

Contributions to the COLEOPTEROLOGY of the United States, No. 3.

BY GEORGE H. HORN, M. D.

The exploration of newly accessible parts of our western country and the more careful examination of older fields bring to our notice from time to time many new species belonging often to groups which have already been the subject of synoptic study. No course remains but their description in an isolated manner. In the present paper will be found species whose types are in the cabinets of either Dr. Leconte or myself, and with their descriptions will be found such short studies of genera as have been made on various occasions which it is hoped will be found of value, the tables of genera and species having been prepared for my own convenience other students will be saved the same labor.

CICINDELA Linn.

C. anthracina n. sp.—Very black, shining glabrous. Labrum convex, moderately long, twice as long at middle as at sides, lateral angles rectangular, median lobe with an acute tooth at middle. Head entirely without pubescence, very finely strigose at the sides, surface opaque. Eyes moderate as in *pulchra*. Thorax very little narrowed behind, apical and basal lines moderately impressed, median line feeble, surface feebly convex very slightly wrinkled at the sides. Elytra moderately convex, surface with coarse but not closely placed punctures near the base which become rapidly finer toward the tip where they become obsolete, tip of elytra not serrulate, sutural angle (♀) slightly denticulate. Body beneath black, very smooth and shining without hairs. Length .56 inch; 14 mm.

This species seems to me to be best placed in our series between *longilabris* and *pulchra* in a separate group, as the labrum is less elongate than in the former while the front is without hairs in that species as in the present; *pulchra* and its allies have a short labrum more or less tridentate at middle and with the front hairy. The elytral sculpture of the present species is however almost exactly that of *pulchra*. The form of the thorax is here feebly narrowed behind resembling *pulchra* and its allies while the thorax of *longilabris* is decidedly narrowed behind and subtransverse.

One pair collected at Fort Bayard, New Mexico.

PTEROSTICHUS Bon.

P. (Peristethus) Hamiltoni n. sp.—Oblong oval, black, shining, antennæ and legs brownish. Head smooth, front with the usual two convergent lines. Thorax quadrate, a very little wider than long, base scarcely wider than apex, the former truncate with angles acutely rectangular, the latter feebly emar-

ginate with obtuse angles, sides feebly arcuate margin narrowly depressed, disc smooth median line distinctly impressed, basal impressions double moderately deep, the inner longer, not separated at base, between them a few punctures. Elytra oval, broadest at middle, base very little wider than the thorax, humeri obtuse, sides moderately arcuate, apex obtuse at sides sinuate; disc moderately convex, striate, striæ not punctured. Three dorsal punctures, the posterior two on the second stria the anterior on the third. Prosternum feebly margined at tip. Thorax beneath very sparsely punctulate. Abdomen smooth, sparsely punctulate and wrinkled at the sides. Posterior tarsi with two joints grooved on the outer side. Body apterous. Length .54 inch; 13.5 mm.

On comparison with *permundus* this species is totally black without iridescence, thorax more convex not narrowed in front, basal impressions deeper, the outer especially more evident, the margin less depressed; the elytra are more oval, more convex, humeri obtuse, striæ less deep and intervals less convex.

Taken abundantly near Allegheny City, Pennsylvania, by Dr. John Hamilton.

P. agonus n. sp.—Oblong black, feebly shining. Thorax one-third wider than long, apex feebly emarginate with obtuse angles, base truncate with broadly rounded angles, sides regularly arcuate, margin broadly depressed posteriorly including the outer basal impression, inner impression moderate, slender in front, broader behind, a very few obsolete punctures along the base and side margin, disc moderately convex, feebly transversely wrinkled. Elytra oval broader behind the middle, feebly striate, striæ finely punctured, intervals flat, alternately with distant interruptions, the third with four deep punctures. Body beneath black, shining obsoletely wrinkled. Femora red, tibiæ and tarsi black. Length .40 inch; 10 mm. (Pl. III, fig. 2).

This species is allied to *punctatissimus* from which it differs in its smaller size, form of thorax and many other characters. It is peculiar in having the hind angles of the thorax very broadly rounded.

One specimen from Yukon River, Alaska, given by Mr. H. Ulke.

HARPALUS Latr.

H. obliquus n. sp.—Pitchy black, shining, antennæ and legs ferruginous. Head moderate, sparsely punctate. Thorax cordate one-third wider than long, sides in front arcuate, posteriorly oblique margin very narrow, base narrower than the apex, hind angles not prominent, basal angular impressions moderately deep, somewhat triangular and punctured, median line distinctly impressed, a few punctures along the basal margin, disc moderately convex shining. Elytra oval, humeri obtusely rounded, apex feebly sinuate, surface striate, striæ impunctured, intervals slightly convex, a single dorsal puncture at posterior third on the third interval near the second stria. Body beneath pitchy black, smooth, abdomen with a few punctures near the base, and at sides bearing accessory setæ. Mentum without tooth. Length .40 inch; 10 mm. (Pl. III, fig. 3).

This species is totally unlike any other in our fauna by the form of the thorax, the sides being very oblique posteriorly forming a broad

angle with the base the point of the angle being rather obtuse. The presence of accessory ambulatorial setæ and absence of mentum tooth will place the species at the end of our series as at present arranged, in association with the somewhat aberrant *testaceus* and *gravis* without however having much relationship with either.

Occurs at Fort Bayard, New Mexico.

Near this species should be placed *Piosoma cordatum* Lec. The male has the middle and anterior tarsi dilated and papillose beneath as in *Harpalus*, the abdomen has accessory ambulatorial setæ, the mentum without tooth and finally a dorsal puncture as in *obliquus*. It will be known from all our species of *Harpalus* by its reproduction of the form of *Cratacanthus dubius*.

XENOMYCETES n. g.

Tarsi subtetramerous. Ligula as broad as long, truncate at tip. Antennæ with three-jointed loose club rather abruptly formed, the ninth and tenth joints not prolonged on the inner side, first joint obconical, second much shorter, third cylindrical nearly as long as the next two together, joints 4—8 nearly equal, about as wide as long, joint nine a little larger in the male and somewhat larger than the tenth, in the female equal to the tenth and less suddenly broader than the eighth, eleventh obtusely oval a little larger than the preceding. Palpi with terminal joint obtusely conical. Prosternum narrowly separating the coxæ, carinate between them and slightly prolonged at tip. Mesosternum moderately long and strongly carinate, slightly bifurcate behind to receive the metasternum. Prothorax without submarginal line or longitudinal discal grooves, transverse basal impression moderate ending abruptly but not in foveæ. Form oblong, inconspicuously pubescent. First joint of tarsi not elongate, second shorter and prolonged beneath, last joint longer than the others together and with simple claws. First and fifth segments of abdomen elongate, the intermediate three short and equal.

The above genus is proposed for a species which must be referred to the *Lycoperdinites* of Chapuis or the more comprehensive tribe *Dapsini* of Gerstæcker. The entire absence of grooves on the thorax excepting the transverse basal, places it in some relationship with *Polymnus* and *Heliobletus*, the latter especially, but even here there are short longitudinal grooves. This latter character is the only one on which I can at present rely for the separation of the two genera, together with the fact that the *Heliobletus* is from Borneo and on comparison would doubtless show other differences.

X. Morrisoni n. sp.—Oblong, moderately elongate, ferruginous, moderately shining, very sparsely clothed with inconspicuous pubescence. Head sparsely punctate. Antennæ a little longer than the head and thorax. Thorax a little broader than long, apex emarginate, sides in front feebly arcuate, posteriorly slightly sinuate, hind angles acute, base truncate, surface very sparsely punctate. Elytra oblong not wider at base than the thorax, sides feebly arcu-

ate and gradually but slightly narrowed to apex, the latter obtuse, disc feebly convex, sparsely and irregularly punctate with a faint tendency to a striate arrangement, sutural stria finely impressed. Body beneath very sparsely punctate. Length .20—.22 inch; 5—5.5 mm. (Pl. III, fig. 4).

In addition to the antennal character above given the male differs from the female in having the middle tibiæ slightly arcuate at tip and also a curious arrangement on the last ventral segment. The latter is as follows: the middle of the segment is deeply concave, from the bottom of the concavity arises a thin plate which has a transverse expansion posteriorly so that its summit forms the letter T, on each side of the concavity a short triangular plate arises which is placed obliquely. The general appearance of this insect is that of a large *Phymaphora*.

Two specimens taken by Mr. H. K. Morrison, in the high Sierras of western Nevada, another was taken by Mr. Crotch.

Mycetina testacea Lec., has a well defined line parallel with the side margin of the thorax. As the genera are defined it should not be a *Mycetina*. I would refer it to *Coniopoda* but the second tarsal joint is said to be subbilobed. A species of *Epopterus* is said by Chapuis to occur in Texas, but this genus has no basal transverse groove. Both these genera have the marginal and the longitudinal lines well marked. In *M. testacea* the tenth joint of the antennæ is slightly prolonged on the inner side. This prolongation is the principal if not the only character made use of to separate three genera under the group name *Epipocites*, (Gen. Col. xii, p. 120). From a study of our species this seems entirely insufficient from its inconstancy.

Here also might be mentioned the genus *Aphorista* Gorham, separated by the claws being (so said), dentate or subdentate. They certainly do not differ from those of *Mycetina vittata*. If it be considered advisable to divide *Mycetina* the form of the prosternum is a far better character, using it as follows:

Prosternum extremely narrow and depressed between the coxæ, the point deflexed and not prolonged, mesosternum very oblique, nearly flat.

Aphorista.

Prosternum moderately broad not depressed, the tip prolonged, meeting the rather protuberant mesosternum.....

Mycetina.

By this means the maculate species remain with *Mycetina*, while *morosa*, *læta* and *vittata* are *Aphorista*, *testacea* having already been removed.

PHYMAPHORA Newm.

P. californica n. sp.—Oblong, glabrous, shining, piceous, thorax reddish-yellow with median piceous spot, elytra piceous, base broadly rufous and a narrow crescentic band posteriorly of the same color. Head rufous, sparsely

punctate. Antennæ a little longer than the head and thorax with the stem and club (♂) of equal length. Thorax a little broader than long, slightly narrowed posteriorly, sides in front feebly arcuate, posteriorly slightly sinuate, hind angles acute, disc sparsely punctate. Elytra sparsely irregularly punctate, sutural stria deeply impressed. Beneath smooth, sparsely punctate. Length .14 inch; 3.5 mm. (Pl. III, fig. 5).

This species resembles in form and color *pulchella* and varies similarly but differs in the characters of the male. Here the stem and club are of about equal length. The club is four-jointed, the first joint very short and transverse, the second suddenly larger with the posterior side longer than the anterior, the third is equally broad but with the two sides equal and shorter than the second, the fourth is a little narrower but longer than the third. In *pulchella* the second joint of the club is very large and nearly equal to the third and fourth together. In *californicus* the anterior tibiæ of the male have a tooth on the inner side near the tip while in *pulchella* there is no tooth, merely a slight thickening, the middle tibiæ of both species have a small tooth near the tip and on the posterior a slight angulation at apical third.

San Francisco, also western Nevada, Morrison.

TERETRIUS Erichs.

T. placitus n. sp.—Black, shining, elytra red. Thorax nearly square, very narrowly margined, surface moderately densely and equally punctured. Elytra a little more coarsely but less densely punctured than the thorax and without trace of striæ, color red. Propygidium and pygidium moderately densely punctured, the latter more finely. Prosternum truncate in front. Mesosternum with a fine entire marginal line, surface coarsely and moderately densely punctured. Legs rufous. Anterior tibiæ with four or five minute teeth, the middle with two larger teeth, posterior finely bispinose, the upper spine which is near the middle very small. Length .08 inch; 2 mm.

A more robust species than *americanus* and less coarsely punctured and differing especially in the dentation of the tibiæ. From *obliquulus* it differs in the absence of the elytral stria and in the tibiæ. The color character is of secondary importance and while the three specimens before me are alike it is possible that others will occur entirely black.

Collected by Mr. H. K. Morrison, in western Nevada.

T. montanus n. sp.—Black, shining. Thorax a little wider than long, rather finely punctate the punctures denser in front. Elytra not more densely punctured than the posterior portion of the thorax. Prosternum sparsely punctate, the tip distinctly grooved. Mesosternum sparsely and finely punctate without marginal line. Anterior tibiæ 5-denticulate, middle tibiæ rather strongly bidentate at middle, the posterior bispinose near the tip. Length .10 inch; 2.5 mm.

One specimen, Veta Pass, Colorado. Of the same form as *americanus* but larger and with differently dentate tibiae.

The species now known to us of *Teretrius* may be separated in the following manner:

Mesosternum with entire marginal line.

A short oblique stria on each elytron.....**obliquulus** Lec.

Elytra without striae.

Middle tibiae bidentate at middle.....**placitus** n. sp.

Middle tibiae tridentate.....**americanus** Lec.

Mesosternum without marginal line.

Middle tibiae bidentate at middle.....**montanus** n. sp.

In the preceding descriptions and table in counting the spinules or teeth of the middle and posterior tibiae no account is taken of the two which are present in all the species at the outer angle of the tip, only those are counted which belong properly to the edge of the tibia.

GEOTRUPES Latr.

G. occidentalis n. sp.—Form of *semiopacus*, color above brilliant violet changeable to cupreous, beneath steel-blue. Clypeus oval, coarsely punctured, at middle with a short triangular horn slightly prolonged in carina toward the front, vertex smooth, above each eye a moderate tubercle. Thorax smooth, a very few obsolete punctures along the margin and the usual fovea at the side, base with deeply impressed marginal line which is entirely obliterated on each side except at the angle. Elytra moderately deeply striate, striae subcrenately punctured, intervals moderately convex, margin moderately dilated. Body beneath sparsely clothed with brownish hair. Anterior tibiae 7-dentate, the teeth gradually decreasing in size above. Length (including head) .60 inch; 15 mm.

This species, the only one known from California, belongs to the *Cnemotrupes* group as defined by Mr. Jekel. I have however but one female, but in this group the first joint of the middle tarsus of both sexes equals the three next together while it is shorter in the *Onychotrupes* group. The elytral margin is about as much developed as in *semiopacus* and much less than in *chalybæus* recently described by Dr. Leconte from Florida. The latter has also the thorax nearly impunctate but it may be very easily known by the obsolete elytral striae.

One specimen from Havilah,* California, given me by Mr. Henry Edwards.

The following dichotomous table is given to aid the student in distinguishing our species. It is needless to say that it is purely empirical and must not supplant the arrangement proposed by Jekel,

* Mr. Edwards informs me that Havilah is a new settlement in the Tulare Valley east of Visalia near the base of the Sierra Nevada.

from whose paper I extracted what concerned our species in the short review published by me in Trans. Am. Ent. Soc. 1868, p. 313.

Surface granulate without trace of striæ or punctures**retusus**.
Surface not granulate, elytra striate or with rows of punctures.

Joints of antennal club entire.

Body above opaque, elytra with rows of punctures only.....**opacus**.

Body above shining more or less metallic.

Striæ of elytra without punctures.....**semiopacus**.

Striæ of elytra punctured.

Sutural stria alone impressed, disc with rows of fine punctures only.

Anterior tibiæ strongly spinous posteriorly.....**chalybæus**.

Striæ all impressed.

Thorax with very few obsolete punctures at the sides.....**occidentalis**.

Thorax with numerous coarse punctures at sides.

First joint of middle tarsus shorter than the next three together.

splendidus.

First joint of middle tarsus equal to the next three.

Elytral striæ coarsely crenately punctured.....**Egeriei**.

Elytral striæ more finely punctured.....**Blackburnii**.

Second joint of club emarginate, partially concealed on one side where the club is closed.....**Balyi**.

G. conicollis Jekel, is merely a variety of *Blackburnii*.

PLECTRODES Horn.

This genus was indicated by me (Trans. Am. Ent. Soc. 1867, p. 166), on specimens obtained from Visalia, Cal. Since then two other species have been discovered having considerable superficial resemblance to the typical form but distinguished by characters which seem worthy of more special notice.

P. pubescens Horn, loc. p. 167.

Anterior legs.—Anterior claw strongly arcuate, armed with a long subbasal tooth a little longer than half the apical portion. Posterior claw feebly curved except at tip, at base a moderate dilatation not dentiform in character.

Middle legs.—Anterior claw as above. Posterior claw with a more abrupt dilatation but not dentiform.

Posterior legs.—Anterior claw as above. Posterior claw with a still more abrupt dilatation, rectangular in front and dentiform at its tip.

The claws on the three tarsi are shown on Pl. III, fig. 7 a.

Last joint of maxillary palpi not wider than the third, as long as the preceding joints together, form oblong obtuse at tip and moderately excavated on its outer face. It is a little less in length than half the antennal club. Pl. III, fig. 7 d.

P. Carpenteri Lec., Wheeler's Rep. 1876, App. H, 10, p. 516.

Anterior legs.—Anterior claw strongly arcuate, armed at base with a slender acute tooth one-third the length of the apical portion. Posterior claw moderately arcuate, scarcely dilated at base.

Middle legs.—Anterior claw as above. Posterior claw slightly dilated at base with a minute tooth.

Posterior legs.—Anterior claw as above. Posterior claw similar to that of the middle with the minute tooth a little more distinct.

On Pl. III, fig. 7 b, the claws are illustrated.

Last joint of maxillary palpi oval, subacute at tip, broadly and rather deeply excavated on its outer face. It is scarcely a third the length of the antennal club. Pl. III, fig. 7 e.

P. palpalis n. sp.—Piceous beneath, brownish above, moderately densely clothed with cinereous pubescence, short and recumbent on the elytra, longer and semierect on the head and thorax; body beneath with long silken hairs, abdomen with short recumbent pubescence. Clypeus very distinctly narrowed at base, angles rounded, apical margin truncate and reflexed. Thorax broader than long, narrowed in front, sides moderately arcuate, surface coarsely and moderately densely punctate. Elytra densely punctulate, disc vaguely costate. Pygidium sparsely pubescent as on the elytra. Legs fimbriate with moderately long hair. Length .80 inch; 20 mm.

This species resembles *Carpenteri* in form and vestiture but differs in the characters given below.

The claws are shown on Pl. III, fig. 7 c.

Anterior legs.—Anterior claw moderately arcuate, armed at base with a slender acute tooth scarcely more than a fourth the length of the apical portion. Posterior claw moderately arcuate, armed at base with a broad basal dilatation which is dentate in front.

Middle legs.—Anterior claw as above. Posterior claw with a basal dilatation armed in front with a tooth of moderate length.

Posterior legs.—Anterior claw as above. Posterior very nearly like the anterior with the tooth merely a little smaller.

The tarsi of this species are longer and more slender than those of the other two species. This is especially noticeable in the middle legs where the tarsi are very distinctly longer than the tibiae. The tarsi in fact resemble those of *Lachnosterna* (e. g. *fusca*), while in the others the tarsi approach *Polyphylla*.

Last joint of maxillary palpi nearly one-half longer than the preceding joints taken together, oval, subacute at tip, very deeply excavated on the outer side the groove running the entire length of the joint. It is moreover three-fourths the length of the antennal club. Pl. III, fig. 7 f.

I have seen two ♂ specimens of this species, one in the cabinet of Dr. Leconte, the other kindly presented to me by Mr. Chas. Fuchs. They were collected in California.

In resuming the differences it will be seen that *pubescens* has a shallow and narrow impression on the outer face of the last joint of the maxillary palpi, *Carpenteri* has a broader and deeper impression while *palpalis* with the joint much longer has the impression reaching the whole length of the joint and extending into it at least two-thirds of its thickness.

In the claws *pubescens* has, on the anterior, a tooth longer than half the apical portion, *Carpenteri* scarcely a third and *palpalis* about a fourth. The posterior claw of each pair of feet is thus modified: on the front legs of *pubescens* this claw is slightly dilated but no tooth, middle legs abrupt dilatation no tooth, hind legs abrupt dilatation and a small tooth; in *Carpenteri* on the anterior legs this claw is feebly dilated at base, on the middle legs slightly dilated with a minute tooth, on the hind legs similar with the tooth a little more evident; in *palpalis* the same claw has on the front legs a minute tooth, on the middle a stronger tooth while on the posterior legs the tooth of the two claws is very nearly equal.

These comparisons show that while *pubescens* is the most specialized type from the fact that its claws are most dissimilar in each pair of legs, the other species depart from this and seem gradually to approach the true *Melolonthæ* in which both claws are alike, the approximation being best marked in *palpalis*. While this approach occurs in the latter species it will be noticed that, as if by compensation, the terminal joint of the palpi assumes a much greater development and reverts to the type of the *Clavipalpides* in a more decided manner than in either of the other two species.

The discovery of the new species above leaves very little doubt in my mind that the view already expressed by me that *Plectrodes* must be associated with the allies of *Tanyproctus* in the *Clavipalpides* as constituted by Lacordaire. From its slender tarsi it is most closely allied to *Clavipalpus* from which it differs in having the antennæ 10-jointed and the claws dissimilar and dentate and not cleft.

PHILEURUS Latr.

The descriptions of our species are not accessible to many students and the following notes will assist in their recognition:

Outer apical angle of posterior tibiæ spiniform.

Head with two moderately long, obtuse, curved processes; median groove of thorax moderately deep, limited in front by a tubercle which is distant from the apical margin, thorax flattened in front.....**truncatus.**

Head with two conical tubercles, groove of thorax deep nearly attaining the front and limited by a tubercle which is near the apical margin...**valgus.**

Head with two small tubercles, median groove of thorax very feeble, no tubercle, surface of thorax very coarsely and densely punctured in front.....**illatus.**

Outer apical angle of hind tibiæ not spiniform, the margin fimbriate with short stout spinules.

Head with a feeble transverse carina, thoracic groove nearly obsolete and without tubercle.....**cribrosus.**

In the first two species the hind tibiæ are strongly bi- or even tri-

spinous on the posterior edge, in the last two these are replaced by two oblique ridges which are spinulose.

P. TRUNCATUS Beauv., occurs from North Carolina southward.

P. VALGUS Fab. Texas.

P. ILLATUS Lec. Arizona to Peninsula of California.

P. CRIBROSUS Lec. Texas. Pl. III, fig. 6.

ACMÆODERA Esch.

A. lanata n. sp.—Form moderately elongate, gradually narrowed from base of elytra to tip, surface feebly bronzed, clothed with long white silken hair. Front sparsely punctured. Thorax not wider than the elytra, gradually narrowed in front, surface uniformly bronzed, moderately densely punctured, punctures finer and less dense in front, median line feebly impressed, basal impressions feeble. Elytra with striæ of moderately coarse punctures, intervals feebly convex, surface feebly bronzed with two nearly entire yellow vittæ, the one submedian the outer near the margin. Prosternum trisinuate in front. Abdomen very densely and moderately finely punctured (except the middle of the first segment), and densely clothed with long white silken hair. Legs fimbriate with long hair. Length .36 inch; 9 mm.

From its trisinuate prosternum this species belongs to the division of *Acm. sinuatæ* as indicated Trans. Am. Ent. Soc. vii, 1878, p. 4, and from the form and color of thorax must be placed near *pubiventris* in the table on p. 5. It is abundantly distinct from any in the group by the sculpture of the abdomen and the long silken hairs which clothe the body and are sparse on the upper surface and quite dense beneath.

One specimen, Kanab, Utah.

CYMATODERA Gray

C. gigantea n. sp.—Elongate, piceous, feebly shining, sparsely clothed with short erect hair. Head moderately coarsely punctate. Antennæ moderately long, longer than head and thorax, joints 3—11 subequal, second very little shorter, color piceous, basal joint rufous. Thorax twice as long as wide at base, apex broader than base, form subcylindrical, slightly constricted before and behind the middle, surface rather finely not densely punctate. Elytra nearly twice as long as head and thorax and nearly twice as wide at base as the thorax, gradually but slightly broader behind, narrowed at apical fourth, the apices rounded, surface with rows of punctures arranged in pairs, coarser near the base, becoming gradually finer toward the tip, intervals alternately broader and sparsely punctate, apical fourth rather densely punctulate, color piceous, apical fourth and a broad transverse band behind the middle reddish-yellow. Body beneath rufo-piceous not densely punctate, sparsely pubescent. Abdomen rufous, moderately densely punctulate. Legs rufo-piceous, sparsely hairy. Length .82 inch; 21 mm.

Male.—Last ventral segment wider than the last dorsal, broadly emarginate at tip, fifth ventral triangularly emarginate at middle. Last dorsal with a feeble median impression near the tip, the latter broadly emarginate.

This species must be placed near *californica* in the arrangement of our species as indicated on p. 221, Trans. Am. Ent. Soc. vol. v.

It differs from that species by the tips of the elytra entire and the color of the surface as well as by the sexual characters. It is our largest Cleride, this male being as large as the female of *californica*.

One specimen kindly given me by Mr. A. S. Fuller, received by him from Texas.

C. usta Lec., does not differ from *CYLINDRICOLLIS* Chev., from Mex.

TRICHODES Hbst.

T. simulator n. sp.—Blue black, elytra orange red with two transverse bands and tip bluish black, clothed with yellowish hair, long on the head and thorax, short on the elytra except at base. Head with greenish tinge densely punctured. Thorax very coarsely and densely punctured, almost cribrate. Elytra coarsely and deeply punctured, the punctures feebly arranged in series, tip of elytra ♂ truncate, the sutural angle slightly prolonged. Body beneath and legs with moderately long yellowish hair. Length .52 inch; 13 mm.

This species reproduces almost exactly the markings of *apivorus* and might readily be mistaken for it. The elytra however differ in the form of the tip and the thorax is more coarsely punctured than in either *bibalteatus* or *apivorus*. The antennal club is broadly triangular as in the former, in the latter the club is more elongate as in *Nuttali*.

Two specimens ♂, are before me from the cabinet of Mr. A. S. Fuller, collected in Arizona.

TROGODENDRON Guér.

T. Edwardsii n. sp.—Black, shining, almost entirely devoid of pubescence, elytra orange red, a median fascia interrupted at sides and suture and apex broadly, black. Head black, coarsely but sparsely punctate, front slightly concave, surface with few short yellowish hairs. Antennæ black, club very gradually formed. Thorax black, one-half wider than long, narrower at base, apex and base constricted, the latter more strongly, sides between the constrictions strongly arcuate, surface shining with very few coarse punctures and a few short yellow hairs. Elytra one-half wider than the thorax, humeri moderately prominent, sides at basal fourth parallel, posteriorly arcuately slightly dilated, apices rounded, surface very shining sparsely punctate, punctures a little closer toward the apex. Body beneath and legs black, sparsely punctate, tip of abdomen red. Length .62 inch; 15.5 mm. (Pl. III, fig. 8).

The occurrence of this genus in our fauna is remarkable but has its parallel in *Aulicus*. These two genera are represented by types from Australia, in which the elytra are sculptured with deeply impressed punctures. *Aul. Nero* Spin., has rather finely punctured elytra while in the species here described the elytra are comparatively smooth. Notwithstanding the differences in appearance between *Edwardsii* and the Australian species there is no generic difference and the case is therefore parallel with that of *Aulicus*. The form of the present species is that of a broader *Clerus*, more depressed and broader even than *C. Spinolæ*.

One specimen from southern Arizona, given me by Henry Edwards Esq., to whom I dedicate it.

The addition of *Aulicus* and *Trogodendron* to our fauna requires a modification of the table of the genera on p. 196 of the Classification. In both the above the labial and maxillary palpi have the last joint broadly triangular, differing in this respect from all our genera with finely granulated eyes. In *Aulicus* the antennal club is abruptly formed of three joints, while in *Trogodendron* the club is very gradually formed and may be said to begin about the sixth or seventh joint.

The following is the amended table:

Eyes strongly granulated.

Antennæ serrate; labial palpi alone dilated.....**Priocera.**

Antennæ with joints 9—11 larger.

Last joint of labial palpi alone dilated.....**Opilus.**

Last joint of all the palpi dilated.....**Tarsostenus.**

Eyes finely granulated.

Terminal joint of all the palpi broadly dilated.

Antennæ with abruptly formed, rather loose, 3-jointed club.....**Aulicus.**

Antennæ gradually broader not abruptly clavate.....**Trogodendron.**

Terminal joint of labial palpi alone broadly dilated.

Last joint of maxillary a little broader than the preceding.

Antennal club more or less triangular.....**Trichodes.**

Last joint of maxillary palpi slender.

Eyes feebly convex very distinctly emarginate.

Posterior tarsi moderately broadly dilated.....**Clerus.**

Posterior tarsi longer, scarcely dilated. (Cleron.)....**Thanasimus.**

Eyes more strongly convex not emarginate.

First joint of tarsi very short.....**Thaneroclerus.**

Thanasimus does not seem sufficiently distinct from *Clerus* and the characters of *Cleronomus* in the books lead to no better result. It is however unknown to us in nature. It seems to me probable that, as the differences between *Cleronomus* and *Clerus* are rather those of facies than of character, the former may bear the same relation to the latter that the American species of *Aulicus* and *Trogodendron* do to the Australian. *Thaneroclerus* on the other hand has more convex eyes which are really entire forming in this respect a lead toward *Hydnocera* (but differing in the insertion of the antennæ), and also through *Ichnea* with the *Enopliini*.

DOLICHOSOMA Steph.

D. tenuiforme n. sp.—Slender elongate, dark greenish bronze, subopaque above, bluish and shining beneath. Head coarsely punctured, front triangularly impressed. Thorax a little narrower than the head, nearly twice as long as wide, sides parallel the margin slightly irregular, surface moderately densely punctured and with an impressed median line. Elytra a little wider than the thorax, sides straight, parallel, narrowed at apical fourth, nearly three times

as long as the head and thorax, surface rather coarsely, densely and irregularly punctured, sutural margin slightly elevated, lateral margin near apex subseriate. Body beneath shining, bluish, nearly smooth. Length .16 inch; 4 mm.

This species resembles the figure given by Duval of the European *D. lineare*.

One specimen from Texas, given me by Miss H. C. Cook of New York City.

LACTICA Erichs.

This genus is introduced here to note the occurrence of two species in our fauna. It is a part of the tribe *Halticidæ* as defined by Chapuis. The antennæ are approximate at base, eleven-jointed; the claw joint of the tarsi not inflated; the anterior coxal cavities open behind and the thorax marked with a deep transverse impression in front of the base.

The two species are:

Body above and beneath bright yellow, antennæ (except at base), tibiæ and tarsi black.....**ocreata**.
Head and thorax, anterior and middle legs yellow, elytra deep violet, body beneath and hind legs black.....**specularis**.

L. ocreata Say, (*Altica*), Insects of Louisiana p. 7; Am. Ent. ed. Lec. i, p. 303; *xanthochroa* Harold, Heft. xiii, 1875, p. 89.—“Body pale honey yellow; antennæ excepting the first and second joints, black; thorax on the posterior submargin having a transverse groove, which does not reach the lateral margin, but at its extremities it is abruptly reflected to the posterior edge; elytra destitute of striæ; feet with the knees, tibiæ and tarsi black.” Length .14—.16 inch; 3.5—4 mm.

I copy Say's description and add that: the anterior angles of the thorax are obliquely truncate and subdentate as in certain *Cryptophagus*, and the elytra are sparsely irregularly punctate.

Occurs from North Carolina to Louisiana.

L. specularis Harold, Coleop. Heft. xiii, p. 89; xiv, p. 17.—Form and sculpture of *ocreata* and differing in the characters given above. The anterior angles of the thorax are not truncate. Length .14 inch; 3.5 mm.

A very beautiful insect and apparently rare, as I have seen but the one in my cabinet from Georgia. Harold's specimen is from Florida.

ASIDA Latr.

A. quadricollis n. sp.—Black, shining. Head sparsely punctate. Antennæ as long as the head and thorax. Thorax nearly square or a very little wider than long, apex moderately deeply emarginate, base truncate, sides very feebly arcuate, disc feebly convex, sparsely punctulate, margins slightly reflexed and coarsely subconfluently punctured, hind angles acutely rectangular. Elytra a little wider at base than the thorax, margined for a short distance at humeri, sides slightly divergent to the middle then rather rapidly narrowing to tip, surface very sparsely punctate, disc feebly convex, suture sometimes

depressed. Sides of pro- and mesothorax very sparsely granulate, body beneath otherwise nearly smooth, a few punctures on the abdomen, more evident on the last two segments, tarsi with very short spines beneath. Outer apical angle of anterior tibiae slightly prolonged. Length .50 inch; 12.5 mm. (Pl. III, fig. 9).

This species seems more nearly allied to *polita* than any other but differs from any in our fauna by its quite square thorax.

Received from Fort Bayard, New Mexico, and placed in my cabinet by Carl F. Gissler.

ASIDA GABBII Horn.—This name is proposed for a species from Lower California, until now known as *gibbicollis*. The name being preoccupied at the time I gave it to this species a new one is required, and I therefore dedicate it to the memory of my lamented friend who collected this and many other varieties during a Geological exploration of the Peninsula.

HELOPS Fab.

The increase in the number of species as well as of specimens requires some modification of a portion of this genus published by me in 1870, (Trans. Amer. Philos. Soc. xiv, p. 392), more particularly in the part containing the apterous species.

The new table is as follows:

- | | |
|--|--------------------------|
| Antennæ short, robust, outer joints compressed..... | rugicollis Lec. |
| Antennæ longer than head and thorax..... | 2. |
| 2.—Sides of thorax regularly arcuate or sinuate..... | 3. |
| Sides of thorax subangulate in front of middle..... | 10. |
| 3.—Apex of thorax truncate..... | 4. |
| Apex of thorax emarginate, anterior angles rather prominent..... | 9. |
| 4.—Thorax longer than wide. Form slender..... | attenuatus Lec. |
| Thorax usually wider than long, rarely equal..... | 5. |
| 5.—Prothoracic pleura grooved or strigose..... | 6. |
| Prothoracic pleura coarsely punctured..... | 7. |
| 6.—Hind angles of thorax obtuse or rounded. | |
| Hind angles rounded, pleural sculpture coarse consisting of large punctures feebly confluent. Margin of thorax obtuse..... | Bachei Lec. |
| Hind angles obtuse or feebly subrectangular, the margin acute and slightly reflexed; pleural sculpture finely, intricately strigose. | convexus Lec. |
| Hind angles of thorax sharply rectangular. | |
| Elytra scarcely striate, with rows of fine punctures..... | aereus Germ. |
| Elytra rather deeply striate, the intervals convex.... | sulcipennis Lec. |
| Elytra with rows of coarse, deep, slightly elongate punctures. | perforatus n. sp. |
| 7.—Elytra with deep broad striæ and coarse quadrate punctures. | arizonensis Horn. |
| Elytra finely or obsoletely striate.. | 8. |
| Elytra densely punctured, with feeble traces of striæ..... | difficilis Horn. |

8.—Body beneath sparsely punctured.

Hind angles of thorax slightly obtuse, the punctures of the under side slightly elongated. Elytra with moderately coarse punctures.

discretus Lec.

Hind angles sharply rectangular, punctures of under side sharp and dense.

Elytra with rather fine punctures in the striae.....**cisteloides** Germ.

Body beneath, especially the abdomen densely punctured...**spretus** n. sp.

9.—Form broadly oval, elytra deeply striate.....**farctus** Lec.

10.—Elytra striate, form broadly oval. Thorax beneath rugosely punctured.

tumescens Lec.

In the above table I have omitted all reference to the terminal joint of the antennæ as it varies with the sex, being longer in the male.

H. montanus Lec., Bull. U. S. Geolog. Surv. 1879, vol. v, p. 518, does not appear in the table as I am unable to separate it from *convexus* Lec.

H. perforatus n. sp.—Moderately elongate, piceous or black, moderately shining. Antennæ rather slender, nearly reaching the middle of the body, outer joints scarcely wider and very little compressed. Head moderately densely punctured. Thorax wider than long, apex and base equal, truncate, sides moderately arcuate, a little more strongly in front of middle, margin acute, hind angles sharply rectangular, disc moderately convex, coarsely and densely punctured. Elytra oblong oval, very little wider than the thorax, surface with rows of large, very deeply impressed, slightly elongate punctures, intervals narrower sparsely punctulate. Prothorax beneath with punctures which become strigose. Abdomen sparsely punctured. Length .30 inch; 7.5 mm.

This species has some superficial resemblance to *discretus*, but the rows of punctures on the elytra are not only coarser than in that but also than in any other of our species.

Two specimens from Texas, given me by Mr. A. S. Fuller.

H. spretus n. sp.—Form oblong oval, moderately robust, black, surface with slight æneous lustre. Antennæ slender, attaining the middle of the body ♂, or slightly passing the hind angles of thorax ♀. Head moderately densely punctured. Thorax a little wider than long, base a little broader than apex, sides feebly arcuate in front, nearly parallel ♀ or slightly convergent ♂, margin acute, hind angles sharply rectangular, disc moderately convex, and rather densely punctate. Elytra oval slightly oblong, at middle nearly twice as wide as thorax ♀, less wide in ♂, moderately convex surface finely striate, striae indistinctly punctured, intervals flat, sparsely punctulate, often wrinkled. Under side of thorax coarsely and moderately densely punctured, abdomen densely punctured, denser in the ♀ than the ♂. Length .36—.68 inch; 9—17 mm.

In the ♀ the last three antennal joints are much shorter than those which precede, are broader and more flattened. In the ♂ the last two only are a very little shorter, not broader, the eleventh being fully as long as the tenth.

This species resembles somewhat our eastern *cisteloides* and replaces it in the west.

Occurs in western Nevada, collected rather abundantly by H. K. Morrison.

DENDROIDES Latr.

D. picipes n. sp.—Piceous, shining, thorax red, base of femora and tip of abdomen pale. Thorax as wide as long, arcuately narrowed in front, surface shining with extremely minute punctures sparsely placed and a slight basal impression. Elytra scarcely dilated posteriorly, moderately densely coarsely punctured. Body beneath sparsely finely punctate, abdomen a little more coarsely and densely. Legs nearly black, base of femora and coxæ ferruginous. Length .52 inch; 13 mm.

Male.—Antennæ with joints 3—10 emitting a very long slender branch, those on joints 6—10 fully five times the length of the joint; the last joint a little longer than the preceding four taken together. Last ventral segment truncate.

Female.—Unknown.

In color of upper surface this species resembles *canadensis*, but differs by the under side and legs being piceous and the thorax very much less conspicuously punctured, as well as by the length of the last joint of the antennæ which in *canadensis* equals the three preceding joints. In its characters except color it more nearly approaches *concolor*.

One specimen given me by Dr. D. M. Castle, who received it from California.

EXPLANATION OF PLATE III.

- 1.—*Dyschirius lævifasciatus* Horn, Trans. Am. Ent. Soc. 1878, p. 52.
- 2.—*Pterostichus agonus* Horn.
- 3.—*Harpalus obliquus* Horn.
- 4.—*Xenomycetes Morrisoni* Horn.
- 5.—Head and thorax of *a*, *Phymaphora californica* Horn; *b*, *P. pulchella* Newm.
- 6.—*Phileurus cribrus* Lec.; *b*, hind tibia and tarsus *P. truncatus* Beauv., natural size.
- 7.—Claws and maxillary palpi of *Plectrodes* Horn; *a*, *P. pubescens* Horn, showing the two claws on each leg; *d*, Maxillary palpus of same, as seen from above, the impression on the outer side and an imaginary transverse section; *b*, *P. Carpenteri* Lec., the claws; *e*, the maxillary palpus; *c*, *P. palpalis* Horn, the claws; *f*, the maxillary palpus.
- 8.—*Trogodendron Edwardsii* Horn.
- 9.—*Asida quadricollis* Horn.

