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Descriptions of new North American SCARABÆIDÆ.

BY GEORGE H. HORN, M. D.

The species described in the following pages introduce three genera into our lists which were previously not with certainty known to occur with us: *Glaresis*, *Phytalus* and *Orizabus*. The last two had occurred so near our southwestern border that species were confidently expected, but I know of no reason why *Glaresis* could have been expected to occur in the same region.

The full number of *Listrochelus* is not yet complete as there are yet wanting species with structural characters filling the evident blanks which I have illustrated in a table published some time ago.

In *Plusiotis* new species rarely present themselves, while new *Cremas-tochili* appear with sufficient frequency to disarrange all the synopses which have been published.

GLARENIS Erichs.

G. mendica n. sp.—Oblong oval, robust, dark brown, opaque. Head rugulose, occiput vaguely transversely carinate. Thorax nearly twice as wide as long, slightly narrower in front, sides nearly straight, the margin crenulate, disc convex, a subapical impressed line, a median impressed line deeper posteriorly, a vague fovea each side slightly in front of middle, another near the side margin. Elytra very little wider than the thorax, sides nearly straight, slightly divergent posteriorly, disc convex, each elytron with eight finely elevated costæ bearing short setæ on their summits, the intervals concave with vague foveæ not closely placed. Body beneath and legs rugulose and subopaque. Length .12 inch; 3 mm.

The ornamentation of the thorax consists of small distant granular elevations which near the sides become more elongate forming short lines.

One specimen, Arizona.

G. inducta n. sp.—Form robust, ferruginous, not shining. Head slightly granulate rugose in front, punctate posteriorly, a slight depression above the base of the antennæ. Thorax more than twice as wide as long, gradually narrower from base to apex, sides nearly straight, margin not crenulate, subapical impression very feeble, median line very indistinctly channeled, a vague depression near the middle of the side close to the margin, surface opaque with short finely elevated longitudinal lines. Elytra finely costulate, the costæ catenulate, intervals concave with a single row of barely perceptible large punctures. Body beneath opaque, obsoletely punctate. Length .12 inch; 3 mm.

A slightly smaller and more robust species than the preceding with the elytral costæ much less elevated and the punctures of the intervals even more indistinct.

Two specimens, southwestern Texas.

The genus *Glaresis* was indicated, and the characters given rather summarily by Erichson, but to Westwood we owe a full exposition of its details. Regarding its systematic position there is some doubt as Westwood places it among the Orphnides, while Erichson and Lacordaire consider it a Trogide. The material at my disposal does not admit of dissection, and I can only accept the views of the last named authors.

Glaresis might be compared in form to some of our *Aegialiæ*. From *Trox* it differs in having the first joint of the antennæ cupuliform and the abdomen small, membranous and retracted under the posterior coxæ.

The only species at present described is *G. Frivaldskyi* Ww. from Hungary and it is very remarkable to find now two species in our country and in such a very remote region.

As there are now three species known the following sketch gives in brief their distinctive characters.

G. Frivaldskyi Westw. Head with very distinct transverse impression from the base of each antennæ, median line of front distinctly impressed. Thorax—a deep post-apical impression, deeper near the angles, median line very deeply sulcate, an oblique fovea each side of median line in front of middle and another posterior to the first but more distant from the median line, a depression near the middle of the side margin; sides of thorax, straight, convergent to the front, the margin crenulate; surface with small granulations. Elytral costæ well marked, intervals with distinct foveæ.

G. mendica Horn. Head obsoletely foveate at the base of the antennæ, no median groove. Thorax—post-apical line distinct not deeper externally, median line moderately deeply excavate, an oval fovea near the median line slightly in front of middle, another near the middle of side margin. Elytral costæ moderately elevated, the foveæ of the intervals indistinct.

G. inducta Horn. Head as in *mendica*. Post-apical line of thorax feeble, median line feebly channeled a feeble fovea near the side margin. Elytral costæ feeble, the foveæ of the intervals scarcely distinct.

PLECTRODES Horn.

P. palpalis Horn, Trans. Am. Ent. Soc. viii, p. 146.

The specimens hitherto collected of *Plectrodes* have consisted of males alone and the descriptions of the three species apply to that sex alone. A short time since Mr. Behrens, of San Francisco, loaned me a female of the above species which differs from the male by some characters worthy of note.

The form and vestiture do not differ in the sexes, and the tibiae have similar teeth on the front pair while the middle and posterior are mucronate in a similar manner. The antennal club is but two-thirds in the female the length in the male. The last joint of the maxillary palpi is about half the length in the female, more oval and more acute at tip, the impression quite shallow and not deeper than observed in *pubescens*. In the male the anterior claw of each tarsus is armed with a moderately long tooth near the base and very nearly of equal length on all three tarsi; the posterior claw is also toothed but that of the front tarsus has a very feeble tooth, a larger one on the middle tarsus while on the posterior tarsi the claws are nearly equally toothed. In the female the anterior claws are toothed as in the male, the posterior claws are also toothed, but less strongly than the anterior, and on all three tarsi very nearly equally.

PHYTALUS Erichs.

At the time of the publication of the "Classification" several species of this genus were known to us, but as none of them were described the name was accidentally omitted. *Phytalus* should be associated with *Lachnosterna* and *Listrochelus*, from both of which it differs in having the claws cleft at tip.

In examining the species before me I find the claws differing, two of them having the claws so cleft that the upper portion is more slender and shorter than the lower portion, while in the others the reverse is the case. Two of the Mexican species described by Blanchard are known to me by specimens kindly sent me by Mr. Sallé, and are mentioned in my table for the sake of comparison. The following are the species known to me in nature:

- | | |
|---|----|
| Claws unequally cleft, the upper portion more slender and shorter than the lower..... | 2. |
| Claws more equally cleft, the upper portion nearly as stout and always longer than the lower..... | 3. |
- 2.--Thorax very regularly closely and rather coarsely punctate. Outer spur of hind tibiae of ♂ short, fixed. Form robust. Clypeus feebly emarginate.
- robustus** n. sp.

Thorax shining, irregularly and sparsely, coarsely punctate. Spurs of hind tibiæ ♂ free and slender. Form oblong. Clypeus feebly emarginate.

laevigatus Bl.

3.—Thorax with a distinct basal marginal line, interrupted at middle.

Clypeus rather strongly emarginate, thorax rather finely but regularly sparsely punctate.....**cephalicus** n. sp.

Clypeus scarcely at all emarginate, thorax very coarsely and irregularly sparsely punctate.....**pubicollis** Bl.

Thorax without basal marginal line, clypeus feebly emarginate.

Elevated portion of prosternum behind the front coxæ in form of a transverse lamina broadly emarginate at summit.

Head rugosely punctate, the punctures coarse and more or less confluent.

pallidus n. sp.

Head coarsely punctate, the punctures distinct and not confluent.

vexatus n. sp.

Elevated portion of prosternum deeply emarginate, the angles prolonged in the form of processes.

Head pale, not densely nor coarsely punctate.....**debilis** n. sp.

Head piceous, deeply, coarsely and densely punctate.

georgianus n. sp.

P. cephalicus n. sp.—Form rather slender, moderately elongate, color varying from piceous to castaneous. Head coarsely and deeply but not closely punctate, a distinct longitudinal frontal impression, clypeus rather deeply emarginate, more densely punctured and rugose than the front. Thorax short, more than twice as wide as long, apex feebly emarginate, not narrower than the base, sides moderately arcuate, margin not crenulate, basal marginal line distinct and entire, surface shining, punctures moderate in size, rather sparsely placed, but evenly disposed over the entire surface. Scutellum with very few punctures. Elytra not wider at base than the thorax, shining, surface coarsely not closely punctate, sutural costa moderately elevated, the oblique costa scarcely evident, a vague lateral costa a little more distinct. Pygidium very coarsely but sparsely punctate, especially near the apex. Prothorax beneath with very few punctures. Metasternum closely punctate at the sides, very sparsely at middle, finely sparsely villous. Abdomen coarsely, sparsely punctate. Length .60 inch; 15 mm.

Male.—Antennal club as long as the funicle. Spurs of hind tibiæ free, the inner twice as long as the outer. Fifth ventral segment slightly flattened at middle.

Female.—Antennal club a little shorter. Spurs of hind tibiæ nearly equal.

Collected in Arizona by Morrison.

P. robustus n. sp.—Facies robust, nearly that of *Lach. crassissima*, brown, feebly shining. Head coarsely rugosely punctured, clypeus very slightly emarginate. Thorax narrower in front, sides moderately arcuate, as wide at base as at middle, lateral margin not crenulate, basal marginal line distinct at the sides, hind angles rectangular; surface feebly shining, moderately punctate, the punctures closely placed and equally disposed over the entire surface, very sparsely pubescent. Scutellum coarsely punctate. Elytra very little wider at base than the thorax, coarsely and moderately closely punctate, the sutural and oblique costæ feeble. Pygidium obsoletely punctate, the punctures very shallow but variolate. Body beneath sparsely punctured, the metasternum villous. Length .80 inch; 20 mm.

Male.—Antennal club nearly as long as the entire stem. Outer spur of hind tibiæ short, stout and fixed. Abdomen vaguely concave at middle.

In this species the claws are unequally cleft, the upper portion being much more slender and shorter than the lower portion. As in all the species in our fauna the antennæ are 10-jointed. This species differs from all those described from Mexico by the very equally and rather closely punctured thorax.

One specimen in my cabinet from the Berlandiere collection made along the Rio Grande, and may possibly have been collected on the Mexican side of the river at Matamoras.

The antennæ in this species are rather short, resulting from the fact that the third joint is the only one elongate, the 4-7 being short and quite transverse. The post-coxal elevation of the prosternum is broad and feebly emarginate. The head is rather large and broad, recalling those of the Lachnosternæ allied to *longitarsis*, which this species resembles in form but not in color. The claws are so cleft that the upper portion is as large as the lower and somewhat longer.

Occurs in New Mexico and Arizona.

P. pallidus n. sp.—Form oblong, a little more slender than *Lach. glaberrima*, color testaceous, the elytra a little paler. Head darker in color, coarsely, densely and rugosely punctured, clypeus feebly emarginate. Thorax a little more than twice as wide as long, a little narrower in front, sides moderately arcuate, margin not crenulate, base with a faint trace of marginal line near the hind angles, surface shining, punctures moderately coarse sparsely placed, and regularly disposed. Elytra scarcely wider than the thorax, sparsely, rather coarsely punctate, smoother near the apex, the sutural costa moderately distinct, the oblique discal and sub-marginal obliterated. Pygidium coarsely sparsely punctate, shining. Prothorax beneath very sparsely punctate. Metasternum moderately closely punctured at the sides, very sparsely at middle, clothed with short sparse hair. Abdomen very finely sparsely punctate at middle, more coarsely at the sides. Length .56 inch; 14 mm.

The male of this species is unknown to me. The female has the antennal club about as long as the funicle. The spurs of the hind tibiæ are both free and nearly equal in length. The post-coxal elevation of the prosternum is broad and vaguely emarginate at tip. The claws are equally cleft, the two portions being similar.

Occurs in Arizona.

P. vexatus n. sp.—Oblong, yellowish testaceous. Head darker, coarsely and moderately closely punctate, clypeus feebly emarginate, less closely punctured than the front. Thorax not more than twice as wide as long, narrower in front, sides arcuate, margin entire, basal marginal line absent, surface shining, moderately coarsely but sparsely punctate, the punctures somewhat irregularly disposed. Elytra a little wider at base than the thorax, moderately coarsely and sparsely punctate.

tate, smoother near the apex, sutural costa feeble, discal costa obsolete. Pygidium very sparsely and vaguely punctate. Prothorax beneath coarsely and sparsely punctate. Metasternum coarsely sparsely punctate at middle and sides. Abdomen nearly smooth at middle, vaguely punctate at the sides. Length .48 inch; 12 mm.

In this species the third and fourth joints of the antennæ are equal and moderately long. The tip of the prosternum is broadly emarginate. The two portions of the cleft claws are nearly equal.

This species is less elongate than *pallidus*; has the head much less rugulose, and the thorax a little more irregularly punctured.

One specimen ♀, Texas.

P. debilis n. sp.—Oblong, rather slender, pale yellowish testaceous. Head coarsely not closely punctate, clypeus feebly emarginate; eyes rather large and prominent. Thorax a little more than twice as wide as long, narrower in front, sides moderately arcuate, margin entire, base without marginal line, disc moderately convex, coarsely, rather sparsely, equally punctate. Elytra very little wider than the thorax, coarsely sparsely punctate, a little smoother at apex, sutural costæ feeble, oblique discal and submarginal costæ obsolete. Pygidium obsoletely coarsely and very sparsely punctate. Prothorax sparsely punctate beneath, the apex of prosternum deeply emarginate, the angles prolonged. Metasternum nearly smooth at middle, coarsely sparsely punctate at the sides. Abdomen very sparsely punctate at the sides. Length .42 inch; 10.5 mm.

Male.—Antennal club longer than the funicle. Posterior tibial spurs free, the inner a little shorter. Penultimate ventral segment with a small slightly roughened space near the posterior margin.

The two divisions of the cleft claw are equal. This species resembles the preceding, but is more slender and with a more sparsely punctate head. In general appearance it resembles *Lach. inana*.

Occurs in Arizona, near Tucson.

In a general review of the preceding species two may be said to have a relatively small head: *robustus* and *vexatus*, while the others have a large head. The two Mexican species in the table have a small head, both have the posterior tibial spurs free in the male, one (*lævigatus*) has a long antennal club, the other (*pubicollis*) a short club.

P. georgianus n. sp.—Form slender, moderately elongate, testaceous, head piceous. Head coarsely, deeply and closely punctate; clypeus short, margin reflexed, feebly emarginate; eyes large and prominent. Thorax short, more than twice as wide as long, widest at middle, apex very little narrower than the base, basal marginal line not present, disc with coarse and deep, rather sparsely but regularly placed punctures. Elytra not wider at base than the thorax, sides very little arcuate, oblique costal obsolete, submarginal costa feeble, surface coarsely not closely punctate. Pygidium coarsely sparsely punctate. Prothorax beneath coarsely sparsely punctate, the post-coxal process very deeply emarginate, the angles prolonged. Sides of metasternum and abdomen sparsely punctate. Length .50 inch; 12.5 mm.

Male.—Antennal club longer than all the preceding portion. Spurs of hind tibiae free, the inner much longer than the outer. Last ventral segment vaguely concave.

The claws are slender, the upper portion longer than the lower. This species resembles *Lachnosterna volvula* so closely that one might readily be mistaken for the other.

One specimen, Georgia. Morrison.

LISTROCHELUS Blanch.

L. flavipennis n. sp.—Subcylindrical, moderately elongate, head and thorax rufo-testaceous, elytra yellowish testaceous, surface shining. Head coarsely not closely punctate, clypeus at middle smoother, its anterior margin subtruncate and narrowly reflexed. Thorax transverse, widest at middle, the sides very obtusely subangulate, the margin not crenulate, and with rather distantly placed short stiff setae, surface shining, very sparsely punctate, the punctures a little closer along the apical margin. Elytra coarsely sparsely punctate, sutural costa feebly elevated the oblique discal costa scarcely evident. Pygidium convex, very sparsely, coarsely punctate. Metasternum yellowish testaceous, moderately closely punctate, clothed with fine silken pubescence. Abdomen pale picco-testaceous, very sparsely punctate at the sides, granulate along the middle. Length .60 inch; 15 mm.

Male.—Club of antennae long and slender. Abdomen longitudinally concave at middle, the last ventral segment longitudinally impressed, the penultimate less so. Claws pectinate on all the tarsi, the pectination double. Spurs of hind tibiae slender.

Female.—Club of antennae not longer than the funicle. Claws similar on all the feet, very indistinctly serrulate their entire length with moderate tooth at middle.

This species is closely related to *disparilis*, but differs in color, size and sculpture. The pectination of the ♂ claws is also different, being fine and equal in the present species, unequal and partly coarse in *disparilis*.

Collected by Mr. Morrison in Arizona.

L. gracilis n. sp.—Form rather slender cylindrical, rufo-testaceous, surface distinctly pruinose. Head sparsely coarsely punctate, clypeus subtruncate in front, the margin narrowly reflexed. Antennae nine-jointed, the third and fourth joints being closely connate, club paler but little longer than the funicle. Thorax transverse, wider at base than apex, widest at middle, sides obtusely angulate, the margin crenulate and fimbriate, surface sparsely punctate, punctures less abundant near the hind angles. Elytra not wider than the thorax, sparsely coarsely punctate, sutural costa feebly elevated, oblique discal costa obsolete. Pygidium very sparsely finely punctate. Body beneath, sparsely pilose, the metasternum finely not densely punctate, opaque. Abdomen paler, sparsely punctate. Length .52 inch; 13 mm.

Male.—Anterior claw of front tarsi biserially finely pectinate, the outer claw more coarsely pectinate with a tooth at middle. Middle claws biserially pectinate. Posterior front claw biserially pectinate, the other claw serrate at tip and

obsoletely pectinate at base. Last ventral segment with a strongly elevated transverse carina. Posterior trochanters dentiform at tip. Posterior tarsi slender, not pilose beneath.

The sexual characters mark this as a very peculiar species. It is allied in many respects to *scoparius*. The prominence of the hind trochanter has never been observed in any other species. No value is attached to the 9-jointed antennæ, as in *mucorens* it has been observed that specimens seem to be indiscriminately nine or ten jointed.

One male. Arizona.

PLUSIOTIS Burn.

P. Woodii n. sp.—Form oval, robust, surface bright brilliant green with a slight golden lustre from the surface, tarsi violaceous. Head sparsely punctate, clypeal margin narrowly reflexed. Antennæ piceous, basal joint bright green. Thorax not twice as wide as long, a little narrower at apex, broadest at middle, hind angles nearly rectangular, surface sparsely coarsely punctate with finer punctures intermixed, the punctures denser at the sides, especially in front. Scutellum coarsely punctate. Elytra wider at base than the thorax, broadest slightly behind the middle, apical umbones moderately prominent, surface obsoletely striate, nearly entirely obliterated at the sides, striæ punctate, the intervals flat, with coarse sparsely placed punctures with finer punctures intermixed. Pygidium rugulose at the sides, closely not coarsely punctate. Body beneath a little more polished than above, sides of metasternum coarsely punctate. Abdomen much more sparsely and finely punctate. Legs bright green, tibiæ distinctly golden externally. Length 1.-1.12 inch; 25-28 mm.

The male has the anterior claw longer than the posterior on each tarsus as is usual, but that of the front tarsus is suddenly acuminate near the tip.

This species is easily known from either of our other species, *gloriosa* having sulcate elytra, and *LeContei* deeply striate elytra. The elytral sculpture resembles that of *Chrysina*.

Two specimens from the Rio Grande, Texas, collected by my friend, Dr. H. C. Wood, to whom I have great pleasure in dedicating the species. I have seen another specimen in the Museum of the Jardin des Plantes at Paris.

ORIZABUS Fairm.

O. Snowii n. sp.—Dark castaneous, moderately shining, beneath moderately densely clothed with short, reddish brown hair. Head densely punctured and opaque, frontal suture arcuate, clypeus in front reflexed, on each side more elevated so as to be bidentate, at middle close to the frontal suture elevated in a slight tubercle. Thorax about one-third wider than long, narrower in front, sides arcuate, hind angles broadly rounded, lateral margin fimbriate with short hairs, base with a distinct and entire marginal line, surface coarsely and very densely punctured near the anterior angles from which point the punctures become gradually finer, the middle of the disc being very finely and sparsely punctured;

disc behind the anterior margin with a slight depression in front of which is a slight pyramidal elevation of the margin, flat and smooth in front. Elytra wider than the thorax, about one-fourth longer than wide, scarcely broader behind, surface vaguely seven-striate, with large variolate punctures rather closely placed, the fourth and sixth intervals wider with irregular variolate punctures with others at the base of the second interval, sides of elytra beyond the seventh row of punctures, coarsely and irregularly punctured. Pygidium sparsely and rather finely punctate. Abdomen smooth at middle, coarsely punctured at the sides. Anterior tibiae with the outer edge regularly arcuate the anterior face coarsely punctured (except along the outer margin) and with a carina extending nearly the entire length; tip of tibia obtuse. Length .8 inch; 21 mm. (Pl. 4, fig. 5.)

The genus *Orizabus* was founded by Fairmaire (Rev. et Mag. Zool. 1878) for certain Mexican forms closely related to the Australian *Chiroplatys*, and from which no characters of moment have been given to separate them. In our own fauna *Ligyris* and *Aphonus* are its closest allies, and the species resemble those genera greatly in form and sculpture. The anterior tibiae in the species described by Fairmaire are without teeth on the outer side, but in one of them, *isodonoides*, the following expression is used: *tibiis anticis . . . extus leviter bisinuatis*. This latter expression indicates a tendency of the tibia to become dentate, which the following species fully illustrates.

The two specimens before me were collected by Prof. Snow in New Mexico. Of the four species described by Fairmaire they seem most closely related to *marginalis*.

O. ligyroides n. sp.—Dark castaneous, shining, beneath clothed with short reddish brown hair. Head densely punctured and opaque, frontal suture sinuate, clypeus in front narrow, the margin reflexed and acutely notched, obtusely bidentate, a slight elevation at the middle of the clypeal suture. Thorax about one-third wider than long, narrower in front, hind angles broadly rounded, sides fimbriate, base with a distinct marginal line; apical margin thickened and slightly elevated at middle, surface coarsely and rather densely punctured along the apical third, gradually more sparsely posteriorly, a smooth median space posteriorly and one each side nearer the lateral margin. Elytra wider than the thorax, scarcely a fourth longer than wide, slightly broader posteriorly, the surface with seven vague striae indicated by rows of coarse variolate punctures, the intervals 2-4-6 broader and with irregularly placed punctures, sides of elytra beyond the seventh row of punctures coarsely and deeply punctured, the punctures arranged in vague rows. Pygidium very finely and sparsely punctured. Abdomen finely and sparsely punctate. Anterior tibiae coarsely punctured, except along the outer margin and apex, a distinct carina extending from base two-thirds to tip, outer edge vaguely tridentate. Length .88 inch; 22 mm. (Pl. 4, fig. 6.)

In comparing this species with *Snowii* we find the form more robust, the sculpture throughout deeper and more pronounced. The thorax is not depressed in front and the apex of the clypeus narrower.

It is, however, in the form of the anterior tibiae that the greatest difference is observed as is shown in the accompanying figure. From the facies of the species and all the other characters there seems to me no doubt that it should be placed in the present genus, and the structure of the tibiae of one of the species already quoted seems to indicate the occurrence of another with the form of tibiae of the one now before me. In the present species it will be observed that the submarginal rows of setigerous punctures of the ventral segments 3-4-5 are better marked than in *Snowii*.

One specimen collected by Mr. Morrison in Arizona.

CREMASTOCHILUS Knoch.

In a review of our species of this genus published by me (Proc. Am. Philos. 1879, pp. 382-397) there is indicated a peculiar type represented by one species (*saucius*) in which the clypeus is strongly longitudinally carinate at middle and the thorax trilobed on the disc. One other species (*plumatus*) has the clypeus carinate, but with the disc of thorax entire, still another (*Wheelerii*) has the disc trilobed, but without clypeal carina. In all the species with widely reflexed clypeus, especially the group below, the surface of the clypeus above is quite smooth and shining.

The occurrence of two new species enables me to define a small group with the following characters: Mentum plate rather flat, the margins narrowly reflexed, more widely posteriorly, hind angle of mentum entire; head rapidly narrower behind the eyes, the clypeus strongly carinate at middle; disc of thorax trilobed.

The species thus included are as follows:

tibiae of normal form, rather thick, more slender at base; hind tibiae with a small tooth at middle.

Anterior tibiae with the upper tooth near the middle; hind angles of thorax small, acute, not everted. **saucius** Lec.

Anterior tibiae with both teeth near the apex; hind angles of thorax rather long, slender and everted. **spinifer** n. sp.

tibiae broad, laminiiform and thin, not much narrower at base, middle and hind tibiae toothed near the tip.

Anterior tibiae with both teeth near the apex; hind angles of thorax acute, but short. **planipes** n. sp.

C. spinifer n. sp.—Piceous, slightly shining. Head coarsely not densely punctured, the occipital region transversely depressed; clypeus, viewed from above, nearly semi-circular, margin widely reflexed, at middle very strongly carinate, surface smooth. Thorax wider than long, narrower behind, sides arcuate in front, sinuate posteriorly, the hind angles acute and prolonged externally, anterior

angles with a deep incision forming in front an auriculate lobe, disc trilobed, the median portion being somewhat depressed, surface very coarsely but sparsely punctured. Elytra with disc flat, sides nearly vertical, discal region with shallow, elongate foveæ, the sides with coarse punctures. Pygidium coarsely sparsely punctate. Body beneath shining, with very coarse but sparse punctures. Legs brownish, anterior tibiæ obtusely bidentate near the apex, middle and posterior tibiæ acutely dentate near the middle. Tarsi ambulatorial, cylindrical, slightly compressed; and but little shorter than the tibiæ. Length .30 inch; 7.5 mm. (Pl. 4, fig. 1.)

In the plate is an outline sketch of this species which will serve better than a description to give an idea of its curious form. The mentum is rather deeply cupuliform, smooth, the hind angles entire.

One specimen, Texas.

C. planipes n. sp.—Robust, piceous, feebly shining, legs reddish brown. Head coarsely, not densely punctate, occipital region transversely depressed, clypeus semi-circular, margin widely reflexed and fimbriate with short hairs, at middle strongly carinate, surface smooth. Thorax transverse, narrower behind, sides slightly arcuate in front, oblique behind, hind angles acute, smooth and shining, anterior angles deeply incised forming an auriculate lobe, disc trilobed, the median portion much wider and depressed, surface with rather closely placed variolate foveæ, densely placed near the side margin. Disc of elytra flat, with very elongate foveæ, sides nearly vertical with coarse variolate punctures. Pygidium with coarse variolate punctures. Body beneath coarsely sparsely punctured. Legs broad and flat, sparsely punctured on the under side, smooth above. Anterior tibiæ bidentate at apex, middle and posterior tibiæ with the outer edge acutely bidentate near the tip. Tarsi cylindrical, slightly compressed, shorter than the tibiæ. Length .52 inch; 13 mm. (Pl. 4, fig. 2.)

The punctures of the entire surface bear short erect black hairs.

In the accompanying plate are figures in outline of the three species which I have associated in one group. Their differences may be seen at a glance. The mentum is rather flat at bottom, the sides reflexed, the posterior angle entire.

One specimen, Arizona.

C. ineptus n. sp.—Black, feebly shining, form relatively elongate. Head coarsely and closely variolate punctate, occiput not transversely compressed, front flat, clypeus narrowly reflexed. Thorax broader than long, general form hexagonal, anterior angles slightly acute, posterior angles obtuse, disc feebly convex, with very coarse, moderately deep and rather closely placed punctures. Elytra with flat disc which has very elongate variolate foveæ, the sides very coarsely punctured. Pygidium with coarse variolate punctures. Legs ambulatorial, relatively slender, anterior tibiæ bidentate near the tip, the middle and posterior toothed at middle and with coarse teeth around the apex. Tarsi nearly as long as the tibiæ, cylindrical. Body beneath very coarsely but sparsely punctate. Length .50 inch; 12.5 mm. (Pl. 4, fig. 4.)

In this species the mentum plate is of pentagonal form, acute posteriorly and entire, rounded in front, surface slightly concave, sparsely

punctate, the margins not reflexed. It should be associated with *leuco-stictus* in the section *Brilocnemis*. 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