



Contributions to the Coleopterology of the United States (No 4)

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punctate, the margins not reflexed. It should be associated with *leucostictus* in the section *Brilconemis*. It is a more elongate species than the latter and with a different form and sculpture of mentum.

One specimen from Arizona, kindly given me by Mr. L. E. Ricksecker.

Contributions to the Coleopterology of the United States.

(No 4.)

BY GEORGE H. HORN, M. D.

In the initial paper of the present volume Dr. LeConte remarks that it includes descriptions of nearly all the important material in his collection, and that previous papers by me exhausted nearly all undescribed species in my cabinet.

It has been my custom to avoid, as far as possible, the description of isolated species, except in the case of those belonging to very recently monographed families, allowing the others to accumulate until their numbers render it advisable to prepare essays of a more or less monographic character.

The quantity of new material has at last become too great to neglect and the present contribution has been prepared, at the same time the principle above mentioned has been almost strictly adhered to. Several portions which were originally part of the present paper have been separated under independent titles more expressive of their contents.

The typical specimens of all the new species which follow are in my cabinet.

CARABIDÆ.

CALOSOMA Weber.

C. Morrisonii n. sp.—Black, moderately shining. Head moderately closely punctate, rugulose at the sides, mandibles transversely wrinkled. Thorax twice as wide as long, base and apex nearly equal, sides strongly arcuate in front, oblique behind, hind angles very obtuse, lateral margin narrow in front, more widely reflexed posteriorly, the basal impressions moderately deep, apex feebly, base more distinctly emarginate, median line distinct, surface moderately closely punctate and more rugulose at the sides and along the base. Elytra oval, widest behind

the middle in both sexes, humeri distinct, surface rather shining, with about fifteen rows of rather fine not closely placed punctures, the intervals with a single row of finer and more distant punctures, the fourth, eighth, twelfth and submarginal intervals with a series of moderately distant larger golden punctures. Prothorax beneath sparsely punctate, metathorax at sides more coarsely, abdomen sparsely punctate at the sides. Length .72-.80 inch: 18-20 mm.

The male has three joints of the anterior tarsi spongy pubescent beneath. This species from the evident golden elytral spots must be associated with *calidum* and *tepidum*, than either of which it has much smoother elytral sculpture although resembling them in general form. It might be mistaken for a smooth variety of *obsoletum*, but the elytra are more dilated, their sculpture smoother, and without the imbricated appearance. The base of the thorax is distinctly bisinuate in *obsoletum* and simply emarginate in the present species as well as in those with which it is associated.

Collected by Mr. H. K. Morrison in Colorado. With it I associate his name as an evidence of my appreciation of his industry and success in adding to a knowledge of our fauna.

STOLONIS Motsch.

The occurrence of a species of this genus within our faunal limits is rather unexpected, as none have as yet been found north of Yucatan.

Stolonis was rather insufficiently described by Motschulsky (Bull. Mosc. 1865, ii, p. 230), but to Mr. H. W. Bates we owe a fuller exposition of its characters in his usual able manner (Ent. Mo. Mag. viii, p. 148). Chaudoir gives some additional information regarding species apparently unknown to Mr. Bates (Bull. Mosc. 1873, p. 85).

There can be no doubt of the correctness of the views of Bates and Chaudoir in associating *Stolonis* with *Loxandrus*. The three glabrous antennal joints and the elytral plica are sufficient to indicate its position in the Pterostichini. The anterior tarsi are obliquely dilated in the males as in *Loxandrus*, although Chaudoir says this is very feebly evident in the smaller species. The elytra have one dorsal puncture on the third interval rather closer to the second stria, there is no scutellar stria. Chaudoir indicates the only positive and permanent character which will distinguish *Stolonis* and *Loxandrus*. In the former the thorax is strongly constricted at base forming, as it were, a neck. The acute margin of the thorax does not extend on this neck.

S. Ulkei n. sp.—Piceous black, shining, iridescent. Head smooth, a deep frontal impression each side, and a slight trace of a vertical fovea. Antennæ slender, basal joint testaceous, 2-6 piceous, 7-11 white. Thorax cordate, sides

strongly arcuate, strongly constricted at base, surface smooth, median line rather deeply impressed, subapical impression feeble, a few coarse punctures along the base, especially near the hind angles, which are rectangular. Elytra oval, humeri rounded, surface moderately deeply striate, the striæ crenately punctured, intervals very slightly convex, the sutural interval behind the middle and the lateral margin of the elytra ferruginous. Body beneath smooth, shining, iridescent. Legs pale yellowish testaceous. Length .24 inch; 6 mm. (Pl. 4, fig. 1.)

It is not without some hesitation that I give this species a name. The description of *S. intercepta* Chaud. from Yucatan, fits very accurately the species before me, but being rather a comparative than a didactic description it is impossible to ascertain.

One ♀ specimen from Texas. I have seen another in the cabinet of Mr. Ulke.

PLATYNUS Bon.

P? quadrimaculatus n. sp.—Rufo-testaceous, sides of abdomen piceous, head black, elytra black with a large humeral spot confluent with that on the opposite side, another very little smaller near the apex. Head oval, eyes distant from the thorax, surface subopaque, finely alutaceous, a few punctures near the occiput. Thorax somewhat cordiform, a little longer than wide, narrower at base, apex feebly emarginate, base truncate, sides in front arcuate, posteriorly sinuate, hind angles rectangular but not prominent, an extremely narrow reflexed margin, disc very slightly convex, basal impressions shallow but nearly reaching the middle, median line finely impressed, surface subopaque, alutaceous, very sparsely finely punctate. Elytra oval, broader behind, humeral angles much rounded (body feebly winged), striate, striæ obsolete punctured, intervals flat, alutaceous, dorsal punctures three, on the third interval close to the third stria. Body beneath more shining than above, almost entirely smooth. Metasternal episterna moderately long. Tarsi slightly hairy on the upper side, without tarsal grooves. Length .30 inch; 7.5 mm. (Pl. 5, fig. 2.)

Female.—Tarsi slender, fourth joint scarcely emarginate. Last ventral with three setæ each side at apex.

I place the very pretty species above described in *Platynus* for want of knowledge of a better place. While all the essential characters are those of that genus, the slightly hairy upper side of the tarsi is at variance, this in connection with the style of coloration makes the species rather an anomaly in the genus. The general form of body and the long basal impressions of the thorax are very like some of the apterous *Platyni* (e. g. *jejunus*). The male might give some additional characters and lead to the formation of a new genus, which I suppose will have to be done.

I have seen but one specimen kindly sent me by Dr. John Hamilton, of Allegheny, collected by Mr. Klages "Feb. 27, 1881, under the bark of a fallen gum tree near Owensburgh, Ky." (banks of the Ohio, near Louisville.)

GALERITA Fab.

G. decipiens n. sp.—Form of *Janus*. Head, palpi antennæ, body beneath and legs black. Thorax reddish yellow, elytra decidedly bluish. Head oval, very broad behind the eyes, coarsely and densely punctate. Thorax as in *Janus*, oval narrowed behind, broadest in front of middle, hind angles very obtuse, surface rather densely and coarsely punctate. Elytra oval, rather depressed, black, surface decidedly blue, especially at the sides, striate, striæ distantly punctured, intervals rather coarsely, closely and roughly punctate, sparsely pubescent. Body beneath more shining, less closely punctate and more sparsely pubescent. Length .70 inch; 18 mm.

The colors of this species are those of *atripes*, except that the elytra are more distinctly blue. From that species it is known by the form of the head. Two species, *atripes* and *bicolor* have the head rapidly narrower from the eyes to the neck, the present species has more nearly the form of head of *Janus*.

Occurs in Arizona.

LEBIA Latr.

L. montana n. sp.—Beneath and head black, thorax red, elytra dark blue, or with a slight greenish tinge. Antennæ slender, piceous, two basal joints and part of the third red. Head very sparsely finely punctate, rather abruptly narrowed behind the eyes. Thorax red, twice as wide as long, median line finely impressed, very little narrower behind, margin narrower in front, broader behind, hind angles rectangular, surface finely transversely wrinkled. Elytra very finely striate, striæ obsoletely punctured, intervals flat, very finely alutaceous, dorsal punctures two on the third interval near the third stria. Abdomen very sparsely punctate. Legs piceous or piceo-testaceous. Length .22 inch; 5.5 mm.

This species belongs to that division of *Lebia* defined by Chaudoir as *Lebia* proper. By its general appearance it is most closely related to *viridipennis*. The latter has a yellow under body, and the legs, except the knees and tarsi, are yellow. The elytral striæ are, in *montana*, a little more distinct. The only other species similarly colored is *atrípennis*, which has the metathorax red, and belongs to a different section of the genus.

Occurs in Montana.

L. lecta n. sp.—Body beneath, head, thorax, legs and antennæ pale rufo-testaceous, abdomen piceous, elytra metallic green. Head suddenly narrowed immediately behind the eyes, surface alutaceous, impunctate. Antennæ slender, entirely rufo-testaceous. Thorax very little narrowed behind, margin rather broad, wider posteriorly, hind angles rectangular, median line finely impressed, surface alutaceous and transversely wrinkled. Elytra entirely metallic green above, the epipleuræ rufo-testaceous, surface rather deeply striate, striæ finely punctured, intervals slightly convex, alutaceous. Abdomen nearly smooth, the punctures sparse and very distant. Fourth joint of hind tarsi very deeply bilobed. Length .14 inch; 3.5 mm.

The specimen before me is a female, and I cannot determine, with absolute certainty, whether the species belongs to the *Loxopeza* or *Lebia* series. The fourth hind tarsal joint being very deeply bilobed it is more than probable that it is a true *Lebia*, and should be placed near *pleuritica*. It is a much smaller species than any in our fauna except *pumila*, and resembles a diminutive *pleuritica* in color except that in the latter the side margin of the elytra is narrowly pale.

One specimen, Florida, given me by Mr. W. H. Ashmead.

L. scapula n. sp.—Antennæ rufo-testaceous. Head rufo-testaceous, sparsely finely punctate. Thorax similar in color, transverse, slightly narrower behind, margin moderately wide, wider near the hind angles, which are rectangular, surface slightly transversely wrinkled. Elytra piceous, almost black, with a large rufo-testaceous humeral spot which extends in a point on the fifth interval, and is prolonged narrowly along the side to the apical margin, surface striate, not punctate, intervals slightly convex. Body beneath and legs rufo-testaceous. Abdomen piceous, sparsely punctate. Length .22 inch; 5.5 mm.

From its style of coloration this species resembles *L. xanthopleura* Chd., as figured by Mr. Bates (Biol. Cent. Am. vol. i, pt. 1, pl. xi, fig. 9). It is, however, a smaller species, with a differently formed thorax, and without the humeral piceous spot. The figure (Pl. 5, fig. 10) will give an idea of the markings. It should be placed among the *Lebiæ*, although the mentum tooth is indistinct. It is the only true *Lebia* in our fauna with ornate elytra having a pale head.

One specimen, Arizona.

L. vivida Bates, Biol. Cent. Am. vol. 1, pt. 1, p. 298.—Rufo-testaceous, not shining. Head black, apical half and narrow basal margin of elytra blue. Antennæ piceous, basal joints somewhat paler. Head black with slight tinge of blue, moderately coarsely but not closely punctate. Thorax transverse, slightly narrower posteriorly, margin moderately wide, broader at the hind angles which are rectangular, surface rather coarsely punctate and wrinkled. Elytra striate, the striæ not visibly punctate, intervals flat, rather coarsely sparsely punctate and alutaceous, basal margin narrowly blue-black, apical half blue-black, the anterior margin of the latter space irregular. Body beneath shining, very sparsely punctate. Femora and tarsi almost black, tibiæ paler, sometimes testaceous. Length .22 inch; 5.5 mm.

The accompanying sketch (Pl. 5, fig. 7) will give an idea of the style of marking of this species. By its color and the rather coarse punctuation of the surface is very distinct from any species in our fauna. In our series it should be placed with *divisa* after *bitaeniata* and *pulchella*.

Two specimens, Arizona.

This species is referred by Mr. Bates to *Metabola*, and as I have already expressed the opinion that *Lebia* has been very artificially and unnecessarily divided, I prefer to retain the name *Lebia* alone.

L. depicta n. sp.—Rufo-testaceous, legs entirely and antennæ, except first joint, black, elytra conjointly with three black stripes, the sutural bifurcate at the base. Front sparsely punctate, at the sides and posteriorly slightly wrinkled. Antennæ nearly black, the basal joint rufo-testaceous. Thorax very little narrowed behind, the margin rather wide, wider posteriorly, hind angles rectangular, median line finely impressed, surface wrinkled and more rugulose near the side margin. Elytra finely striate, striæ obsolete punctulate, intervals slightly convex, very finely alutaceous, general color pale yellow, a common black sutural vitta which occupies the two inner intervals on each elytron, except a short distance at tip, and bifurcate about one-third from the base, on each elytron a vitta beginning at the shoulder occupying the sixth and seventh intervals, becoming a little broader near the apex. Legs and palpi entirely black. Length .26 inch: 6.5 mm. (Pl. 5, fig. 6.)

This species belongs to the *Aphelogenia* group of *Lebia*, characterized by the absence of mentum tooth. In its markings it resembles *furcata*, but differs from all our species in this series with wide thoracic margin by its entirely black legs.

Occurs in Montana.

L. vittata Fab. var. *Spraguei* Horn (Pl. 5, fig. 9).

The variety above indicated is that form in which nearly the entire disc of the elytra, except a narrow side margin and apex, is black. I have now specimens from Georgia which correspond in every particular with the figure given by Chaudoir in his monograph (Bull. Mosc. 1871, i, p. 40, Pl. 3, fig. 127). The typical form of *vittata* has some resemblance to *scopularis*, but there are many characters separating these. *L. conjungens* Lec. is really a variety of this species.

L. pectita pro *vittata* ‡ Horn nec Fab. (Pl. 5, fig. 5.)

In consequence of the correct determination of the preceding species it becomes necessary to change the name of the present. It is also a vittate species, but the common sutural vittata reaches the apex but does not bifurcate at base; the outer vitta is abbreviated at base and apex, limited within by the fourth stria, extending over three intervals (5-6-7), but narrower toward the apex.

Our species of the division *Aphelogenia* separate into two natural series: (1) those with the thorax widely margined, and (2) those with a very narrow margin. The first series contains the following species:

Body beneath pale; head and thorax similar in color.

Elytra with the sutural vitta bifurcate at base.

Femora in great part rufo-testaceous, sutural vitta bifurcating one-third from base.....**furcata** Lec.

Legs entirely black, sutural vitta bifurcating very near the base.

depicta n. sp.

Elytra with sutural vitta not bifurcate.

Elytra in great part black, with (at most) a narrow side margin, apex, and slender oblique stripe yellow.....**vittata** Fab.
 Elytra in great part yellow, sutural black vitta beginning at the apex but not reaching the base, the lateral vitta short.....**pectita** n. sp.

From Chevrolat's description of *flavovittata* it seems related rather to *scapularis* than to *vittata*.

CHLENIUS Bon.

C. insperatus n. sp.—Totally black. Head nearly smooth. Thorax transverse, a little wider at base than apex, sides moderately arcuate, feebly convex, surface coarsely punctured, the punctures rather irregularly placed, being denser along the base. Elytra a little wider than the thorax, basal marginal line not angulate at the humeri, surface finely striate, striæ with distant punctures, intervals flat not closely punctate, pubescence fine and black. Prothorax beneath smooth, prosternum distinctly margined. Metasternum and side pieces with very coarse distant punctures, met-episterna longer than wide in front. Abdomen smooth at middle, sparsely punctate at the sides, not pubescent. Length .50 inch; 13 mm.

The male has the first three joints of the anterior tarsi dilated, the middle tibia not pubescent externally at tip. By the arrangement proposed by me (*Trans. Am. Ent. Soc.* v. 255) this species must be referred to the division A, in which the males have middle tibiæ not pubescent externally. By its impunctured abdomen it is more closely related to *tomentosus*, but in its general appearance it resembles a large *purpuricollis*. It differs from the latter as well as from all those with a broad thorax by the prosternum margined at tip.

Occurs in Arizona.

BRACHYLOBUS Chd.

B. caurinus n. sp.—Beneath piceous, above bright green, sparsely clothed with short fulvous pubescence. Antennæ piceous, three basal joints pale. Head shining, sparsely punctate, the vertex nearly smooth. Thorax about one-half wider than long, base slightly wider than apex, sides arcuate, very slightly sinuate in front of the hind angles, which are nearly rectangular, median line moderately impressed, a short longitudinal impression each side in front of base, surface coarsely and moderately closely punctate, especially near the base. Elytra regularly oval, very little wider than the thorax, nearly twice as long as wide, surface opaque, finely striate, intervals flat, closely submuricately punctate. Body beneath shining, the thoracic segments coarsely punctate. Abdomen more finely punctate over its entire surface. Femora piceous, tibiæ and tarsi testaceous. Length .36 inch; 9 mm. (Pl. 5, fig. 3.)

A more elongate species than *B. lithophilus* (Pl. 5, fig. 4), which it, however, resembles in general appearance. In the present species the thorax is very little wider at base than the apex and the hind angles well

defined, while in *lithophilus* the base is much wider than the apex and the hind angles obtuse or rounded. The latter species has entirely pale legs.

One specimen ♂, kindly given me by Prof. Wm. Duenkel, which was collected by him near Yreka, Cal.

STAPHYLINIDÆ.

OXYPORUS Grav.

O. austrinus n. sp.—Black, shining, elytra testaceous with the suture and outer apical angle black. Legs pale yellow, the knees and tips of tibiae narrowly piceous. Antennæ piceous, but somewhat paler at base. Thorax broader than long, narrower at base, widest in front of middle, sides arcuate. Elytra longer than the thorax, conjointly wider than long, slightly wider behind, with a subsutural and two discal punctured striae, all very regular with but few irregular punctures between them, surface smooth, the outer apical angles finely rugose. Abdomen smooth, with the usual two dorsal punctures on each segment, beneath shining with fine scattered punctures. Length .26–.30 inch; 6.5–7.5 mm.

This species resembles *vittatus*, but should be placed near *femoralis* from the finely rugose apical angles of the elytra; it differs from the latter, however, by the smaller size and entirely pale legs.

I have seen five specimens collected near Savannah, Ga., by Mr. Geo. Noble.

O. occipitalis Fauvel.

This species is mentioned to note its occurrence in Washington Territory.

O. fasciatus Mels. Proc. Acad. ii, p. 40.—Head variable in color, sometimes entirely black, usually rufo-testaceous with the front and sides black. Thorax transverse, narrower behind, sides arcuate, broadest at or behind the middle, color rufo-testaceous, apical and basal margins black. Elytra wider than the thorax, conjointly wider than long, slightly broader behind, very shining, rufo-testaceous, suture and outer apical angles black, subsutural series of punctures regular, the two discal rows somewhat irregular. Abdomen shining, terminal segment pale, fourth and fifth above and beneath entirely piceous, the second and third pale but brownish at base. Abdomen beneath rufo-testaceous except the fourth and fifth segments. Legs testaceous. Length .28–.34 inch; 7–8.5 mm.

This species has been quoted in all the books as a variety of *vittatus*, even by Melsheimer, but I am convinced that it is fully entitled to be retained as distinct, from the great uniformity of the color of the specimens before me, as well as in the shorter and broader thorax. If it must be admitted as a variety then *vittatus*, *bicolor* and *occipitalis* must also be considered varieties of one, and the entire aggregate of four called *vittatus*.

Abundant in the District of Columbia, taken by Mr. Ulke.

SILPHIDÆ.

ECHINOCOLEUS n. g.

Form convex, oboval, narrower behind. Head as in *Choleva*. Antennæ short, almost entirely glabrous, last joint pubescent at apical half; first joint cylindrical, narrower at base, second oval, joints 3-11 gradually wider, those from 3-8 gradually shorter and more transverse, eighth as wide as the seventh and ninth and a little shorter, joints nine and ten nearly equal, as wide as long, eleventh longer, oval at tip. Maxillary palpi with last joint elongate conical as long as the preceding joint. Middle coxæ slightly separated, the mesosternum not carinate; posterior coxæ contiguous. Tibiæ spinulose externally, spurs slender and moderately long.

The genus for which the above name is proposed is closely related to *Choleva*, and differs especially in the form and structure of the antennæ. In this respect it resembles *Catopomorphus*, from which it differs by the non-carinate mesosternum and the form of the terminal joint of the palpi.

E. setiger n. sp.—Broadly oboval, narrower behind, pale castaneous, feebly shining. Head finely punctulate, sparsely finely pubescent, with short, semi-erect setæ intermixed. Thorax very transverse, more than twice as wide at base as long, apex subtruncate, sides arcuately narrowing to the front, base broadly emarginate, the hind angles rectangular not prolonged, surface extremely finely punctulate and with fine brownish pubescence, with semi-erect setæ intermixed. Elytra as wide at base as the thorax, sides rapidly arcuately narrowing to the apex, the two apices conjointly rounded, sutural stria distinct, abbreviated in front, surface minutely punctulate, the punctures arranged in strigæ slightly oblique, surface finely pubescent with short semi-erect not closely placed setæ arranged in about eleven series on each side. Body beneath sparsely punctate with coarser pubescence than above. Length .11 inch; 2.75 mm.

This species resembles in form *Ptosnophagus brachyderus* (Trans. Am. Ent. Soc. 1880, Pl. v, fig. 16), but is more arcuately narrowed posteriorly.

Two specimens, Arizona.

CHOLEVA Latr.

C. alsiosa n. sp.—Oblong, rather slender, piceous, subopaque, elytra slightly fuliginous. Head rather coarsely but not closely punctate, finely pubescent. Antennæ rather slender, longer than the head and thorax, piceous, the two basal joints somewhat paler. Thorax less than twice as wide as long, narrower in front, sides moderately arcuate, hind angles not rectangular, rather obtuse, surface slightly shining, moderately densely and finely, sub-muricately punctured and finely pubescent. Elytra elongate oval, as wide at base as the base of the thorax, gradually narrowing to apex, sutural stria fine abbreviated at base, surface opaque moderately densely punctate and finely pubescent, the punctures coarser than the thorax. Body beneath moderately closely punctate, finely pubescent. Legs piceous, tips of tibia and tarsi rufescent. Length .16 inch; 4 mm.

Male.—First three joints of the anterior tarsi and the first of the middle dilated. Under side of front femora flattened, slightly longitudinally concave, without tubercle.

This species, the most elongate and narrow in our fauna, might be mistaken for a small *Prionochæta opaca*. Among our species of this genus it is most closely related to *C. luridipennis*, but is longer and differently colored and punctured.

One male given me by Mr. Ulke, from the Yukon River, Alaska.

PTOMAPHAGUS Illig.

P. fisus n. sp.—Form *Mordella*-like, color pale brownish, very finely pubescent. Head minutely, moderately closely punctate. Thorax nearly twice as wide at base as long, much narrowed in front, sides slightly arcuate, hind angles rectangular, disc moderately convex, very finely and rather closely transversely strigose-punctulate. Elytra as wide at base as the thorax, a little more than twice as long as it, sides feebly arcuately narrowing to apex, the apices slightly obliquely truncate, sutural stria rather deeply impressed, surface moderately closely and very obliquely strigose. Body beneath finely not closely punctulate. Middle and posterior tibiæ fimbriate at tip with short, equal, closely placed spinules. Length 10 inch; 2.5 mm.

Male.—Posterior femora slightly angulate-dentate at middle, anterior tarsi dilated.

This species is closely related to *consobrinus* and *californicus*, having sculpture similar to the former and the color of the latter. In both these species the posterior femora are simple in the male. To this species belong the Pacific forms referred by me to *consobrinus*, the insufficiency of material by the absence of males prevented me from considering it distinct.

Occurs in Arizona and California (Owen's Valley).

P. Ulkei n. sp.—Form moderately robust, piceous, clothed with very fine sericeous pubescence. Head minutely punctured. Antennæ rather stout, piceous, apical and two basal joints pale. Thorax one-half wider than long, sides posteriorly scarcely convergent, apical third arcuately narrowing to the front, hind angles acute, slightly prolonged, surface very finely and densely strigose, finely pubescent. Elytra not wider than the thorax, the sides gradually narrowing to the subtruncate apices, sutural stria deeply impressed, entire, surface extremely finely and very closely obliquely strigose, clothed with fine sericeous pubescence. Body beneath finely, sparsely punctate, abdomen more closely and coarsely punctate. Legs piceous. Tibiæ fimbriate at tip with fine, equal, closely placed spinules. Length .15 inch; 3.75 mm.

By its character this species is related to *californicus* and its allies, especially by the dense strigosity to *nevadicus*. It is, however, larger, more robust, darker in color, and with a thorax longer and less narrowed in front than is usual in our species.

One female specimen collected in the District of Columbia by Mr. Ulke, whose name I take pleasure in associating with it as an evidence of my appreciation of his industry and acute observation.

HYDNOBIUS Schmidt.

H. arizonensis n. sp.—Oblong oval, dark castaneous, moderately shining. Antennæ rufo-testaceous, club piceous. Head sparsely punctate: labrum deeply bilobed. Thorax more than twice as wide as long, base and apex truncate, hind angles obtuse, surface finely and sparsely punctate. Elytra as wide at base as the thorax, oval, gradually narrowing to apex, finely striate, striae punctured, the intervals not punctulate but transversely strigose, the 3-5-7 with distant punctures. Metasternum coarsely punctured at the sides. Abdomen more finely and sparsely punctate. Legs testaceous. Length .10 inch; 2.5 mm.

One female specimen, with simple femora, belongs to the series indicated by me with bilobed labrum and differs from all the species of that series by the distantly strigose elytral intervals.

One specimen, Arizona.

SCYDMENIDÆ.**SCYDMENUS** Latr.

S. deformatus n. sp.—Reddish brown, shining, very sparsely pubescent. Head oval, gradually narrowed behind the eyes, then suddenly constricted to a neck, by which it is slightly separated from the thorax. Thorax conical, truncate at apex and base, as long as wide at base, apex about one-fourth narrower, surface smooth, shining. Elytra wider at base than the thorax, ovate, very little longer than wide, widest at middle, then rapidly narrower to apex, base slightly depressed, humeral umbone slightly prominent, surface shining, very sparsely and minutely punctulate. Legs moderately long, femora not strongly clavate. Length .08 inch; 2 mm.

Male—Antennæ with first joint cylindrical, slightly narrower toward the base, second and third conical, similar, together longer than the first, fourth shorter and slightly broader, fifth transversely oval, very broad, prolonged on the upper side, sixth and seventh also transverse, narrower than the fifth, the seventh being a little narrower than the sixth, eighth smaller than the seventh, rounded, ninth broader and as long as the two preceding joints together, tenth conical, a little wider than the ninth and one-third longer, eleventh oval, a little longer than the tenth (Pl. 5, fig. 11).

This species may be referred to Schaum's stirps 4 (Germar *Zeitschr.* v, p. 465), by the distinct neck, the carinate mesosternum, the long second joint of max. palpi, and the subulate terminal joint.

The specimens before me would have been referred to *S. biformis* Mækl. (Bull. Mosc. 1852, ii, p. 330) but the author says that species has a four-jointed club, and that the sides of the thorax are impressed in front of base.

Several specimens were collected by Mr. Crotch at Los Angeles, Cal.

EROTYLIDÆ.

LANGURIA Latr.

L. divisa n. sp.—Slender, black with slight tinge of bronze, anterior half of thorax red. Head black above and beneath with slight bronze tinge, coarsely sparsely punctate. Thorax about one-fourth longer than wide, apex and base equal, sides very nearly straight, sparsely punctate, anterior half red, posterior black, the line of division being very sinuous. Elytra with rows of moderate size, rather deeply impressed, closely placed punctures which become gradually finer posteriorly and reach nearly the tip, intervals flat with a row of distant fine punctures. Thorax beneath red, except at the posterior angles. Body beneath black, very sparsely finely punctate, last ventral segment more coarsely punctate. Legs black, smooth. Length .40 inch; 10 mm. (Pl. 5, fig. 25a.)

A species which might readily be supposed to be a variety of *gracilis*, but the arrangement of color seems very constant. *L. gracilis* seems always to have the head and thorax beneath entirely red, and while the dorsal black vitta may expand to that the entire disc above is black, there is never a tendency to divide the color transversely.

Three specimens, Colorado and New Mexico.

LANGURITES Motsch.

L. lineatus Cast.—Body beneath entirely red. Antennæ piceous, basal joint red, club very gradually formed, four-jointed. Head entirely red (a small occipital piceous spot), above and beneath very sparsely finely punctate, supra-orbital line rather distant from the eye. Thorax about one-fifth longer than wide, base slightly broader than apex, sides nearly straight, surface smooth, impunctate, color above red with a median entire vitta and very narrow side margin black; beneath red, a little more widely black at the sides than above. Scutellum piceous. Elytra piceous with a basal spot on each side red extending about one-fifth of the elytra but not well defined, disc with rows of feebly impressed punctures which become obsolete near the tip; sutural angle of elytra emarginate but not spinous. Body beneath smooth, last ventral segment coarsely closely punctate at tip. Legs red, tarsi and posterior tibiæ piceous; upper side of anterior and middle femora striped with black. Length .40 inch; 10 mm.

This species differs from all in our fauna in the very oblique emargination of the sutural angle of the elytra (Pl. 5, fig. 25b) and the antennal club of but four joints.

One specimen, Arizona, occurs from Venezuela northward.

COLYDIIDÆ.

SYNCHITA Hellw.

S. dentata n. sp.—Piceous, opaque, moderately elongate. Head rather coarsely granulate. Thorax nearly square, very slightly narrower behind, apex truncate, base arcuate, margin rather coarsely 8-dentate and fimbriate, disc convex with coarse tubercles. Elytra scarcely wider at base than the thorax, slightly wider posteriorly, lateral margin serrulate, disc with rows of rather coarse granules replacing the costæ. Body beneath rugous. Length .10 inch; 2.5 mm.

Related to *granulata* but smaller, more convex, with relatively coarser tubercles and a more nearly square thorax much more coarsely dentate at the sides.

One specimen, Tampa, Fla.

S. obscura n. sp.—Piceous opaque, facies of diminutive *Cicones marginalis*. Head very coarsely granulated. Thorax nearly one-half wider than long, base slightly wider than apex, sides feebly arcuate, margin narrowly explanate, fimbriate with short stiff hairs which are directed anteriorly, hind angles obtuse. disc convex, roughly granulate. Elytra not wider than the thorax, a little more than twice as long, disc with suture and four costæ finely elevated and bearing short, semi-erect, curved setæ, the intervals coarsely, biserially punctate, the interval between the margin and costa with one series of punctures, these closely placed. Body beneath opaque, scabrous. Length .05 inch; 1.25 mm.

The smallest species known to me. It is related by its costate elytra to *laticollis* and *variegata*, and agrees with the latter in the absence of an elevated line on the thorax, but differs in its much shorter and broader form and the absence of color ornamentation on the elytra. My specimen has a trace of a paler spot near the base of the first costa.

One specimen, District of Columbia. E. A. Schwarz.

DITOMA Illig.

D. quadricollis n. sp.—Dark brown, opaque, form depressed, parallel. Antennæ ferruginous, ninth joint scarcely wider than the eighth. Head rather coarsely granulate, epistoma pale. Thorax wider than long, sides straight, the margin serrulate, base and apex equal, disc with two costæ each side the outer joining the apical and basal margins, the inner starting at the base curved at tip near the apex; two short prescutellar costæ which converge in front. Elytra very little wider than the thorax, suture, margin and four discal costæ moderately elevated, the intervals coarsely biserially granular. Body beneath paler, opaque, more finely granulate and sparsely pubescent. Legs ferruginous. Length .10 inch; 2.5 mm.

This species is closely related to *quadrivittata* and *ornata*, which are maculate on the elytra. Independently of color the former species is broader, the sides of the thorax are distinctly arcuate and scarcely perceptibly crenulate; the latter species has the thorax distinctly narrower behind. In the present species the base of the thorax is less arcuate, so that the hind angles are closer to the elytral humeri.

Collected by Morrison in North Carolina.

LASCONOTUS Erichs.

L. vegrandis n. sp.—Form slender, dark brown opaque, elytra somewhat paler at base. Antennæ rufous. Head coarsely moderately closely punctate. Thorax longer than wide, sides nearly parallel and straight, anterior angles rather obtuse, posterior angles sharply rectangular, middle of disc broadly but vaguely

concave, on each side of this an almost obsolete impressed line, surface densely punctate. Elytra wider than the thorax, parallel, four discal costæ, suture and margin moderately elevated, intervals biserially coarsely and closely punctate, the two rows narrowly separated. Body beneath darker than above, closely coarsely punctate. Length .12 inch; 3 mm.

This species has no striking peculiarities. By its characters it is related to *simplex* Lec., but is larger, the punctures of the intervals smaller, without thickened anterior margin of thorax, and with well defined hind angles of the thorax.

One specimen collected by J. J. Rivers, near Berkeley, Cala.

L. servus n. sp.—Moderately elongate, brown, opaque. Head moderately coarsely punctate. Thorax a little longer than wide, sides nearly straight, anterior angles obtuse, the posterior distinct, disc broadly longitudinally concave at middle, between this and the side margin an elevated line which joins both the apical and basal margins, hooked at each end and entering for a short distance the apical and basal ends of the median concavity, apical margin thickened, surface moderately closely coarsely punctate. Elytra very little wider than the thorax, four discal costæ, suture and margin slightly elevated, intervals biserially punctate, the punctures distinctly separated, and the rows of punctures as widely separated as the diameter of the punctures. Body beneath opaque, the prothorax coarsely punctate, the abdomen granulate. Length .12 inch; 3 mm. nearly.

Related to the preceding species and *simplex*, and differs from both by the presence of an elevated line between the median concavity of the thorax and the side. The thoracic sculpture seems to be a more complete development of that seen in *referendarius*.

The species of *Lasconotus* now known to me are separable in the following manner:

Elytra equally costate over the whole surface.

Thorax costate, or with feebly elevated sinuous lines.

Thorax wider than long.

Disc of thorax costate. Eyes partially concealed.....**complex** Lec.

Disc with sinuous lines indicated by pubescence.....**borealis** Horn

Thorax longer than wide, disc with sinuous lines.....**linearis** Crotch.

Thorax vaguely longitudinally concave.

Thorax longer than wide.

Disc without elevated line between the middle and side.

Apical margin not thickened, hind angles sharply rectangular.

vegrandis Horn.

Apical margin thickened, hind angles obtuse.....**simplex** Lec.

Disc with lateral elevated line.....**servus** Horn.

Thorax as wide as long, no lateral elevated line, apical margin thickened.

referendarius Zimm.

Elytra broadly longitudinally concave, the fifth interval rather strongly elevated, the first and third not.....**pusillus** Lec.

- L. complex** Lec., occurs in California and Nevada.
L. borealis Horn, at Lake Superior and White Mountains.
L. linearis Crotch, California.
L. vegrandis Horn, California.
L. simplex Lec., Cape San Lucas.
L. servus Horn, California.
L. referendarius Zimm., District of Columbia to Florida.
L. pusillus Lec., Florida to Arizona, Vancouver and Nevada.

COXELUS Latr.

C. serratus n. sp.—Oblong oval, brown or piceous, opaque. Head granular, with sparsely placed scale-like hairs. Antennæ with joints 2-8 short, the outer ones moniliform, the third not longer than fourth. Thorax transverse, slightly narrower behind, disc convex, a vague median groove, margin narrowly serrate and fimbriate, surface granular and punctate. Elytra oval, not wider than the thorax and about two and a half times as long, with rows of very large and deep, closely placed punctures, the intervals very narrow, surface sparsely clothed with short cinereous pubescence. Body beneath granulate, opaque. Length .08-.10 inch: 2-2.5 mm.

A very small species compared with our others, and with disproportionately deep elytral sculpture. When the surface is coated with the usual exudation it seems roughly granulate. Easily known by its small size and serrate thorax.

Two specimens from California, from Mr. H. Ulke.

HISTERIDÆ.

ULKEUS n. g.

Head deeply inserted, front deeply concave with two feeble carinæ convergent above, epistoma truncate. Labrum small, trapezoidal. Mandibles stout, not prominent. Eyes convex, very coarsely granulate.

Antennæ inserted under a frontal margin, 10-jointed, first joint cylindrical, gradually broader externally, second joint large, thick irregularly pentagonal in outline, third joint shorter than the first, as long as the next three, elongate conical, arcuate, arising from the posterior angle of the second, joints 4-9 short, transverse, gradually wider, joint 10 oval, not compressed, as long as four or five preceding joints together, surface entirely pubescent, but partly corneous on the upper side.

Thorax transverse, antennal fossa large and deep, situated at the anterior angle of the thorax between the dorsal and pectoral plates, widely open in front. Prosternum moderately wide, a short lobe in front, bistriate, posteriorly flattened and slightly excavated at middle.

Mesosternum truncate in front, with a submarginal line very sinuous at middle.

Pygidium oval, inflexed.

Legs moderate in length, anterior femora much stouter than the others, the tibiæ all dilated, without spurs, the anterior truncate at tip, the outer edge minutely denticulate at lower half, middle and posterior tibiæ slightly fimbriate externally. Tarsi 5-jointed, received in badly defined oblique grooves on the upper side of the tibiæ: claws two, slender and feebly arcuate.

This genus of Histeridæ must be associated with *Hetærius* and its allies, *Echinodes* and *Eretmotes*, from which it differs in having the club oval, and in great part spongy pubescent over its entire surface except for a space on the upper side. In this respect it is more closely related to *Scapicœlis*, which is not placed in close relationship with *Hetærius* by Marseul. The essential differences between the present genus and *Scapicœlis* are in the form of the prosternum—emarginate at tip and each side bistrate in *Scapicœlis*, the mesosternum sinuate in front, the anterior tibiæ broadly emarginate externally and not denticulate. The eyes in *Ulkeus* are more coarsely granulate than in any Histeride I have examined.

In the preceding description the antennæ are given as 10-jointed, while all the figures of *Hetærius* and *Scapicœlis* give but nine joints. In a careful examination of the antennæ of the present genus made necessary by the sketch given, it was found that the large joint which is usually called the first really consists of two, the suture being well marked. This led me to an examination of *Hetærius*, and on removing an antenna of *H. Blanchardi* the same structure became evident.

In our genus *Tribalister* the club is solid, the entire surface pubescent and the entire antennæ is constructed after the usual mode in Histeridæ, with the scape long. A more careful examination of the antennæ of those genera in which the apparent first joint is very large and thick would probably show the structure indicated for *Ulkeus* and figured on the accompanying plate.

U. intricatus n. sp.—Oval, convex, castaneous shining. Head smooth, vertex with two elevated lines convergent above. Thorax a little more than twice as wide as long, margin acute, outline somewhat sinuous, surface shining, a deep arcuate groove limited externally by an elevated ridge beginning opposite the base of the first dorsal stria extending forward and joining that from the opposite side, a finely elevated line starts from opposite the base of dorsal striae 2-3-4 arching forward and joining a net-work at the middle, the line opposite the second dorsal very sinuous; a few large punctures bearing short erect setæ placed near the lateral margin, many placed along the sinuous line, a few near the two inner lines. Scutellum small but distinct. Elytra with five entire striae, the sutural interval with a row of coarse setigerous punctures, striae 1-4 deep, with coarse, rather closely placed punctures each bearing one, often two erect setæ, a very short marginal stria extending one-third from the base bearing punctures and setæ: intervals smooth and shining. Pygidium and propygidium with sparsely placed setigerous punctures. Body beneath smooth shining, a few fine punctures on the metasternum with a few others coarser and setigerous placed near a line of sculpture at middle, and others along the posterior border. Abdomen smooth, first segment with a row of setigerous punctures close to the metasternum. Legs smooth, a fine marginal line on the middle and posterior tibiæ beneath. Length .06 inch: 1.5 mm. (Pl. 4, fig. 9-10.)

A better idea may be obtained from the accompanying drawings of the intricacies of the thoracic sculpture than from a lengthy description, for such details the student is referred to the plate.

In naming the genus I desire to pay a tribute of regard to a sincere friend, an untiring collector and enthusiastic entomologist, whose kind assistance I have so often had occasion to acknowledge in this and previous essays, Mr. Henry Ulke, of Washington.

The specimen described is one of two, from the collection of Mr. Ulke, and was collected in Kansas, the other is from Texas.

BUPRESTIDÆ.

HALECIA L. et G.

H. gentilis n. sp.—Form moderately robust as in *Psiloptera Drummondi* but more narrowed posteriorly, surface bright metallic green, smoother beneath than above. Head coarsely and deeply punctured, the front slightly concave. Thorax a little longer than the width at apex, base nearly one-half broader, sides regularly arcuate and gradually narrowing from the base to apex, hind angles acute, not prolonged, disc moderately convex, median line broadly impressed posteriorly, surface coarsely, deeply and moderately closely punctured, the punctures at sides coarser and deeper than those of the disc. Elytra as wide at base as the thorax and about two and a half times as long, sides gradually narrowing from the base, the lateral margin serrulate at apical third, sutural angle acute, disc very vaguely sulcate without trace of striæ, the surface coarsely and deeply punctured, the punctures rather finer and denser near the apex. Prothorax beneath coarsely and deeply punctate, metasternum more finely punctate, very sparsely at middle, more closely at the sides. Abdomen more finely and densely punctured, especially at the sides and apex. Length .40–.56 inch; 10–14 mm.

It is with considerable doubt that this species is referred to *Halecia*. That it belongs to the Chalcophorides as defined by authors generally, is very plainly evident, but the genera of the group and even the divisions of the group itself seem very vaguely characterized. A specimen of the above species sent to Mr. Sallé elicited the opinion that it was either a *Pelecopselaphus* or a new genus. I am unwilling to place it in that genus as the tarsi are flattened from the second joint, and the first joint very distinctly longer than the second. In these respects it agrees more nearly with *Hippomelas*, in which I include three of our species formerly placed in *Gyascutus*. In the genera *Gyascutus*, *Hippomelas* and *Psiloptera*, the antennæ are inserted in a fovea, which is partly covered by an oblique plate; in *Chalcophora* there is a slight ridge, while in the species now under consideration the antennal foveæ are entirely uncovered without trace of the ridge. As I feel certain that the insect cannot be placed in any of the genera cited it is placed provisionally in *Halecia*. As speci-

mens collected by Dr. Palmer in Coahuila have been sent to the editors of the *Biologia Centrali-Americana* the species will doubtless receive attention from Mr. Waterhouse.

Southwestern Texas and Coahuila, Mexico.

Regarding *Halecia* Mr. Waterhouse remarks (*Biol. Cent. Am.* vol. iii, pt. 1, p. 5): "This genus, as at present constituted, is found throughout America from Pennsylvania to Patagonia." I am not aware of any species from the Atlantic region which can be referred to *Halecia*.

CHRYSOBOTHRIS Esch.

C. ignicollis n. sp.—Dark bronze, head and thorax bright coppery red. Clypeus broadly but not deeply emarginate. Front densely coarsely punctured, nearly flat ♂, more convex ♀, the latter with distinct smoother spaces; occiput with smooth median line. Thorax twice as wide as long, sides strongly arcuate in front, feebly at middle, obliquely convergent behind, surface coarsely but not closely punctured at middle, very densely and coarsely at the sides, base deeply bisinuate. Elytra little wider than the thorax, sides nearly parallel, apical third obliquely narrowed, apices separately rounded, lateral margin posteriorly serrulate, subsutural costa extending from apex to middle, a deep depression at middle of base, the surface rather densely and coarsely punctured with an elevated indistinct space at basal third, a larger quadrate space slightly behind the middle, another one-fourth before the apex. Body beneath coarsely not closely punctured, last ventral segment serrulate at the sides. Length .28-.30 inch; 7-7.5 mm.

Male.—Anterior femora toothed, the tooth serrate outwardly; anterior tibiæ slightly arcuate and with an acute tooth one-third from apex; middle tibiæ slightly arcuate and sinuous on the inner side; posterior tibiæ straight. Last ventral rather deeply semi-circularly emarginate.

Female.—Anterior femora as in ♂. anterior tibiæ slender slightly arcuate, without tooth; middle and posterior tibiæ straight, not sinuous on the inner side. Last ventral very feebly emarginate.

A small species resembling *contigua* in sculpture. It belongs to a small group in which the male anterior tibiæ are toothed near the tip, all of which differ in the form of the clypeal emargination.

This species is moreover noteworthy in having the middle ♂ tibiæ sinuate within.

Occurs in Colorado and Texas.

SCHIZOPUS Lec.

S. Sallei n. sp.—Oblong oval, moderately robust. Head coarsely and very densely punctured. Thorax transverse more than twice as wide as long, broadest at base, sides gradually sinuately narrowing to the front, coarsely, deeply and densely punctured, a very deep oblique impression on each side. Elytra a little wider than the thorax, sides nearly parallel in front, apical half gradually converging, apices separately rounded, surface coarsely punctate scabrous, color

brownish yellow with a darker vitta extending from the umbone nearly to the tip. Body beneath more sparsely punctate than above, more shining and distinctly æneous. Femora brown, tibiæ and tarsi paler. Length .52 inch; 13 mm. (Pl. 4, fig. 14.)

The head and thorax are darker in color than the elytra, the apex of the thorax being, however, somewhat paler. The body beneath is brownish testaceous with a slight æneous lustre.

Closely related to *S. lætus*, but differing notably in color, somewhat in sculpture, and with much deeper oblique impressions on the thorax.

One specimen kindly given me by my friend Sallé, collected by M. Alphonse Thevenet at Mariposa, Cala.

DYSTAXIA Lec.

D. LeContei Thomson.—Typi Buprestidarum, Paris, 1879, p. 6.—Crassa, obesa, convexa. Caput sat profunde et valde confertim punctulatum. Prothorax subtrapezoidalis, antice angustior et postice latior, profunde et confertim punctatus. Scutellum subrotundatum. Elytra tenuissime et confertissime granuloso-punctata, obsolete longitudin. 6-costata, apice subacuta. Corpus subtus tenuiter punctatum, Pedes punctis aliquibus impressi.

Supra bruneo-rufo aureo-viridi repercussa; antennæ desunt; corpus subtus viridi-aureum, albo-villosum, pedes clare castanei, nitidi. Long 12.5 mm.

The above is the description by Thomson of a form which seems from a specimen in my cabinet to apply rather to an immature and somewhat distorted specimen than to a valid species.

THRINCOPYGE Lec.

T. laetifica n. sp.—Form elongate, subdepressed, entirely brilliant metallic green, shining. Front moderately convex, coarsely, deeply and closely punctate. Thorax about one-third wider than long, slightly wider at base, sides regularly arcuate, widest at middle and with a submarginal impressed line at basal two thirds, apex truncate, base bisinuate, hind angles distinct but rather obtuse; disc moderately convex, median line slightly impressed posteriorly, surface with coarse punctures, sparsely and irregularly placed, coarser near the sides and closer near the front angles. Elytra as wide as the thorax at base, sides parallel, gradually narrowed at apical third, the margin slightly serrate near the apex, the tip truncate and serrulate; surface striate, striæ coarsely not closely punctate, intervals flat with a single series of fine punctures. Prosternum coarsely punctured, the flanks very coarsely but not closely. Metasternum sparsely at middle, densely at the sides. Abdomen coarsely punctured, the third and fourth segments more finely and closely, the fifth more densely. Length .64 inch; 16 mm.

A smaller species than our other two and more convex and differently colored.

Kindly given me by Mr. A. S. Fuller, who obtained it from Texas.

Our species of *Thrincopyge* may be distinguished in the following manner:

Side margin of thorax bordered with yellow.

Elytra with three yellow spots on each variable in size or nearly absent, the lateral margin never entirely yellow.....**alacris** Lec.

Elytra not maculate, the entire lateral margin narrowly yellow.

ambiens Lec.

Side margin of thorax not yellow.

Elytra entirely metallic green.....**laetifica** Horn.

These species are known to occur as follows :

alacris Lec., Texas, Arizona and Mexico.

ambiens Lec., Texas, Arizona.

laetifica Horn, Texas.

TYNDARIS Thoms.

T. cineta n. sp.—Form robust, depressed cylindrical, narrower posteriorly, black, æneous beneath, elytra with a pale median fascia not reaching the suture. Head convex, surface shining, slightly æneous, coarsely and moderately closely punctured. Antennæ black, slender (first six joints only). Thorax a little wider than long, narrower in front, sides moderately arcuate, broadest at middle, base slightly narrower, hind angles rectangular, disc convex, opaque, moderately densely punctate, a smoother median line extending from base nearly to apex. Elytra black, more shining than the thorax, not wider at base than it, gradually narrower posteriorly, lateral margin finely serrulate posteriorly, the apices separately rounded and quadridentate, disc moderately convex, striate, striæ punctured, intervals flat coarsely and irregularly but not closely punctate, the apical portions of the outer intervals distinctly muricate. Flanks of prothorax moderately densely punctate with silvery white pubescence, extreme side margin smooth, prosternum more finely punctured in front, coarsely and densely punctured at tip. Metasternum and coxal plates more coarsely punctured at middle, more densely and finely at the sides and with silvery white pubescence. Abdomen with the first segment and the middle of the other segments less densely punctured than at the sides where there is silvery pubescence. Legs black with slight violaceous lustre. Length .44 inch : 11 mm. (Pl. 4, fig. 13.)

This insect is of the same general form as *Ptosima gibbicollis*, but with a more robust facies. The median elytral band is very much broader at the side margin and the posterior edge is oblique, the anterior concave. The color of the band is pale red at the side and yellowish white on the disc.

The genus to which I have referred this insect is represented by two species from Chili, but the description by Thomson (Archives i, p. 168) and Lacordaire's note (Génera iv, p. 66, note) apply so closely to our insect that I see no reason for separating it. In our series it is most closely related to *Ptosima*, from which it differs particularly in its simple tarsal claws.

One specimen Texas, given me by Mr. A. S. Fuller.

LAMPYRIDÆ.

ZARHIPIS Lec.

In addition to the characters given by Dr. LeConte (Trans. Am. Ent. Soc. ix, p. 39) for the differentiation of the species there are some differences in the form of the maxillary palpi which seem important.

Z. integripennis Lec.—First joint of maxillary palpi longer than either of the others, but not as long as the two following together. Last joint very little longer than the preceding and slightly broader at tip. Palpi entirely yellow.

Z. ruficollis Lec.—Palpi as in *integripennis*, the last joint piceous.

Z. piciventris Lec.—Palpi entirely piceous, the last joint wider at tip and obliquely truncate.

Z. Riversi n. sp.—Head piceous, middle of front and the clypeus reddish yellow. Antennæ piceous, about one-third the length of the body, basal joint pale. Palpi testaceous, last joint piceous, triangular, obliquely truncate and shorter than the preceding joint. Thorax transverse, reddish yellow, finely sparsely punctulate, margin broad, equal at apex and base. Scutellum yellow. Elytra black, scabrous, vaguely obliquely bi-costate. Abdomen moderately densely punctate, pale reddish yellow, last segment piceous. Body beneath entirely pale reddish yellow except the last ventral segment. Length .56 inch; 14 mm.

One specimen ♂ sent me by Mr. J. J. Rivers, from Berkeley, Cal.

The superficial characters separating these species seem very constant, and may be tabulated as follows:

Head entirely yellow.

Body beneath, abdomen and legs yellow.....**integripennis.**

Head in great part piceous.

Beneath entirely yellow except the last ventral segment.....**Riversi.**

Metasternum and last ventral segment piceous, abdomen otherwise yellow.

ruficollis.

Metasternum and entire abdomen piceous, nearly black.....**piciventris.**

In *Phengodes* there are no marked palpal differences except that in *fusciceps* and *Sallei* these organs are shorter as Dr. LeConte observed to be the case with the antennæ.

LYCUS Fab.

L. Fernandezi Dugès. La Natureza, iv, p. 175, Pl. 6, figs. 5, 6; Gorham, Biol. Cent. Am. iii, pt. 2, p. 2.

This species occurs in Texas and Arizona. Its style of coloration is very similar to *cruentus*, but the black tip of the elytra is relatively smaller, and is distinctly notched where the humeral costa enters it. In form the present species is very much more expanded behind the humeri, and is of larger size.

LYCOSTOMUS Motsch.

L. loripes Chev. (*Lycus*) Col. Mex. Cent. ii, 148: Gorham, loc. cit. p. 6, Pl. 1, fig. 8.

Entirely reddish yellow, tibiæ and tarsi (except the claws) antennæ (except the basal joints) black.

These few words will distinguish this species from any described in our fauna. Specimens probably exist in cabinets with the recent manuscript name *pedalis* Lec. The females have all the tibiæ black, in the males the front tibiæ are in part or entirely yellow.

Occurs in Arizona.

L. sanguineus Gorham, Biol. Cent. Am. vol. iii, pt. 2, p. 226.—Pale blood-red. antennæ, tarsi and apical fourth of elytra black. Length 12–14 mm. ♂: 18–20 mm. ♀.

In the female of this species the abdomen is more dilated than the male and extends three-fourths the length of the elytra beyond their apices.

I found this species labeled *L. posticus* in Dr. LeConte's cabinet. It has never been described by him.

This species was collected by Morrison and sold to us as from Arizona, and sent to Gorham as from Sonora.

LYGISTOPTERUS Muls.

L. lactus Gorham, loc. cit. p. 227, Pl. xi, fig. 2.—Beneath blue-black; antennæ, disc of thorax at middle and tip of elytra narrowly, blue-black; elytra and sides of thorax orange-red. Length 7–11 mm.

This species is the one labeled by me as a Calochromus. The work on this family has at all times been done by Dr. LeConte, and my notes on his cabinet show that this species bears the manuscript name *Lygist. ignitus*.

Arizona, Morrison.

LYCAINA Dugès.

L. marginata Gorham, loc. cit. p. 209, Pl. xii, fig. 8.—Piceous, sides of thorax, lateral margin of elytra, anterior and middle femora orange-yellow. Length 6–7 mm.

The disc of the elytra has sometimes a bluish tinge. This insect figures in Dr. LeConte's cabinet among the Lygistopecteri under the name of *L. debilis*. Having given but little attention to this family any expression as to the validity of the genus proposed by Dugès and accepted by Gorham, would have but little value.

Collected in Arizona by Morrison.

L. discoidalis n. sp.—Beneath piceous; antennæ black, under side of basal joint yellow; thorax piceous at middle, broadly yellow at the sides, median impression deep but narrow, surface rather shining, sparsely finely punctate and rather sparsely pubescent; elytra orange-yellow, with a common blue-black oval space beginning at the apex and reaching nearly the middle, surface not striate but with three faintly elevated costæ; intervals rather coarsely punctate, surface fulvo-pubescent; anterior and middle femora orange-yellow. Length 7-7.5 mm.

This species differs in the sculpture of the elytra from both the described species as well as in their color.

Three specimens, southwestern Texas.

In the work above, cited p. 237, Mr. Gorham is disposed to refer *Eros humeralis* and *trilineatus* to *Plateros*. For reasons above given I prefer publishing the opinion without comment.

CHAULIOGNATHUS Hentz.

C. ineptus n. sp.—Reddish yellow, head, tibiæ, tarsi, outer half of femora and apical third of elytra black. Antennæ long, slender, flattened, yellowish, basal joint piceous, third joint a little shorter than the fourth, outer joints slightly fuscous. Head oval, black, opaque, moderately densely punctured, eyes moderately prominent. Thorax much wider than the head, broader than long, sides regularly arcuate and reflexed, surface moderately closely punctate sparsely pubescent, disc usually with three black spots which are sometimes absent or confluent. Elytra scarcely wider than the thorax, parallel, the apices obliquely rounded, moderately closely punctate, sparsely pubescent, apical third black, each black space arcuate in front. Scutellum reddish yellow. Body beneath yellow, the terminal segment of ♂ black. Length .60-.64 inch; 15-16 mm.

This species is most closely related to *profundus* in form, but the two differ in coloration, the latter being scarlet, including the head, antennæ uniformly brown and legs entirely black.

Occurs in Arizona (Morrison).

C. misellus n. sp.—Form slender, pale yellow, head and legs black. Head oval, black, subopaque, finely punctulate, sparsely pubescent, genæ and mandibles yellow. Antennæ slender, piceous, nearly as long as the entire body in the male, third joint very little shorter than the fourth. Thorax wider than the head, as long or a little longer than wide ♂, broader than long ♀, sides feebly arcuate, rather broadly reflexed, disc nearly entirely smooth and shining. Elytra wider than the thorax, covering entirely the abdomen in both sexes, parallel, apices separately rounded, surface opaque, sparsely pubescent, moderately closely and deeply, not coarsely punctured, the sculpture more rugose toward the apex, color sometimes entirely pale yellow, often with a small piceous spot on each elytron one-third from apex. Body beneath pale yellow ♂, with the coxæ and posterior portion of metasternum brown; in the ♀ the basal portion of each ventral segment is brown. Legs black. Length .42-.50 inch; 10.5-12.5 mm.

This species resembles *discus* Lec., and differs especially in the black head, and the absence of discal thoracic spots. In *discus* both sexes are pale beneath.

Occurs in Arizona.

CLERIDÆ.

TILLUS Oliv.

T. occidentalis Gorham, Biol. Cent. Am. iii, pt. 2, p. 129, Pl. ix, fig. 1.

This species occurs in Texas and Arizona. It is rather small (3-5 mm.) slender in form, color usually piceous, the elytra with a small oval ivory-like spot at base and an oblique band of similar color at middle. The color varies, being in most cases entirely piceous except the spots and band, but specimens are before me entirely reddish yellow with only the portion of the elytra behind the band piceous. Rarely the basal ivory spot is indistinct.

Unaware of the above name the species has been labeled *laetus* in Dr. LeConte's cabinet.

COLYPHUS Spin.

C. signaticollis Spin. Clerites i, p. 135.

C. cinctipennis Spin. id. p. 136.

These two species are said by Spinola to have been collected in California. By reference to the above cited descriptions, the specimens were obtained from the Dupont collection. I have already on several occasions indicated the erroneousess of the localities given by Dupont, and now these two seem to be rather abundant in the eastern regions of Mexico.

I am quite sure that all the Dupont specimens attributed to California are from southwestern Texas and the adjacent regions of Mexico.

The two species above cited should be stricken from our lists.

Two other species are mentioned by Spinola: *C. rufipennis* (p. 136) and *C. interceptus* (p. 137) as from California. These also are Dupont specimens, but no mention is made of them in the Biologia, and, as with the preceding two species, the locality is probably doubtful.

CYMATODERA Gray.

C. turbata n. sp.—Rufo-testaceous, elytra piceous with a broad fascia slightly ante-median and apical fourth rufo-testaceous. Antennæ slender, a little longer than the head, joints 2-3-4 short, conical, equal, joints 5-10 longer than these, joint 11 one-half longer than the tenth. Head rather coarsely not closely punctate. Thorax cylindrical, nearly twice as long as wide at apex, slightly narrower at base than apex, behind the middle on each side compressed, surface sparsely punctate, sparsely clothed with erect yellowish hairs, ante-scutellar impression feeble. Elytra wider than the thorax, parallel, apices conjointly rounded, disc with rows of coarse, closely placed punctures which are gradually finer to the tip, intervals narrower than the rows of punctures, surface sparsely clothed with semi-recumbent and with erect yellowish hair. Body beneath sparsely punctate. Legs somewhat roughly punctured. Length .16-.26 inch: 4-6.5 mm.

I am unable to detect any sexual differences in the specimens before me, the last abdominal segments of the dorsal and ventral aspect being oval at tip.

There is considerable variation in the color of the elytra, although the type of coloration is preserved. In those fully colored about one-fourth at base is piceous, then a broad pale band, following the latter another broad piceous band, the tip for about one-fourth is pale. The tendency is to become paler. The basal piceous band is gradually lost, then the post-median piceous band becomes narrower so that the elytra are finally rufo-testaceous with a very narrow piceous band behind the middle.

This species belongs in our series near *puncticollis*, and differs in its longer thorax, less coarsely punctured elytra and different coloration.

Occurs in southwestern Texas.

C. texana Gorham, Biol. Cent. Am. iii, pt. 2, p. 134.

This is the species referred to by me but not named (Trans. Am. Ent. Soc. v, p. 230). It is closely allied to *fuscula* Lec., and differs in the presence of the sub-apical pale spot. The variety referred to by Mr. Gorham as having no apical spot is without doubt the true *fuscula* Lec. If the two forms are really identical the latter name should prevail.

C. sirpata n. sp.—Form slender, piceous, legs and antennæ brown, elytra testaceous with piceous fasciæ. Antennæ slender, brown, joint 2 not longer than half the third, joints 3–10 subequal, 11 longer. Head coarsely, deeply and moderately closely punctate, sparsely pubescent. Thorax cylindrical, nearly twice as long as wide at apex, slightly contracted behind the apex and more decidedly compressed on each side behind the middle, surface coarsely, moderately closely punctate, sparsely pubescent, ante-scutellar impression feeble. Elytra wider than the thorax, humeri distinct, sides straight, very slightly divergent, apices conjointly rounded, disc with rows of coarse moderately closely placed punctures which become gradually finer toward the apex but do not reach the tip, intervals much wider than the punctures with a row of fine punctures, sparsely pubescent; color pale testaceous, humeral umbone piceous, a narrow piceous fascia one-third from base which extends along the suture to the scutellum and along the lateral margin to the base, a broad piceous fascia behind the middle with the anterior and posterior margins undulating, about one-fifth of the elytra at tip is testaceous. Body beneath piceous, abdomen sparsely punctate. Length .32–.38 inch; 8–9.5 mm.

Male.—Fourth ventral segment densely punctured at middle, fifth very feebly emarginate, sixth shorter truncate at tip and deeply longitudinally sulcate at middle: last dorsal narrower than the last ventral, oval at tip and entire.

Female.—Last ventral very short oval, last dorsal narrower oval at tip.

This is also one of the species merely indicated by me (Trans. Am. Ent. Soc. v, p. 230), but not fully described from the absence of the male. In its general appearance it resembles *undulata*, and might readily be considered a color variety, but the structure of the antennæ

and the male sexual characters prove its distinctness. By its antennal structure it should be associated with *xanti*, but that species is entirely brown and of much more robust form.

Occurs in southwestern Texas.

C. fallax n. sp.—Form elongate, rufo-testaceous, head, thorax and broad post-median elytral band piceous. Antennæ pale brown, joints 2-10 very nearly equal, eleventh longer. Head coarsely and densely punctured, subopaque, sparsely pubescent. Thorax subcylindrical, slightly narrower at base, twice as long as wide at apex, very slightly contracted behind the apex, a little more so in front of base, surface coarsely punctured, the punctures coarser than on the head but less dense, basal marginal groove distinct, ante-scutellar impression feeble, surface sparsely pubescent. Elytra elongate oval, gradually wider from the humeri which are not prominent, surface with rows of very coarse moderately closely placed punctures which become gradually finer posteriorly but do not quite reach the apex, intervals very narrow with a row of distant fine punctures, sparsely pubescent. Body beneath rufo-testaceous, moderately densely finely punctate. Legs yellowish testaceous. Wings abortive. Length .32-.46 inch: 8-11.5 mm.

Male.—Fifth ventral deeply semi-circularly emarginate, sixth ventral elongate, parallel, the sides arcuate at tip, the apex deeply quadrangularly emarginate; last dorsal narrower than the ventral, elongate oval, truncate at tip and with a slight notch at middle.

Female.—Last ventral short, semi-circular, smaller than the last dorsal which is more elongate oval and prolonged.

The elytra have a little variation in color. The post-median fascia is always present, and usually broad with irregular edges. Rarely there is a trace of a fascia at basal fourth and another in front of the apex. This species might be supposed to be a variety of *undulata*, but the elytra are much narrower at base, more oval, and but a small trace of wings remains. The sexual characters are of the type of *ovipennis* and *angustata*. From these last two species *fallax* differs in its more elongate elytra with stronger sculpture and with the head and thorax much more densely punctate.

Occurs in southwestern Texas.

From my memory merely, *fallax* resembles very closely Mr. Gorham's determination of *angustata*. That author after having placed *angustata*, *ovipennis* and *pilosella* in synonymy makes the following remarks: "The difficulty of determining the species of this genus is so great that I doubt the correctness of the synonymy given above, as adopted by American describers" (Biol. Cent. Am. iii, pt. 2, p. 138). That there is difficulty I admit, but it is to be regretted that some little attention was not given to many characters indicated by me (Trans. Am. Ent. Soc. v, p. 221), of which all mention is omitted in the Biologia. Regarding the synonymy,

no American describers are responsible for it, the only mention of such being in the 'Check List' by Mr. Crotch, for which no more authority exists than is claimed in the preface.

CLERUS Fab.

Our species of this genus are said by Mr. Gorham (Biol. iii, pt. 2, p. 148) "not to be typical and ought perhaps to be assigned to *Thanasimus*. This is true of a certain number (*trifasciatus*, *repandus*, *undulatus* and *dubius*), but not of the vast majority. In fact, Mr. Gorham includes *sphegeus*, *spinolae* and *nigripes* in *Clerus* as restricted by him.

Clerus mexicanus Lap. This species has for some time appeared in our lists. I have never seen a specimen from within our faunal limits and am unaware of any authority for its introduction.

C. arachnodes Klug. This species is placed as a synonym of *sphegeus* by Mr. Gorham (Biol. Cent. Am. iii, pt. 2, p. 150).

C. viduus Klug. This species is simply indicated from "Amerique Septentrionale," and as it is well known from Mexico and not at all in our fauna should be removed from our lists.

C. quadriguttatus Oliv. Of this species *nigrifrons* and *nigripes* Say, are synonyms.

C. thoracicus Oliv. This species is referred by Mr. Gorham to *Pœcilochoera* Chev., but the latter author says that this genus has 9-jointed antennae, which is certainly not true of our species.

C. decussatus Klug, Abhand. Akad. Berl. p. 296; *Hopfneri* Spinola, *Clerites* 1, p. 256, Pl. xxv, fig. 1. Form of *ichneumoneus*, black, opaque, finely pubescent, elytra with an arcuate fascia at middle interrupted at the suture, behind this a common triangular spot, near the apex a narrower transverse fascia interrupted at suture, all of reddish yellow color. Length .38 inch; 9.5 mm.

The form described and figured by Spinola has the elytra in front of the median fascia, the thorax and head reddish. Specimens are noted by Mr. Gorham (Biol. Cent. Am. iii, pt. 2, p. 155) in which the anterior portion of the elytra is black. My specimen goes further in being entirely black. Similar variations in color seem quite common in *Clerus*, notably in our *C. abruptus* Lec.

One specimen, Arizona.

C. ocreatus n. sp.—Form of *rosmarus*, but slightly more robust, black, shining, sparsely hairy, antennae, tibiae and tarsi rufo-testaceous, elytra with a median band of cinereous pubescence broadly interrupted at the suture. Front rather flat, vaguely bi-impressed, head very sparsely punctate. Thorax slightly longer than wide, ovate, slightly tubulate at base, post-apical transverse impression distinct, median line not distinct, surface sparsely punctate, punctures coarser and more numerous along the apical margin. Elytra wider than the thorax, sides parallel to middle then slightly broader, apices conjointly rounded, surface shining, obsoletely punctate at basal half, more evidently punctured posteriorly; the

median band of cinereous pubescence begins at the lateral margin and extends to the middle line of the elytra, a few cinereous hairs about the apex. Body beneath shining, coarsely but sparsely punctured. Length .18 inch; 4.5 mm.

A small species which should be placed near *quadriguttatus* Ol. (*nigrifrons* Say), from which it differs by its more robust form, almost smooth surface and the color of the legs.

One specimen, Kansas.

PTINIDÆ.

SINOXYLON Dufts.

S. simplex n. sp.—Cylindrical, piceous, elytra brownish. Antennæ 10-jointed, pale yellow. Maxillary palpi with last two joints equal. Head opaque, tuberculate. Thorax wider than long, slightly arcuately narrower to the front, hind angles rounded, the anterior declivity roughly asperate, posteriorly densely punctate. Elytra not wider than the thorax, apex gradually declivous, not margined nor dentate, surface very coarsely and closely punctate, the punctures of the declivity being coarser and denser than those near the base of the elytra, sutural region slightly elevated, more conspicuously in the declivity. Body beneath moderately densely punctate, sparsely pubescent. Length .26 inch; 6.5 mm.

This species belongs to the first division of the genus as defined by me (Proc. Am. Philos. Soc. 1878, p. 542) from all the members of which it differs in the simple elytral declivity, excepting *dinoderoides*, which is much smaller and has the maxillary palpi otherwise formed.

Occurs in southwestern Texas.

The species referred by us to *Sinoxylon* including the one above described are said to belong to *Xylopertha* by Mr. Gorham (Biol. Cent. Am. iii, pt. 2, p. 215). I am not now prepared to investigate this question, and leave the species as they at present stand. Our species of *Amphicerus* are referred to *Apate*.

S. floridanum n. sp.—Cylindrical, piceous, moderately shining, elytra castaneous. Antennæ pale yellow, 10-jointed, the five joints of the female very small. Head closely punctate, subopaque. Thorax broader than long, slightly narrower in front, declivity in front roughly tuberculate and with the tubercles at the front angles slightly hooked, disc at middle closely punctate, posteriorly and at the hind angles quite smooth. Elytra a little narrower than the thorax, moderately coarsely but not closely punctate, declivity flat, on each side tri-tuberculate, the surface coarsely and evenly punctate. Body beneath sparsely punctate and pubescent. Length .12 inch; 3 mm.

This species is related to and should be associated with *texanum* and *sextuberculatum*. In the former the punctures of the declivity are few in number and arranged near the suture, leaving a smooth space near the tubercles. In the second species the declivity is quite smooth and the suture well elevated. In the present species the declivity is very flat and the coarse punctures very evenly disposed over its entire surface.

One specimen, Florida. Mr. F. G. Schaupp.

CHRYSOMELIDÆ.

CHRYSOCHUS Redt.

C. robustus n. sp.—Brilliant metallic blue with a slight tinge of green, form oval robust. Antennæ piceous, basal joint blue. Head sparsely punctate. Thorax about one-third wider at base than long, apex a little wider than the length, sides feebly arcuate, surface very sparsely punctate. Elytra wider than the thorax, widest at the humeri which are prominent, sides arcuately narrowing to apex, surface irregularly, moderately coarsely and sparsely punctured. Body beneath bright blue, as above, very sparsely punctate. Length .44 inch; 11 mm.

This species is much more robust than either *cobaltinus* or *auratus*. In these the elytra are parallel, in the present species they narrow from the base. The thorax in *robustus* is wider from the apex to the base, while in the other two species the sides are almost parallel posteriorly.

Arizona, collected by Morrison.

The three species may be correlated in the following manner :

Sides of thorax subparallel posteriorly, the punctuation of the surface conspicuous.

Surface color brilliant cupreous or golden; punctures of elytra arranged in confused rows.....**auratus.**

Surface color cobalt blue; punctures of elytra irregular.....**cobaltinus.**

Sides of thorax gradually wider from apex to base, the surface color blue with a slight tinge of green.....**robustus.**

Two other species have been described, *californicus* and *tenebricosus* (Marshall, Proc. Linn. Soc. Zool. 1864, p. 49), which are synonymous with *cobaltinus* Lec.

BRUCHIDÆ.

ZABROTES n. g.

Head strongly deflexed in repose the mouth resting between the middle coxæ. Mouth as in *Bruchus*. Eyes finely granulated, feebly emarginate in front. Antennæ slender, as long as the entire body, subserrate. Thorax acutely margined, base feebly lobed. Scutellum small. Elytra separately rounded at tip. Pygidium vertical entirely exposed. Anterior coxæ conical, prominent and contiguous, their cavities closed behind. Middle coxæ widely separated, the mesosternum nearly vertical in front. Posterior coxæ large, very narrowly separated at middle. Abdomen very short, not as long as the width of the coxæ, the first and last segments a little longer than the others, the intermediate segments linear. Tarsi as in *Bruchus*, the claws simple. Anterior and middle tibiæ without spurs, posterior tibiæ with two long movable spurs and finely spinulose on the inner side. Form robust, quadrate, body winged.

The most striking differences between this genus and *Bruchus* are found in the simple claws, movable hind tibial spurs, acutely margined thorax and widely separated middle coxæ. From *Spermophagus* as rep-

resented in our fauna by *robinix*, *Zabrotes* differs in the absolutely simple claws. It is probable that many of the small species at present referred to *Spermophagus* should belong to the present genus.

In addition to the characters given above the species at present known have the posterior femora deeply sinuate beneath, the condyles at the knee lamiform and without tooth. The tibiæ of the same legs are short, not longer than the first tarsal joint, the inner side with fine spinules.

The following species are now known to me:

Vertex very distinctly carinate.

A transverse band at middle of each elytra white.

Suture of elytra and pygidium in great part white, the latter with two transverse reniform black spots.....**cruciger**.

Suture concolorous.

Elytra separately rounded at tip, the band well defined.....**spectabilis**.

Elytra subtruncate at tip, the band indistinct.....**obliteratus**.

Pubescence above uniformly dark gray.

Punctures of thorax extremely fine and dense.....**densus**.

Vertex not or very indistinctly carinate.

Basal joint of antennæ red. Pubescence all gray.....**planifrons**.

All the above species are of short quadrate form, the elytra rather flat. In *cruciger* the sides of the elytra are more sinuate, so that the subhumeral lobe is very well marked.

Z. cruciger n. sp.—Form quadrate robust, depressed above, black. Head finely punctate, vertex carinate, sparsely pubescent. Antennæ black, as long as three-fourths the body, subserrate from the fifth joint. Thorax twice as wide at base as long, sides rapidly arcuately narrowing to the front, moderately convex, densely finely punctulate with numerous coarse punctures intermixed, pubescence sparse and gray, a denser whiter space in front of the scutellum on each side of which in front is a darker spot. Elytra not wider than the thorax, a little wider conjointly than long, apices separately rounded, sides lobed at basal half, surface striate, striæ closely punctured, intervals flat finely punctulate, densely clothed with black pubescence, the suture and a median slightly sinuous band white. Pygidium densely punctate, densely clothed with white pubescence, a transverse reniform spot on each side black. Body beneath black, clothed with gray pubescence. Coxal plates black, very coarsely punctured at outer half. Legs black, sparsely and finely pubescent. Length .10 inch; 2.5 mm.

This is the largest species, conspicuous in the style of its vestiture, and is with *obliteratus* remarkable in having the coxal plates coarsely punctate.

One specimen, Colorado.

Z. spectabilis n. sp.—General form and sculpture of the preceding species but much smaller. Thorax not densely clothed with brownish pubescence with a narrow whitish space at the sides and a small ante-scutellar spot. Elytra with separately rounded apices, clothed with brownish pubescence, a median, slightly oblique white fascia which does not reach the side or suture. Pygidium coarsely

punctured, pubescence brown with a narrow median white stripe. Body beneath sparsely clothed with gray pubescence. Coxal plates finely punctured. Length .06 inch; 1.5 mm.

Three specimens, Arizona and Nevada.

Z. obliteratus n. sp.—General form and sculpture of *cruciger*, but a little more oval. Antennæ slender, nearly as long as the entire body. Thorax moderately shining, rather densely finely punctured with numerous very coarse punctures near the sides, surface sparsely clothed with brownish pubescence. Elytra striate, striæ finely punctured, intervals flat finely punctulate, apices truncate, surface sparsely clothed with brownish pubescence with an indistinct short, median, transverse band of white on each elytron. Pygidium rather coarsely, rugosely punctured, very sparsely clothed with brownish hair, with an indistinct median stripe of white. Body beneath sparsely pubescent, coxal plate coarsely punctured at outer third. Length .08 inch; 2 mm.

Closely allied to *cruciger*, but more oval, with different vestiture, and the elytra truncate at apex.

One specimen, Arizona. I have a smaller specimen from Florida which does not seem distinct.

Z. subnitens n. sp.—Form rather oval, slightly convex, black, rather shining, sparsely clothed with short, brownish pubescence. Antennæ three-fourths the length of the body. Thorax rather finely punctulate with numerous coarser punctures over the entire surface except for a small region in front of scutellum. Elytra rather wider at base than the thorax, apices subtruncate, rather deeply striate, the striæ punctured, intervals slightly convex, finely punctulate with a single row of distant coarser punctures on each, very sparsely pubescent. Pygidium rather densely finely punctulate with coarser punctures near the sides, very sparsely pubescent. Body beneath shining, very sparsely pubescent. Coxal plate not coarsely punctured externally. Length .08 inch; 2 mm.

A little smaller and rather more convex than *obliteratus*, with more shining surface and less pubescence. There is no trace of elytral band.

Three specimens, Georgia.

Z. densus n. sp.—Closely related to *subnitens* and differing as follows: Form more quadrate, surface more shining with very little pubescence. Antennæ three-fourths as long as the body. Elytra subtruncate at apex, striæ less deep than usual, intervals very flat rather densely punctulate. Pygidium densely punctulate at middle, rugulose and coarsely punctured at the sides. Body beneath sparsely pubescent. Coxal plates not coarsely punctate. Length .06 inch; 1.5 mm.

One specimen, California.

Z. planifrons n. sp.—Form rather oval, black, moderately shining. Front not or extremely feebly carinate. Antennæ half as long as the body, black, the two basal joints usually paler. Thorax rather densely finely punctured, a few coarser punctures at the sides. Elytra separately rounded at tip, striate, striæ punctured, intervals very flat, densely punctulate, pubescence gray, sparse and relatively coarse. Pygidium densely punctulate, a few coarser punctures at the sides, very sparsely pubescent. Body beneath sparsely pubescent. Coxal plates with a very few coarse punctures externally. Length .06 inch; 1.5 mm.

The smallest species known to me and separable from those which precede by the very feebly or not carinate front, and by the basal joints of the antennæ paler.

Three specimens, Arizona.

TENEBRIONIDÆ.

CONOECUS n. g.

Front feebly trilobed, middle lobe not prominent, separated from the lateral lobes by a feeble sinuation. Labrum trapezoidal, moderately prominent, narrower in front, a median impressed line. Mandibles visible beyond the epistoma, chisel-shaped at apex, the right mandible toothed on the upper side behind the apex, the left mandible simple. Mentum transverse, arcuate in front, entirely closing the buccal opening beneath. Terminal joint of maxillary palpi triangular. Eyes round, slightly emarginate by the sides of the front, rather coarsely granulated, without supra-orbital ridge. Thorax fitting the base of the elytra. Scutellum small, transverse. Elytra not wider at base than the thorax, oval, narrowed behind, epipleuræ narrow but entire. Prosternum rounded at tip. Mesosternum nearly vertical, slightly concave in front. Metasternum moderate in length, body apterous. Inter-coxal process of abdomen triangular, oval at tip. Legs moderate in length, outer edge of tibiæ rounded, anterior tibiæ slightly broader at tip, the outer angle somewhat prolonged. Posterior tarsi with the first joint shorter than the fourth, tarsi clothed beneath with short silken hairs. Antennæ slender, third joint longer than those following, joints 4-11 gradually shorter and broader, the last three joints being more distinctly broader.

The genus which I have found it necessary to form for an inconspicuous species belongs to the tribe Gnathosiini as indicated in the Class. Col. N. A. ed. ii. p. 361. By the system of Lacordaire the genus should be referred to his group Tribolocarides (Genera v. p. 69), and seems by description most nearly related to Eremœcus, a Chilean genus, from which it differs in the middle lobe of the front being rounded, by the absence of the supra-orbital ridge, and the structure of the mandibles.

In the table of genera (Classif. p. 362) Conœcus is more nearly related to Trimytis. The latter genus has the middle lobe of the front prominent, both mandibles dentate above clasping the sides of the middle lobe of epistoma, the first joint of the hind tarsi is longer than the fourth, and the tarsi spinous beneath.

C. ovipennis n. sp.—Oblong oval, piceous with a very faint bronze tinge surface finely, very sparsely pubescent. Head coarsely, moderately densely punctured, more densely in front. Thorax transverse, about one-half wider than long, base very little wider than the apex, base bisinuate, apex truncate, sides regularly arcuate, hind angles obtuse, disc moderately convex, punctuation finer than on the head, moderately densely placed, denser at the sides. Elytra regularly oval, base not wider than the thorax, disc with coarse punctures arranged in moderately regular rows but somewhat confused about the scutellum. Prosternum coarsely

and deeply punctured, flanks of prothorax granular. *Metasternum* at sides densely coarsely punctured. Abdomen coarsely but not densely punctate. Legs sparsely punctate. Length .20-.30 inch; 5-7.5 mm. (Pl. 5, fig. 12.)

Four specimens, Texas.

ZOPHERUS Lap.

Z. granicollis n. sp.—Form moderately elongate, black, surface with slight velvety aspect. Head very coarsely but sparsely punctate. Thorax oval, as wide as long, sides in front slightly arcuate, posteriorly gradually coarctate, the margin posteriorly coarsely crenulate, disc moderately convex with numerous tubercles regularly and moderately closely placed over the entire surface, each tubercle punctate on its posterior aspect. Elytra regularly oblong oval, not wider than the thorax, apex tuberculate on each side, surface with numerous tubercles very regularly disposed and rather closely placed, each punctate on its posterior aspect. *Prosternum* beneath coarsely tuberculate, the body and abdomen very coarsely not closely punctate. Length .80 inch; 20 mm.

Differs from all our other species by the more coarsely tuberculate thorax and elytra. In all our black species the thorax is sparsely and irregularly punctate except in *opacus*. In the latter the punctures of the thorax are muricate, but the elevations small and distant, and the tubercles of the elytra are also small and distant.

One specimen collected in the north of Lower California near the boundary by Dr. E. Palmer.

RHINANDRUS Lec.

R. sublaevis n. sp.—Form elongate, subdepressed, black with slight velvety aspect, beneath more shining. Head sparsely punctate, punctures much finer at middle, the sides behind the eyes more coarsely punctate, finely granulate opaque, under side triangularly wrinkled. Thorax one-fifth wider than long, base wider than apex, sides arcuate, broadest at middle, slightly narrower and feebly sinuate behind, hind angles sharply rectangular, lateral margin entire, disc moderately convex, very sparsely finely punctulate, a vague ante-basal transverse impression. Elytra wider at base than the thorax and more than three times as long, humeri distinct, sides feebly arcuate, widest at posterior third, surface with nearly obsolete striae of fine punctures, the intervals flat with extremely minute punctures sparsely placed. Prothorax beneath sparsely punctate near the front angles. Metathorax slightly wrinkled and minutely punctate. Abdomen more distinctly sparsely punctate. Body winged. Length .69 inch; 17.5 mm.

This species bears a notable resemblance to *Nyctobates subnitens* Horn, but is a little broader. The clypeal emargination is deep, nearly semi-circular. The other two species known to me have elongate oval elytra, the humeri obliterated and the wings wanting.

Two specimens, Arizona.

HELOPS Fab.

H. strigicollis n. sp.—Moderately elongate, piceous, feebly shining, legs and coxæ ferruginous. Antennæ very little longer than the head and thorax, brownish, outer joints slightly broader. Head coarsely and densely punctured in front, longitudinally deeply strigose posteriorly. Thorax one-half wider than long, apex and base equal, sides feebly arcuate, apical and basal angles obtuse, surface deeply longitudinally strigose. Elytra oblong oval, not wider than the thorax, sides feebly arcuate, surface moderately deeply striate, striæ punctate, intervals slightly convex, slightly wrinkled, irregularly biseriately punctulate, these small punctures with fine inconspicuous hairs. Prothorax beneath coarsely punctured at middle, longitudinally strigose at the sides. Body beneath coarsely punctate. Abdomen less coarsely punctate and more shining. Femora sparsely punctate, the tibiæ more densely. Body apterous. Length .31-.42 inch; 8-10.5 mm.

This species has the thorax as wide as any portion of the elytra, and is unique in our fauna in the sculpture of its upper surface. It is related to *Bachei* and *rugicollis*, and should be placed between them.

Three specimens from the southern part of California, probably near San Diego.

CURCULIONIDÆ.

ORCHESTES Illig.

O. betuleti n. sp.—Black, subopaque, abdomen and elytra clear red, tarsi and antennæ pale yellow. Rostrum coarsely punctured, smoother and vaguely bisulcate in front, head coarsely and deeply punctured, very sparsely pubescent. Thorax wider than long, much narrower in front, sides arcuate, median line finely impressed, surface coarsely and deeply punctate, very sparsely pubescent. Scutellum black. Elytra oval, one-third longer than wide, striate, striæ coarsely and closely punctured, intervals scarcely wider than the striæ, flat, irregularly biseriately punctulate, surface shining, very sparsely indistinctly pubescent. Body beneath black, coarsely punctate, more distinctly pubescent than above. Abdomen entirely red, obsoletely punctate. Legs black, coarsely punctured, posterior femora stouter than the middle and with two dentiform tubercles at middle beneath. Antennæ pale yellow, the club fuscous, funiculus six-jointed. Length .11 inch; 3 mm. nearly.

Among the few species in our fauna this is readily distinguished by its color. There are several species in Europe similarly colored, from all of which it seems to differ.

Three specimens, Washington, D. C., given me by Mr. E. A. Schwarz, collected on *Betula nigra*.

Description of Plates.

PLATE IV.

- Fig. 1.—*Cremastochilus spinifer*, n. sp.
 “ 2.— “ *planipes*, n. sp.
 “ 3.— “ *saucius*, Lec.
 “ 4.— “ *ineptus*, n. sp.
 “ 5.—*Orizabus Snowi*, anterior tibia.
 “ 6.— “ *ligyroides*, anterior tibia.
 “ 7.—Tarsal claw of *Phytalus laevigatus*, Bl.
 “ 8.— “ “ “ *debilis*, Horn.
 “ 9.—*Ulkeus intricatus* Horn, upper side.
 “ 10.— “ “ under side.
 “ 11.— “ “ antenna, upper side.
 “ 12.—*Hetaerius Blanchardi* Lec., antenna.
 “ 13.—*Tyndaris cincta*, Horn.
 “ 14.—*Schizopus Sallei*, Horn.
 “ 15.—*Chrysobothris contigua* Lec., front.
 “ 16.— “ *cuprascens* Lec., front.
 “ 17.— “ *ignicolis* Horn, front. The usual form of clypeus in
Chrysobothris.

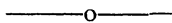


PLATE V.

- Fig. 1.—*Stolonis Ulkei*, Horn.
 “ 2.—*Platynus quadrimaculatus*, Horn.
 “ 3.—*Brachylobus caurinus*, Horn.
 “ 4.— “ *lithophilus*, Say.
 “ 5.—*Lebia pectita*, Horn.
 “ 6.— “ *depicta*, Horn.
 “ 7.— “ (*Metabola*) *vidida*, Bates.
 “ 8.— “ *vittata*, Fab.
 “ 9.— “ “ var. *Spraguei*, Horn.
 “ 10.— “ *scapula*, Horn.
 “ 11.—*Scydmaenus deformatus*, Horn.
 “ 12.—*Conoecus ovipennis*, Horn.
 “ 13.—*Pyrota mylabrina*, Chev.
 “ 14.— “ *Engelmanni*, Lec.
 “ 15.— “ *postica*, Lec.
 “ 16.— “ *dubitabilis*, Horn.
 “ 17.— “ *insulata*, Lec.
 “ 18.— “ *limbalis*, Lec.
 “ 19.— “ *lineata*, Oliv.
 “ 20.— “ *discoidea*, Lec.
 “ 21.— “ *Germari*, Hald.
 “ 22.— “ *bilineata*, Horn.
 “ 23.— “ *sinuata*, Oliv.
 “ 24.—Palpi of *P. insulata*.
 “ 25.—*Languria, a* thorax of *L. divisa* Horn, *b* tips of elytra of *Langurites lineatus* Cast.

