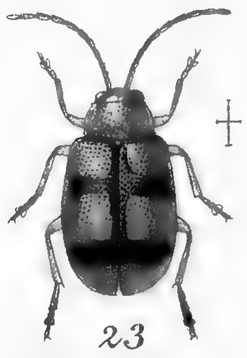
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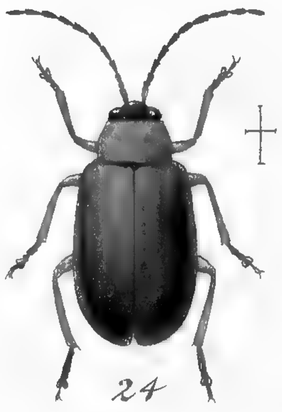
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1♂,2♀ METACYCLA MARGINATA.
3 " CÆRULEIPENNIS.
4 " ROBUSTA.
5 PLATYMORPHA VARIEGATA.
6 " SMARAGDIPENNIS.
7♂,8♀ PTELEON SEMICÆRULEUS.
9 CNEORANE NIGRICORNIS.
10 " MEXICANA.

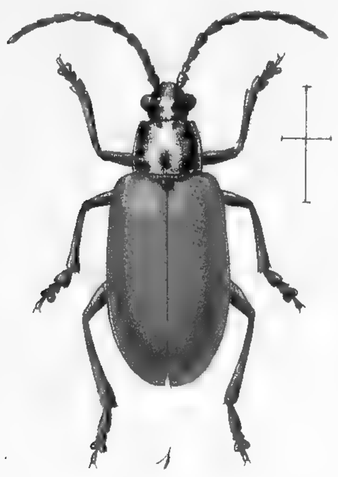
W. Purkiss lith.

11 METACORYNA FULVIPES.
12 SCELIDA VIRIDIS.
13 " (?) ANTENNATA.
14 " GLABRATA.
15 " ELEGANS.
16 MIRACES ÆNEIPENNIS.
17 MASURIUS BIFASCIATUS.

18 CEROTOMA SALVINI.
19 " DILATIPES.
20 " ROGERSI.
21 MONOLEPTA IRAZUENSIS.
22 " IMITANS.
23 " PANAMENSIS.
24 " VELUTINA.
25 " BIPARTITA.

Hanhart imp.
491.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8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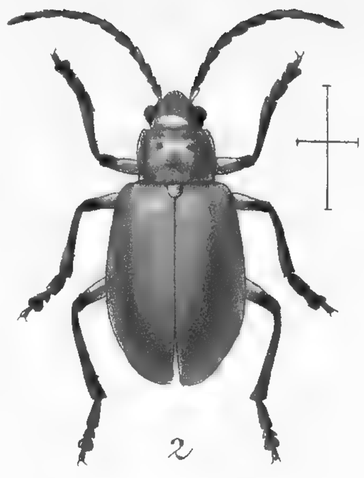
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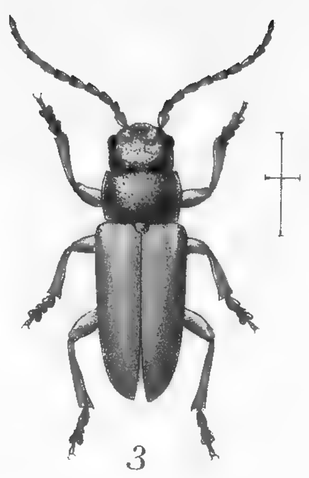
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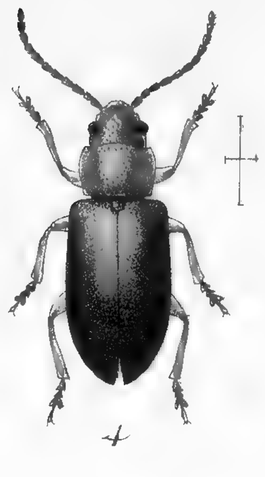
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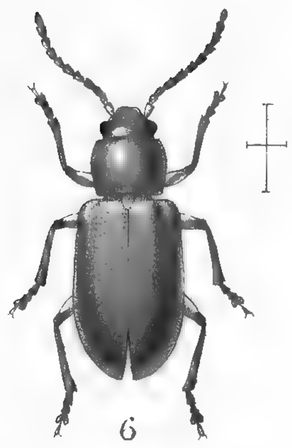
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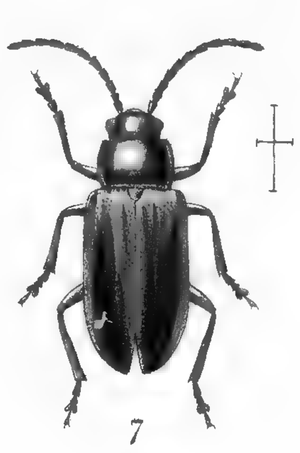
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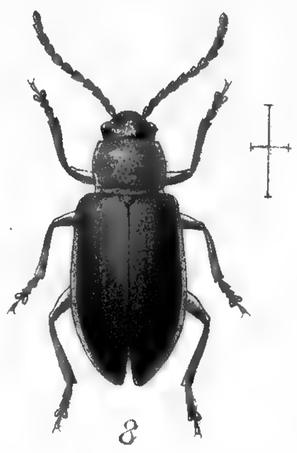
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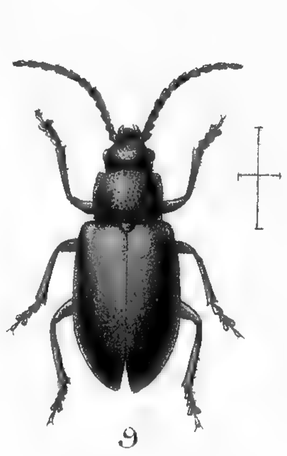
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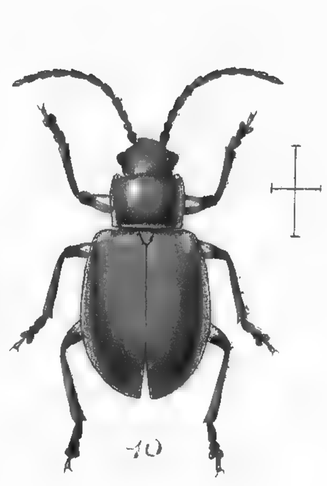
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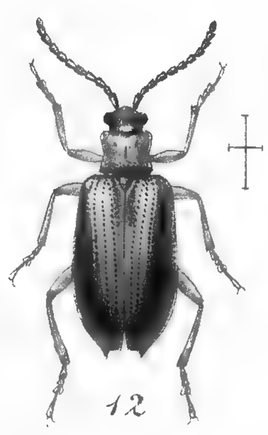
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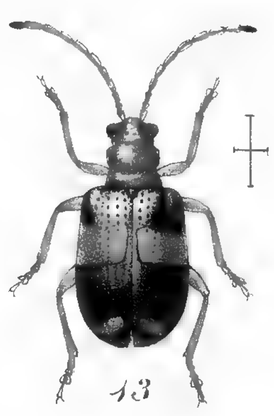
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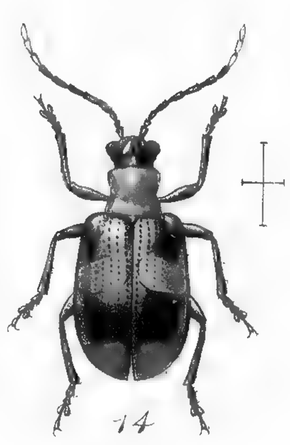
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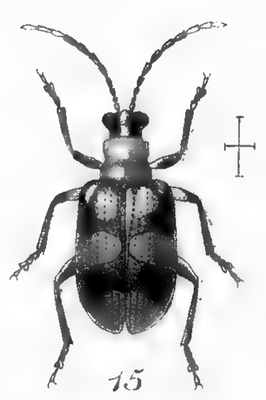
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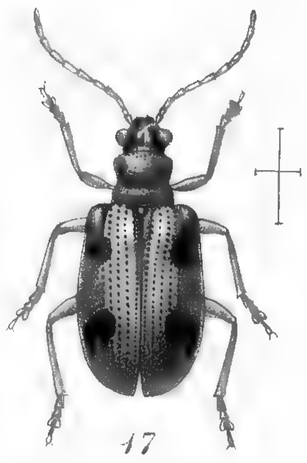
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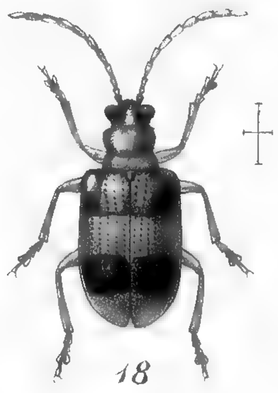
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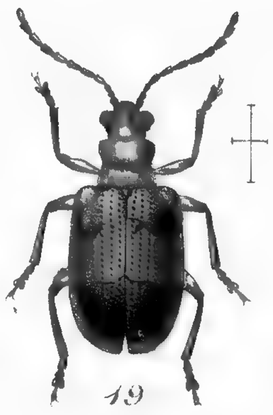
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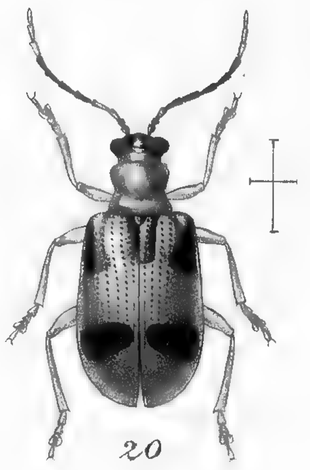
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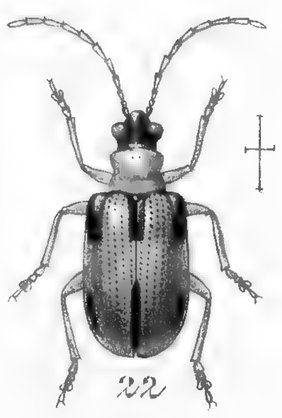
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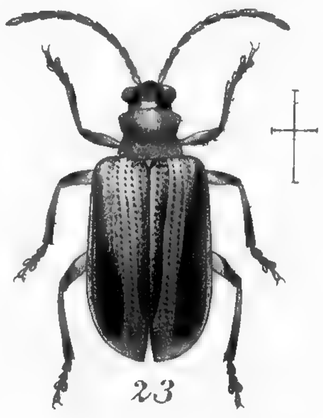
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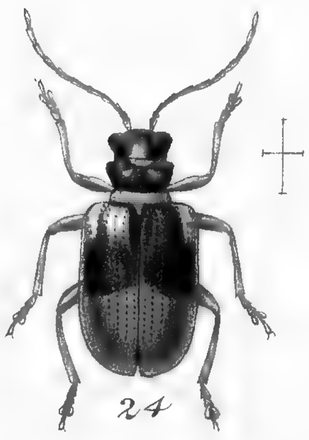
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25

1 8 AULACOSCELIS GRANDIS.
2 " TIBIALIS.
3,4 " FEMORATA.
5 " ELONGATA.
6 " HÖGEI.
7, " CANDEZEI.
8,9 " VARIABILIS.
10 " SANGUINEA.

11 DONACIA CINCTICORNIS.
12 HÆMONIA NIGRICORNIS.
13 LEMA DIMIDIATICORNIS.
14 " APICICORNIS.
15 " SEXPLAGIATA.
16 " FORRERI.
17 " MACULIGERA.

18 LEMA CHIRIQUENSIS.
19 " FULVO-FASCIATA.
20 " INSULARIS.
21 " CLARKI.
22 " SEXLINEATA.
23 " BELLA.
24 " INCISA.
25 " NIGRO-LINEATA.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

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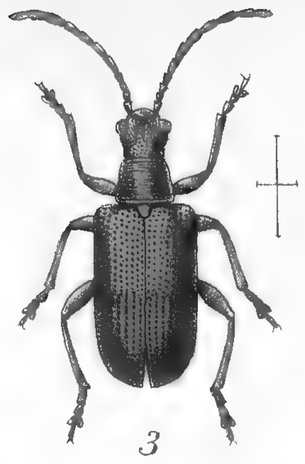
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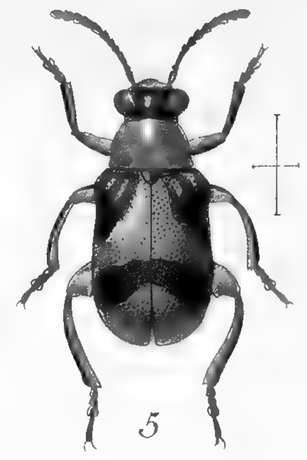
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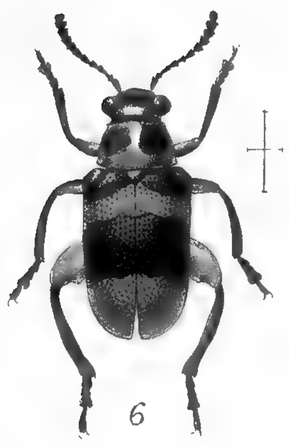
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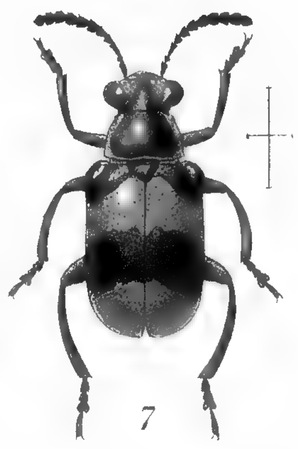
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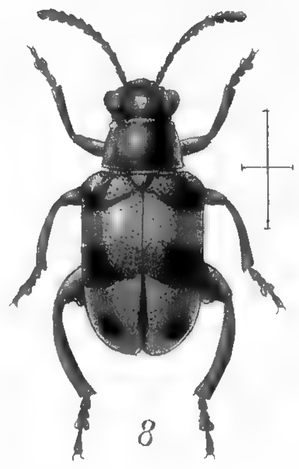
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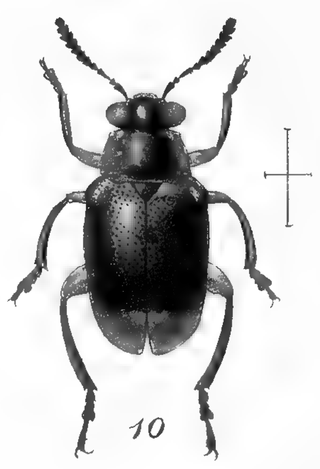
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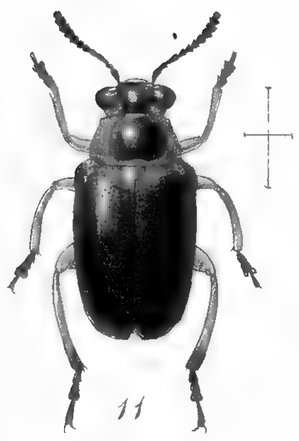
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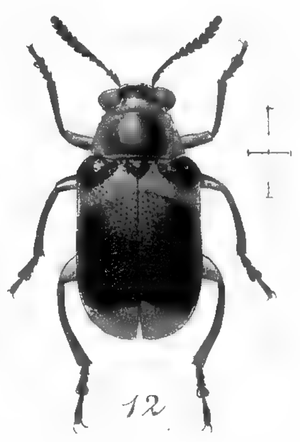
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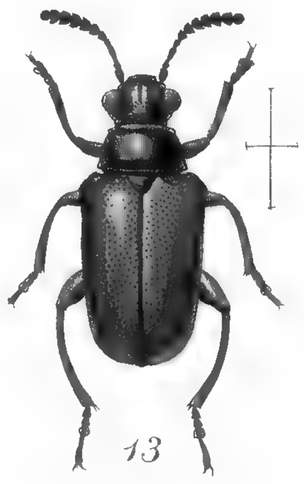
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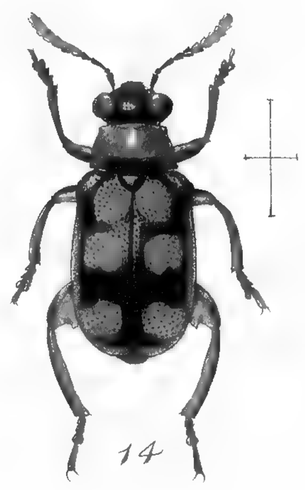
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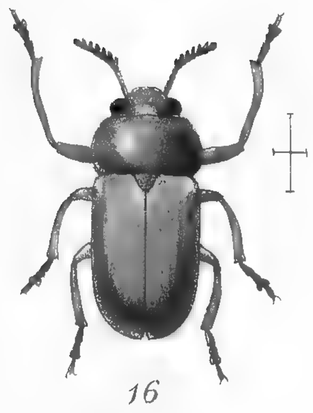
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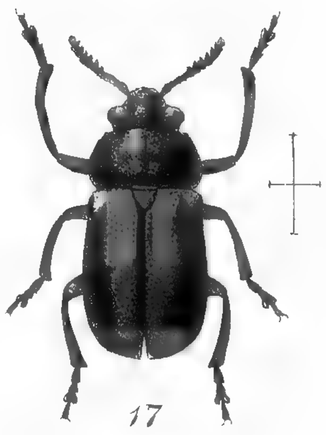
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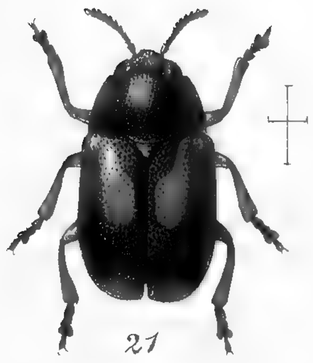
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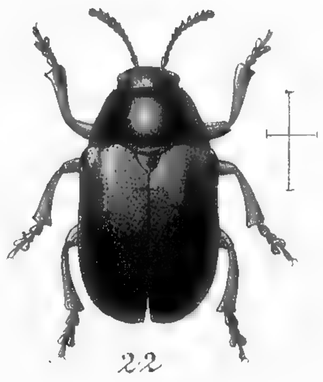
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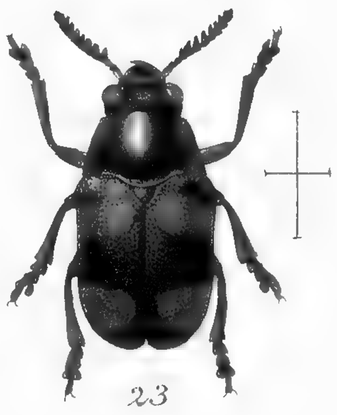
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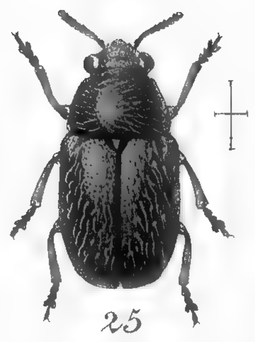
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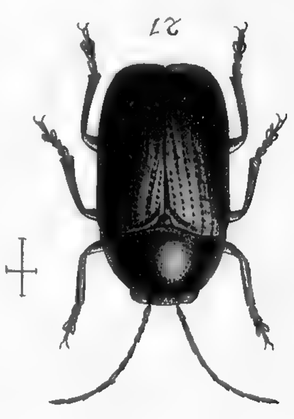
1 CRIOCERIS FLOHRI.
2 „ RUGIPENNIS.
3 „ RUGICOLLIS.
4 MEGASCELIS MEXICANUS.
5 MASTOSTETHUS SALVINI. *var.*
6 „ GRACILENTA.
7 „ CORDOVENSIS.
8 „ FEMORATUS.
9,10 MASTOSTETHUS PANAMENSIS.
11 „ IMITANS.
12 „ HUMERO-NOTATUS.
13 „ MODESTUS.
14 „ OCTOMACULATUS.
15 MEGALOPUS VIOLACEO-FASCIATUS.
16 TITUBŒA HÖGEI.
17 „ VILLOSA.
18 TITUBŒA BREVILINEATA.
19 MEGALOSTOMIS METALLICA.
20 „ FEMORATA.
21 „ FULVIPES.
22 „ PUNCTATISSIMA.
23 „ ANACHORETA.
24 „ AMAZONA.
25 COSCINOPTERA PURPUREA.

W. Purkiss lith.

Hanhart imp
507.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black



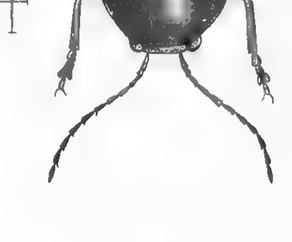
1 EURYSCOPA NIGRITARSIS.
2 " MEXICANA.
3 " VILLOSA.
4 " SEMISTRIATA.
5 " LONGICOLLIS.
6 " REGULARIS.
7 " PARVULA.
8 PROCTOPHANA FULVICOLLIS.

9 BABIA CHIRIQUENSIS.
10 SAXINIS SONORENSIS.
11 " HÖGEI.
12 MONACHUS 4-PLAGIATUS.
13 " FLAVIPENNIS.
14 CRYPTOCEPHALUS DIFFICILIS.
15 " FORRERI.
16 " SUBCURVATUS.
17 " COMPLICATUS.

18 CRYPTOCEPHALUS 10-PLAGIATUS.
19 " DOLOROSUS.
20 " FLAVOFASCIATUS.
21 " " " vocr.
22 " MULTIPUNCTATUS.
23 " 11-PLAGIATUS.
24 " PROBLEMATICUS.
25 " ADMIRABILIS.

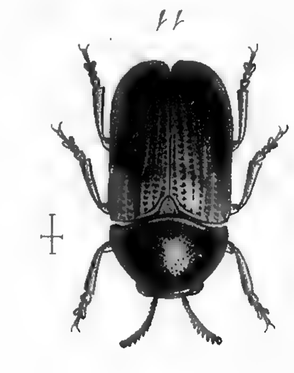
W. Purkiss lith.

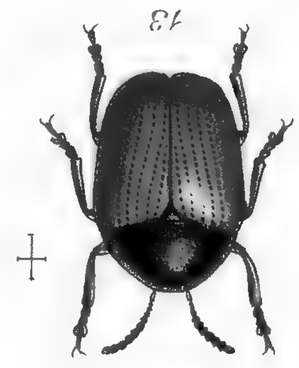
Hanhart imp
519.

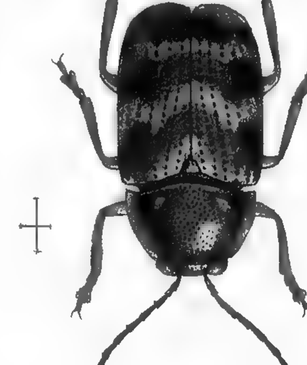


Geol. Entr. etc.

Coleoptera. Pl. VI. Fig. 1 Vol. 37.







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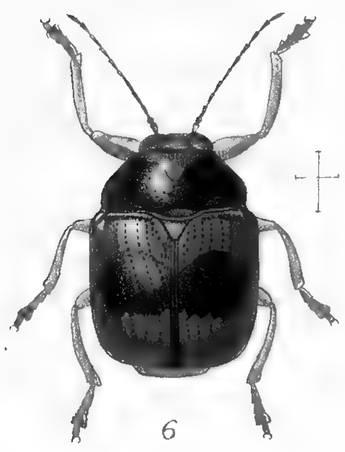
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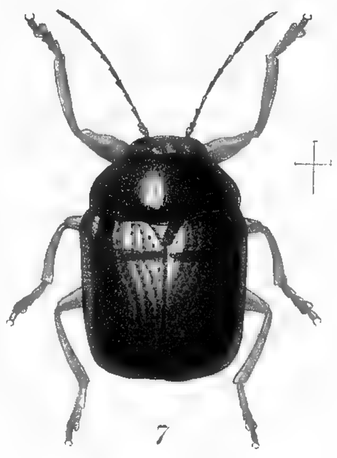
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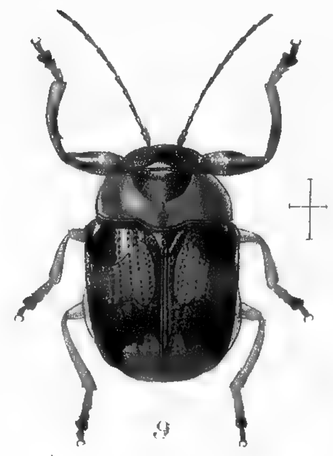
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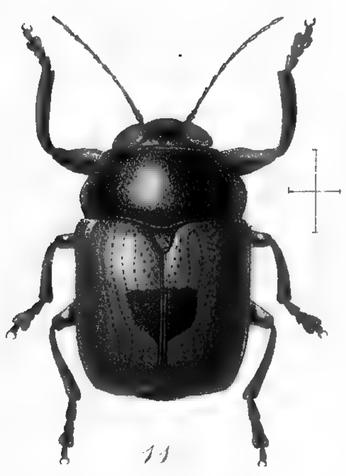
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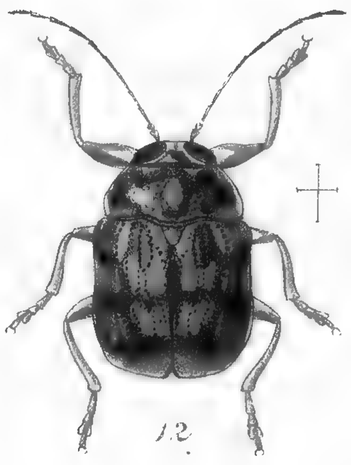
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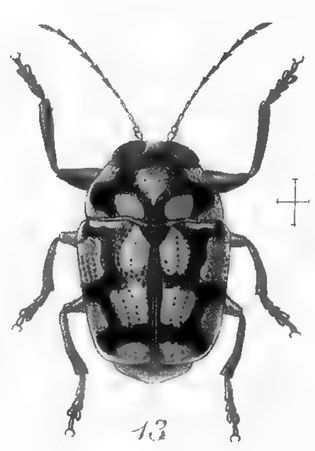
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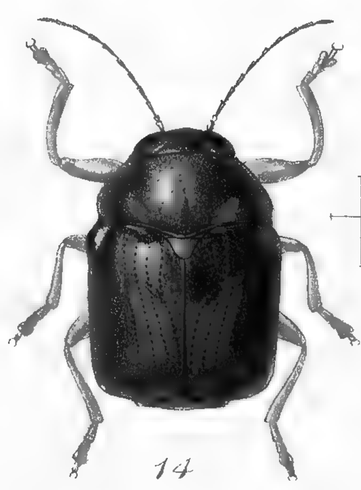
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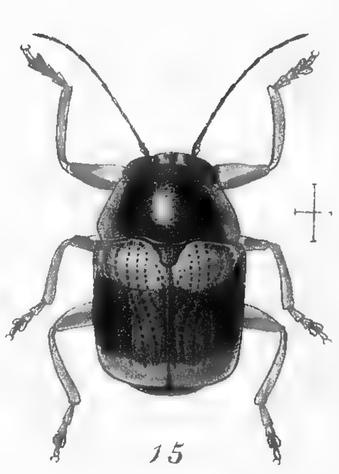
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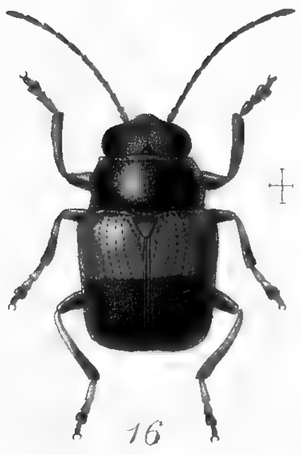
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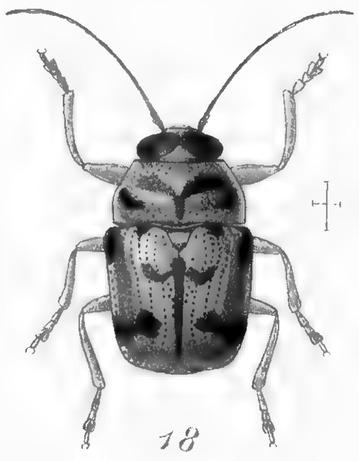
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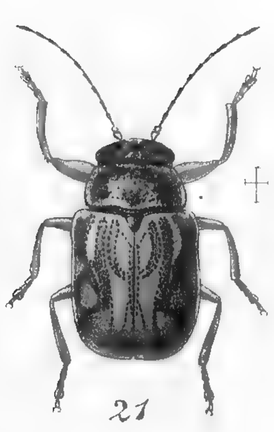
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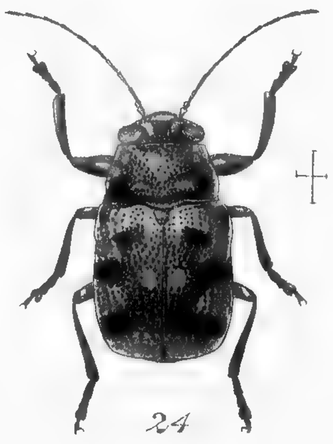
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1 CRYPTOCEPHALUS JUQUILENSIS.
2 „ 7-PUNCTATUS.
3 „ FLAVOMACULATUS.
4 STEGNOCEPHALA COSTATA.
5 „ LONGICORNIS.
6 SCOLOCHRUS PALLIPES.
7 „ „ *, var.*
8 „ PANAMENSIS.

9 SCOLOCHRUS MACULICOLLIS.
10 „ 5-MACULATUS.
11♀ „ YUCATANUS.
12 „ 12-GUTTATUS.
13 „ 17-GUTTATUS.
14 „ ROBUSTUS.
15 „ IMITANS.
16 „ MINUTUS.
17 „ CORDOVENSIS.

18 SCOLOCHRUS GAMMA.
19 „ FALLAX.
20 „ MODESTUS.
21 „ GEOMETRICUS.
22 „ 4-MACULATUS.
23 PACHYBRACHYS THORACICUS.
24 „ FORRERI.
25 „ DURANGOENSIS.

W. Purkiss lith. Hanhart imp 527.

Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

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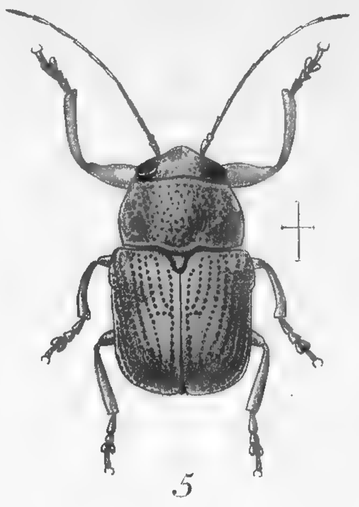

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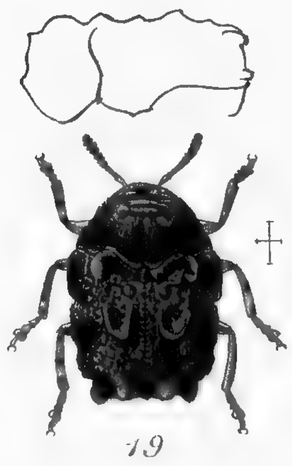

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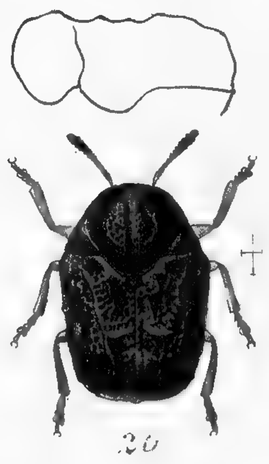

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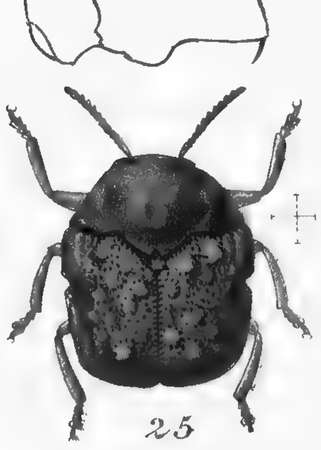

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1 PACHYBRACHYS SEMIBRUNNEUS.
2 „ MINUTUS.
3 „ INCLUSUS.
4 „ MACULICOLLIS.
5 „ FLAVESCENS.
6 „ BRUNNEO-MACULATUS.
7 „ JUQUILENSIS.
8 „ SALLÆI.
9 PACHYBRACHYS MEXICANUS.
10♀ „ MARMORATUS.
11 „ LIVENS ?
12 „ LONGICOLLIS.
13 „ NIGROFASCIATUS.
14 „ DECORATUS.
15 CHLAMYS SEMILUTEA.
16 „ GODMANI.
17 „ MILITARIS.
18 CHLAMYS HÖGEI.
19 „ INSULARIS, *var.*
20 „ COLLARIS.
21 „ STRIGICOLLIS.
22 „ PUNCTIPENNIS.
23 „ ADMIRABILIS.
24 „ BUGABENSIS.
25 „ INSIGNIS.

W. Purkiss lith

Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

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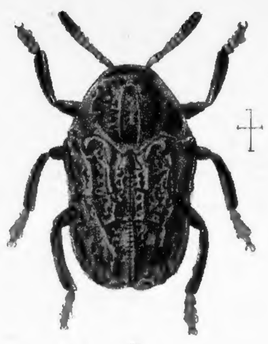

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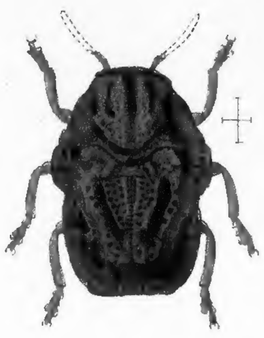

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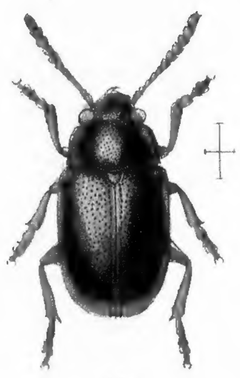

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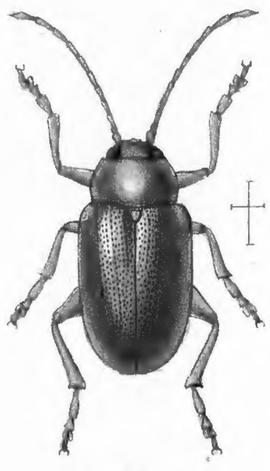

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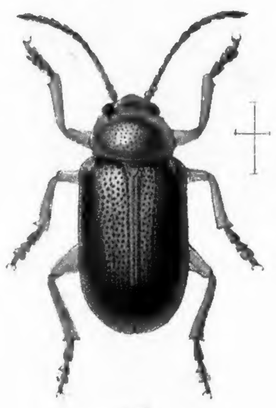

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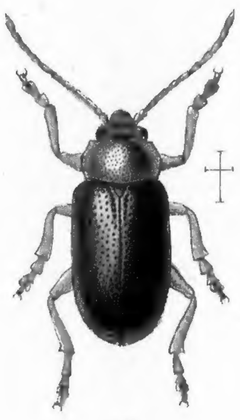

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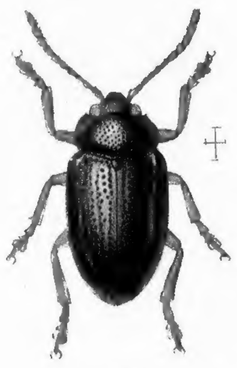

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1 CHLAMYS FULVOMACULATA.
2 „ INSTABILIS.
3 „ SUBLÆVICOLLIS.
4 „ SCABROSA.
5 „ PRODIGIOSA.
6 „ NITIDICEPS.
7 „ SEMIFULVA.
8 „ INSIDIOSA.

9 CHLAMYS BIPLAGIATA.
10 „ MULTIFASCIATA.
11 „ ANGULICOLLIS.
12♂ ISCHYROLAMPRA PANAMENSIS.
13 EUPHRYTUS PALLIDUS.
14 „ ELONGATUS.
15 „ HUMERALIS.
16 „ APICICORNIS.
17 „ (?) RUGOSUS.

18 PSEUDOCHORIS FULVICOLLIS.
19 EPHYRÆA ISTHMICA.
20 CHORIS PUBICOLLIS.
21 CLISITHERA CERASINA.
22♂ METAXYONYCHA HIRSUTA.
23 „ PANAMENSIS.
24 PRIONODERA LIMBATA.
25 PROMECOSOMA FLOHRI.

W. Purkiss lith.

Hanhart imp.
560.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 PLAGIODERA BISTRIPUNCTATA.
2 " VIRIDIMACULATA.
3 CALLIGRAPHA FULVITARSIS.
4 " FEMORATA.
5 " MARGINIPENNIS.
6 ZYGOGRAMMA FASCIATIPENNIS.
7 " OBSCURO-FASCIATA.
8 " DURANGOENSIS.
9 ZYGOGRAMMA MACULICOLLIS.
10 " MILITARIS.
11 " 10-PUSTULATA.
12 " THORACICA.
13 STILODES QUADRISTRIATA.
14 LEPTINOTARSA LINEOLATA.
15 " ANGUSTOVITTATA.
16 " TYPOGRAPHICA.
17 DORYPHORA STABILIS.
18 ELYTROSPHÆRA MARGINICOLLIS.
19 " BIFASCIATA.
20 " ERRATICA.
21 LACTICA QUADRINOTATA.
22 PLECTROTETRA NIGRIPENNIS.
23 ♂ HEMIPHRYNUS TENUICORNIS.
24 " SULCATIPENNIS.
25 ♂ HALTICA LONGICORNIS.

W. Purkiss lith.

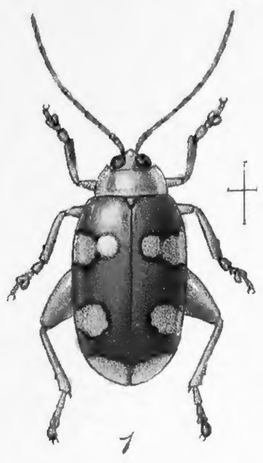
Hanhart imp.
576.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1,1a EXOCERAS FACIALIS.
2 DISONYCHA ANGULATA.
3 ORODES NIGROPICTUS.
4 NEPHRICA INORNATA.
5♂ CALLIPHRON FERRUGINEUM.
6 IPHITROIDES 4-MACULATA.
7 " 4-PUNCTATA.
8 " NIGROCINCTA.
9 CREPIDODERA AMPLICOLLIS.
10 ORTHYGIA UNIFASCIATA.
11,11a♂ SUETES NIGER.
12 CHRYSOGRAMMA TRIFASCIATA.
13 " 7-PUNCTATA.
14 " OMILTEMIA.
15 " PICTIPENNIS.
16 CYRSYLUS RECTICOLLIS.
17♂ CYRSYLUS CRASSICORNIS.
18 BLEPHARIDA ALTERNATA.
19 CYRSYLUS VITTATUS.
20 PSEUDODIBOLIA PICEA.
21 HOMOPHYLA PALLIDA.
22 SPHÆRODERMA CÆRULEA.
23 PHYDANIS NIGRIVENTRIS.
24, 25 HOMOPHÆTA SIMULANS.

W.Purkiss lith.
Hanhart imp.
585.

Centimetres
Inches
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black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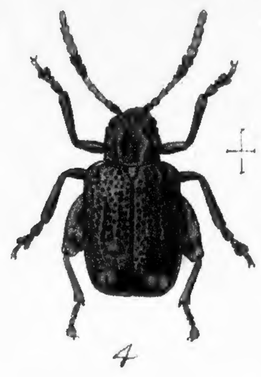
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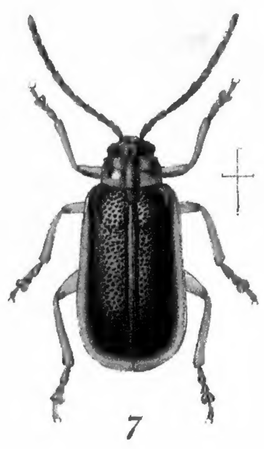
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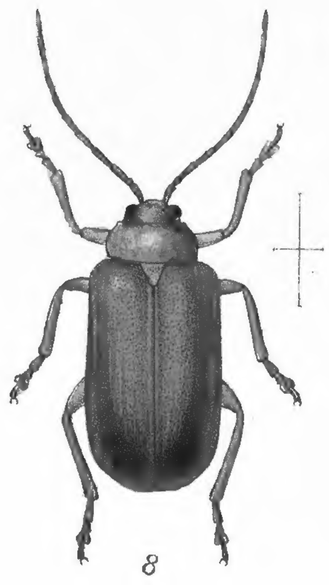
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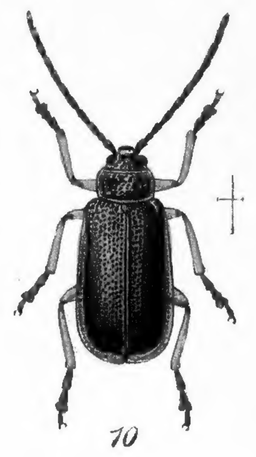
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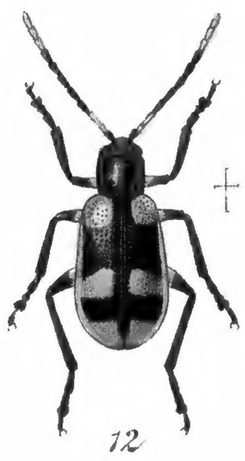
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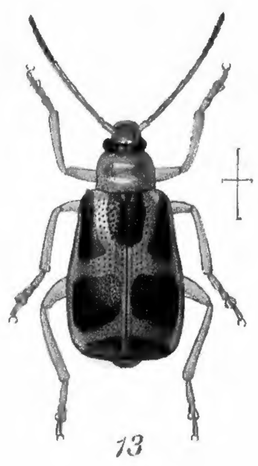
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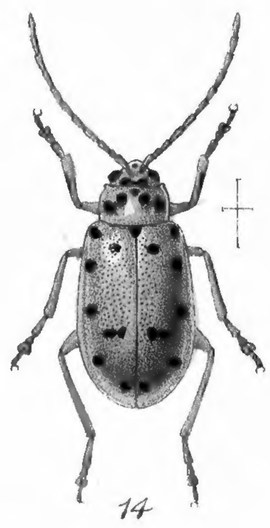
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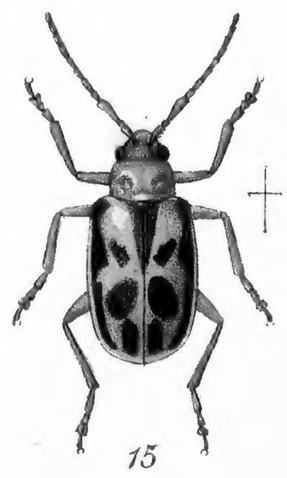
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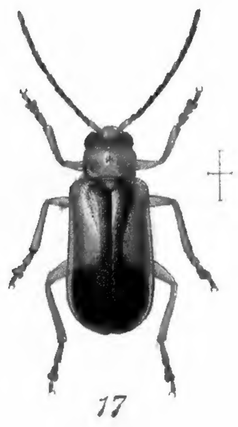
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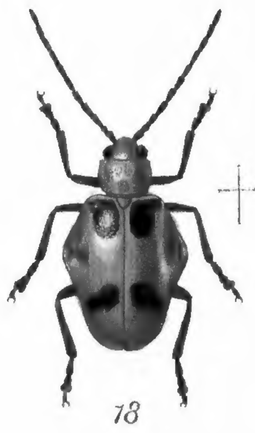
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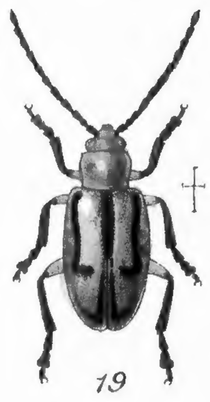
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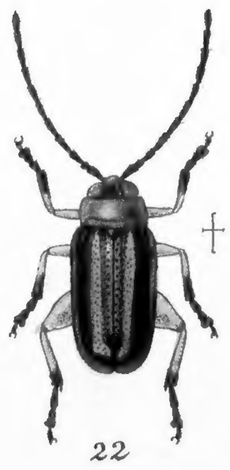
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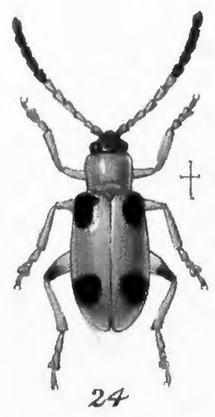
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1 ŒDIONYCHIS PAVONINA.
2♂ ALLOCHROMA TEAPENSE.
3 OMOTYPHUS SUTURALIS.
4 " CARINATUS.
5♂ ALLOCHROMA FLOHRI.
6 CORAIA APICICORNIS.
7 TRIRRHABDA SUBLÆVICOLLIS.
8 " HÖGEI.
9 TRIRRHABDA SEMIVIRIDIS.
10 " RUGOSA.
11 GALERUCELLA AMABILIS.
12 DIABROTICA PEREGRINA.
13 " GUERREROENSIS.
14 " 14-PUNCTATA.
15 " (?) ANTENNATA.
16♂ PSEUDODIABROTICA METALLICA.
17 NEOBROTICA RUATANÆ.
18♂ MALACORHINUS COBANENSIS.
19♂ " EXCLAMATIONIS.
20♂ METACORYNA PRETIOSA.
21 HOPLACERUS TIBIALIS.
22 LACTICA VITTATIPENNIS.
23 BLEPHARIDA SINGULARIS.
24 LACTICA VARICORNIS.
25♀ PIASUS FULVUS.

W. Purkiss lith.
Hanhart imp.
588.

Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black