

III.—*Coleopterological Notices.*

V.

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In bringing together a number of short studies of our North American Coleoptera under the above title, the methods and objects held in view in the other parts of the present series are continued. The systematic revisions do not pretend to approach completeness, and are merely efforts to indicate the probable interrelationships of the species, based upon such material as it has been found possible to gather together. New forms are continually being brought to light, which sometimes tend to alter previously formed conceptions of specific limits, or to destroy or modify the value of characters assumed as the bases and criteria of classification. This is the natural outcome of all endeavors to evolve the laws of complicated affinities from inadequate data, but, at the same time, it is not always necessary or advisable to defer the announcement of such apparent truths as we have been able to discover with the material at our disposal; if carefully conducted, I believe that they may, and generally do, lead onward and upward.

Having before us a confused mass of material which it is proposed to classify and arrange generically and specifically, the problem is to record all the genera and species, but neither more nor less. This problem is frequently more difficult than any which can confront us in the domain of the exact or physical sciences, because the accidental and variable factors cannot be determined. We might illustrate the process by imagining an exact circle finely drawn on paper, and then trying by free hand to retrace it with a blacker pencil. It will be found that a portion of the dark line is outside the circle, a portion within, and another truly on the line. The portion without represents an excess of units or species, that within those which we have overlooked, as shown by subsequent and fuller evidence. The

hand cannot follow the circle exactly, and in like manner is it impossible for the human brain to correctly interpret nature; we can only approximate. It would of course be perfectly easy to strike a circle wholly within the circumference of fact, but this would be analogous to the rule of thumb by which an engineer may make a structure many times too strong, in order to avoid laborious calculations. It may answer in a certain way, but is not in the spirit of true scientific inquiry.

NEW YORK, Sept. 7, 1893.

STAPHYLINIDÆ.

ALEOCHARINI.

It is unfortunate, having in view the optical means of investigation usually employed, that the Aleocharini are so small in size, for, from all points of view taxonomic and etiologic, they are one of the most interesting groups of little animals on the earth. The extraordinary diversity of structure and specialization of type observable among the termitophilous inquilines, are, in a measure, characteristic of the entire tribe, and it is this diversity alone which has given rise to the multitude of generic names which have been proposed. It is impossible to estimate just what proportion of these names is really necessary, but the number of true genera is without doubt proportionally much greater than in any other tribe of Staphylinidæ, possibly excepting the Omalini. This diversity and specialization bespeaks a greater geological antiquity for the Aleocharini than for the other tribes of Staphylinidæ, and this is indicated again by the fact that nearly all the associates of the termites,—known to be more ancient than the Coleoptera,—are taken from the tribe under consideration, or the closely related Tachyporini.

The study of the subarctic Aleocharini of North America has been almost completely neglected thus far, but the species are without much doubt as plentiful here as in any other part of the world, and seem to follow the general rule with regard to the Staphylinidæ in being more abundant and diversified than in Europe. This is somewhat remarkable, in view of the superior development in that continent of several other large families of Coleoptera, and, as I have before suggested (Col. Not. II, p. 326), seems to point to a

greater age for the Staphylinidæ than for some other families of Coleoptera.

The following detached studies are merely intended as a beginning, and in drawing up the generic diagnoses, I have employed to some extent the differential characters suggested by Rey in the "Brévipennes" of France; so that one familiar with that work can refer the genera to their most probable positions in the European scheme. It is to be regretted, on the score of simplicity, that it has been found necessary to propose so many new genera, but I feel quite sure that those here described are really essential. In fact several species now referred to *Leptusa*, *Oxypoda* and *Rheochara*, will ultimately have to form distinct genera. This matter of generic subdivision is, however, becoming an important one from the mere standpoint of numbers, and, in the *Aleocharini*, if we go beyond *Aleochara*, *Myrmedonia*, *Bolitochara* and others, as determined by the number of tarsal and antennal joints, it is difficult to tell just where to draw the line. One good rule to follow in such cases, is to avoid defining new genera unless there be at least three or four important structural differences; facies, however, here as elsewhere, frequently goes far as a guide, and is much more important than any single organic structural peculiarity.

There is one important point concerning the nomenclature of the *Aleocharini*, which should be continually borne in mind. *Homalota* Mann. was founded upon a single definitely stated species, the *Aleochara plana* of Gyllenhal, which was subsequently found by Rey to have but four intermediate tarsal joints. This necessitates the complete abandonment of all our old ideas of *Homalota* as extended by Erichson, and the true and only *Homalota* is the genus named *Epipeda* by Rey. In future, therefore, when we think of the Erichsonian *Homalota*, we should have in mind *Atheta*, *Colpodota*, *Amischa*, *Liogluta* and a score or so of other genera.¹ When

¹ This is set forth with sufficient clearness in the recent catalogue of Heyden, Reitter and Weise. I cannot agree with the authors of that work, however, in changing certain family names by reason of the rehabilitation of Geoffroy's genera. For instance, under *Mylabris*, Geoff., p. 331, I am unable to find a single species named by Geoffroy. Genera are and must be founded upon species, and if no species were described by Geoffroy under Latin names, it follows that that author had not adopted a proper binomial nomenclature when he founded his genera. We are compelled to assume some definite beginning, and that beginning is the date when the names of species were first published under the true binomial form. It is possible that some genera

there is the least doubt, a name long established in connection with certain species should not be changed, but in a case of this kind, where there can be no doubt whatever, the sooner we overcome our conservatism and adopt what is manifestly proper and right, the easier it will be for the generations of systematists who are to come into the world during the next few hundreds or thousands of years. It is our duty to lay as immovable a foundation as possible in the nomenclature of all sciences. The time, be it greater or less, during which we have become accustomed to a certain status or condition, will count as a mere nothing in future ages.

ALEOCHARIDES.

Antennæ 11-jointed; tarsi 5-5-5-jointed.

MASEOCHARA Sharp.

Of this interesting genus we have four species. First, a large form with red elytra, which is without much doubt *semivelutina* Solsky; second, a similar species, having the base of the prothorax equally rounded with the sides, but with the elytra black, described by LeConte under the name *valida* (= *californica* Csy.). Third, a rather smaller and notably more slender species with black elytra, having the basal angles of the prothorax distinct, recently made known by Dr. Sharp under the name *opacella*, and fourth, the following very small species allied to *gracilis* Shp.

M. puberula n. sp.—Black, each elytron feebly suffused with rufopiceous toward—but not attaining—the suture; legs throughout and antennæ toward base dark rufopiceous; integuments alutaceous, the elytra rather more shining, the abdomen strongly shining; head and pronotum feebly and sparsely punctate, the elytra more closely and a little more distinctly, the abdomen rather strongly but not densely, the impressed basal areas impunctate; pubescence rather long, coarse and plentiful, conspicuous, though much less so on the abdomen. Head orbicular, rather longer than wide, the eyes at fully their own length from the base; antennæ fully as long as the head and prothorax, feebly incrassate, second and third joints equal, tenth one-half wider than long. Prothorax one-fourth to one-third wider than long; sides parallel, broadly, evenly arcuate; basal angles obtuse but very distinct,

founded upon undescribed species may have been more recently accepted, but this would scarcely be a case in point, since the adoption of them took place long after the binomial system was firmly established. To establish a system is quite another matter, and requires the rigorous fulfillment of certain conditions.

scarcely blunt; base broadly arcuate, slightly wider than the truncate apex; disk very obsoletely impressed along the median line throughout. *Elytra* strongly transverse, at base subequal to the prothorax, but, at apex, quite distinctly wider; sides feebly divergent from the base, broadly arcuate; disk externally scarcely as long as the prothorax, the suture much shorter than the median line of the latter, broadly, feebly depressed toward the suture; humeri broadly rounded to the base of the prothorax. *Abdomen* one-half longer than the anterior parts, about equal in width to the elytra; sides parallel, feebly convergent toward apex; first two tergites strongly, widely impressed at base, the third very feebly so; fifth just visibly longer than the fourth. Basal joint of the hind tarsi one-third longer than the second; two to four exactly equal; fifth a little longer than the preceding two together. Length 4.0–5.0 mm.; width 0.85–1.25 mm.

Arizona (Benson).

The male above described, has six small slender teeth along the apex of the sixth tergite, but instead of being disposed in two sets of three, with a wider interval in the middle as in the other species, they are here equidistant. The coloration seems to be constant, and the largest and smallest specimens in my series are both females. The rufous cloud on each elytron is extremely feeble.

BARYODMA Thoms.

B. sculptiventris n. sp.—Rather narrow, parallel, convex, black, a narrow apical margin of the elytra almost imperceptibly rufescent; legs scarcely paler, the tibiae and tarsi dark piceo-rufous; basal joint of the antennae piceous; integuments moderately shining, the abdomen polished; head coarsely and rather closely punctate, the pronotum very finely but deeply, extremely densely and evenly so; elytra more distinctly but still rather finely, very densely and subasperately so; abdomen very coarsely deeply and densely punctured, the coarse punctures of the basal depressions longitudinally coalescent, forming fine strong ridges; pubescence of the pronotum and elytra fine, subrecumbent, very dense and distinct, of the abdomen longer but fine, sparse and very inconspicuous. *Head* orbicular, as long as wide, three-fifths as wide as the prothorax; antennae feebly incrassate, slightly longer than the head and prothorax, third joint obconical, elongate, two and one-half times as long as wide and much longer than the second, tenth scarcely one-half wider than long. *Prothorax* broadly ovoidal, one-half wider than long; sides broadly, strongly arcuate, becoming distinctly convergent in apical half; base broadly, strongly arcuate, much wider than the apex which is feebly arcuate; basal angles obtuse and blunt; disk broadly, evenly convex, without trace of impression. *Elytra* distinctly transverse, slightly wider than the prothorax and about as long as the latter; sides subparallel and broadly arcuate; humeri not distinct. *Abdomen* much longer than the anterior parts, very slightly narrower than the elytra; sides parallel and straight; first three

segments very strongly impressed at base through about one-half of their length; fourth and fifth equal in length. *Legs* rather short; posterior tarsi very much shorter than the tibiae, with the first joint distinctly shorter than the next three. Length 4.0–4.2 mm.; width 1.2 mm.

New York (Catskill Mts.); North Carolina.

The middle coxæ are moderately distant, the mesosternal process extending nearly to the apex, with its sides becoming parallel, the apex transversely truncate with the angles right and not rounded, the apical margin just visibly bisinuate, the fine acute median carina extending to the tip, the space between the carina and side margins broadly concave. This species is about twice as large as the European *morion* Grav., and has much longer antennæ.

B. thoracica n. sp.—Stout, thick, parallel, polished, black, the lateral limbs of the pronotum feebly rufescent from diaphaneity; elytra, tip of the abdomen, legs and basal joint of the antennæ clear pale rufous; head extremely minutely, scarcely visibly, remotely punctate; pronotum very finely, sparsely, uniformly so; elytra strongly, rather closely and asperately; abdomen sparsely, unevenly, subrugosely sculptured; pubescence rather short, not very dense, stiff, inconspicuous, long and sparse on the abdomen. *Head* strongly deflexed, oval, longer than wide, less than one-half as wide as the prothorax, convex; eyes well developed; antennæ long, distinctly incrassate, extending fully to the middle of the elytra, third joint feebly obconical, nearly three times as long as wide, longer than the second, tenth very slightly wider than long. *Prothorax* large, transversely suboval, three-fifths wider than long; sides broadly, strongly arcuate, convergent anteriorly becoming gradually parallel in basal half; base broadly, rather strongly arcuate, much wider than the more feebly arcuate apex; basal angles very obtuse and rounded but not obliterated; disk evenly, strongly convex, without trace of impression. *Elytra* very short, twice as wide as long, not in the least wider than the disk of the pronotum and scarcely more than two-thirds as long as the latter; sides just visibly divergent and arcuate from the base; disk not impressed, the apex transverse. *Abdomen*—when contracted—not longer than the anterior parts, at base as wide as the elytra; sides subparallel, becoming feebly convergent toward apex; first three segments narrowly, deeply impressed along the base; fifth distinctly longer than the fourth. *Legs* rather long; posterior tarsi very long and slender, only slightly shorter than the tibiae, with the basal joint fully as long as the next three combined. Length (contracted) 3.0 mm.; width 1.1 mm.

Canada (Grimshy).

The abdomen is reflexed from the base. The middle coxæ are moderately distant, the mesosternal process extending nearly to their apices where it is as usual superposed on the tip of the short metasternal projection; the sides of the process are feebly conver-

gent, the apex transversely sinuato-truncate with the angles not rounded, and, along its surface there is a low rounded ridge, extending to the apex and occupying one-third of its entire subapical width. The differences between this and the preceding species are almost certainly subgeneric; the general appearance of *thoracica* is not unremindful of *Oxypoda*.

B. bipartita n. sp.—Stout, subfusiform, rufo-piceous in color, the head and abdomen darker and blackish; elytra scarcely visibly clouded with blackish along the suture and toward the flanks; legs pale flavate throughout; antennæ fuscous, paler toward base, the eleventh joint also paler except toward its base; integuments strongly shining, the head finely, strongly, not very densely, the pronotum finely, strongly, evenly and extremely densely punctate; elytra finely, still more densely, subasperately punctate, the abdomen much more coarsely, very densely and subrugosely; pubescence coarse, stiff, dense, short, pale fulvous and distinct, finer darker sparser and inconspicuous on the abdomen. *Head* small, orbicular, not as long as wide, scarcely more than one-half as wide as the prothorax, the eyes large, elongate, at much less than one-half their length from the base; infralateral carina strong, entire; vertex evenly convex; antennæ short but only slightly incrassate, not quite as long as the head and prothorax, the second and third joints equal in length, the first longer and stouter, fourth but little wider than long, six to ten equal, slightly though distinctly transverse, eleventh subconical, rather acute, somewhat longer than the two preceding. *Prothorax* not quite twice as wide as long, the sides strongly convergent, very evenly and moderately arcuate from base to apex; base strongly arcuate, four-fifths wider than the apex, which is less strongly arcuate; basal angles very obtuse, rounded; apical equally obtuse but less broadly rounded; flanks greatly deflexed, the disk completely unimpressed, the fine basal bead distinct. *Elytra* at base equal in width to the prothorax, which is widest at its base, toward apex quite distinctly wider than the prothorax, equal in length, strongly transverse, the humeri concealed; sides feebly divergent, evenly and unusually strongly arcuate throughout; disk flattened toward the middle. *Abdomen* quite distinctly longer than the anterior parts, at base equal in width to the elytral apex; sides feebly convergent and straight to the apex; first two segments only feebly impressed but not more coarsely punctured at base, fifth distinctly longer than the fourth, border thick, moderately deep. *Legs* short; posterior tarsi slightly shorter than the tibiae, the basal joint barely as long as the next two and slightly longer than the last. Length 3.7 mm.; width 1.3 mm.

Texas (Galveston).

The mesosternal process is moderate in width and extends to the very apex of the coxæ, the apex subtruncate with rounded angles, the median carina entire, strongly elevated and finely compressed. This species greatly resembles an *Oxypoda* in outline. The contrast

between the fine dense punctuation of the anterior parts, and the coarser, beautifully regular sculpture of the abdomen, is very marked.

RHEOCHARA Rey.

The species described below is assigned provisionally to this genus, although the outer joints of the antennæ are strongly transverse, the first three tergites gradually less strongly impressed at base, the posterior tarsi much shorter than the tibiæ, and the anterior tibiæ entirely devoid of spinules. It will probably form a genus distinct from Rheochara, but at present it is not advisable to separate it, as I have no representative of Rheochara with which to compare it.

R. lucifuga n. sp.—Slender, moderately convex, pale ochreous-yellow, the head piceous and the abdomen with a large very feeble piceous cloud near the apex; apices of the three basal segments paler than the base; surface feebly shining, the abdomen polished; pubescence rather coarse, decumbent, moderately dense, sparser on the abdomen. *Head* ovulate, longer than wide, three-fifths as wide as the prothorax, evenly convex, finely, sparsely punctate; eyes moderate, before the middle; infralateral ridge very strong; ligula with a short thick simple and membranous deflexed process bearing two setæ; terminal supplementary palpal joint distinct; antennæ as long as the head and prothorax, thick, the first three joints gradually decreasing in length, four to ten transverse, increasing greatly in size, the tenth rather strongly transverse, eleventh large, feebly pyriform, as long as the two preceding, outer joints somewhat perfoliate. *Prothorax* one-fourth wider than long, sides subparallel, broadly arcuate, distinctly convergent only in apical third; base broadly arcuate, much wider than the apex; basal angles very obtuse but not obliterated; disk widest just behind the middle, broadly, feebly convex, finely feebly and somewhat closely punctate, not in the least impressed, the edges, except at apex, finely beaded; hypomera slightly visibly from the sides, subhorizontal. *Elytra* one-half wider than long, not distinctly wider and a little shorter than the prothorax; sides subparallel, feebly arcuate; humeri rounded, slightly exposed; disk rather finely but strongly, somewhat closely, subsparsely punctate; suture strongly margined, scarcely impressed. *Abdomen*—when extended—not quite twice as long as the anterior parts, very slightly narrower than the elytra; sides just visibly convergent behind the middle; fourth segment a little shorter than the fifth, the latter very remotely punctate; basal impressions not more densely or coarsely punctate. *Legs* moderate; posterior tarsi much shorter than the tibia, slender, with the basal joint fully as long as the next two. Length (extended) 4.8 mm.; width 0.9 mm.

Kentucky (Lexington). Prof. H. Garman.

The mesosternal process is long, extremely slender and acutely pointed, extending to and over the acute apex of the mesosternal

process at about two-thirds the coxal length. This interesting species is said to inhabit caves, but as the eyes are well developed, it probably only seeks their seclusion and darkness during the day.

The genus *Rheochara* seems to be distinct from *Aleochara*, with which it is united in the recent European catalogue.

POLISTOMA Steph.

There is considerable variation in the form of the mesosternal process in this genus, the apex being more truncate in the European species, but as the Californian species are intermediate in this respect between them and *maritima*, I have no doubt that the genus *Emplenota* Csy. will have to be suppressed; I have used the name *Polistoma* however, as *Polystoma* is preoccupied. The North American species in my cabinet may be readily separated as follows:—

Basal joint of the hind tarsi short, only slightly longer than the second.

Head very coarsely and conspicuously punctured. Atlantic coast.

maritima

Head more finely and sparsely punctured; form broader. Pacific coast.

arenaria

Basal joint of the hind tarsi much longer, equal to the next two combined; form still broader, the head and prothorax more transverse, the latter more strongly rounded at the sides; pubescence sparser; antennae more incrassate; deflexed apical angles of the prothorax very broadly rounded. Pacific coast.....

pacifica

The species of *Polistoma* throughout the world are remarkably homogeneous in general appearance.

P. arenaria n. sp. — Parallel, rather depressed, black, the elytra sometimes with a subquadrate rufescent cloud not attaining the base; antennae black; legs rufo-piceous toward tip; head and pronotum opaque, extremely densely and minutely granulato-reticulate, rather finely, feebly, sparsely but distinctly punctate; elytra rather less opaque, more strongly and closely punctured; abdomen polished, sparsely finely and unevenly punctate; pubescence rather coarse, long, not dense but conspicuous, arranged transversely on the pronotum. *Head* orbicular, as long as wide, fully four-fifths as wide as the prothorax, parallel and broadly arcuate at the sides; antennae feebly incrassate, one-half longer than the head, the outer joints not more than one-half wider than long. *Prothorax* feebly transverse, subquadrate, one-fourth wider than long; sides parallel, broadly, feebly arcuate; base and apex equal, the former evenly and very strongly, the latter feebly, arcuate; apical angles strongly deflexed, narrowly rounded; basal extremely obtuse but distinct; disk evenly, feebly convex, somewhat flattened in a broad median area toward

base. *Elytra* moderately transverse, slightly longer and much wider than the prothorax, parallel; humeri distinctly exposed at base; disk flat, deflexed at apex except laterally. *Abdomen* slightly narrower than the elytra, as long as the anterior part of the body, parallel and straight at the sides; border strong; segments subequal. Length 3.6–4.0 mm.; width 0.9–1.1 mm.

California (San Diego and San Francisco).

Easily distinguishable from *pacifica* by the narrow, more parallel form and more conspicuous pubescence. Moderately abundant.

It at first seemed probable that this species might be the same as *Homalota litoralis* of Mäklin, since the elytra are frequently rufous with the base and external sides black, this being the described coloration of *litoralis*; but the phrases "thorace . . . posterius ante basin latissime transversim impresso, confertim subtilissime punctulato" do not find the remotest correspondence, there being no trace of a transverse subbasal impression; the width, also, $\frac{1}{3}$ line—about $\frac{1}{4}$ mm.—is not sufficient for *arenaria*.

P. pacifica n. sp.—Parallel, moderately depressed, black, the legs rufopiceous; antennae picescent toward base; elytra, except laterally, feebly rufopiceous; sculpture and punctuation as in *arenaria*, the pubescence much sparser and less conspicuous. *Head* much wider than long, scarcely more than three-fourths as wide as the prothorax; eyes at rather more than their own length from the base; antennae strongly incrassate, the outer joints fully twice as wide as long, one-half longer than the head, shorter and thicker than in *arenaria*, the second joint distinctly shorter than the third. *Prothorax* transverse, nearly one-half wider than long; sides parallel, evenly, strongly arcuate; apex broadly, strongly arcuate; apical angles strongly deflexed, very broadly arcuate; basal extremely obtuse and almost completely obliterated; disk very feebly flattened toward the median line from base to apex. *Elytra* transverse, only slightly wider and longer than the prothorax; sides subparallel, straight; humeri strongly rounded to the prothorax; disk flat, feebly deflexed at apex in the middle. *Abdomen*, when contracted, distinctly shorter than the anterior parts combined, nearly as wide as the elytra; sides parallel and straight; border strong, rather deep; first three segments impressed at base; fifth longer than the fourth. Length (contracted) 3.4 mm.; width 1.15 mm.

California (Sta. Barbara).

The elongate basal joint of the hind tarsi will readily enable one to identify this species. A single specimen taken by Mr. G. W. Dunn.

OXYPODA Mann.

The types here assigned to Oxypoda cannot all be retained as such, for those species having the antennal joints abruptly enlarged

from the fourth, forming a long compact cylindrical club, have the metasternal process between the middle coxæ long and acute, while the others, with slender or feebly incrassate antennæ, have this process either entirely obsolete, or else in the form of an extremely short broad cusp. The former may or may not be congeneric with the European *Mycetodrepa*, of which I do not possess a representative at present, but in any event the three here brought to notice differ greatly among themselves in somewhat important characters. The genus will prove to be very extensive in North America, and I have simply selected at the present time a number of hitherto undescribed forms, for the most part illustrative of groups; these may be known among themselves as follows:—

Antennæ more slender, gradually and generally feebly incrassate toward tip.

Third antennal joint distinctly longer than the second, the antennæ long; abdomen parallel, narrowed slightly at the fifth segment; prothorax widest before the base, the basal angles almost completely obliterated; basal joint of the hind tarsi as long as the next three.....**congruens**

Third antennal joint equal in length to the second, both elongate; antennæ much shorter; elytra distinctly longer than the prothorax.

Prothorax widest before the base; abdomen narrowed from base to apex; basal joint of the hind tarsi as long as the next three...**convergens**

Prothorax widest at base; abdomen parallel, narrowed near the tip; basal joint of the hind tarsi but slightly longer than the next two.

impressa

Third antennal joint distinctly shorter than the second.

Elytra longer than the prothorax.

Elytra pale, clouded with black toward the scutellum and toward each flank; abdominal punctures not so dense.....**nubifer**

Elytra uniform in coloration or very nearly so; sides of the elytra perfectly parallel; integuments subopaque.....**saxatilis**

Elytra shorter than the prothorax.

Prothorax subconical, widest at or near the base, where it is a little wider than the elytra.

Abdomen blackish, the apices of the segments narrowly paler.

glenoræ

Abdomen rufous, with a large blackish cloud occupying most of tergites three to five; form very slender; size small.....**nigriceps**

Prothorax with the sides perfectly parallel and broadly, evenly arcuate from base to apex, not wider than the elytra; body very small and narrow, piceous and black in color.....**lineata**

Antennæ rapidly enlarged from and including the fourth joint, forming a long, compact, claviform mass.

Antennæ, except near the base, completely devoid of erect setæ, clothed uniformly with excessively minute even pubescence, almost perfectly cylindrical from the fifth joint.....**hudsonica**

Antennæ with short erect setæ as usual, rapidly enlarged from the fourth to the sixth or seventh joints.

Rufo-testaceous, the head and a large subapical abdominal cloud blackish.

fustiger

Black; elytra slightly picescent, much paler at the humeri.

californica

I have been unable to recognize *sagulata* Er., which is a species apparently allied to *convergens*, but having pale antennæ, with the apical joint obtuse, and a subparallel abdomen, and *minuta* Sachse, which is small, piceous, with the antennæ toward base, legs, elytra and anterior parts of the abdomen testaceous; the latter is probably allied to *nigriceps*, but in that species the pronotum is very pale and the elytra dark. The species described by me as *Oxyptoda insignis* is placed further on in the genus *Anepsiota*, allied to *Atheta*, the anterior tarsi being four-jointed.

O. congruens.—Moderately stout and convex, parallel, brown, the head and abdomen black, the segments paler at apex above and beneath; legs and antennæ brown, the latter still paler toward base; integuments alutaceous, excessively minutely, densely punctate throughout, the pronotum slightly less densely so and more shining toward base; pubescence throughout very short, fine and dense, subsericeous. *Head* orbicular, rather longer than wide, but little more than one-half as wide as the prothorax, evenly convex; eyes moderate, distant from the base; antennæ long, fully attaining the middle of the elytra, gradually and feebly incrassate, the second joint shorter than the first or third, the latter nearly as long as the next two, tenth joint not distinctly wider than long, eleventh acutely conoidal, barely as long as the two preceding. *Prothorax* transversely suboval, the base moving freely above the elytra, fully three-fourths wider than long, the sides broadly arcuate, becoming convergent and straighter in apical half, the base much wider than the truncate apex, broadly, strongly arcuate, the basal angles almost completely obliterated; apical but slightly deflexed, broadly rounded; disk feebly impressed in the middle before the basal margin. *Elytra* moderately transverse, at base narrower than, at apex equal in width to, the prothorax, slightly longer than the latter; sides distinctly divergent, broadly arcuate, especially near the base; humeri concealed; disk very indefinitely and widely impressed in the middle toward base. *Abdomen* but slightly narrower than the elytra, much longer than the anterior parts; sides straight and parallel to the apex of the fourth segment; first three tergites impressed at base, successively less strongly; fifth slightly longer than the fourth. Length 3.4 mm.; width 1.0 mm.

Montana (Helena); Michigan.

The elytral humeri are frequently a little paler than the other portions of the disk. This species, which appears to be widely dif-

fused, differs from the European *spectabilis* in its much smaller size and far less distinct basal angles of the prothorax.

O. convergens.—Rather broad, subfusiform, black; four basal joints of the antennæ and the legs throughout pale; pronotum gradually rufescent toward base; elytra and apices of all the ventral segments pale brownish-rufous; integuments alutaceous, extremely finely feebly and densely punctate throughout, the head and pronotum rather the least densely punctate and more shining; pubescence short, very dense throughout, sericeous on the abdomen, the latter bristling with stiff setæ toward apex. *Head* wider than long, orbicular, evenly convex, scarcely more than one-half as wide as the prothorax; eyes rather large, extending to within one-half their length of the base; antennæ feebly incrassate, as long as the head and prothorax, the first three joints equal in length, fourth subquadrate, five to ten subequal, a little wider, slightly transverse, eleventh rather acutely conoidal, barely as long as the two preceding. *Prothorax* fully two-thirds wider than long, the sides strongly convergent, broadly evenly and strongly arcuate from base to apex; base fully three-fourths wider than the apex, broadly, strongly arcuate, the apex transversely truncate; basal angles obtuse and rather blunt but distinct; disk just visibly wider at basal third than at base, not distinctly impressed. *Elytra* at base slightly narrower, at apex a little broader, than the prothorax, distinctly longer than the latter; sides perceptibly divergent and feebly arcuate from base to apex; humeri completely concealed; external apical sinuations narrow and deep; disk scarcely at all impressed. *Abdomen* at base distinctly narrower than the elytra, at the apex of the fifth segment one-half as wide as the latter; sides perfectly straight; border gradually thicker and deeper from apex to base; two basal tergites very feebly impressed along the basal margin; fifth nearly as long as the third and fourth together. Length 3.0 mm.; width 0.9 mm.

New York (Catskill Mts.).

The abdomen is evenly narrowed from base to apex, and the fifth segment is unusually long. This species cannot be very closely allied to *sagulata*, although it approaches that species, according to description, closer than any other form here described.

O. impressa.—Moderately wide and convex, black throughout, the elytra extremely indistinctly piceous; antennæ black; legs rufo-piceous; ventral plates slightly and narrowly pale at apex; integuments but feebly shining, the head, pronotum and elytra finely and densely but rather distinctly punctate, the abdomen much more minutely feebly and excessively densely so; pubescence rather coarse, dense, semi-erect anteriorly, excessively minute and dense on the abdomen, each tergite, in addition, with a transverse apical series of long setæ. *Head* orbicular, evenly convex, nearly as long as wide, slightly more than one-half as wide as the prothorax; eyes rather large, at less than one-half their length from the base; antennæ moderate in length, slightly longer than the head and prothorax, rather slender and feebly in-

crassate, the first three joints subequal in length, fourth slightly longer than wide, outer joints distinctly transverse, the tenth less so than the ninth, equal in width but a little longer, eleventh short, acutely conoidal, not as long as the preceding two. *Prothorax* fully three-fourths wider than long; sides broadly, evenly arcuate and distinctly convergent from base to apex; base fully three-fourths wider than the apex, broadly, strongly arcuate; apex subtruncate; basal angles obtuse and blunt but definite; disk extremely obsoletely impressed along the median line, with a large rounded and distinct impression in the middle before the base. *Elytra* slightly transverse, at base exactly equal in width to the prothorax and at apex slightly wider, fully one-third longer; humeri not exposed; disk but feebly, indefinitely and broadly impressed in the middle toward base. *Abdomen* at base distinctly narrower than the elytra, the sides parallel and straight to the apex of the fourth segment; fifth very much longer than the fourth. Length 2.75 mm.; width 0.75 mm.

British Columbia (Glenora). Mr. Wickham.

Readily distinguishable from *congruens* by its smaller size, smaller prothorax with more distinct basal angles, shorter antennæ, longer fifth ventral segment and many other characters.

O. nubifer.—Somewhat narrow, subparallel, pale rufo-testaceous, the head piceous; abdomen piceous, broadly pale at tip and at the apices of all the segments; legs pale; antennæ dusky, pale toward base; integuments strongly shining, extremely feebly sculptured; head and pronotum finely and closely but feebly and not conspicuously punctate, the elytra scarcely so densely but more distinctly so, the abdomen minutely, feebly and moderately densely; pubescence short, decumbent, moderately dense. *Head* orbicular, evenly convex, as long as wide, a little more than one-half as wide as the prothorax; eyes at nearly their own length from the base; antennæ short, feebly incrassate, not quite extending to the base of the prothorax, the second joint a little longer than the first and distinctly longer than the third, fourth subquadrate, feebly obconical, five to ten subequal, distinctly wider than long, eleventh long, obtusely ogival, rather longer than the two preceding. *Prothorax* widest at base, two-thirds wider than long, the sides strongly convergent and feebly, evenly arcuate from base to apex; base and apex equally, moderately arcuate, the former two-thirds wider than the latter; basal angles—viewed laterally—very obtuse and blunt but not obliterated, the apical moderately defined, broadly rounded; disk perfectly even, without trace of impression. *Elytra* at base scarcely as wide, but at apex fully as wide, as the prothorax, just visibly longer, slightly transverse; sides subparallel; humeri concealed; apex strongly sinuate near the sides, the edge thence to the inner angles feebly, anteriorly oblique and straight; disk unimpressed, with a black cloud near the scutellum and another longitudinal near the flanks, not attaining base or apex. *Abdomen* just visibly narrower than the elytra, not longer than the anterior parts; sides parallel, the fifth segment slightly narrowed, distinctly longer than the fourth; border thick; posterior edges of tergites

two to four broadly, feebly sinuate. *Legs* rather short; basal joint of the hind tarsi as long as the next two and equal to the fifth. Length 2.5 mm.; width 0.7 mm.

Utah (southwestern).

The trimaculate elytra, pale coloration, feeble punctuation and conical prothorax, with the base rather loosely fitted over the base of the elytra, are distinguishing characters of this rather isolated species.

O. saxatilis.—Rather narrow and subparallel, blackish-piceous, the abdomen black, the apices of all the segments paler; legs pale throughout; antennæ dark, pale toward base; integuments densely opaque, finely, very densely punctate, the abdomen not less densely so, the elytra more distinctly; pubescence fine, short, recumbent, extremely dense throughout, the abdomen without longer setæ toward apex. *Head* a little wider than long, well inserted, three-fifths as wide as the prothorax, the eyes moderately large, approaching the base within one-half of their length; antennæ slender, feebly incrassate, loosely articulated, about as long as the head and prothorax, the second joint much longer than the first and nearly as long as the next two, four to six slightly increasing in width, six to ten subequal, slightly transverse, eleventh acutely ogival, as long as the preceding two. *Prothorax* two-thirds wider than long, the sides convergent and distinctly arcuate from base to apex; base broadly arcuate, two-thirds wider than the subtruncate apex; basal angles obtuse but evident; disk not distinctly impressed. *Elytra* throughout the length exactly equal in width to the prothorax, one-third longer, sides parallel, nearly straight; humeri concealed; disk with a small and just visible impression behind the scutellum. *Abdomen* at base slightly narrower than the elytra, at the apex of the fifth segment three-fourths as wide as the latter, distinctly longer than the anterior parts; sides straight and just visibly convergent from base to apex; border rather thick; tergites two to four very feebly sinuate at apex; fifth one-half longer than the fourth. *Legs* slender; posterior tarsi filiform, the basal joint slightly longer than the next two and much longer than the fifth. Length 2.5 mm.; width 0.6 mm.

Colorado (Cañon City). Mr. Wickham.

Readily recognizable by the parallel elytra, very nearly as long as wide, and by the opaque integuments.

O. glenora.—Narrow and elongate, pale brownish-testaceous, the head darker, rufo-piceous; abdomen blackish, the apices of the segments paler; legs pale throughout; antennæ piceous, paler toward base; integuments feebly shining, extremely minutely and densely punctate throughout, scarcely more distinctly on the elytra; pubescence minute, extremely dense throughout, the abdomen also with a few stiff bristles toward apex. *Head* slightly wider than long, well inserted, evenly convex, not quite two-thirds as wide as the prothorax; eyes moderate, at nearly their own length from the base; antennæ

slender, very feebly incrassate, barely as long as the head and prothorax, the second joint subequal in length to the first and one-third longer than the third, the latter nearly as long as the next two, four to six slightly increasing in width, six to ten subequal, slightly transverse, eleventh acutely ogival, fully as long as the two preceding. *Prothorax* rather large, subconical, the base loosely fitted over the base of the elytra, three-fifths wider than long; sides distinctly convergent and very feebly arcuate from the rather broadly rounded basal angles to the apex; base broadly arcuate, much wider than the apex; disk broadly and extremely obsoletely impressed along the median line in about basal half. *Elytra* transverse, at base distinctly narrower, at apex barely as wide as the elytra, distinctly shorter than the latter; sides divergent and nearly straight from base to apex; humeri completely concealed; disk with a small impression behind the scutellum. *Abdomen* one-half longer than the anterior parts, at base scarcely at all narrower than the elytra, at the apex of the fifth segment three-fourths as wide as the latter; sides almost straight; border rather thick and deep; fifth segment much longer than the fourth. *Legs* moderate; posterior tarsi scarcely at all shorter than the tibiae, with the first joint almost as long as the entire remainder; two to four short and equal. Length 2.9 mm.; width 0.7 mm.

British Columbia (Glenora). Mr. Wickham

The extremely elongate basal joint of the hind tarsi and large conical loosely fitted prothorax, will readily lead to the identification of this species, which may possibly be referred to the subgenus *Sphenoma*.

O. nigriceps.—Slender, subfusiform, convex, the head and antennae black, the latter pale toward base; pronotum pale flavo-testaceous throughout; elytra much darker, piceous; abdomen with the two basal segments dark rufo-testaceous, the remainder black, with the apices narrowly paler; integuments moderately shining, the head polished, rather coarsely, not very densely punctate; pronotum more finely, very densely, the elytra more distinctly but finely, subasperately and extremely densely, the abdomen minutely densely subasperately and less distinctly; pubescence fine, extremely short, rather dense but inconspicuous, the abdomen bristling with long setae toward tip. *Head* slightly wider than long, scarcely three-fifths as wide as the prothorax, evenly, strongly convex, the eyes moderate, at about their own length from the base; antennae short, rather slender, feebly, gradually incrassate and rather compact, not more than one-half longer than the head, the first two joints subequal in length, the second distinctly longer than the third, fourth to tenth feebly, gradually increasing in width, the latter nearly twice as wide as long, eleventh short, obtusely ogival, about as long as the two preceding. *Prothorax* large, rather more than one-half wider than long, the sides strongly convergent and feebly arcuate from base to apex; base broadly arcuate, much wider than the apex, the basal angles obtuse and rather broadly rounded; disk with an extremely obsolete impression in the middle before the base. *Elytra* distinctly shorter than the prothorax, and, throughout the length,

visibly narrower; sides subparallel and feebly arcuate; humeri wholly concealed; disk feebly, transversely convex. *Abdomen* fully one-half longer than the anterior parts, at base nearly as wide, and at the apex of the fifth segment two-thirds as wide, as the elytra; sides straight; border rather thick; fifth segment two-thirds longer than the fourth. *Legs* rather short and thick, the hind tarsi much shorter than the tibiae, with the first joint a little longer than the next two. Length 2.0 mm.; width 0.45 mm.

Rhode Island (Boston Neck).

Readily separable from *minuta* Sachse, by the pale prothorax and dark elytra. The antennæ are unusually short.

O. lineata.—Narrow and sublinear, convex, black, the pronotum piceous-black, the elytra feebly rufescent; antennæ pale at base; legs pale flavo-testaceous throughout; integuments feebly shining, the pronotum and abdomen extremely minutely and excessively densely punctate, the elytra equally densely but rather more strongly and subasperately, the head a little less finely and more sparsely; pubescence extremely minute, dense, the abdomen as usual with an apical fringe of longer hairs on each tergite, but having only a very few longer setæ toward apex. *Head* as long as wide, evenly convex, fully three-fourths as wide as the prothorax; eyes moderate, at more than their length from the base; antennæ rather long, loose, feebly incrassate, extending to basal third of the elytra, the third joint elongate, only slightly though visibly shorter than the second, joints increasing only very slightly in width toward apex, six to ten quite distinctly wider than long, the eleventh rather large, ogival at tip, fully as long as the two preceding. *Prothorax*—from above—only one-third wider than long, the sides parallel and evenly, broadly arcuate, widest at the middle; base and apex equal, feebly arcuate, the former fitted rather closely to the elytral depression; basal angles obtuse and blunt but very evident; disk not distinctly impressed. *Elytra* short and transverse, quite distinctly shorter than the prothorax, at base as wide as the prothorax, and, at apex, just visibly wider; sides perceptibly divergent and straight from base to apex; humeri not exposed; disk broadly, feebly impressed along the suture in more than basal half. *Abdomen* nearly one-half longer than the anterior parts, at base distinctly narrower than the elytra; sides subparallel, narrowed toward apex; border moderate; fifth segment one-half longer than the fourth; sixth greatly visible, a little narrowed and parabolic but as long as the fifth. *Legs* moderate in length, slender, the hind tarsi but slightly shorter than the tibiae, with the first joint a little longer than the next two. Length 2.1 mm.; width rather more than 0.4 mm.

Rhode Island.

This species is rather aberrant, not only in the subquadrate form of the prothorax, but in the total absence of the infralateral carina of the head. I cannot see, however, that it differs otherwise from *Oxyptoda*.

O. hudsonica.—Moderately stout, subparallel, convex, pale flavo-testaceous throughout, the abdomen more rufous and less flavate, with a small dark cloud occupying about the fourth tergite; integuments polished, the head and pronotum minutely and sparsely punctate, the elytra finely, densely, feebly but subasperately, the abdomen rather coarsely, strongly, distinctly and not very densely; pubescence rather coarse, moderately dense, denser on the elytra. *Head* longer than wide, evenly convex, a little more than one-half as wide as the prothorax, the eyes moderate, black, at more than their own length from the base; antennæ very thick, cylindrical, scarcely longer than the head and prothorax, the third joint but slightly shorter than the second but strongly, evenly obconical, not twice as long as wide, four to six very short and transverse, gradually wider, seven to ten equal, cylindrical, gradually a little longer but not wider, strongly transverse, eleventh obtuse at apex, fully as long as the preceding two. *Prothorax* two-fifths wider than long, the sides feebly convergent, evenly and distinctly arcuate from the broadly rounded basal angles to the apex; base and apex broadly arcuate, the former perceptibly the wider; disk very strongly, evenly convex, without trace of impression. *Elytra* moderately transverse, at base distinctly narrower, but at apex just visibly wider than, the prothorax, distinctly shorter; sides slightly divergent, broadly arcuate toward base; humeri concealed; disk with a small sutural impression behind the scutellum. *Abdomen* one-half longer than the anterior parts, at base but slightly narrower than the elytra, and, at the apex of the fifth segment, almost four-fifths as wide; sides nearly straight; border rather thick; fifth segment but slightly longer than the fourth. *Legs* somewhat stout; hind tarsi slightly shorter than the tibiae, with the basal joint as long as the next three. Length 2.7 mm.; width 0.75 mm.

New York (near the city).

The infralateral carina of the head is fine but strong and entire, and the facets of the eyes are rather larger and more convex than usual. The thick antennæ, with their very peculiar and excessively minute dense vestiture, totally devoid of erect setæ, render this species quite aberrant.

O. fustiger.—Subparallel, convex, polished throughout, pale testaceous, the head piceous; abdomen more rufous, blackish behind the second segment except at tip; head finely, sparsely, the pronotum finely, rather less sparsely, feebly but subasperately punctate, the elytra more strongly, subrugosely but not more densely, the abdomen rather strongly, subasperately and not densely so; pubescence coarse, inclined, not very dense, longer and still sparser on the abdomen, the latter without subapical bristles. *Head* wider than long, three-fifths as wide as the prothorax; eyes normal, at nearly their own length from the base; antennæ short, very thick, scarcely as long as the head and prothorax, the basal joint oblong-oval, nearly as long as the next two, second thinner, one-half longer than wide and perceptibly longer than the third, which is slightly elongate and obconical, fourth wider, strongly transverse, fifth similar but wider, sixth to tenth longer than the fourth or fifth, compact,

very strongly transverse, eleventh short, not longer than wide, obtusely and obliquely ogival, scarcely as long as the two preceding, outer joints with short erect setæ in addition to the minute pubescence. *Prothorax* three-fifths wider than long; sides distinctly convergent, evenly and rather strongly arcuate from base to apex; base broadly, strongly arcuate, much wider than the truncate apex; basal angles obtuse, blunt but very evident; disk strongly, evenly convex, without impressions. *Elytra* throughout equal in width to the prothorax, distinctly longer, nearly quadrate; sides subparallel, almost straight, humeri not exposed. *Abdomen* about as long as the anterior parts, at base almost as wide as the elytra; sides feebly convergent from base to apex and just visibly arcuate; fifth segment but slightly longer than the fourth; under surface sparsely, deeply and coarsely punctate and sparsely clothed with long coarse hairs. Length 2.3 mm.; width 0.7 mm.

California (Humboldt Co.).

Differs from the preceding species in the gradually wider and sparsely setose outer joints of the antennæ, and in the structure of the basal joints. A single specimen of undetermined sex.

O. californica.—Somewhat fusiform, convex, highly polished throughout, black, the elytra piceous, testaceous at the humeri and along the suture near the apex; abdominal tip scarcely at all paler; legs pale; antennæ black, pale toward base; head and pronotum minutely feebly and sparsely punctate, the elytra finely but a little more strongly and still more sparsely so; abdomen finely, scarcely distinctly and sparsely; pubescence somewhat long, subrecumbent, coarse and sparse. *Head* orbicular, as long as wide, evenly convex, nearly three-fourths as wide as the prothorax, the eyes at less than their length from the base; antennæ fully as long as the head and prothorax, stout, feebly setulose and finely pubescent, the first joint small, elongate-oval, longer than the second, the latter twice as long as wide and distinctly longer than the third, fourth and fifth very short and transverse, increasing in width, sixth to tenth subequal in length and width, longer than either the fourth or fifth and not more than twice as wide as long, eleventh short, obtusely and obliquely ogival, about as long as the two preceding. *Prothorax* rather small, three-fourths wider than long, the sides convergent and arcuate from the broadly rounded and almost obsolete basal angles; base and apex broadly arcuate, the former much the wider; disk evenly, strongly convex, unimpressed, the basal bead strong. *Elytra* large, but slightly wider than long, one-fourth wider and rather more than one-half longer than the prothorax; sides subparallel; humeri quite distinctly exposed, rounded; disk strongly and widely impressed on the suture in more than basal half. *Abdomen* as long as the anterior parts, at base much narrower than the elytra, and, at the fifth segment, one-half as wide as the latter; sides feebly convergent from base to apex and just visibly arcuate; fifth segment distinctly longer than the fourth. *Legs* rather long, very slender; femora unusually narrow; hind tarsi two-thirds as long as the tibiae, with the first joint longer than the next two but shorter than the fifth. Length 1.9 mm.; width 0.7 mm.

California.

The antennæ are not as stout as in *fustiger*, and have the outer part more cylindrical, and, in addition, the prothorax is much smaller, the elytra larger and the coloration wholly different. This is the most sparsely punctate and polished species of *Oxypoda* which I have seen.

ACHROMOTA n. gen.

Body fusiform, moderately convex. Head small, but feebly constricted at base, not inserted deeply in the prothorax; eyes well developed; infralateral carina almost obsolete. Antennæ long and slender, scarcely perceptibly incrassate, setose, the first three joints elongate. Mentum rather large, trapezoidal, broadly sinuate at apex. Maxillary palpi well developed, the third joint slightly longer than the second; fourth very slender, unusually long, oblique, more than one-half as long as the third, simple at apex. Ligula imperfect in the type. Prothorax transversely suboval, the hypomera broad, strongly inflexed and invisible from the side posteriorly, but becoming horizontal anteriorly. Elytra well developed. Abdomen gradually narrowed almost from the base; border rather deep; first tergite broadly impressed at base, shorter than the second, the others completely unimpressed at base; fifth just visibly longer than the fourth. Coxæ large, the intermediate very approximate but not contiguous, the mesosternal process not extending behind the middle. Metasternum not advanced between the coxæ, the fine beaded line merely feebly arcuate opposite the intercoxal space, the surface thence to the mesosternum transversely convex, the parapleuræ rather wide, parallel to the elytra, the epimera not projecting behind the elytra. Legs rather long and slender; tarsi slender, 5-5-5-jointed, the posterior slender but much shorter than the tibiae, with the first four joints slightly elongate and as nearly as possible perfectly equal, the fifth very long, longer than the two preceding combined; claws moderately long, slender, evenly arcuate.

It seemed possible at first that the type of this genus might enter *Oxypoda* as an aberrant member or subgenus, but the tarsal structure is so radically different that it is impossible to place it there. In fact there is no European genus near *Oxypoda* which has the posterior tarsi constituted in any way approximating this, but for the present it may be considered as allied to *Thiasophila*. The anterior tarsi are five-jointed, apparently without the slightest

doubt, which will prevent us from placing the genus among the allies of Colpodota.

A. fusiformis n. sp.—Rather stout, black, the elytra just visibly rufopiceous; legs and antennæ throughout pale; integuments finely but not strongly reticulate, rather shining, the head very sparsely, obsolete punctate, more coarsely so toward the sides and base; pronotum finely, not densely and obsolete, the elytra strongly, closely and asperately punctate, the abdomen more sparsely, feebly and subasperately, very sparsely so toward apex; pubescence short, coarse, decumbent, moderately distinct, sparser on the abdomen, the latter bristling with long erect setæ toward apex. *Head* orbicular, wider than long, about three-fifths as wide as the prothorax, strongly, evenly convex; eyes not prominent, at rather less than their own length from the base; antennæ long, slender, fully attaining the middle of the elytra, the fourth and fifth joints longer than wide, about two-thirds as long as the third, outer joints rather loosely connected, very feebly increasing in width, the tenth not distinctly wider than long, eleventh pointed, as long as the two preceding. *Prothorax* three-fourths wider than long; sides broadly arcuate, subparallel toward base, becoming straighter and distinctly convergent in apical half; base broadly, strongly arcuate, much wider than the truncate apex, becoming feebly subsinuate near the basal angles, which are obtuse and slightly rounded; apical angles only feebly deflexed, rounded; disk transversely, strongly convex, very obsolete impressed along the median line toward the middle, the posterior margin strongly beaded. *Elytra* two-fifths wider than long, at base scarcely as wide as the pronotal disk, but at apex distinctly wider, about one-third longer; sides distinctly divergent, subarcuate; humeri concealed; disk rather strongly, indefinitely impressed on the suture behind the scutellum. *Abdomen* equal in length to the anterior parts, at base slightly narrower than the elytra, the apex of the fifth segment scarcely more than one-half as wide as the elytral apex; tergites, except the first, perfectly even, not impressed, broadly, feebly convex toward the abdominal apex. Length 2.1 mm.; width 0.75 mm.

New York (near the city). Mr. H. H. Smith.

The single specimen in my cabinet has no sexual marks of prominence; the sixth tergite is feebly exerted, much narrower than the fifth, with its apex feebly, evenly sinuato-truncate.

THIASOPHILA Krantz.

The American species of this genus resemble the European *angulata* Er., in all essential points of structure, sculpture and vestiture, but have the prothorax a trifle wider near the base, and the abdomen more parallel and much more distinctly narrower than the elytra. The genus is widely diffused throughout the subarctic

portions of the continent. The three species here brought to notice may be readily distinguished as follows:—

Elytra but slightly longer than the prothorax, the apical angles of the latter blunt but rather distinct; antennæ shorter and less incrassate.

Abdomen less elongate, slightly narrower than the elytra, strongly distinctly and moderately densely punctate, the dorsal plates strongly transverse.

laticollis

Abdomen longer, much narrower than the elytra, very finely densely and indistinctly punctate, the dorsal plates less than twice as wide as long.

angustiventris

Elytra decidedly longer than the prothorax, the apical angles of the latter more broadly rounded; abdomen nearly as in *laticollis*, but differing conspicuously in coloration; size small.....**asperata**

I am unable at present to say anything about the habits of these insects, but in Europe they are generally inquiline with ants.

T. laticollis n. sp.—Rather stout and convex, dark piceo-rufous, the abdomen uniformly blackish but pale at the apex; legs and antennæ rufotestaceous, the latter just visibly clouded toward the middle; head finely but strongly, the pronotum more finely and very densely, the elytra strongly densely and subasperately punctate; abdomen with imbricate sculpture, gradually disappearing behind, the punctures fine but strong, isolated and distinct, sparse toward tip; pubescence very short, stiff and rather dense. *Head* orbicular, not as long as wide, but slightly more than one-half as wide as the prothorax; eyes large, prominent, at less than their own length from the base; tempora convergent and broadly rounded behind them; antennæ a little longer than the head and prothorax, rather slender, feebly incrassate, the joints somewhat compactly united, the first and third subequal, longer than the second, fourth and fifth slightly longer than wide, tenth scarcely visibly wider than long, eleventh as long as the two preceding, pointed, constricted just beyond the middle. *Prothorax* transverse, not quite twice as wide as long, the apex subtruncate, about three-fourths as wide as the base, the latter broadly, feebly arcuate, distinctly sinuate near the basal angles, which are nearly right though slightly blunt; sides convergent and feebly arcuate in apical two-thirds, just visibly convergent in basal third; disk even. *Elytra* transverse, at base quite distinctly narrower than the prothorax, slightly longer than the latter; sides just visibly arcuate; disk rather convex, feebly, indefinitely impressed on the suture toward base. *Abdomen*—when contracted—scarcely as long as the anterior parts, parallel, slightly but distinctly narrower than the elytra, the border thick; first three segments feebly and gradually less distinctly impressed at base; fourth and fifth equal. Length 2.7 mm.; width 0.8 mm.

New York.

The single specimen is of undetermined sex; it represents a larger broader and more distinctly sculptured species than the following.

T. angustiventris n. sp.—Rather convex, dark red-brown, the abdomen darker with the apex pale; legs and antennæ throughout pale brownish-flavate; anterior parts rather dull, finely, extremely densely but somewhat distinctly, subasperately punctate, the elytra a little less densely and subrugosely; abdomen more shining, minutely, much less closely punctulate; pubescence very short but somewhat coarse and close, distinct, long and sparsely fimbriate at the apices of the abdominal segments. *Head* wider than long, three-fifths as wide as the prothorax; antennæ much longer than the head and prothorax, moderately incrassate. *Prothorax* fully three-fourths wider than long, the sides very feebly convergent from base to apex, broadly, nearly evenly arcuate from above, widest just behind the middle; apex broadly sinuate; apical angles deflexed, obtuse, not rounded; basal obtuse, rather prominent, not in the least rounded; base broadly arcuate, just visibly sinuate near the basal angles; disk broadly, evenly convex. *Elytra* one-half wider than long, broadly, deeply emarginate at apex, very slightly longer than the prothorax and equally wide; sides subparallel, very feebly arcuate; base equal to the pronotal base; humeri not in the least visible; disk transversely convex, just visibly impressed behind the scutellum. *Abdomen* at base much narrower than the elytra, much longer than the anterior parts; sides parallel and straight but convergent toward apex; border thick. Length 2.0–2.4 mm.; width 0.6 mm.

Rhode Island; Florida; Iowa.

Readily identifiable by the wide convex pronotum and elytra and abruptly narrow parallel abdomen; the prothorax is less strongly narrowed anteriorly than in *laticollis*.

T. asperata n. sp.—Subparallel, somewhat convex, red-brown; legs and antennæ throughout pale, flavescent; head piceous; abdomen brighter red, with the fourth segment piceous-black; head and abdomen very minutely, sparsely punctulate; pronotum and elytra strongly, asperately, densely and equally punctured; pubescence short, stiff, subrecumbent, rather dense and distinct, sparse on the abdomen. *Head* orbicular, as long as wide, three-fifths as wide as the prothorax; antennæ moderately incrassate, much longer than the head and prothorax, outer joints slightly transverse. *Prothorax* rather more than three-fourths wider than long, throughout nearly as in *angustiventris*, but with the apical angles distinctly rounded when viewed laterally, and the basal obtuse and just visibly blunt. *Elytra* scarcely as wide as the prothorax and fully one-third longer, the apex transversely truncate, just visibly sinuate toward the middle and deeply so near each external angle; sides parallel and almost straight; humeri not in the least exposed; base equal to the pronotal base; disk not distinctly impressed and but slightly more than one-third wider than long. *Abdomen* only slightly but distinctly narrower than the elytra, scarcely longer than the anterior parts; sides straight and parallel, feebly convergent toward apex; first five segments exactly equal in length. *Legs*, coxæ and tarsi as in *angustiventris*. Length 2.0 mm.; width 0.5 mm.

California (Lake Tahoe and Truckee).

A much smaller species than *laticollis*, with more rounded apical angles of the prothorax and somewhat longer elytra; the pronotal sculpture is coarser than in *angustiventris*.

ISOGLOSSA n. gen.

Body rather stout, subfusiform, convex. Head small, not at all constricted at base, well inserted, the eyes large, sparsely setose, at less than their own length from the base; labrum very short, transversely arched and feebly produced in the middle in a rounded lobe; infralateral carina strong. Antennæ long, very feebly incrassate, the first three joints long, subequal in length; fourth feebly obconical, longer than wide; outer joints moderately close, scarcely visibly wider than long; eleventh conoidal, pointed, barely as long as the two preceding. Mentum large, transversely trapezoidal, truncate; ligula with a slender deflexed and simple terminal process; labial palpi slender, three-jointed. Maxillary palpi normal, the fourth joint long and distinct. Prothorax feebly transverse, the basal angles rounded; hypomera subhorizontal, in part visible from the side. Elytra large and well developed. Abdomen feebly narrowed from the base, the first three segments impressed at base; fifth longer than the fourth. Anterior coxæ very large; intermediate almost completely contiguous. Metasternum large, the side-pieces moderate in width, parallel, not extending beyond the elytra. Legs long; tibiæ densely clothed with even and equal stiff inclined setæ, not in the least spinulose; tarsi 5-5-5-jointed, slender, the posterior distinctly shorter than the tibiæ, with the basal joint very long, equal to the last and rather longer than the next two together; claws long, slender, feebly arcuate.

The feeble inflexion of the hypomera seems to ally this genus to *Thiasophila* and *Stichoglossa*, particularly the latter, but the antennæ are much more elongate and the sculpture and facies very different.

I. arcuata n. sp.—Stout, polished throughout, dark piceous-brown, the antennæ concolorous but paler toward base; abdomen black, with the apices of the first three segments slightly pale; legs pale flavate throughout; head and pronotum very minutely, extremely sparsely punctate, the elytra rather more reticulate, the reticulations transverse, more strongly, rather closely punctate; abdomen finely, not densely punctate, the punctures extremely remote toward apex; head, pronotum and abdomen coarsely, extremely sparsely pubescent, the elytra more finely and decidedly densely so. Head barely

three-fourths as wide as the prothorax, distinctly transverse; antennæ much longer than the head and prothorax combined, the eleventh joint not paler. *Prothorax* transversely subelliptical, one-half wider than long; sides subparallel, a little more convergent anteriorly, strongly arcuate from above; base slightly wider than the apex, strongly, evenly arcuate throughout, not at all sinuate near the basal angles, which are very obtuse and distinctly rounded; apical angles strongly deflexed, even somewhat inflexed, broadly rounded; disk strongly convex, with the median line very feebly impressed and a large rounded and rather strongly impressed dent in the middle just before the base. *Elytra* large, but slightly wider than long, one-fifth wider and nearly one-half longer than the prothorax, at base fully as wide as the pronotal disk; humeri very slightly visible, rounded; sides subparallel, slightly arcuate; apex subtruncate, the lateral sinuations distinct; disk subconvex, broadly, strongly impressed along the suture, especially toward base. *Abdomen* quite distinctly shorter than the anterior parts, not more than three-fourths longer than the elytra when moderately contracted, at base slightly narrower than the elytra; sides convergent and just visibly arcuate to the apex, the apex of the fifth segment barely two-thirds as wide as the first; border strong. Length 3.0 mm.; width 0.95 mm.

California (Lake Tahoe).

The large elytra, transversely elliptical and polished pronotum, with the pronounced rounded subbasal indentation and long antennæ will readily distinguish this species.

OCYUSA Kraatz.

The following species agrees satisfactorily in form and structural characters with *O. prociua*, but has a totally different system of sculpture; there appears, however, to be considerable disparity among the European species, which have been separated into subgenera by Rey.

O. asperula n. sp.—Subparallel, rather stout, compact and convex, black, the legs and basal parts of the antennæ dark rufo-testaceous, polished, the punctures of the head and pronotum fine, not very dense and strongly granuliform, of the elytra sparse, strongly asperate, of the abdomen coarser, nearly normal, not dense but coarser and very dense on the fourth and fifth segments toward base; pubescence fine, sparse but rather long. *Head* transversely orbicular, distinctly shorter and narrower than the prothorax; sides parallel and rounded; eyes at rather more than their own length from the base; antennæ nearly as long as the prothorax and elytra, thick toward apex, second joint fully one-half longer than the third, the latter obconical, twice as long as wide, fourth obconical, slightly longer than wide, four to ten subequal in length but evenly, perfectly gradually and conspicuously increasing in width, the tenth strongly transverse, eleventh ogival, obtuse. *Prothorax*

large and evenly, strongly convex, nearly one-half wider than long, widest just before the middle, the sides feebly convergent and nearly straight thence to the base, broadly rounded to the apex which is broadly arcuate; base arcuate, rather wider than the apex; basal angles obtuse and slightly rounded. *Elytra* strongly transverse, slightly shorter than the prothorax, at base just visibly narrower than the latter but equal at apex, the sides very feebly divergent, nearly straight. *Abdomen* a little longer than the anterior parts, as wide as the elytra; sides subparallel but convergent behind; border thick toward base; first three segments impressed at base; fifth longer than the fourth. *Legs* moderate; tarsi all distinctly five-jointed, the posterior slender, distinctly shorter than the tibiae, the first joint fully as long as the next two; middle coxae very slightly separated, the mesosternal process acute, prolonged for nearly two-thirds their length, with the apex slightly free. *Ungues* long, very slender, feebly and evenly arcuate. Length 1.6–1.75 mm.; width 0.6 mm.

Iowa; Rhode Island.

Rather abundant and probably occurring in moss. The infra-ocular ridge is very strong and well developed, the hypomera feebly inflexed and visible from the side.

PHLÆOPORA Erichs.

A specimen before me labeled "North Carolina," agrees very well with the original description of *latens* Er., but has the elytra gradually paler from base to apex and the body rather smaller, measuring only 1.8 mm., while Erichson gives the length as "1½ lin.;" the first four segments of the abdomen are almost equally impressed at base. The following is a larger, more linear species, altogether different in facies, but having all the principal structural features of *Phlæopora*:—

P. ferruginea n. sp.—Pale yellowish-ferruginous, the head a little darker; abdomen brighter rufous, with a subapical piceous cloud; legs pale; antennæ fuscous, pale toward base; head and pronotum finely, densely reticulate and dull, very minutely, indistinctly punctate, the latter almost opaque; elytra a little less dull, very minutely, densely but quite distinctly punctate, the abdomen shining, finely, subasperately, rather closely punctate, with the pubescence long, sparse but distinct; pubescence of the anterior parts fine, short, dense and distinct but not conspicuous. *Head* much shorter and narrower than the prothorax, the antennæ as long as the head and prothorax, not very stout; eyes at their own length from the base. *Prothorax* fully one-third wider than long, widest just before the middle, the sides broadly, evenly rounded to the apex which is broadly and feebly arcuate, distinctly convergent and very feebly sinuate to the base, the latter broadly arcuate and slightly wider than the apex; basal angles obtuse; disk evenly convex. *Elytra* distinctly wider than long, scarcely perceptibly wider and longer than

the prothorax; sides subparallel, very feebly arcuate; humeri slightly exposed; disk indefinitely impressed along the suture toward base. *Abdomen* long, very much longer than the anterior parts, slightly narrower than the elytra; sides straight and parallel; border thick; dorsal plates scarcely twice as wide as long. Length 2.3 mm.; width 0.5 mm.

Pennsylvania.

The large opaque prothorax, about as wide before the middle as the elytra, and long testaceous abdomen with subapical cloud, will render the identification of this species at all times easy. It is probable that *ferruginea* will be regarded as forming a subgenus of *Phlæopora*, and I therefore give below some of its more important structural characters:—

Body linear, thick and convex. Head parallel at the sides, rounded and constricted behind, not deeply inserted, the neck not quite two-thirds as wide as the head; eyes moderate, before the middle; infralateral carina obsolete. Antennæ short, slender, very feebly incrassate, the second joint about as long as the next two; third obconical, twice as long as wide; outer joints strongly transverse, not very densely pubescent and with intermixed short stiff setæ; eleventh small, compressed, conoidal, as long as the two preceding. Mentum moderate, transverse, trapezoidal. Maxillary palpi normal. Ligula with a cylindrical process, which is extremely minutely cleft at apex. Pronotal hypomera feebly inflexed and distinct viewed laterally, narrowed but not obsolete near apex and thence widening and distinct along the oblique apical parts to the neck. Abdomen with the first four segments equally and rather strongly impressed at base; fifth very slightly longer than the fourth. Intermediate coxæ very narrowly separated. Metasternum ample, the episterna moderate, parallel; epimera nearly as wide behind as the episterna, disappearing under the elytra at the middle. Legs rather short, femora noticeably stout; tibiæ slender; tarsi 5-5-5-jointed, the posterior very slender, three-fourths as long as the tibiæ, with the first joint as long as the next two, the fifth as long as the first two together.

NASIREMA n. gen.

Body slender, parallel, rather convex. Head orbicular, feebly constricted at base, the neck very wide; eyes small, at twice their length from the base; infralateral carina very feeble, not entire; labrum short and transverse. Antennæ strongly thickened toward

apex, distant at base, the second joint much longer than the third, the latter strongly obconical, not twice as long as wide; third to tenth very short, perfoliate and transverse; eleventh oblong, not compressed, obtuse at apex, rather longer than the two preceding; pubescence toward tip very short dense and uniform, without trace of erect setæ. Maxillary palpi moderate, normal; second and third joints equal in length; fourth oblique, distinct. Mentum very short and transverse, trapezoidal, truncate. Ligula with an acutely triangular median process; labial palpi small, very slender, three-jointed, the last joint as long as the two preceding. Prothorax small, the hypomera feebly inflexed, distinct when viewed laterally, terminating at apical fourth. Elytra well-developed. Abdomen parallel, the first three segments equally and strongly impressed at base; fifth much longer than the fourth; second not longer than the first. Mesosternal process extending between the narrowly separated coxæ for nearly two-thirds of their length, with the apex slightly blunt. Metasternum large. Legs short, rather stout, hairy; tarsi 5-5-5-jointed, the posterior short, very much shorter than the tibiæ, the first joint not longer than the next two together, the fifth longer than the preceding two; unguis long, slender, simple and feebly arcuate.

This genus is closely allied to *Phlæopora*, but differs in its less depressed body, thicker and non-setulose antennæ, much more abbreviated hypomera, smaller eyes, broader neck, and in having only three of the abdominal segments deeply impressed at base.

N. humilis n. sp.—Narrow, rufo-ferruginous, the head and abdomen except at apex darker, more piceous; antennæ throughout and legs flavate; integuments feebly shining, finely, moderately densely, subasperately punctate, distinctly and rather densely pubescent, the hairs subrecumbent, and, on the pronotum, streaming transversely from the median line. *Head* small, nearly as long as wide, much smaller than the prothorax, convex, even, the antennæ as long as the prothorax and elytra. *Prothorax* small, but slightly wider than long, widest just before the middle, the sides broadly arcuate and feebly convergent anteriorly to the apex, feebly convergent and slightly sinuate behind the middle to the basal angles, which are obtuse and slightly blunt; base broadly, feebly arcuate; disk evenly, rather strongly convex, very absolutely, transversely impressed near the base before the scutellum. *Elytra* slightly wider than long, two-fifths longer and fully one-third wider than the prothorax; sides parallel, very feebly arcuate; humeri distinctly exposed at base. *Abdomen* longer than the anterior parts, in the middle subequal in width to the elytra; sides parallel, slightly arcuate; border thick; surface transversely convex, more shining. Basal joint of the hind tarsi not as long as the next two. Length 2.0 mm.; width 0.5 mm.

Pennsylvania.

The single representative is probably a female, but the species is very easily recognizable by reason of the peculiar form of the prothorax, and the disposition of its vestiture.

N. parviceps n. sp.—Slender, thick, convex, black, the legs and antennæ throughout dark rufo-testaceous; integuments rather shining; pubescence fine, somewhat long, subrecumbent and conspicuous; punctuation minute, moderately close, not conspicuous. *Head* small, orbicular, evenly convex, much shorter and distinctly narrower than the prothorax; eyes moderate, at nearly twice their length from the base; antennæ stout, nearly as long as the prothorax and elytra; second joint as long as the next two, third strongly obconical, longer than wide, four to ten forming a long, evenly cylindrical, subperfoliate club, transverse, eleventh oblong, obtuse; joints from the fourth clothed with minute dense and even pubescence, without sparse setæ. *Prothorax* very nearly as long as wide, widest at apical third, thence broadly arcuate around the entire apex, feebly convergent and nearly straight to the obtuse basal angles; base broadly arcuate; disk evenly convex, the pubescence oblique. *Elytra* parallel, slightly wider than long, one-third longer and nearly one-half wider than the prothorax; humeri distinctly exposed and transverse at base; disk strongly impressed just behind the scutellum. *Abdomen* parallel, slightly but noticeably narrower than the elytra, subequal in length to the anterior parts, the first three segments deeply, the fourth very feebly impressed at base; fifth a little longer than the fourth. *Legs* moderate; basal joint of the hind tarsi as long as the next two combined. Length 2.0 mm.; width 0.6 mm.

Rhode Island.

Readily distinguishable from the preceding by its entirely black coloration, slightly less slender form, much longer prothorax, widest more anteriorly, and by many other characters.

OCALIA Erich.

The species here brought to notice resembles the European *puncticollis* in general habitus, but differs apparently in the extremely short and broadly angulate metasternal process behind the middle coxæ.

O. vancouveri n. sp.—Moderately narrow, convex, black, the legs and basal parts of the antennæ rufo-testaceous; integuments polished; head and pronotum very finely and rather sparsely punctate, the elytra more coarsely and decidedly densely so, the abdomen very finely and sparsely; pubescence short, decumbent, moderately close, very sparse on the abdomen. *Head* orbicular, as long as wide, slightly shorter and narrower than the prothorax, convex; eyes at a little more than their length from the base; antennæ long and

slender, very slightly incrassate, rather more than attaining the middle of the elytra, the first three joints elongate, subequal, the first slightly the stoutest, fourth distinctly longer than wide, tenth just visibly wider than long, eleventh small, conoidal, pointed, not as long as the two preceding. *Prothorax* but slightly wider than long, widest just before the middle, the sides broadly arcuate and distinctly convergent anteriorly, much more feebly convergent and distinctly sinuate to the base, which is broadly arcuate and much wider than the apex; apical angles greatly deflexed and rounded; basal obtuse and distinctly rounded; disk strongly convex, very obsoletely impressed along the median line, with a feeble rounded impression in the middle just before the base. *Elytra* large, quadrate, two-fifths wider and longer than the prothorax; sides subparallel; humeri broadly exposed at base; surface strongly, broadly impressed just behind the scutellum; suture excessively finely margined. *Abdomen* rather longer than the anterior parts, distinctly narrower than the elytra; sides parallel, becoming feebly convergent near the apex; border rather deep; first three segments strongly, the fourth feebly, impressed at base; fourth and fifth subequal; sixth exposed, rounded. *Legs* moderate in length, slender; posterior tibiae very slender, nearly equally thick throughout, the tarsi much shorter, filiform, the basal joint rather longer than the next two and fully as long as the last. Length 4.0 mm.; width 0.95 mm.

Vancouver Island. Mr. Wickham.

The middle coxæ are large oblique and narrowly separated, the acetabula deep and acutely limited on all sides except the long isthmus, which separates the acute apex of the prosternal process—extending two-thirds the length of the coxæ—from the extremely short obtuse metasternal process, the latter scarcely entering at all between the coxæ. The neck is much wider than in *puncticollis*.

CALLICERUS Grav.

It is difficult to understand just why this genus is still placed among the allies of *Atheta*, for in my specimen of *rigidicornis* from the Caucasus, the anterior tarsi are as distinctly five-jointed as in any species of *Aleochara*; the facies also indicates its affinity with *Ilyobates*.

C. puberulus n. sp.—Subparallel, moderately stout, convex, slightly shining, the abdomen polished, dark brown, the elytra, apices of the tergites, legs and basal parts of the antennæ paler, obscure rufous; punctuation of the head rather strong and moderately sparse, of the pronotum finer, very dense and rather feeble, of the elytra coarser, rather close and subasperate, of the abdomen moderately sparse but distinct, subasperate, extending to the base of the segments; pubescence rather long, dense and conspicuous, sparse on the abdomen. *Head* orbicular, longer than wide, only slightly but distinctly narrower than the prothorax, even, convex; eyes at much more than their own

length from the base; antennæ long, feebly incrassate, rather loose, extending almost to the end of the elytra, the basal joint a little longer and thicker than the second or third, the latter similar, subequal and elongate, four to ten feebly obconical, very slightly increasing in width, the latter barely perceptibly wider than long, eleventh not wider, as long as the two preceding together; ligular process slender, elongate, apparently simple; labial palpi well developed, the two basal joints subequal in width and strongly united. *Prothorax* but slightly wider than long, widest near apical third where the sides are broadly subangulate, feebly convergent and rounded to the apex, equally convergent and straight to the base, the latter broadly, strongly arcuate and as wide as the subtruncate apex; apical angles deflexed, narrowly rounded; basal obtuse but distinct; hypomera greatly visible from the side, not extending to the apex; disk transversely convex, very broadly, feebly impressed in the middle toward base. *Elytra* large, slightly wider than long, one-half wider and nearly one-half longer than the prothorax; sides parallel, very feebly arcuate; humeri broadly exposed at base; disk evenly convex, not impressed, the suture strongly margined. *Abdomen* distinctly narrower than the elytra but wider than the prothorax, much longer than the anterior parts; sides perfectly straight and parallel from the base to the apex of the fifth segment, the latter fully one-half longer than the fourth; first four strongly impressed at base. *Legs* long, slender; posterior tarsi long, a little shorter than the tibia, the first joint as long as the next two and rather longer than the fifth. Length 4.7 mm.; width 1.2 mm.

New York.

The middle coxæ are narrowly separated, the mesosternal process very long and slender, subacute at apex, the metasternal short, but slightly prolonged, rounded at tip and not attaining the apex of the mesosternal, the isthmus short. This species appears to be congeneric with *rigidicornis*, but the antennæ are much less incrassate and the terminal joint is more slender.

ECHIDNOGLOSSA Woll.

In conformity with the views of Mr. Fauvel, I have placed the species previously described under the name *Colusa* Csy., in Wollaston's genus, although it is difficult to understand the statement under the original diagnosis of *Echidnoglossa*, to the effect that the elytra are "greatly abbreviated," if the two genera are identical. Rey introduced some confusion, which seems to be still maintained in the European catalogues, by placing the Corsican representative in a hypothetical *Echidnoglossa*, having four-jointed anterior tarsi and allied to *Falagria*; the tarsi in the American species are all five-jointed without the slightest doubt, and they are so described also by Wollaston for the type-species occurring in the Island of Tenerife.

In the United States the genus, whatever it may prove to be, is somewhat widely diffused and diversified in species, extending from the Pacific coast to the Great Lakes; I have not yet seen it from the Atlantic regions however, although it possibly occurs here.

The characters employed in my former tabular statement are variable and difficult to observe, and the species may be much more conveniently distinguished as follows:—

Abdomen strongly narrowed toward base.

Tarsi with two long slender divergent claws.

Elytral suture much longer than the pronotum.

Antennæ long, very much exceeding in length the head and prothorax combined.

Larger and stouter, very densely punctate species, the first two ventral plates densely and strongly cribrate.....**valida**

Smaller and more slender, the abdomen beneath finely and sparsely punctate, only the basal segment more coarsely so (*exilis* Say.).

eximia

Antennæ short and slender, not longer than the head and prothorax, the outer joints strongly transverse; species small...**brevicornis**

Elytral suture scarcely perceptibly longer than the pronotum.

Body rather less slender, the head semi-circularly rounded behind.

Michigan.....**lacustris**

Very slender, the head narrower and more parabolic behind from eye to eye. Pacific coast.....**gracilis**

Tarsi with a single claw, composed of two somewhat shorter claws closely united or connate, the dividing suture fine but distinct throughout the length; body slender, the elytral suture scarcely visibly longer than the pronotum.....**brendeli**

Abdomen much wider, very feebly narrowed toward base.

Punctuation normal, the abdomen sparsely pubescent; prothorax normal, fully as long as wide.

Antennæ longer, slender; head finely, rather sparsely punctate.

monticola

Antennæ shorter and more incrassate, but slightly longer than the head and prothorax; head finely but densely and strongly cribrate throughout.....**lativentris**

Punctuation of the upper surface excessively fine and dense throughout, the abdomen extremely minutely, densely pubescent; prothorax larger, wider than long.....**grandicollis**

Exilis cannot be maintained as a distinct species, and there appears to be very noticeable sexual variation in the size of the prothorax and color of the body, the former being relatively larger in the male, and the female often being paler. The following species of the above table are believed to be hitherto undescribed:—

E. brevicornis.—Somewhat stout, convex, black; legs and basal parts of the antennæ paler, dark rufous; integuments polished, very minutely, sparsely punctate, the elytra rather more strongly and closely so; pubescence moderate in length, sparse on the abdomen. *Head* fully as wide as the prothorax, the neck two-fifths as wide as the width across the eyes, the latter rather large, at rather more than their own length from the base; antennæ short, the first joint slightly shorter than the second, the latter more than twice as long as wide and distinctly longer than the third, which is obconical, four to ten subequal in length but greatly increasing in width, the latter twice as wide as the fourth and nearly twice as wide as long, eleventh as long as the two preceding. *Prothorax* as long as wide, widest at two-fifths from the apex, where the sides are strongly rounded and rather prominent, thence rapidly convergent to the neck and feebly convergent and very slightly sinuate to the base, the latter very feebly arcuate; disk strongly convex, even, with a slight transverse impression near the base. *Elytra* large, quadrate, three-fourths wider and nearly one-half longer than the prothorax, the sides parallel and straight, convergent and rounded near the apex; humeri rounded, prominent and widely exposed; disk strongly, broadly impressed on the suture behind the scutellum. *Abdomen* moderate in length, at base three-fifths, and at the apex of the third segment four fifths, as wide as the elytra; segments equal in length, the first three very strongly impressed and coarsely, densely sculptured at base. *Legs* and tarsi normal. Length 2.0 mm.; width 0.55 mm.

California.

The smallest species of the genus and decidedly aberrant, not only in its shorter antennæ but much broader neck and truncate median parts of the base of the head. A single specimen.

E. lacustris.—Slender, convex, dark rufo-piceous or paler, the last two segments of the abdomen blackish; legs pale rufo testaceous; antennæ slightly paler toward base; punctures fine and well separated but strong and distinct, more asperate on the elytra, finer and very sparse on the abdomen except in the basal impressions, which are coarsely and closely sculptured as usual; pubescence rather long, suberect, not very dense. *Head* as long as wide, fully as wide as the prothorax, the neck slightly exceeding one-third of the width at the eyes, the latter small, at much more than twice their length from the base; antennæ long and slender, although distinctly incrassate, extending nearly to the middle of the elytra, the first three joints elongate, subequal in length, four to ten shorter, subequal in length, the first much longer than wide, the latter very slightly transverse, eleventh gradually pointed toward apex, barely as long as the two preceding. *Prothorax* fully as long as wide, widest at two-fifths from the apex, where the sides are narrowly rounded, thence rapidly convergent to the neck and feebly convergent, broadly and distinctly sinuate to the base, the latter subtruncate, fully twice as wide as the apex; disk strongly, evenly convex, not impressed, the punctures more densely crowded toward the median line as usual. *Elytra* one-half wider and slightly longer than the prothorax, the sides parallel, nearly straight, con-

vergent and arcuate in posterior third; humeri rounded to the prothorax, exposed, each elytron very feebly, obliquely sigmoid at apex, the external angles prolonged as usual; disk convex, feebly, narrowly impressed on the suture behind the scutellum. *Abdomen* not as long as the anterior parts, at base three-fourths as wide as the elytra, and, at the tip of the third segment, fully as wide as the latter. *Legs* long, slender, the posterior tarsi short, the basal joint elongate. Length 3.0 mm.; width 0.7 mm.

Michigan.

The description is taken from the male, which, throughout the genus, has the sixth ventral plate relatively small and acutely triangular in form. The female is paler, rather stouter and somewhat more densely punctate. In both sexes, but especially in the female, the pronotum is extremely obsoletely impressed along the median line. The posterior tarsi, as usual, are about three-fifths as long as the tibiae, with the basal joint fully as long as the next two, the following three equal among themselves.

E. brendeli.—Slender, convex, piceous-black, the abdomen feebly rufescent toward base; legs throughout and antennae toward base dark rufous; integuments polished, finely, somewhat strongly, rather closely punctate, the abdomen very sparsely so except at the base of the segments, the elytra strongly and conspicuously but not very densely punctate; pubescence rather long and distinct, extremely sparse on the abdomen. *Head* fully as long as wide, rather longer than the prothorax, the neck one-third as broad as the width across the eyes, the latter moderate, at scarcely twice their length from the base; antennae long, the three basal joints subequal in length, the first slightly thicker, fourth much longer than wide, tenth about as long as wide. *Prothorax* nearly as in *lacustris*, the disk feebly impressed and more densely punctate along the median line. *Elytra* two-fifths wider and scarcely perceptibly longer than the prothorax; sides parallel, convergent and rounded toward apex; humeri rounded, exposed; disk strongly convex, strongly impressed on the suture behind the scutellum. *Abdomen* nearly as long as the anterior parts, at base three-fourths as wide as the elytra, fully as wide as the latter at the apex of the third segment. *Legs* long and slender; tarsi normal, the first joint of the posterior fully as long as the next two; claws connate throughout their length, rather shorter than usual. Length 3.0 mm.; width 0.65 mm.

Iowa (Cedar Rapids). Dr. E. Brendel.

The extraordinary character relating to the tarsal claws is confirmed by a careful examination of all the twelve tarsi of the two males in my cabinet; otherwise, the species is perfectly normal, differing from *lacustris* only in its more slender form, smaller prothorax, smaller and especially shorter elytra, and relatively larger

head, showing that connate tarsal claws are of even less taxonomic significance here than in some parts of the Barini.

E. monticola.—Somewhat stout, convex, black, shining; abdomen subrufescent toward base; legs dark rufous; antennæ rufo-piceous toward base; punctuation fine and very dense, a little coarser on the elytra, sparser on the abdomen, fine and not extremely dense on the head; pubescence rather long, dense and conspicuous, sparser on the abdomen, where it is however closer than in the preceding species. *Head* rather longer than wide, the neck one-third of the width, rather wider than the prothorax, convex; eyes very distant from the base, well developed; antennæ extending to the middle of the elytra, slender, feebly incrassate, the first three joints elongate, subequal in length, tenth scarcely visibly wider than long. *Prothorax* fully as long as wide, widest at two-fifths from the apex, the sides there strongly rounded, rapidly convergent to the neck, and rather strongly convergent and nearly straight to the base, the latter feebly arcuate and distinctly more than twice as wide as the apex; disk strongly convex, with a rather strong subquadrate impression in the middle before the base. *Elytra* large, quadrate, two-thirds wider and one-third longer than the prothorax; sides parallel and straight except very near the apex; humeri very widely exposed; disk strongly impressed on the suture behind the scutellum. *Abdomen* much shorter than the anterior parts, at base four-fifths as wide as the elytra, and, at the apex of the third segment, fully as wide as the latter, coarsely, densely punctate in the three basal impressions as usual. *Legs* long, slender; tarsi and claws normal, the latter long, slender, feebly arcuate and moderately divergent. Length 3.25 mm.; width 0.8 mm.

Colorado.

Readily distinguishable from the preceding species by the broader, less narrowed abdomen, which is however only a difference of degree; in generic structure it agrees perfectly with the others. A single male.

E. lativentris.—Broader, black throughout; antennæ scarcely piceous toward base; legs dark rufo-piceous, the tarsi paler; integuments polished, rather sparsely but strongly punctate, the punctures of the entire upper surface of the head, and of the pronotum toward the median line, coarser, very deep, dense and perforate, on the abdomen fine and sparse except in the impressions; pubescence rather sparse but distinct, still sparser on the abdomen. *Head* rather longer than wide with the neck one-third as wide, rather wider than the prothorax; eyes moderate, before the middle as usual; antennæ extending to about basal third of the elytra, incrassate toward apex, first three joints elongate, subequal in length, tenth quite distinctly wider than long. *Prothorax* about as long as wide, formed as in the preceding species, the sides broadly sinuate as well as convergent in basal three-fifths. *Elytra* not quite as long as wide, two-thirds wider and about one-fourth longer than the prothorax, the sides parallel and feebly arcuate; humeri widely exposed,

disk convex and impressed throughout on the suture. *Abdomen* much shorter than the anterior parts, at base four-fifths as wide as the elytra, but, near the apex, only slightly wider than at base. *Legs* moderate; tarsi normal, the first joint of the posterior fully as long as the next two; two to four equal, or the second rather shorter than the fourth; fifth longer than the first. Length 2.9 mm.; width 0.8 mm.

Montana (Mullan). Mr. H. F. Wickham.

Allied to *monticola*, but differing in its shorter, more sparsely punctured elytra, smaller prothorax, without the deep subbasal fovea and with merely a feeble transverse erosion, more coarsely deeply and densely punctured head and rather shorter antennæ.

MYRMEDONIDES.

Antennæ 11-jointed; tarsi 4-5-5-jointed.

This is the largest, and by far the most complex and difficult division of the Aleocharini.

TINOTUS Sharp.

This remarkable genus greatly resembles *Deinopsis* in the outline of the body, but has the pronotum very strongly convex and deeply indented in the male. The individuals vary greatly in size. The two species known to me may be readily separated as follows:—

Abdomen with elongate punctures; head broadly, deeply excavated nearly throughout its width in the male **caviceps**
 Abdomen with coarsely and regularly imbricate sculpture; head in the male broadly, evenly convex and normal..... **imbricatus**

The sculpture of the integuments is strong, pronounced and beautifully regular.

T. caviceps n. sp.—Rather broad, subfusiform, thick, flattened above, the pronotum very convex; integuments feebly shining, black, the legs throughout and antennæ toward base dark rufo-testaceous; pubescence short, recumbent, moderately dense, very coarse, pale fulvous and distinct, sparser on the abdomen, each segment with a long porrect fringe at apex; anterior parts finely, strongly reticulate, the abdomen polished; punctures of the head and pronotum fine, of the elytra rather coarse and rugose, not very dense, of the abdomen not dense, each composed of two long deep parallel striæ united anteriorly at the point of attachment of the hair. *Head* small, three-fifths as wide as the prothorax; eyes moderate, at nearly their own length from the base; antennæ rather longer than the head and prothorax, somewhat thick,

the second and third joints equal, the latter obconical, more than twice as long as wide, fourth slightly wider, quadrate, fifth to tenth transverse, the latter nearly twice as wide as long, eleventh conoidal, slightly compressed, nearly as long as the three preceding. *Prothorax* nearly twice as wide as long, transversely subelliptical in outline, strongly convex, with a large deep median dent which does not differ at all in the nature of its pubescence. *Elytra* rectangular, parallel, three-fifths wider than long, equal in length and width to the prothorax, broadly, strongly emarginate at base in circular arc. *Abdomen* much longer than the anterior parts, at base nearly as wide as the elytra; sides feebly arcuate, evenly, feebly convergent from the base; border thick and strong; surface nearly flat: first and second segments deeply, transversely impressed, the third more feebly; fifth a little longer than the fourth; under surface convex, finely, densely punctate. *Legs* rather slender, the posterior tarsi distinctly shorter than the tibiae. Length 1.8-2.5 mm.; width 0.6-0.85 mm.

Nevada (Reno).

The female differs from the above-described male in its slightly larger size and more robust form, unexcavated head, and in having a simple, equal, broadly and feebly impressed line along the middle of the pronotum from base to apex.

T. imbricatus n. sp.—Nearly similar in form to *caviceps*, piceous-black, the legs, base of the antennae and apices of the abdominal segments paler; head and pronotum dull, very minutely reticulate, strongly and densely so in the pronotal dent; elytra more coarsely reticulate, more shining and more strongly, rather densely punctate; abdomen polished, finely punctate and evenly imbricate; pubescence of the anterior parts short, coarse, rather dense, very dense, longer and conspicuous in the pronotal indentation, sparse on the abdomen. *Head* small, scarcely three-fifths as wide as the prothorax, feebly, evenly convex; eyes large, at less than their length from the base; antennae barely as long as the head and prothorax, feebly incrassate, second and third joints equal, the latter obconical, three times as long as wide, as long as the next two, eleventh conoidal, not longer than the preceding two. *Prothorax* twice as wide as long; sides evenly convergent from base to apex, broadly, evenly arcuate; base much wider than the apex, broadly arcuate; basal angles obtuse but not blunt, very distinct; disk convex, with a large abrupt median excavation occupying one-third of the width, extending from the base nearly to the apex. *Elytra* very slightly longer and wider than the prothorax; sides subparallel, broadly arcuate. *Abdomen*—extended—nearly twice as long as the anterior parts, at base nearly as wide as the elytra; sides gradually convergent from the base; border thick but not very deep; surface nearly flat; first three segments moderately impressed at base; fourth broadly emarginate at apex and much shorter than the fifth; middle coxae widely separated, the mesosternal process broadly truncate. Length 1.6-2.4 mm.; width 0.55-0.7 mm.

New York (Catskill Mts.).

The description is taken from the male; in the female the pronotum is almost perfectly even, without an impressed median line but with two large feeble and approximate impressions near the base before the scutellum, and, apparently, an extremely obsolete median impression near the apical margin. I place with this species a single male from Austin, Texas, which is very similar but a little more robust and with more finely and densely punctate elytra.

The evenly imbricate sculpture of the abdomen above and beneath is a very striking feature.

MICRODONIA n. gen.

Body parallel, rather depressed. Head broadest behind the eyes, the latter situated at their own length from the base, convex and rather prominent, the tempora rounded, slightly more prominent than the eye; neck moderate in width, the occiput adjacent to the pronotum nearly throughout. Labrum short, broad, truncate. Antennæ rather long, incrassate, inserted in small foveæ very near the eyes. Mentum large, flat, trapezoidal, truncate at apex. Maxillary palpi normal, the fourth joint subulate, oblique, distinct. Ligula with two minute slender parallel and approximate processes at apex, the labial palpi distinct, the two basal joints cylindrical, the second the shorter, third nearly as long as the two preceding, very slender, arcuate near the base. Infraocular carina completely wanting. Prothorax nearly flat, rather abruptly declivous at the sides, the acute lateral line very feeble; hypomera moderately inflexed and greatly visible from the side. Abdomen parallel, the basal segment alone transversely impressed and impunctate at base; second a little longer than any of the others; fourth and fifth nearly equal. Intermediate coxæ moderately but distinctly separated, the mesosternal process very short, parabolic, indefinitely limited at apex, the metasternal also short but acute, separated from the mesosternal by quite a long polished transversely convex isthmus; middle acetabula apparently deep and sharply defined. Metasternum well developed, the episterna wide, parallel, the epimera large, broad behind and extending slightly behind the elytra, gradually attenuate anteriorly and disappearing under the elytra at the middle of the latter. Tibiæ rather long, the anterior very slender, not at all spinose, the terminal spurs small and slender; tarsi with 4-5 joints, the posterior very long and slender, as long as the

tibiae, with the first joint greatly elongate; unguis small, slender, arcuate, simple and divergent.

Microdonia belongs evidently to the subgroup *Myrmedoniates* of Rey, as shown by general organization and by the great development of the metasternal epimera, but is immediately distinguishable from any of the genera known to me by the small parallel and depressed body, subtriangular head, complete absence of infraocular carina and many other characters.

M. occipitalis n. sp.—Reddish-brown, the elytra paler, more flavate; abdomen with a large blackish cloud occupying segments three, four, the apex of two and base of five; anterior parts dull, the abdomen shining. *Head* subtriangular, rather coarsely, densely, evenly punctate, the punctures round, very shallow, distinctly defined but variolate and slightly umbilicate; antennae rather longer than the prothorax and elytra, second joint longer than the third, the latter strongly obconical, one-half longer than wide, outer joints transverse and perfoliate, the tenth fully one-half wider than long, eleventh nearly as long as the preceding three, conoidal, compressed. *Prothorax* distinctly wider than the head, punctured like the latter, two-fifths wider than long, the sides very feebly convergent from near the apex to the base and very nearly straight; base broadly, evenly arcuate; basal angles obtuse and slightly blunt; disk broadly impressed toward each side except anteriorly, also in the middle before the scutellum. *Elytra* just visibly longer but distinctly wider than the prothorax, rectangular, nearly one-half wider than long, flat, more finely and rather less densely punctate. *Abdomen* as long as the remainder of the body, slightly narrower than the elytra, parallel and straight at the sides, feebly convex, the border strong; punctures fine, rather distinct, somewhat close though very sparse toward tip. Length 2.3 mm.; width 0.6 mm.

Texas (Austin).

The pubescence of the anterior parts of the upper surface is very minute, stiff, recumbent and rather dense but not conspicuous, of the abdomen sparser but longer and more visible. A single specimen, perhaps somewhat immature; the singular impressions near the sides of the pronotum are however probably normal.

DINOCORYNA n. gen.

Parallel, rather stout. Head well inserted, nearly as in *Myrmedonia*, the eyes well developed, the tempora rapidly convergent behind them; infralateral carina wholly obsolete. Antennae stout, the first joint very large, robust, constricted at base, as long as the next three; second very small, barely longer than wide, as long as

the third but scarcely more than one-half as wide; third rapidly obtrapezoidal, as wide at apex as joints four to ten, which form a compact cylindrical mass, each joint twice as wide as long and deeply received in the excavated apex of the preceding, the sides almost parallel; eleventh conical, compressed, at base not quite as wide as the tenth, as long as the preceding three. Mentum nearly as long as wide, trapezoidal. Maxillary palpi well developed, the third joint very much longer and thicker than the second; fourth distinct. Ligula with a long slender, apparently almost simple process, the palpi rather slender, three-jointed, the first joint longer than the second and subequal to the more slender third. Prothorax transverse, the anterior margin transverse and deeply bisinuate, the median lobe narrowly rounded, the apical angles somewhat anteriorly prominent; hypomera moderately inflexed, visible from the side, broadly triangular, not attaining the apex. Elytra large and well developed. Abdomen parallel, with the sides strongly, evenly arcuate; border moderate; first two segments very large, together constituting three-fifths of the abdomen, the first slightly the larger; three to five very short; sixth abruptly extremely narrow and but slightly exposed. Coxæ all large, the intermediate distinctly but not very widely separated, the metasternal process extending anteriorly for nearly one-half their length, narrowly subtruncate at tip and separated from the apex of the mesosternal,—which cannot be clearly seen in the unique type,—by a short depressed isthmus. Legs short, stout, covered with long stiff subdecumbent pubescence, the tarsi filiform but stout, somewhat compressed, long, 4-5-5-jointed, the posterior about as long as the tibiae, with the first joint elongate, the first four rapidly decreasing in length, the fifth somewhat longer than the first; unguis very long, extremely slender, feebly, evenly arcuate and but slightly divergent.

This remarkable genus is evidently myrmecophilous, or still more probably, termitophilous, and is allied to *Myrmedonia*. The basal tergite is broadly, deeply impressed and polished at base, the others without trace of impression.

D. bisinuata n. sp.—Moderately short and stout, subparallel, pale flavo-testaceous throughout, the elytra rather albescent; integuments polished, not in the least reticulate; head and pronotum coarsely, sparsely punctate, the elytra very minutely sparsely and indistinctly so, the abdomen subimpunctate, except along the apices of the tergites, where there is a row of close-set, elongate, tubercular punctures bearing very long stiff setæ, the under surface

covered throughout with long coarse hairs; pubescence very sparse and inconspicuous, the abdomen bristling with long setæ; there are also a few long erect setæ toward the sides of the pronotum and elytra, and near the base of the latter. *Head* large, transverse, four-fifths as wide as the prothorax, the occiput feebly impressed in the middle; antennæ extending fully to the middle of the elytra, the club nearly one third as wide as the head, not compressed. *Prothorax* four-fifths wider than long, widest at the apex, the sides rather strongly convergent and broadly arcuate to the basal angles, which are extremely obtuse, rather indistinct; base much narrower than the apex, subtruncate; marginal line of the flank extremely fine; disk without trace of marginal bead, the edges convex, broadly impressed along the middle. *Elytra* transverse, slightly wider and one-half longer than the prothorax; sides subparallel, nearly straight; humeri moderately exposed at base. *Abdomen* at base much narrower, in the middle slightly narrower, than the elytra, shorter than the anterior parts; sides parallel and strongly arcuate; surfaces of tergites two to five broadly, feebly redexed toward apex. Length 1.7 mm., width 0.7 mm.

Florida.

The sex of the type cannot be clearly distinguished, and the abdomen seems to be exerted in its basal parts but drawn in toward apex, which may account in part for the great preponderance in length of the two basal segments.

The genera more or less resembling *Myrmedonia*, which are represented by the material in my cabinet, may be defined as follows:—

Mesosternal process very short, not extending between the coxæ for more than one-third of their length, more or less broad at apex and separated from the metasternal process by a short broad isthmus, which is on the same level and not depressed **Myrmedonia**

Mesosternal process longer, extending to the middle of the coxæ.

Mesosternal process broad, very broadly rounded at apex, the latter soldered to the apex of the metasternal by a short broad undepressed isthmus; front before the line of the antennæ abruptly and strongly declivous to the subhorizontal clypeus; eyes as in *Myrmedonia*, large and near the base; occiput thrown up in a strong transverse ridge **Nototaphra**

Mesosternal process narrow, very acute, not in the least blunt at apex, the latter free and detached from connecting isthmus; head long, oval; front normal; eyes small, distant from the base **Anepsiota**

In all of these genera the side-pieces of the metasternum are broad, the epimera greatly developed and extending posteriorly behind the elytra.

MYRMEDONIA Erichs.

Even within our own faunal limits, this interesting genus varies wonderfully in the degree of separation of the intermediate coxæ, which is usually a character of considerable taxonomic value. It is only a striking example, however, of the fact frequently observed in large groups of arthropods, that characters unquestionably of general significance in defining genera may, in certain parts of the series, abruptly and unexpectedly lose all such weight.

The few species known to me may be distinguished by the following characters:—

Punctures of the pronotum extremely fine.

Apex of the mesosternal process moderate in width.

Basal joint of the antennæ large, extremely robust and pyriform; prothorax strongly transverse; middle coxæ rather narrowly separated (*Platyusa* Cay.).....**sonoma**

Basal joint of the antennæ more slender, sometimes moderately constricted at base; middle coxæ more widely separated.

Prothorax transverse, the sides not at all sinuate toward base.

caliginosa

Prothorax but slightly wider than long, the sides broadly sinuate toward base.

Third antennal joint greatly elongated, nearly as long as the next two; tenth but slightly wider than long**fauveli**

Third joint much shorter, but slightly longer than the second; tenth very strongly transverse; eleventh large, nearly as long as the preceding three combined**angustula**

Apex of the mesosternal process extremely wide, straight, truncate and rather wider than the distance separating the antennæ**loricata**

Punctures of the pronotum normal but coarse and sparse, somewhat as in *Zyras haworthi* but less remote and more even in distribution**obliqua**

Punctures of the pronotum sparse, strong and tuberculiform, at least in the male.

Elytral punctures very coarse, deep and rather sparse; abdomen coarsely sparsely and unevenly punctate, testaceous in color**rudis**

Elytral punctures fine and dense; abdomen subimpunctate**planifer**

"Confertim subtilissime punctata, fusca, antennarum basi, thoracis lateribus, pedibus elytrisq. testaceis, his sutura, basin versus latius, angulisq. apicalibus oblique late infuscatis; thorace transverso, obsoletius canaliculato, basi leviter transversim foveolato. Long. 1½ lin. Lat. ¾ lin. Peninsula Kenai."**angularis**

I have not been able to identify *angularis* Mäkl., and transcribe the original short diagnosis; it is evidently a species allied to *caliginosa*, but differing in the pale sides of the prothorax. *Fauceli* Shp. is abundant throughout the United States from Pennsylvania to Los Angeles, Cal.; I have taken it at Galveston and Waco in Texas. *Rudis* Lec. is a large and very distinct species, with extremely coarse and rugose pronotal sculpture.

M. caliginosa n. sp.—Parallel, black, the legs and antennæ toward base dark rufo-testaceous; apices of the two or three basal tergites sometimes very briefly pale; elytra fusco-testaceous, feebly, triangularly clouded toward base and toward the lateral apical angles with piceous; head and pronotum minutely reticulate, alutaceous, extremely finely and not very densely punctate; elytra and abdomen polished, the former finely but distinctly, densely punctate, the latter impunctate, with the exception of a few fine punctures near the apical margins; pubescence fine, extremely short and inconspicuous, each tergite with a sparse apical fringe of longer hairs. Head slightly wider than long, fully three-fourths as wide as the prothorax, constricted at base; eyes very large, at less than one-half their length from the base; antennæ rather compressed, separated at base by the length of the eye, thick, moderately incrassate, a little longer than the head and prothorax, basal joint moderately thick, as long as the next two, third obconical, barely twice as long as wide, four to nine equal in length, gradually much wider, loosely perfoliate, the latter twice as wide as long, tenth equal in width but a little longer, eleventh conoidal, pointed, rather longer than the two preceding. Prothorax fully three-fourths wider than long, the sides subparallel, broadly arcuate, becoming straight and feebly convergent toward base, the basal angles very obtuse and blunt; the apical rounded; base broadly arcuate, about as wide as the apex; disk even, with a very fine, frequently entirely obsolete, impressed line, without antebasal impression. Elytra transverse, slightly but distinctly wider and longer than the prothorax; humeri somewhat exposed; suture not impressed. Abdomen subequal to the anterior parts, very slightly narrower than the elytra; sides subparallel, feebly arcuate; first three segments deeply equally and not very widely impressed at base; fifth shorter than the fourth. Legs slender; posterior tarsi long but much shorter than the tibiae, the first joint as long as the next two. Length 3.0 mm.; width 0.85 mm.

New York (Catskill Mts.); Indiana.

A somewhat common species, resembling a stout *Atheta* and easily recognizable by the large prominent eyes.

M. angustula n. sp.—Narrow, parallel, convex, polished throughout, dark piceous; pronotum slightly paler and rufescent; elytral humeri and a narrow apical margin, first three abdominal segments except at base, legs and antennæ pale flavate; head, pronotum and elytra extremely minutely, evenly,

rather sparsely and not distinctly punctate; abdomen impunctate, excepting a widely spaced series bearing longer setæ along the apex of each segment; pubescence fine and rather inconspicuous above, longer and more distinct on the under surface of the abdomen. *Head* wider than long, slightly narrower than the prothorax, convex; eyes moderate, at nearly their own length from the neck; tempora moderately convergent, broadly arcuate; antennæ extending fully to the middle of the elytra, the basal joint elongate, oval, not as long as the next two, outer joints rapidly wider, rather closely connected, strongly transverse, eleventh long, pointed. *Prothorax* but slightly wider than long, widest at apical third, where the sides are rounded and moderately convergent to the apex, distinctly convergent and broadly sinuate thence to the basal angles, which are nearly right and only slightly blunt; base a little narrower than the apex, both broadly, equally arcuate; disk rather strongly, evenly convex, not distinctly impressed. *Elytra* one-half wider than long, two-fifths wider than the prothorax but not distinctly longer than the latter; humeri broadly exposed at base; surface not impressed. *Abdomen* in the middle about as wide as the elytra; sides parallel and quite distinctly arcuate; basal segments only feebly impressed along the basal margins; fifth shorter than the fourth. *Legs* moderate in length, slender; posterior tarsi very long and filiform but shorter than the tibiae, the basal joint as long as the next two. Length 2.3 mm.; width 0.6 mm.

Florida.

This species resembles *faureli* in general appearance, but is smaller and narrower, and may be known by its much more transverse penultimate joints of the antennæ.

M. loricata n. sp.—Parallel, rather convex, dark blackish-castaneous, the antennæ dark rufo-piceous, paler toward base; abdomen black, the apices of the three basal segments paler; legs piceous, the tarsi pale; head and pronotum very finely, the former sparsely, the latter more closely, punctate; elytra finely but strongly and distinctly, not densely punctate, the punctures becoming dense toward the inner basal angles; abdomen impunctate, except sparsely along the apices; integuments strongly shining, the abdomen highly polished; pubescence fine, rather short, distinct. *Head* wider than long, four-fifths as wide as the prothorax, the occiput rather tumid; eyes large, prominent; antennæ extending nearly to the middle of the elytra, strongly incrassate, feebly compressed, rather compact, the outer joints contiguous, basal joint slender, as long as the next two, third elongate, obconical, twice as long as the second and as long as the next two, the latter equal, as long as wide, five to ten gradually increasing in length and greatly in width, the tenth nearly parallel, two-fifths wider than long, eleventh conical, not as long as the two preceding. *Prothorax* one-fourth wider than long, widest at apical third where the sides are very broadly, feebly arcuate, feebly convergent and slightly sinuate in basal half; base broadly, strongly arcuate, subequal to the apex, which is transverse, becoming feebly sinuate near the sides; basal angles slightly obtuse, strongly marked, not at all blunt; disk convex, the

median line finely and feebly impressed throughout. *Elytra* transverse, one-third wider but not at all longer than the prothorax; sides feebly arcuate; humeri broadly rounded and exposed; disk broadly, feebly impressed at base. *Abdomen* at base much narrower than the elytra and as wide as the prothorax; sides subparallel, broadly arcuate; border thin and deep; first three segments finely, deeply impressed; fifth shorter than the fourth; under surface sparsely, coarsely pubescent, finely punctate. *Legs* moderate; posterior tarsi long but much shorter than the tibiae, the basal joint somewhat thicker than usual and very long, nearly as long as the next three. Length 3.6 mm.; width 1.0 mm.

Canada (Grimsby); Ohio.

The distinguishing character of this species is the very wide truncate sternal piece between the coxæ, much exceeding in width that of any other known to me. The degree of separation of the middle coxæ bears no relation whatever to the width of the body, for, in *sonomæ*, which is a very much stouter species, the coxæ are unusually narrowly separated.

M. obliqua n. sp.—Stout, subparallel, polished, black, the antennæ red-brown, paler toward base; elytra pale rufous, clouded with blackish in a basal subtriangular area and also broadly toward the external apical angles; apices of all the tergites and the legs throughout pale flavate; head distinctly but extremely remotely, the pronotum strongly, rather coarsely and decidedly sparsely, punctate; elytra rather coarsely, roughly but not densely so, the punctures becoming however very dense toward the scutellum; abdomen finely, sparsely punctate throughout, with the pubescence long and fine, coarser and more evident beneath; pubescence anteriorly coarse and somewhat long but sparse, closer and more evident on the elytra. *Head* as long as wide, three-fourths as wide as the prothorax, the eyes moderate, at their own length from the base; tempora feebly convergent to the base; antennæ longer than the head and prothorax, the basal joint slightly thick, not as long as the next two, third elongate, one-half longer than the second, not as long as the next two, fourth quadrate, four to ten very evenly and moderately increasing in width, the tenth rather shorter than the ninth, one-half wider than long, eleventh thick, obtusely ogival, as long as the preceding two. *Prothorax* fully two-fifths wider than long, widest at apical third, where the sides are rather strongly rounded and convergent to the apex, somewhat strongly convergent and nearly straight in basal half; base and apex subequal, the former strongly, the latter feebly arcuate; basal angles very obtuse but evident, not distinctly blunt; disk with a smooth, impunctate but unimpressed median line and a small deep impression in the middle before the base. *Elytra* one-half wider than long, two-fifths wider but only slightly longer than the prothorax; sides feebly divergent and slightly arcuate from base to apex; humeri obliquely, strongly rounded to the prothorax, not becoming transverse; disk scarcely at all impressed. *Abdomen* broad, as wide as the elytra; sides parallel and just visibly arcuate; border thick and not very

deep; first three segments finely impressed at base, the impressions becoming almost obsolete near the sides; fifth a little longer than the fourth. *Legs* moderate; posterior tarsi long, filiform, shorter than the tibiae, with the first joint not thicker but distinctly longer than the next two. Length 3.8 mm.; width 1.3 mm.

New York.

A fine species, somewhat suggestive of the subgenus *Zyras*, but with much less coarse and dispersed elytral sculpture. One specimen, apparently female.

M. planifer n. sp.—Moderately stout, subparallel, polished throughout, rufo-piceous, the elytra darker except near the humeri; abdomen black, the first two segments in great part, and the third narrowly at the margin, pale; legs pale throughout; antennae fuscous, pale toward base; head finely, sparsely, the pronotum still more finely sparsely and obsoletely, punctate, the latter with the flattened median area sparsely but strongly and asperately so; elytra finely but strongly, sparsely, subasperately punctate, more strongly but scarcely more densely toward the scutellum; abdomen subimpunctate, except very obsoletely and remotely along the apical margins; pubescence fine, sparse, rather more distinct on the under surface of the abdomen. *Head* much wider than long, four-fifths as wide as the prothorax; eyes moderate, at nearly their own length from the base; antennae stout, strongly incrassate, longer than the head and prothorax, the basal joint stout, nearly as long as the next two, third longer than the second, obconical, twice as long as wide, four to seven increasing in width, seven to ten subsimilar, rather compact, subparallel, nearly one-half wider than long, eleventh conical, as long as the two preceding. *Prothorax* transverse, three-fifths wider than long, widest at apical third where the sides are distinctly rounded to the apex, plainly convergent and straight—from above—in basal two-thirds; base and apex equal, the former strongly, the latter very feebly, arcuate; basal angles obtuse but not blunt; disk with a large flattened median region, the median line finely but distinctly impressed. *Elytra* transverse, two-fifths wider but only just visibly longer than the prothorax; sides feebly divergent and arcuate from the humeri, which are rather broadly exposed; disk slightly impressed near the sides behind the middle. *Abdomen* rather longer than the anterior parts, quite distinctly narrower than the elytra; sides parallel, slightly arcuate behind; border thin and deep; first two segments widely and deeply impressed at base, the third finely and very feebly so; fourth and fifth subequal. *Legs* slender; posterior tarsi much shorter than the tibiae, with the basal joint as long as the next two. Length 3.2 mm.; width 1.0 mm.

North Carolina (Asheville).

The description is evidently drawn from the male, and in the female the asperate flat median area of the pronotum is probably wanting in great part; the male has, in addition, the sixth tergite feebly emarginate and unevenly serrulate, a somewhat more isolated

median projection having three short teeth. This species is evidently allied to some of the Mexican forms described by Dr. Sharp.

NOTOTAPHRA n. gen.

Body rather narrow, thick and subparallel. Head somewhat as in *Myrmedonia*, constricted at base throughout the width, the occiput transversely prominent; eyes moderate; infralateral carina not distinct. Antennæ long, loose, subparallel from the fourth joint, not incrassate, pilose, but devoid of erect setæ. The gular sutures diverge toward the base of the maxillæ, and from between them there extends forward a large flat plate, gradually narrowed toward the truncate apex; this plate is the mentum and its support fused in one and without trace of transverse suture. The lobes of the maxillæ are very long and slender. Ligula rather short, the terminal process small, gelatino-membranous, easily distorted but seemingly bilobed at apex. Labial palpi apparently two-jointed, the basal joint thick, cylindrical, less than twice as long as wide, the second a little shorter, slender and affixed obliquely. Prothorax narrowed and sinuate to the base, the hypomera feebly inflexed and in part visible from the side. Elytra well developed. Abdomen with the side margins thin and extremely deep. Middle coxæ distant, the mesosternal process broadly rounded at apex, the metasternal acutely angulate but widely separated at tip from the mesosternal. Legs slender; tarsi 4-5-5-jointed, slender, the posterior shorter than the tibiæ, with the first joint more or less elongate.

If my interpretation of the structure of the labial palpi be correct this genus is really very isolated; the structure of the front before the antennæ, of the mentum and its support, and the more prolonged mesosternal process will however, in any event, readily distinguish it from *Myrmedonia*. It seems to have some relationship also with the comparative giants described by Dr. Sharp under the name *Platonica*. Our two representatives may be readily separated as follows:—

Basal joint of the hind tarsi as long as the next two; blue-black, the prothorax and first three segments of the abdomen very pale yellowish-red.

lauta

Basal joint of the hind tarsi but slightly longer than the second; black, the elytra slightly picescent.....**lugubris**

N. lauta n. sp.—Rather slender, parallel, convex, minutely reticulate and rather alutaceous throughout, the elytra dullest; pale rufo-flavate, the

head rufo-piceous; elytra and abdominal apex black; legs very pale; antennæ feebly infusate toward tip; punctures throughout extremely minute, dense but scarcely visible, rather more distinct on the elytra; pubescence consisting of extremely short fine appressed hairs, distributed thickly over the entire surface including the abdomen, becoming sparse toward the apex of the latter.

Head as long as wide, not quite as wide as the prothorax, deflexed; eyes moderate, prominent, at one-half their length from the base; depressed epistoma polished, glabrous; antennæ extending nearly to the tip of the elytra, rather thick, loose, cylindrical, pubescent but without bristling setæ, basal joint small, stout, pyriform, third longer than the second, obconical, not twice as long as wide, its apex oblique, four to ten somewhat asymmetrically obconical, tenth as long as wide, eleventh small, conoidal, not as long as the two preceding. *Prothorax* transverse, three-fourths wider than long, widest at apical third where the sides are strongly rounded, becoming parallel and straight in basal half; base and apex equal, broadly arcuate; basal angles obtuse and slightly blunt; disk rather abruptly declivous laterally, the median half from base to apex occupied by a very large deep indentation, which does not differ in sculpture or vestiture. *Elytra* large, one-half wider than long, one-half wider and one-half longer than the prothorax; sides feebly divergent and straight; humeri broadly exposed. *Abdomen* much narrower than the elytra, parallel, the three basal segments broadly, deeply impressed, polished and glabrous at base; fifth shorter than the fourth. Length 2.8 mm.; width 0.8 mm.

New York.

The male, from which this description is taken, has the posterior part of the first tergite broadly, feebly swollen. The second bears a large strongly elevated tubercle, occupying median third, the posterior wall of which is vertical, clothed with longer hair and having its face furrowed from summit to base; the anterior wall is likewise vertical and its foot is at the margin of the impression. The third segment also has a strongly elevated abrupt elevation, occupying a little more than median third and apical two-thirds, the upper surface of which is flat and declivous posteriorly throughout, its anterior wall vertical and deep. I have not seen the female.

N. lugubris n. sp.—Moderately stout and convex, somewhat shining; punctures throughout almost invisible; pubescence extremely minute, moderately dense; body black, the elytra feebly piceous; legs piceous-black, the tarsi slightly paler; antennæ dark red-brown. *Head* as long as wide, deflexed, nearly as wide as the prothorax; eyes moderate; antennæ thick, extending to the middle of the elytra, the basal joint thick and pyriform, much shorter than the next two, second small, a little longer than wide, third large, rather wider than long, asymmetric, four to ten scarcely differing in width and about as wide as the apex of the third, tenth more than one-third wider than long, eleventh moderate, conoidal, not quite as long as the two preceding. *Pro-*

thorax two-thirds wider than long, widest just before the middle where the sides are broadly, evenly arcuate, becoming convergent and straight in basal half; base and apex equal, the former feebly arcuate, the latter truncate; basal angles obtuse; disk with a large and very deep oval excavation, occupying more than median third and extending from base to apex. *Elytra* large, nearly one-half wider and longer than the prothorax, the humeri broadly exposed. *Abdomen* distinctly narrower than the elytra, the sides straight, just visibly convergent from the base, the fourth and fifth segments equal in length. Length (abdomen strongly contracted and reflexed) 2.1 mm.; width 0.9 mm.

Colorado.

The abdomen is strongly reflexile in both of these species, and the male described above has large discal processes on the second and third segments, almost precisely similar to those of the preceding species. So close a resemblance in these peculiar sexual marks is indeed singular, in view of the great differences in antennal and tarsal structure and coloration of the body. I think that these large tuberosities may possibly have some function in limiting the reflexibility of the abdomen.

ANEPSIOTA n. gen.

Body parallel, moderately stout and rather feebly convex. Head oval, longer than wide, well inserted but borne on a neck which is not more than one-half as broad as the width across the eyes, the latter small, at nearly twice their length from the base, the tempora broadly rounded and convergent behind them. Antennae long, moderately incrassate, loose, the erect setae extremely short, the basal joint slightly longer and thicker than the second; third rather longer than the second, both elongate, obconical and similar; fourth to tenth increasing in width, the former longer than wide, the latter slightly wider than long; eleventh long, ogival, finely pointed, barely as long as the two preceding. Mentum moderate, trapezoidal, the transverse suture at its base almost obsolete but better marked at the sides because of the lateral impressions of the mentum. Ligula stout, short, the apical process well developed, split to its base, the two lobes subparallel, long and moderately slender. Labial palpi three-jointed, the basal joint stout, cylindrical, long, more than twice as long as the second, which is a little narrower and not longer than wide; third slender, oblique, not as long as the first. Maxillary palpi long and well developed, the third joint obconical, a little longer than the second. Infralateral carina obso-

lete except near the base. Prothorax rectangular, the hypomera feebly inflexed, wide and greatly visible from the side. Elytra rather short and transverse. Abdomen wide, the segments short and equal, the first two finely impressed at base. Metasternal epimera large, extending distinctly behind the elytra. Legs short, the tarsi 4-5-5-jointed, the posterior very long, almost as long as the tibiae, with the basal joint not as long as the next two, although elongate, the second fully as long as the last.

The acute mesosternal process, extending one-half the length of the coxae with its apex free, the smaller eyes, more distant from the prothorax, narrower neck and many other structural characters necessitate a separation of this genus from *Myrmedonia*, although it is apparently somewhat allied; it is more closely allied, however, to *Atheta*, Thoms. *Quadricollis* is the type of the genus.

A. quadricollis n. sp.—Parallel, polished throughout, pale rufo-testaceous, the head piceous; abdomen blackish except indefinitely toward base and at apex; legs pale throughout; antennae black, testaceous toward base; head and pronotum very finely sparsely and indistinctly punctate; elytra more distinctly and closely, subasperately so; abdomen throughout finely, subasperately and moderately closely punctate; pubescence short stiff and sparse, longer on the abdomen, where it is still denser beneath. Head rather narrow, two-thirds as wide as the prothorax, the occiput declivous at base but not prominent; antennae attaining the apices of the elytra. Prothorax transversely rectangular, two-fifths wider than long; sides parallel, broadly arcuate anteriorly, broadly sinuate behind the middle; basal angles obtuse and rounded; base distinctly wider than the apex, broadly arcuate, the apex truncate, the angles rather broadly rounded; disk broadly, feebly convex, slightly impressed in the middle before the base. Elytra two-thirds wider than long, slightly shorter than the prothorax, and, at apex, just visibly wider than that part; sides feebly convergent to the base, the humeri not exposed at base, obliquely, feebly rounded; disk impressed on the suture behind the scutellum. Abdomen—contracted—not quite as long as the anterior parts, at base fully as wide as the elytra and behind the middle somewhat wider; sides parallel, very slightly arcuate; border moderately thick, not very deep. Length 3.0 mm.; width of abdomen 0.9 mm., of the elytra 0.8 mm.

Vancouver Island.

The deep emargination at the base of the first tergite, with its connecting membrane largely exposed when in a horizontal position, shows that the abdomen is strongly reflexile. I can observe no sexual marks about the single type specimen, which is probably a female.

The two following species are provisionally attached to *Anepsiota*

although the posterior tarsi are decidedly shorter with the four basal joints differing much less in length.

A. insignis Csy.—Bull. Cal. Acad. Sci., I, p. 310 (Oxyptoda).

This species is allied rather closely to *wickhami*, but differs conspicuously in the wider and deeper impressions of the abdomen, the impression of the second tergite, for instance, occupying more than basal third, while in *wickhami* it is very narrow and feeble along the basal margin; in *insignis* the prothorax is relatively smaller and shorter and more strongly punctate, the elytra longer, and the antennæ rather shorter and less incrassate.

A. wickhami n. sp.—Compact, parallel, somewhat stout, feebly convex, minutely reticulate but strongly shining, the abdomen polished; dark piceous-brown, the head and abdomen throughout black; legs pale, yellowish; antennæ black, testaceous toward base; head and pronotum finely, very feebly and remotely punctulate; elytra finely but more distinctly, subasperately and rather closely so; abdomen finely, feebly and remotely punctulate throughout; pubescence rather long, decumbent and sparse. *Head* nearly circular, fully three-fourths as wide as the pronotum, strongly convex, feebly, coalescently biimpressed just behind the line of the antennæ, and also with a small impression at the center of the vertex between the eyes, the latter moderate, at more than their length from the base; antennæ attaining the middle of the elytra, moderately incrassate, the basal joint thicker and much longer than the second, the latter as long but not quite as thick as the third, both elongate, fourth a little longer than wide, tenth scarcely visibly wider than long, eleventh ogival, pointed, as long as the two preceding. *Prothorax* subquadrate, nearly one-half wider than long; sides parallel, feebly arcuate, becoming straight in basal half, distinctly convergent and broadly rounded toward apex; base broadly arcuate, distinctly wider than the truncate apex; basal angles obtuse and blunt; disk scarcely impressed. *Elytra* one-half wider than long, slightly longer than the prothorax, and, at apex, nearly one-fourth wider; sides distinctly divergent and nearly straight from the humeri, which are broadly rounded and oblique but not much exposed at base; disk broadly impressed on the suture throughout. *Abdomen* a little longer than the anterior parts, fully as wide as the elytra, the sides parallel and nearly straight; first three segments distinctly, subequally but rather narrowly impressed transversely at base; fourth and fifth equal in length. *Legs* moderate; first joint of the anterior tarsi much shorter than the second. Length 3.7 mm.; width 0.95 mm.

British Columbia (Stickeen River Cañon). Mr. H. F. Wickham.

In this species the elytra are much more developed than in *quadrifidus*; it also has a more distinctly athetoid appearance. The mesosternal process is acute, prolonged to the middle of the coxae and free at apex; the metasternum is not produced at all between

the coxæ, and its anterior line is only very feebly arcuate behind the narrow intercoxal space. The surface between the metasternum and the mesosternal process is occupied by a large and long subtriangular isthmus, moderately compressed anteriorly, where it extends under the apex of the latter, and subtubercularly elevated at its centre. This is probably the structure also in *quadricollis*, but in the type of that species these parts are concealed.

TARPHIOTA n. gen.

Body subparallel, moderately wide, flattened above, opaque. Head well inserted, very slightly constricted at base, the eyes rather large and somewhat convex; labrum transverse, truncate; infralateral carina completely wanting. Antennæ slender, filiform, scarcely visibly enlarged near the apex, setose, moniliform, the joints generally held slightly asunder by the narrow cylindrical basal peduncles; first three joints rapidly decreasing in length, the first thicker; four to six equal in width, the former slightly elongate-oval, the latter subglobular; seven to ten feebly transverse and just visibly increasing in width; eleventh as long as the two preceding, conoidal, compressed at tip. Mentum ample, trapezoidal, the apex rather broadly, feebly produced and feebly sinuato-truncate in the middle. Ligula with a deeply bifid process and two discal setæ, the labial palpi three-jointed, the first and last joints longer than the intermediate. Maxillary palpi with the third joint a little longer than the second; fourth distinct, rather stout, bulbous at base and apparently with an excessively minute bisetose apical appendage. Prothorax transversely subquadrate, narrower than the elytra, the hypomera feebly inflexed, broadly triangular and greatly visible from the side. Elytra greatly developed. Abdomen linear, the first four tergites impressed at base, the first two rather more strongly; fifth just visibly longer than the fourth. Coxæ moderately large, the intermediate extremely approximate but not contiguous, the mesosternal process long, finely acute and attenuate, extending two-thirds of their length, the metasternal process acutely produced beneath the mesosternal, the coxæ well imbedded. Metasternum large, the side-pieces narrow, the inner margin arcuately approaching close to the elytra posteriorly. Legs rather short, somewhat stout; anterior and middle tibiæ strongly spinose externally; tarsi 4-5-5-jointed, the posterior three-fourths as long as the tibiæ, with the first four joints slightly elongate and

exactly equal, the fifth longer than the two preceding; ungues long, rather strongly, almost evenly arcuate, divergent and irregular, being strongly compressed toward the middle, with the inner edge thinned out and very acute.

This interesting genus is probably more closely related to *Alianta* Thoms. than any other, but differs in its spinulose tibiae, longer and compressed tarsal claws, much more finely acuminate mesosternal process, less incrassate antennae and many other characters. From *Heterota*, Rey, it differs greatly in antennal structure, in the short basal joint of the hind tarsi, as well as in several features enumerated under *Alianta*. From *Halobrectha* Thoms. it differs in its almost filiform antennae and other characters. It is confined to the sea-beaches of the Pacific coast

T. pallidipes n. sp.—Moderately depressed, intense black throughout, the antennae piceous-black, paler at base; legs extremely pale and uniformly flavate throughout; integuments opaque, finely and strongly granulate-reticulate, the abdomen less strongly, more coarsely so and somewhat shining; anterior parts finely and extremely obsolete, though rather densely punctulate, the punctures of the elytra almost wholly obsolete, the abdomen more strongly and distinctly, evenly and somewhat closely punctate; pubescence short, rigid, dense, cinereous and conspicuous, longer, finer and less distinct on the abdomen. *Head* as long as wide, slightly but distinctly narrower than the prothorax, the eyes convex, at rather more than one-half their length from the base; tempora behind them feebly convergent and arcuate to the base; antennae slender, extending to basal fourth of the elytra. *Prothorax* scarcely more than one-third wider than long; sides subparallel, broadly, feebly arcuate anteriorly, slightly convergent and nearly straight in basal half; basal angles slightly obtuse but scarcely at all rounded; base broadly arcuate, distinctly wider than the truncate apex; disk widest slightly before the middle, broadly flattened toward the middle, the median line sometimes obsolete impressed. *Elytra* large, quadrate, about as long as wide, one-third wider and three-fifths longer than the prothorax; sides subparallel; humeri rather broadly exposed at base. *Abdomen* distinctly narrower than the elytra and slightly wider than the prothorax, as long as the anterior parts; sides parallel and nearly straight; border moderately thick. Length 2.9 mm.; width 0.75–0.8 mm.

California (San Francisco to San Diego).

This is one of the characteristic aleocharinides of the southern California sea-beaches, and the large series in my cabinet indicates scarcely any variation. It is allied to the Alaskan *Tachyusa fucicola* Mäkl.,—afterwards referred to *Homalota* Er. nec Mann.,—but differs in its clear and uniform flavate legs, *fucicola* having the legs piceous, with the knees and tarsi paler.

Besides these two species, the genus will probably include *Homalota geniculata* Mäkl., specimens of which, or of an extremely closely allied form, I have taken abundantly at San Francisco and San Diego; it probably follows the general rule, as observed in *Motschulskium sinuatorolle*, *Aleochara sulcicollis* and several other well-known species, and extends along the entire coast from Alaska to Lower California. This distribution of sea-beach species is exactly what might be expected, as the cold inshore current from the north maintains the water at practically the same temperature throughout. I am at a loss to understand the reference of *geniculata* to *Eudera* Fvl. in our most recently published check-list; it does not remotely resemble the representatives of that genus, which are related closely to *Falagria*.

EURYPRONOTA n. gen.

Body rather broad, convex. Head moderately inserted, the nuchal constriction concealed; eyes moderate, not prominent, at more than their own length from the base, the tempora parallel, nearly straight; labrum short, transverse, truncate. Antennæ inserted in small foveæ at a noticeable distance from the eye, feebly incrassate, the basal joint compressed; second and third subequal, the latter obconical, more than twice as long as wide; tenth about as long as wide; eleventh conoidal, as long as the preceding two. Maxillary palpi moderate, the third joint much longer than the second; fourth oblique, slender, one-half as long as the third. Ligula with a slender apical process forked at apex, the labial palpi apparently three-jointed, with the third joint long and slender. Infra-lateral carina obsolete. Mentum trapezoidal, the apex feebly emarginate. Prothorax very large, transversely orbicular, the hind angles very broadly rounded; hypomera strongly inflexed, not visible from the side. Elytra moderate, much narrower than the prothorax. Abdomen with the basal segment alone impressed; second longer than the first or third; fifth longer than the fourth. Mesosternal process acute, extending slightly beyond the middle of the coxæ, the latter contiguous, with the acetabula apparently shallow and ill-defined. Metasternum ample; the episterna parallel; epimera not extending beyond the elytra, moderate, the suture almost obsolete, disappearing under the elytra behind the middle. Legs short; tibiae moderate, pubescent; tarsi short, 4-5-5-jointed, the basal joint of

the posterior very short, three-fourths as long as the second; fifth fully as long as the two preceding; unguis small, arcuate, simple.

The anterior tarsi seem at first sight to be five-jointed, which would place this singular genus among the Oxypodates of Rey, where its very short basal joint of the hind tarsi would completely isolate it. There can be but little doubt, however, that the apparent fourth joint of the anterior tarsus is rigidly connected with the fifth, of which it forms the troublesome basal node, and that Eurypronota is more appropriately placed in the vicinity of Colpodota, from which it is readily distinguishable by its very large prothorax and short basal joint of the tarsi.

E. discreta n. sp.—Black, the pronotum, elytra, legs and antennæ toward base pale testaceous; integuments polished, sparsely pubescent, the abdomen bristling with long setæ toward apex. *Head* wider than long, suborbicular, three-fifths as wide as the prothorax, finely, sparsely punctate; antennæ nearly one-half as long as the body, joints five to eleven equal in width. *Prothorax* large, transversely subelliptical in form, nearly one-half wider than long, the base broadly, evenly arcuate, nearly continuous in curvature with the sides; apex truncate, the angles very obtuse and rounded; disk evenly, broadly convex, with feeble trace of a fine longitudinal impressed line toward the middle, finely feebly and sparsely punctate. *Elytra* more closely and strongly punctate, transverse, parallel, broadly emarginate at base, much narrower than the prothorax and with the suture scarcely more than three-fourths as long as the latter. *Abdomen* as long as the anterior parts, as wide as the elytra, parallel, feebly narrowed toward apex, finely, very sparsely punctate, more closely so toward base; border moderate. Length 1.7–1.9 mm.; width 0.45–0.5 mm.

Iowa (Cedar Rapids). Dr. E. Brendel.

Readily recognizable by the very large prothorax, which is visibly larger in the male than in the female. The European *Colpodota fungi* Grav., possesses some structural features nearly similar to those of the present species, the pronotum for example being transversely subelliptical, with nearly obsolete hind angles, but the basal joint of the hind tarsi is much longer, the prothorax not wider than the elytra, and the fourth and fifth abdominal segments equal.

E. scopula n. sp.—Moderately slender and convex, pale flavo testaceous, the head black; elytra slightly less pale and more brownish; abdomen with a blackish spot occupying the fourth segment more or less; integuments shining, finely subasperately and closely punctate, the head a little more sparsely and the elytra rather more densely and strongly than the pronotum, abdomen moderately closely punctate; pubescence dense, moderately long, even and erect, longer sparser and decumbent on the abdomen, the latter bristling

with long black sparse setæ toward tip. *Head* wider than long, three-fifths as wide as the prothorax; eyes moderate, at their own length from the prothorax; infralateral carina fine and entire; antennæ slender, feebly incrassate, as long as the prothorax and elytra, bristling with long sparse setæ, first joint a little longer and thicker than the second, the latter slightly longer than the third, which is nearly twice as long as wide, four to ten feebly obconical, the latter slightly wider than long, eleventh ogival, as long as the two preceding. *Prothorax* large, three fourths wider than long, widest at basal third, the sides broadly arcuate, gradually convergent toward apex; base slightly wider than the apex, both broadly arcuate; basal angles obtuse and rounded but not obliterated; disk evenly convex, without trace of impression. *Elytra* as long as the prothorax and distinctly narrower, one-half wider than long; sides very feebly divergent from the base, scarcely visibly arcuate; disk slightly impressed on the suture behind the scutellum. *Abdomen* a little longer than the anterior parts, slightly narrower than the elytra; sides subparallel, becoming gradually convergent behind; first segment impressed at base, the second feebly, the third unimpressed, fifth a little longer than the fourth. Length 1.6 mm.; width 0.4 mm.

Rhode Island (Boston Neck).

This species is apparently congeneric with the preceding, although the vestiture is erect and not decumbent, and the posterior tarsi shorter, with the two basal joints subequal in length.

COLPOSURA n. gen.

Body narrow, elongate, rather convex, with a somewhat pronounced longitudinal development of abdomen. Head triangular, widest behind, not inserted, borne on a distinct but somewhat wide and very short neck, the base nearly in contact with the pronotum throughout; eyes moderate; infralateral carina completely wanting. Antennæ rather short, very feebly incrassate, the three basal joints more or less elongate. Gular sutures straight, convergent from the base nearly to the support of the mentum, then divergent to the sides of the buccal opening. Mentum small, transversely trapezoidal, truncate. Ligula with a small rounded thick median lobe, apparently perfectly simple, the labial palpi three-jointed, with the middle joint shortest. Maxillary palpi with the second joint rather small, slender, the third much longer, thicker, oval, constricted at base; fourth small, subulate. Prothorax parallel, the hypomera moderately inflexed, partially visible from the side. Elytra well developed. Abdomen long, the first tergite rather widely but feebly, the second and third narrowly and obsoletely, impressed at base, the fifth much longer than the fourth; sixth

segment large and greatly exposed, the ventral plate folded over dorsally for an unusually great distance; seventh with rather complex lateral lobes. Coxæ moderate in size, the intermediate large, approximate but not contiguous, the mesosternal process short and broadly triangular, advancing for one-half their length, the point free, extremely fine and attenuate. Metasternum ample, not produced at all between the coxæ, there being simply a very feeble arcuation opposite the coxal opening, the space thence to the mesosternum transversely convex. Legs short; tibiæ rather slender; tarsi 4-5-5-jointed, the posterior distinctly shorter than the tibiæ, with the first joint moderately elongate, the first four decreasing distinctly and uniformly in length; unguis small, arcuate and simple.

The general structure of this genus allies it intimately with *Amischa* Thoms., from which it differs in the more elongate abdominal segments, much more developed sixth segment, and, especially, in the structure of the metasternum between the middle coxæ, which in *Amischa* is produced and acute. It is confined apparently to the arid mountain regions of the west. The three species described below may be thus distinguished among themselves:—

Elytral suture not in the least longer than the pronotum.

Head at base but slightly narrower than the pronotum.....***prælonga***

Head scarcely two-thirds as wide as the pronotum.....***parviceps***

Elytral suture slightly longer than the pronotum***angusta***

In reality only the first of these species can be regarded as the type of *Colposura*, *parviceps* and *angusta* having the metasternum finely produced between the coxæ; these therefore are much closer still to *Amischa*. I have attached them provisionally to *Colposura*, however, because of their general resemblance to *prælonga*, and because they differ from *Amischa* in their absolutely contiguous middle coxæ and more elongate ventral segments.

C. *prælonga* n. sp.—Narrow, parallel, pale ochreous yellow throughout, the head piceous; first five tergites blackish except at apex; anterior parts finely reticulate, moderately shining, finely, feebly, rather closely punctate, the abdomen more shining, coarsely but feebly, sub-intricately sculptured; pubescence throughout fine short and decumbent. Head triangular, not quite as long as wide, the neck scarcely two-fifths as wide as the subbasal width, the latter but slightly, though distinctly, less than the prothorax; base subtruncate; basal angles rather narrowly rounded; sides

thence convergent, the eyes at one-half more than their own length from the base; antennæ very slightly longer than the head and prothorax, cylindrical, rather slender and loose, the first two joints elongate, subequal, the third shorter, obconical, strongly constricted at base and longer than wide, fourth wider, slightly transverse, five to ten still a little wider, equal, moderately transverse, eleventh suboval, barely as long as the two preceding, the apex obliquely obtuse and asymmetrically pointed. *Prothorax* one-third wider than long; sides parallel, feebly, evenly arcuate; apical angles rounded; apex strongly oblique to the neck; basal angles very obtuse and blunt; base broadly arcuate; disk feebly convex, with a rather large and feeble impression in the middle before the base. *Elytra* slightly transverse, just perceptibly wider and longer than the prothorax; sides subparallel; humeri scarcely at all exposed; disk transversely, feebly convex, not impressed. *Abdomen* much longer than the anterior parts, very slightly narrower than the elytra; sides perfectly parallel and straight to the apex of the fifth segment, the latter as densely sculptured as the others. Length (abdomen strongly exerted) 2.8 mm.; width 0.4 mm.

Wyoming (Cheyenne). Mr. H. F. Wickham.

The antebasal abdominal tergite is exerted, corneous and well developed in this species. A single specimen, probably the female, the anal segment having an ogival median lobe and quite complex lateral ake.

C. parviceps n. sp.—Slender, dark brown, the head and abdomen blackish except at the apices of the segments; antennæ toward base and legs pale; anterior parts densely reticulate and feebly shining, the head and pronotum rather densely but feebly and indistinctly punctate, the elytra more distinctly but finely, very densely, granularly punctate; abdomen more shining, closely, imbricately punctate; pubescence very short, fine, rather dense. *Head* small, as long as wide, two-thirds as wide as the prothorax, widest at base, the neck deeply, acutely constricted across the dorsal surface at the base of the occiput; eyes before the middle; antennæ scarcely longer than the head and prothorax, the third joint scarcely perceptibly shorter than the second, evenly, strongly obconical, twice as long as wide, outer joints scarcely increasing in width, loosely connected, distinctly transverse, eleventh subquadrate, as long as the two preceding, obliquely, asymmetrically acuminate at apex. *Prothorax* one-half wider than long; sides subparallel, broadly evenly and feebly arcuate; base broadly arcuate, rather wider than the apex; basal angles distinct but rounded; disk broadly, strongly convex, broadly flattened in the middle toward base, just before which there is a distinct subtransverse impression. *Elytra* wider than long, just visibly wider and slightly longer than the prothorax; humeri not exposed at base. *Abdomen* much longer than the anterior parts, distinctly narrower than the elytra; sides straight and parallel to the apex of the fifth segment. Posterior tarsi very slender, only slightly shorter than the tibiae. Length 2.4 mm.; width 0.5 mm.

Washington State (Spokane). Mr. Wickham.

Distinguishable readily from the preceding by its broader form, more transverse prothorax, smaller and slightly less triangular head, relatively longer third antennal joint, and darker color. The type seems to be a female, and the sixth segment is, on the median line, very nearly as long as the fifth.

C. angusta n. sp.—Slender, dark brown, the head and abdomen darker except at the apices of the segments; legs and antennæ pale, the latter slightly infusate toward tip; anterior parts finely, densely reticulate and somewhat dull, the head and pronotum finely and very indistinctly punctulate, the elytra more distinctly but still very finely and densely so, abdomen uniformly and closely, imbricately sculptured throughout, more shining; pubescence fine, short and close, less dense on the abdomen. *Head* nearly as long as wide, only slightly but distinctly narrower than the prothorax, gradually narrowed anteriorly from the rounded basal angles, the neck only feebly constricted at the base of the occiput; eyes before the middle; antennæ distinctly longer than the head and prothorax, in structure similar to the preceding species, the third joint scarcely visibly shorter than the second, outer joints equal in width, distinctly transverse. *Prothorax* one-third wider than long; sides parallel, broadly, feebly, evenly arcuate; base broadly arcuate, equal in width to the apex; basal angles distinct but rounded, disk convex, not flattened in the middle, but with a deep transversely oval impression before the base. *Elytra* scarcely visibly wider but distinctly longer than the prothorax, wider than long, the sides nearly parallel and straight; humeri obliquely, feebly rounded, not exposed at base; disk feebly impressed behind the scutellum. *Abdomen* much longer than the anterior parts, distinctly narrower than the elytra, the sides parallel and straight. Length 2.0 mm.; width 0.4 mm.

Nevada (Elko). Mr. Wickham.

This species is smaller than the others and the elytra are longer, the antennæ are also more elongate.

TRICHIUSA n. gen.

Body stout, compact, convex, bristling with long sparse hairs. Head rather small, deflexed, the eyes well developed, at their own length from the base; labrum transverse, truncate with rounded angles. Mandibles moderate, the apices very slender and extremely acute, simple. Infralateral carina obsolete. Antennæ incrassate, bristling with very long setæ, the basal joint thicker and very much longer than the second, the latter distinctly larger and longer than the third, both the latter constricted at base; four to ten gradually wider, transverse; tenth nearly twice as wide as long; eleventh

very obtuse, barely as long as the two preceding; outer joints somewhat distant and perfoliate. Mentum ample, trapezoidal, truncate. Maxillary palpi with the third joint very much longer and thicker than the second; fourth small, very slender, oblique. Ligula with two minute and subparallel slender processes descending subvertically from the apex, also with two long setæ; labial palpi distinctly three-jointed, the first stouter and much longer than the second; third slender, nearly as long as the first two. Prothorax rather small, transverse, the hypomera strongly inflexed but in part visible from the side. Elytra wide, well developed, transverse. Abdomen broad, parallel, the first three dorsals narrowly and deeply impressed at base, fourth and fifth equal. Middle coxæ very widely separated, the mesosternal process scarcely more than one-third as wide as the interval separating them, gradually, feebly deflexed, abruptly and obtusely pointed or narrowly rounded at apex, extending through three-fourths of the coxal length, with its apex superposed upon the broadly rounded apex of the very short and wide metasternal process. Metasternum well developed, the side-pieces parallel, the epimera projecting slightly behind the elytra. Legs short but slender, the tarsi short, slender, distinctly 4-5-5-jointed, the four basal joints of the posterior equal, the fifth longer than the preceding two combined; unguis rather long, slender, feebly arcuate.

The wide vacant space separating the middle coxæ from the sides of the mesosternal process is probably a constant feature. This genus belongs near *Hoplandria*, from which it differs in habitus, in the parallel sides and distinct basal angles of the prothorax, much longer antennæ with a longer basal joint, entire absence of the terminal appendage of the fourth palpal joint, and, especially, in the form of the ligula, which in *Hoplandria* has a long slender almost simple terminal process; it also differs in its narrow, obtusely pointed mesosternal process and parallel abdomen.

Several of the South and Central American species described under the name *Brachida*, will probably have to be referred to *Trichiusa*; in fact the tuberculate external apical angles of the elytra in *Brachida batesi* Shp., points almost unmistakably to a relationship with *Hoplandria*.¹ In the European representative of

¹ In this connection the small tubercles near the inner apical angles of the elytra in *Brachida notha* are remarkable, in view of the four-jointed middle tarsi.

Brachida notha before me, the middle tarsi are clearly four-jointed, but they are equally plainly five-jointed in *Trichiusa*, and the two genera differ completely in the form and relations of the intermeso-coxal sclerites.

Although most closely allied to *Hoplandria*, the species of *Trichiusa* bear a striking resemblance to *Gyrophæna*, having the same stout compact form, but may be known by the long hirsute vestiture and the distinctly five-jointed middle tarsi. Of the following five species, the first is to be considered the type; they are however all congeneric:—

Antennæ strongly incrassate and stout from the fourth joint, which is strongly transverse.....**compacta**

Antennæ not so thick, more gradually and feebly incrassate, the fourth joint subglobular and only slightly transverse.

Body black throughout.

Prothorax at base nearly as wide as the elytra, the humeri scarcely at all exposed.

Deflexed apical angles of the prothorax obtuse but only very narrowly rounded; elytral vestiture shorter, coarser and subdecumbent, a few long erect setæ bristling along the sides of the body.....**setigera**

Deflexed apical angles rounded; vestiture throughout the body consisting of long equal closely placed and erect hairs, without longer bristling setæ along the sides.....**pilosa**

Prothorax at base narrower than the elytra, the humeri distinctly exposed; vestiture rather long but decumbent, lateral setæ subobsolete.

robustula

Body pale rufo-testaceous throughout, with a small piceous spot toward the middle of the fourth tergite; prothorax small, humeri broadly exposed; vestiture very long, sparse but shaggy.....**parvicollis**

The species appear to be rather numerous, and others are perhaps known at present in cabinets.

T. compacta n. sp.—Stout, subparallel, convex, shining, the elytra polished, black, the antennæ toward base, elytra, apical parts of the first three tergites and legs paler, rufo-testaceous, head and pronotum very minutely sparsely punctate, the former with some larger punctures, the latter with a few scattered large punctures toward base, elytra rather coarsely, sparsely and somewhat irregularly punctured; abdomen sparsely, minutely granulate-punctate, the impressed parts subimpunctate, pubescence rather long, sparse and coarse. Head three fourths as wide as the prothorax, wider than long, with a feeble central impression, the antennæ longer than the prothorax and elytra, strongly incrassate. Both about a little less than twice as wide as long; sides subparallel, arcuate, base and apex broadly, strongly arcuate; apical angles moderately deflexed, broadly rounded, basal

obtuse but distinct, not blunt; disk strongly convex, finely beaded at the sides and base, very obsoletely impressed in the middle before the base. *Elytra* much wider than long, one-fourth wider and two-fifths longer than the prothorax; sides parallel, feebly arcuate; humeri slightly exposed. *Abdomen* longer than the anterior parts, very nearly as wide as the elytra; sides parallel, just visibly arcuate; border moderate; under surface densely, coarsely fulvo-pubescent. *Legs* clothed sparsely with long hairs, the upper sides of the femora and trochanters polished, impunctate and glabrous. Length 2.0 mm.; width 0.7 mm.

District of Columbia.

One of the three specimens has the pronotum also rufous, and another has the pronotum and elytra black; this latter specimen has the prothorax somewhat smaller, the elytra fully one-third wider than that part, and with longer, more erect pubescence. It is probably a variable species, with considerable sexual disparity also, although the sexual marks at the apex of the venter are apparently very feeble, and there are none on the tergum in the examples before me.

T. setigera n. sp.—Moderately stout and convex, thick, subparallel, black, the legs and antennæ toward base pale, flavescent; integuments feebly reticulate throughout but polished, the head and pronotum finely, sparsely punctate, the elytra more strongly but simply and not very densely so, the abdomen sparsely and asperately; pubescence long and conspicuous. *Head* wider than long, only slightly but distinctly narrower than the prothorax, eyes rather prominent; tempora equal to them in length and feebly convergent and arcuate to the base; surface flattened; antennæ strongly setose, feebly, gradually incrassate, about attaining basal third of the elytra, the first joint much longer than the second, the latter thicker and a little longer than the third, fourth slightly wider than long, subquadrate, tenth twice as wide as the fourth and rather strongly transverse. *Prothorax* transversely subrectangular, nearly two-thirds wider than long; sides parallel, broadly arcuate; base and apex subequal, broadly, strongly arcuate; basal angles slightly obtuse and distinct; disk strongly, evenly convex, very feebly impressed in the middle toward base. *Elytra* transverse, about one-fourth wider and nearly one half longer than the prothorax; sides quite perceptibly divergent from the base; disk feebly convex. *Abdomen*, at the middle, as wide as the elytra, but at base distinctly narrower, a little longer than the anterior parts; sides parallel and arcuate; segments short, transverse, all equal in length, the first three strongly, subequally impressed at base; border strong. Length 1.65 mm.; width 0.6 mm.

New Jersey.

Smaller and rather more slender than *compacta*, to which it is perhaps most strongly allied, and with strikingly different antennal structure.

T. pilosa n. sp.—Suboval, convex, polished, black throughout; legs and antennæ toward base pale; integuments finely, rather strongly reticulate throughout; head and pronotum subimpunctate; elytra finely, very feebly, rather closely so, the abdomen finely, very sparsely and granularly; pubescence even in length, long, erect, moderately dense, conspicuous. Head nearly as long as wide, small, not more than two thirds as wide as the prothorax; eyes prominent; tempora longer than the eye, feebly convergent and straight behind them, rounded at base; surface broadly, strongly impressed in the middle; antennæ stout, bristling, but slightly longer than the head and prothorax, the first joint distinctly longer than the second, the latter much longer than the third, which is scarcely at all longer than wide, constricted at base, fourth a little wider than long, four to six differing but little, seven to ten larger, more pubescent, increasing more rapidly in width, tenth about twice as wide as long, eleventh scarcely as long as the two preceding. Prothorax fully two-thirds wider than long, sides strongly convergent and arcuate from base to apex; base very much wider than the apex, both strongly arcuate, basal angles very obtuse but distinct; disk strongly convex, with three extremely obsolete parallel median longitudinal impressions, and a very obsolete transverse impression before the base. Elytra wider than long, one-third wider and nearly one-half longer than the prothorax; sides perceptibly divergent from the base and broadly arcuate; disk impressed behind the scutellum. Abdomen in the middle as wide as the elytra, at base very slightly narrower, as long as the anterior parts. Length 1.4 mm.; width 0.5 mm.

Rhode Island (Boston Neck).

A very interesting species, wholly different from the preceding in the form of the prothorax, and from *robustula* in its narrower form, erect hirsute vestiture and other structural characters. Two specimens. The impressions of the pronotum are extremely feeble, and join the transverse subbasal impression; in one of the specimens the longitudinal impressions are obsolete, and at best they can be only faintly seen.

T. robustula n. sp.—Rather stout and convex, suboval, black, the legs and antennæ toward base pale; integuments densely and strongly reticulate and alutaceous, the head and abdomen less strongly so and shining; head subimpunctate; pronotum very minutely and feebly so, the elytra more strongly densely and subasperately but still very finely, the abdomen sparsely, extremely finely and subasperately; pubescence rather long, decumbent, conspicuous, ashy in color, very sparse on the head and abdomen. Head rather small, convex, impressed in the centre, scarcely three-fourths as wide as the prothorax, wider than long; eyes at somewhat more than their own length from the base, not very prominent, the tempora perfectly parallel and straight behind them, then broadly rounded to the base; antennæ attaining basal third of the elytra, the basal joint longer than the second, the latter as long as the next two, fourth slightly wider than long, outer joints gradually

strongly transverse and perfoliate. *Prothorax* transversely oval, three-fourths wider than long, the sides rounded and convergent anteriorly, becoming parallel and nearly straight in basal half; base slightly but distinctly wider than the apex, both strongly arcuate; basal angles obtuse and blunt; disk strongly convex, the median line feebly impressed and with a feeble transverse impression before the base. *Elytra* transverse, nearly one-half wider and two-fifths longer than the prothorax; sides slightly divergent and arcuate from the humeri, the latter narrowly rounded, rather broadly exposed at base; disk convex, very broadly, feebly impressed near the scutellum. *Abdomen* short, when moderately contracted not as long as the anterior parts, as wide as the elytra; border rather strong and thick. Length 1.35 mm.; width 0.55 mm.

Iowa (Cedar Rapids). Dr. E. Brendel.

The large series before me exhibits scarcely any variation, even in size. A specimen which I took at Galveston, Texas, differs but very slightly and is probably conspecific.

T. parvicollis n. sp.—Oblong, convex, pale rufo-testaceous throughout, with the exception of a small piceous cloud on the fourth tergite; integuments strongly shining, the head and pronotum subimpunctate, the elytra very minutely, rather closely but scarcely distinguishably, the abdomen minutely, rather closely and subasperately; vestiture long, erect, ashy and bristling from every part of the body. *Head* wider than long, strongly impressed in the centre, fully three-fourths as wide as the prothorax, the eyes rather large, at scarcely more than their own length from the base; tempora feebly convergent and arcuate behind them to the very broad neck; antennae longer, unusually slender, extending to the middle of the elytra, the first joint longer than the second, the latter scarcely longer but thicker than the third, four to six moniliform, subglobular, nearly similar, seven to ten very slightly increasing in width, the tenth slightly transverse, eleventh small, ovoidal, obtusely acuminate, only one-half longer than the tenth. *Prothorax* small, transverse, three-fifths wider than long, the sides strongly convergent, evenly and moderately arcuate from base to apex; base much broader and more strongly arcuate than the apex; basal angles obtuse and blunt; disk strongly convex, feebly impressed along the median line toward base only. *Elytra* strongly transverse, three-fifths wider and two-fifths longer than the prothorax; sides but feebly divergent and slightly arcuate from the humeri, which are right, scarcely rounded and broadly, transversely exposed at base. *Abdomen* scarcely as long as the anterior parts, in the middle as wide as the elytra, but at base distinctly narrower; sides parallel and arcuate; border thick; posterior margins of tergites three and four broadly, feebly sinuate in circular arc throughout the width; fifth distinctly longer than the fourth, transverse at apex. *Posterior tarsi* two-thirds as long as the tibiae, the first four joints equal, the fifth as long as the preceding two. Length 1.7 mm.; width 0.65 mm.

Delaware.

This species is somewhat aberrant in its longer, more slender and less incrassate antennae, and longer fifth ventral segment. It is

however congeneric without doubt. A single specimen of undetermined sex.

PLATANDRIA n. gen.

Body rather broad, fusiform. Head well inserted, not constricted at base, the eyes large, oval; infralateral carina strong, entire. Antennæ rather short, slender, becoming gradually strongly incrassate in apical half. Mentum rather large, transversely trapezoidal, broadly sinuato-truncate at apex. Ligula with a slender process which is deeply forked at apex, each lobe bearing at its apex a slender flexible and attenuate appendage. Labial palpi three-jointed, the basal joint thick, long, cylindrical, obliquely truncate at apex; third slender, with a terminal appendage. Maxillary palpi well developed, the third joint slightly longer than the second, the fourth long and distinct, with a slender supplementary appendage. Prothorax nearly as in *Hoplandria*, the hypomera strongly inflexed and invisible from the side. Elytra well developed. Abdomen gradually narrowed from the base; border strong, the two basal tergites strongly but rather narrowly impressed at base, the third finely and very feebly so; fifth much longer than the fourth; sixth distinct and wide. Middle coxæ large, oblique, deeply inserted, narrowly separated, the mesosternal process very long and acutely attenuate, extending very nearly to the tips of the coxæ, with its apex free and overlapping the apex of the rather short but acute metasternal process. Metasternum large, the parapleuræ moderately wide, perfectly parallel, the epimera extending scarcely at all behind the elytra. Legs moderate in length, the tibiæ slender; tarsi long, slender, 4-5-5-jointed, the posterior very nearly as long as the tibiæ, with the basal joint elongate, the first four decreasing rapidly in length, the fifth somewhat longer and much more slender than the first; ungues moderately long, slender, rather strongly arcuate and divaricate.

The paraglossæ are not distinct in the type and appear to be much less developed than in *Hoplandria* and *Platonicus*, with which this genus is to be associated. It differs from the first in the form of the ligula and structure of the tarsi, and from the latter altogether in the structure of the mesocoxal sclerites. In *Hoplandria ochracea* the process of the ligula is long and slender, perfectly cylindrical, but bearing at its extreme tip two very minute subparallel and apparently setiform appendages, almost exactly as in the American species of *Echidnoglossa*.

P. mormonica n. sp.—Rather broad, somewhat shining, the abdomen polished, dark rufo-piceous in color, the abdomen black throughout; legs dark, rufescent; antennæ black, pale toward base; head and pronotum minutely, not densely, evenly punctate, the elytra hardly less minutely and rather more sparsely, but more distinctly so; abdomen finely, evenly, somewhat closely punctate throughout, and with somewhat well-marked imbricate sculpture; pubescence short, subrecumbent, rather dense but not conspicuous, longer and sparser on the abdomen. *Head* small, nearly as long as wide, slightly more than one-half as wide as the prothorax, the eyes at about one-half of their length from the base; antennæ about as long as the head and prothorax, the first three joints subequal in length, the first stouter, cylindrical, third one-half longer than the fourth which is distinctly longer than wide, fifth subquadrate, joints five to ten gradually and rapidly broader, the tenth twice as wide as long, eleventh as long as the two preceding, moderately pointed at apex. *Prothorax* three-fourths wider than long, the sides rounded and parallel near the base, then strongly convergent and nearly straight to the apex; basal angles very obtuse and blunt; base broadly evenly and strongly arcuate, much wider than the subtruncate apex; disk strongly convex, perfectly even, unimpressed. *Elytra* two-fifths wider than long, at apex about one-fifth wider than the prothorax, nearly one-half longer than the latter; humeri obliquely, feebly rounded externally; disk broadly, indefinitely impressed behind the scutellum. *Abdomen* at base quite distinctly narrower than the elytra, much longer than the anterior parts. Length 2.7 mm.; width 0.8 mm.

Utab (Provo). Mr. H. F. Wickham.

The single type before me is a male, having a long distinct carina on the fifth tergite and another, only slightly shorter, on the sixth; elytral angles and second segment not in the least modified.

GNYPETA Thoms.

A genus allied to *Tachyusa* and comprising but few species at present.

G. atrolucens n. sp.—Polished, intense black, throughout; base and apex of the tibiae and tarsi paler; antennæ not paler at base; pubescence not very dense, short, stiff, erect, pale brown in color and not conspicuous. *Head* slightly wider than long, finely, sparsely punctate, the vertex broadly, feebly impressed in the middle; eyes large, somewhat convex, setose, at less than their own length from the base; tempora broadly rounded at base to the very wide neck; antennæ long, slender, feebly incrassate, nearly two-fifths as long as the body. *Prothorax* about one-third wider than long, widest at apical third where the sides are narrowly rounded and somewhat prominent, thence feebly convergent and distinctly sinuate to the basal angles, the latter obtuse but not rounded; base broadly arcuate, wider than the apex; disk convex, feebly impressed in a transversely oval discal area before the scutellum. *Elytra* nearly one-half wider and longer than the prothorax, moderately trans-

verse, parallel, each broadly feebly and obliquely sigmoid at apex; humeri broadly exposed and transverse at base; disk minutely, feebly punctate like the pronotum, broadly impressed behind the scutellum. *Abdomen* parallel, slightly longer than the anterior parts, much narrower than the elytra, rather wider than the prothorax, finely, feebly, almost evenly, not densely punctate, the transverse impressions of the three basal segments equal, strong, coarsely but very sparsely punctate; border thick, not very deep. *Legs* rather long and slender, the tarsi moderate in length. Length 2.6 mm.; width 0.75 mm.

New York.

Closely resembles the European *carbonaria* Mann., but differs in its relatively larger head and smaller prothorax, much more widely exposed elytral humeri and shorter, much less conspicuous pubescence.

ANEUROTA n. gen.

Body linear and rather depressed. Head large, transverse at base, feebly sinuate in the middle, borne on an extremely short, narrow neck which is less than one-fourth as wide as the base; eyes large, feebly convex, before the middle; tempora long, parallel, feebly arcuate. Antennae widely separated, feebly incrassate, the second joint nearly as long as the next two; third strongly obconical, nearly twice as long as wide; tenth slightly wider than long. Labrum short, truncate. Infralateral carina completely obsolete; gular sutures distant, parallel. Mentum very short, strongly transverse, trapezoidal, deeply sinuate at apex, the sinus filled with a transparent hypoglottis. Maxillary palpi rather small and slender, the fourth joint minute, oblique. Ligula not distinct, the labial palpi very small, apparently three-jointed. Prothorax small, cordiform, the flanks feebly inflexed and not separated by a fine line; base finely and distinctly margined, the basal angles sharply defined. Elytra well developed. Abdomen much shorter than the anterior parts, the sides straight and almost imperceptibly divergent from base to apex; first three segments deeply impressed and impunctate at base; fourth and fifth equal and a little longer, unimpressed. Prosternum moderately developed before the coxae. Middle coxae separated by one-third of their width, the acetabula deep and well-defined; mesosternal process narrowly truncate and extending slightly beyond the middle. Legs short but rather slender; tarsi 4-5-5-jointed, the posterior distinctly shorter than the tibiae, with the basal joint moderate, not longer than the next two.

The type of this genus is a minute species having a peculiar

linear depressed form. It is allied to *Cardiola*, but differs in its parallel form, in the more elongate second antennal joint, more prolonged mesosternal process, shorter basal joint of the hind tarsi, and in having a fine distinct basal margin of the pronotum with well-defined basal angles. It resembles *Cardiola* in the absence of a dividing line between the pronotum and its inflexed flanks.

A. sulcifrons n. sp.—Polished, piceous-black, the antennæ concolorous throughout; elytra and legs dark piceous-brown; punctures very minute sparse and subgranuliform, except on the abdomen, where they are a little larger, more distinct and nearly simple or slightly asperate; pubescence fine and sparse but rather long and distinct. *Head* slightly longer and much wider than the prothorax, the eyes at one-half more than their own length from the base; antennæ about as long as the head and prothorax; surface with a coarse deeply excavated groove extending from the apical margin behind the middle, there becoming finer to the base. *Prothorax* fully as long as wide, widest at apical fourth where the sides are very strongly rounded, thence extremely oblique to the neck and distinctly convergent and nearly straight to the base, the latter truncate; disk transversely convex, with a deep median sulcus extending from base to apex. *Elytra* about as large as the head, distinctly wider and longer than the prothorax, subquadrate, parallel and straight at the sides; humeri broadly exposed at base; disk flat, narrowly impressed along the suture. *Abdomen* at base distinctly narrower than the elytra, but, at apex, subequal in width; border thin, nearly vertical. Length 1.4 mm.; width 0.3 mm.

Florida.

The deep sulcus of the front may be a sexual peculiarity, in part at least.

BOLITOCHARIDES.

Antennæ 11-jointed; tarsi 4-4-5-jointed.

APHELOGLOSSA n. gen.

Body elongate, subparallel and subdepressed. Head rather large, transverse, narrowed toward base but scarcely constricted, the eyes rather large, convex, setose and prominent, at less than their own length from the base; infralateral carina feebly traceable, interrupted and nearly obsolete, antennæ rather long, thick, feebly incrassate, finely pubescent, bristling with long sparse setæ, the basal joint thicker and much longer than the second or third, the latter equal, elongate; fourth subquadrate; tenth one-third wider than long; eleventh ogival, as long as the two preceding. Mentum

large, feebly transverse, trapezoidal, broadly impressed laterally, the apex strongly emarginate throughout the width. Ligula apparently with a small acuminate apical process; labial palpi very long, two-jointed, the second about twice as long as the first, slender, somewhat contorted toward apex. Maxillary palpi normal. Prothorax subparallel, the sides feebly convergent toward base, and, viewed sublaterally, broadly, strongly sinuate before the basal angles; hypomera feebly inflexed, broadly visible from the side, entire, broad behind. Elytra well developed, parallel. Abdomen parallel, the first three segments impressed at base, the fourth and fifth equal. Anterior coxæ moderate; intermediate widely separated, the mesosternal process extending to the middle, flat, broadly rounded at apex, the latter slightly superposed on the tip of the broad metasternal process; acetabula deep, sharply defined. Metasternum large and long, the side pieces moderate in width, parallel. Legs rather short; tibiæ clothed densely and evenly with short stiff inclined setæ, with a very long black seta just behind the middle and another near the tip externally; tarsi 4-4.5 jointed, slender, the last joint of the anterior and intermediate much longer than the basal three; posterior much shorter than the tibiæ, but very slender, the four basal joints exactly equal, fifth very long but distinctly shorter than the first four together; claws very long, slender, feebly arcuate.

This genus appears to be allied to the European *Diestota*, but differs in the subobsolete infralateral carina of the head, longer, less incrassate antennæ, emarginate mentum, more developed prosternum and longer terminal joint of the tarsi. *Diestota fanchris* Shp., will probably have to be referred to *Aphelloglossa*.

A. rufipennis n. sp.—Subparallel, black, basal parts of the antennæ and legs throughout dark rufo-testaceous; elytra rufous, clouded with blackish in a broad subtriangular basal area and externally toward apex. Head and pronotum minutely, strongly granulate-reticulate and perfectly opaque, finely, closely but almost imperceptibly punctate; elytra finely reticulate, more alutaceous, minutely, very densely, subasperately but not very plainly punctate, the abdomen shining, finely, closely, distinctly punctate, more sparsely toward tip; pubescence anteriorly short, suberect, dense but not conspicuous, still denser on the elytra, longer but sparse on the abdomen. Head transverse, fully four-fifths as wide as the prothorax; antennæ nearly as long as the prothorax and elytra together, very widely distant at base. Prothorax transverse, three-fifths wider than long, the sides from above subparallel, broadly, evenly arcuate; apex truncate, just visibly narrower than the base, the apical angles obtuse but distinct from above, base broadly, feebly arcuate, basal angles

obtuse but very distinct, not in the least blunt; disk even, unimpressed, feebly convex. *Elytra* transverse, nearly one-third wider and one-half longer than the prothorax; sides parallel, feebly arcuate; humeri broadly exposed at base; disk flattened, very feebly, broadly impressed on the suture toward base. *Abdomen* distinctly longer than the anterior parts, much narrower than the elytra; sides parallel, nearly straight; border thick; under surface finely, densely punctate and densely clothed with long decumbent pubescence. Posterior tarsi three-fourths as long as the tibiae. Length 3.3–3.6 mm.; width 0.85 mm.

Arizona (Benson). Mr. G. W. Dunn.

The general appearance of this insect suggests a community of habit with the large *Maseocharæ* of the same regions.

PLACUSA Erichs.

The following species perfectly resembles the European *complanata*, but is narrower, with shorter antennæ, and denser and still more obscure sculpture.

P. tacomæ n. sp.—Oblong-elongate, strongly depressed, black throughout, the legs and antennæ piceous, the elytra frequently paler; integuments extremely dull opaque and minutely, densely granulate-reticulate, the elytra rather less opaque, the abdomen shining; head and pronotum very minutely, extremely densely and almost undistinguishably punctate, the elytra rather less minutely, extremely densely and more visibly so, the abdomen distinctly but very densely punctate, more sparsely near the apex; pubescence very minute and scarcely noticeable. *Head* large, wider than long, distinctly narrower than the prothorax, the surface flat; antennæ one-half longer than the head, the basal joint a little longer and thicker than the second, the latter longer and much thicker than the third, which is longer than wide and strongly constricted at base, four to ten very strongly transverse, seven to ten equal in width, about twice as wide as long, eleventh obtuse, as long as the preceding two. *Prothorax* twice as wide as long, the sides just visibly convergent from base to apex and broadly, strongly arcuate; base broadly, strongly arcuate, becoming feebly sinuate near the basal angles, which are obtuse but well marked; disk not distinctly impressed. *Elytra* at base a little narrower, at apex somewhat broader, than the prothorax, about one-third longer; sides straight; humeri completely concealed at base; apex transversely truncate, disk flat. *Abdomen* distinctly longer than the anterior parts, evidently narrower than the elytra, the sides subparallel at base, becoming gradually convergent behind; border rather thick, the first tergite very narrowly and feebly, the others not perceptibly, impressed at base; fifth much longer than the fourth; ante-basal infraelytral tergite corneous and frequently exerted. *Legs* short; tarsi long, the posterior evidently shorter than the tibiae, with the first joint about as long as the next two. Length 1.9 mm.; width 0.7 mm.

Washington State (Spokane).

The male from which the above description is taken, has the apex of the sixth tergite prolonged in the middle in a short broad truncate ligula, and, between this and each side, there is a slender spine as long as the ligula, which is gradually and feebly bent toward the middle. This species was taken by Mr. Wickham, apparently in considerable numbers.

P. complanata is said by Mr. Fauvel to occur in Massachusetts; among other differences it has the joints of the antennæ much less transverse than *tacomæ*.

SILUSA Erichs.

S. vesperis n. sp.—Stout, subparallel, rather thick and convex, blackish, the elytra rather more rufo-piceous; legs pale; antennæ dark red-brown, paler toward base; integuments strongly shining throughout, the abdomen highly polished; head and pronotum extremely finely and very sparsely punctate; elytra strongly densely and subasperately punctate, the abdomen finely, sparsely so, almost impunctate toward apex; pubescence rather coarse, not dense but distinct, very sparse on the abdomen. *Head* distinctly wider than long, scarcely four-fifths as wide as the prothorax; eyes moderate, setose, at rather less than their length from the base; antennæ long and rather strongly incrassate, finely pubescent and bristling with long erect setæ, fully as long as the pronotum and elytra, second joint a little shorter than the third, the latter elongate but shorter than the first, fourth and fifth feebly obconical, the former a little longer than wide, the latter as wide as long, tenth about one-third wider than long, eleventh as long as the two preceding. *Prothorax* transverse, three-fifths wider than long, widest at the middle; sides broadly arcuate anteriorly, feebly convergent and slightly sinuate toward base; apex truncate, slightly narrower than the base, the latter broadly, distinctly arcuate, becoming straight or very feebly sinuate near the basal angles, which are obtuse but distinct; disk broadly convex, with a small transverse impression in the middle near the base. *Elytra* nearly one-half wider than long, just visibly wider and distinctly longer than the prothorax; sides parallel, very feebly arcuate; humeri slightly rounded to the pronotum; lateral apical sinuations strong; disk feebly impressed along the suture. *Abdomen* at base slightly narrower than the elytra, as long as the anterior parts; sides subparallel toward base, feebly convergent behind; border rather thick; first three tergites transversely impressed at base, fourth and fifth equal in length. *Legs* moderate, first joint of the hind tarsi slightly longer than the second, the fifth as long as the preceding three; fourth joint of the intermediate rather longer than the other three together. Length 2.8 mm.; width 0.85 mm.

California (Humboldt Co.).

The labial palpi are very long and slender, composed apparently of two closely connected joints, forming an obtuse angle, the second about one-half longer than the first and feebly acuminate toward tip. This species agrees tolerably well in form and size with *rubiginosa*, but the sides of the prothorax are more convergent and sinuate toward base, and the basal angles are much more pronounced; the antennæ, also, are longer, rather looser and more incrassate.

Silusa gracilis Sachse, is a more slender parallel and less convex species, with the second joint of the labial palpi much shorter, not longer than the first, and somewhat claviform. I have specimens agreeing very well with the description from Pennsylvania and Iowa. The following is a species more nearly resembling *gracilis*, but much smaller still:—

8. nanula n. sp.—Rather narrow, thick, subparallel, moderately shining, the head coarsely, very densely but inconspicuously punctate, the punctures round, very shallow, variolate and somewhat umbilicate; pronotum reticulate, finely densely and granularly punctate; elytra coarsely deeply and densely so, the punctures normal but giving a somewhat rugose appearance; abdomen finely but strongly, granularly and rather densely punctured toward base; pubescence fine, suberect, dense but not conspicuous; abdomen with long bristling pubescence toward apex, especially beneath; color very dark red brown, the abdomen feebly rufescent toward base, pale at tip; legs pale flavate; antennæ dusky, the basal joints and also the eleventh paler. *Head* transverse, fully three-fourths as wide as the prothorax; eyes moderately prominent, at their own length from the base; antennæ short, feebly incrassate, but slightly longer than the head and prothorax, bristling with long sparse setæ, basal joint much longer and thicker than the second, the latter longer than the third, which is twice as long as wide, fourth subquadrate, outer joints becoming strongly transverse, also more and more obconical and with a corona of dense ashy pubescence, the tenth scarcely twice as wide as long, eleventh large, conoidal, as long as the two preceding. *Prothorax* three-fourths wider than long; sides parallel, almost evenly, distinctly arcuate, becoming straight and convergent in basal half; base and apex subequal, the former more arcuate; basal angles very obtuse but distinct; basal beaded edge conspicuous and rather abruptly defined; disk very obsoletely, broadly flattened in the middle before the base. *Elytra* subquadrate, one-fourth wider and fully one-half longer than the prothorax; sides nearly straight, the humeri slightly visible. *Abdomen* narrower than the elytra but wider than the prothorax; sides parallel and nearly straight; first three segments impressed at base; fifth longer than the fourth. *Legs* moderate; posterior tarsi short, the first two joints oblong, equal. Length 1.7 mm., width 0.5 mm.

Rhode Island (Boston Neck).

The description is drawn from the male, this sex having a small but rather strong carina near the apex of the fifth dorsal segment, and another, more feeble, near the apex of the sixth.

There is a remarkable and isolated group of genera inhabiting the northern beaches of the Pacific coast, having the elytra extremely short, the tibiæ short, completely devoid of lateral spinules, and clothed with long sparse erect hairs, the tarsi very short, thick, 4.4-5-jointed, the first four of the posterior equal or with the first just visibly longer than the second, the prothorax narrowed toward base, with the hypomera feebly inflexed, and the labial palpi two-jointed. They may be defined as follows:—

Metasternum invisible except between the apices of the middle coxæ, which extend to or slightly upon the bases of the posterior; labial palpi greatly developed, the basal joint stout, cylindrical, more than twice as long as the second and as long as the second maxillary; integuments extremely opaque and densely granulate-reticulate throughout.

Body broad, the abdomen inflated, with no segment at all impressed at base, the metasternal side-pieces extending behind the elytra; labrum very strongly transverse, four times as wide as long, truncate; mentum strongly transverse, the apex transversely truncate and with an abrupt shallow emargination occupying median third, with its bottom transverse; ligula with a slender deflexed terminal process, the supports of the palpi separated by a rather wide parallel intermediate piece; mandibles serrulate from the internal submedian tooth nearly to the apex; infralateral carina partially obsolete **Liparocephalus**

Body narrow, the abdomen not inflated although rather broader than the anterior parts, the first three segments transversely impressed at base; metasternal side-pieces not extending behind the elytra; labrum smaller, twice as wide as long, rounded; mentum narrower, more rounded at apex, with a small median emargination in circular arc; process of ligula not visible in the types; supports of the labial palpi very approximate, separated by a slender acute process; mandibles smaller, not serrulate within; infralateral carina feeble but almost entire **Diaulota**

Metasternum longer, the apices of the intermediate separated from the bases of the posterior coxæ by a conspicuous interval; labial palpi long but much more slender, the basal joint slightly longer and only very slightly thicker than the second; eyes extremely small, rudimentary; integuments more finely sculptured but dull **Amblopnea**

In these genera the middle coxæ are contiguous and their acetabula indefinitely limited behind; in *Liparocephalus* and *Diaulota* the

coxæ are all very large but are much smaller in *Amblopusa*. They would be allied to *Sipalia* if the labial palpi were three-jointed and the middle acetabula sharply defined.

LIPAROCEPHALUS Makl.

Of this singular genus there are two species very closely allied but undoubtedly distinct, as follows:—

Body black throughout; antennæ shorter, barely as long as the head and prothorax, the outer joints slightly wider than long; prothorax slightly transverse, moderately constricted behind, more than twice as long as the elytra.....**brevipennis** Makl.

Body black, the head and prothorax rufo-testaceous; antennæ distinctly longer than the head and prothorax, the outer joints not wider than long; prothorax strongly transverse, very strongly constricted at base and not more than twice as long as the elytra.....**cordicollis** Lec.

These differences appear to be independent of sex, the sixth ventral being broadly lobed in the middle in the four specimens which I have examined; these specimens are from Washington State and Queen Charlotte Island.

In placing the genus *Liparocephalus* in the *Pæderini*, Maklin evidently had in view only the peculiar dull lustre, a characteristic feature in *Lithocharis* and some allied genera; the shape of the head also reminds us of some *pæderides*.

DIAULOTA n. gen.

Although greatly resembling *Liparocephalus* in general organization, dense granulose sculpture and large coxæ, the species of *Diaulota* can be distinguished readily by their narrow parallel body with undilated abdomen, more convex eyes, shorter antennæ, narrower and more elongate head, much less constricted prothorax and many other characters as given in the table. In my cabinet there are representatives of two species:—

Tibiæ clothed a little more thinly with longer hair; prothorax relatively longer, less narrowed behind and much narrower than the elytra.

densissima

Tibiæ clothed with shorter hair; pubescence of the upper surface shorter and less conspicuous; prothorax at its widest part fully as wide as the elytra.

insolita

D. densissima n. sp.—Black throughout, the anterior parts densely opaque, the abdomen dull but more alutaceous; pubescence moderately

dense, fine, erect, not very conspicuous. *Head* narrow, elongate, the sides parallel and feebly arcuate; eyes small, rather coarsely faceted, convex, at twice their length from the base; antennæ short, one-third longer than the head, moderately incrassate, the second joint thick, nearly as wide as the first, much thicker than the third, but slightly longer than wide, third strongly obconical, slightly longer than wide, four to ten transverse, gradually wider, eleventh small, conoidal, not as long as the preceding two. *Prothorax* but very slightly wider than the head and about as long, fully as long as wide; sides subparallel, broadly feebly and evenly arcuate, but slightly more convergent toward base than apex; disk evenly convex, widest slightly before the middle; apex broadly arcuate and just visibly wider than the base. *Elytra* short, fully twice as wide as long, one-half as long as the prothorax and nearly one-fifth wider; sides feebly convergent from apex to base and feebly, evenly arcuate. *Abdomen* thick, parallel, fully as wide as the elytra, nearly twice as long as the anterior parts; sides nearly straight; border thick; surface transversely and feebly convex. *Tibiæ* moderate in length; posterior tarsi barely one-half as long as the tibiæ, the first four joints very short, equal; unguis long, slender, evenly and rather strongly arcuate. Length 2.7 mm.; width 0.7 mm.

Alaska (mainland opposite Ft. Wrangel). Mr. H. F. Wickham.

The single specimen serving as the type is apparently a female. The other species is nearly similar, but differs in the following characters:—

D. insolita n. sp.—Black throughout and very dull, body narrower. *Prothorax* wider than the head, not quite as long as wide, wider just before the middle where the sides are broadly arcuate to the apex, distinctly convergent but not sinuate to the base, which is noticeably narrower than the apex. *Elytra* barely twice as wide as long, equal in width to the prothorax and rather more than one-half as long. *Abdomen* long, at base as wide as the elytra; sides straight, gradually divergent behind, so that the apex of the fourth segment is fully one-third wider than the elytra, border thick. Length (extended) 2.8 mm.; width 0.6 mm.

Queen Charlotte Island.

The male has the sixth ventral plate prolonged in the middle in a rounded triangular lobe. In both of these species the last three joints of the antennæ form a kind of club, the ninth and tenth being longer as well as wider than those preceding them.

The label states that the type specimen was taken near low water on the beach.

AMBLOPUSA n. gen.

Body extremely slender, parallel, linear, thick and flattened above, convex. Head oval, parallel, the sides broadly arcuate, labrum moderate

ately transverse, rounded; infralateral carina obsolete, feebly traceable very near the base. Eyes rudimentary, consisting of five or six coarse facets in a cluster behind the mandibles. Antennae rather short, moderately incrassate; outer joints subsimilar, strongly transverse; second cylindrical, as long as the next two and about as thick. Mentum large, very slightly wider than long, trapezoidal, the sides feebly sinuate; apex rather more than one-half as wide as the base and evenly sinuate in circular arc throughout the width. Ligula not distinct in the type. Maxillary palpi normal, the third joint longer than the second. Prothorax narrowed toward base, the hypomera scarcely inflexed beyond the vertical, large, evanescent far behind the apex. Elytra very short. Abdomen long, parallel; first five segments equally impressed at base; fifth longer than the fourth; sixth distinct, a little narrower than the fifth but as long as the fourth. Middle coxæ contiguous, the mesosternal process short, triangular, acute, extending barely to the middle. Metasternal side-pieces rapidly widening behind. Legs very short, sparsely hairy, the tibiae not at all spinulose; tarsi very short, stout, the posterior three-fifths as long as the tibiae, with the first joint very slightly longer than the second; ungues very small, slender, moderately arcuate.

A. brevipes n. sp.—Slender, pale rufo-testaceous throughout, except the abdomen above and beneath, which is piceous-black with the apex pale; integuments dull and minutely, strongly reticulate, the abdomen less strongly so and more shining; anterior parts finely, indistinctly punctate, the abdomen minutely, not densely but more distinctly so; pubescence distinct, rather long and moderately dense. *Head* convex, ovato-conoidal, a little longer than wide, rather longer than the prothorax and fully as wide or a little wider; antennae nearly one half longer than the head. *Prothorax* very slightly wider than long, widest at the apical angles, the sides thence moderately convergent and nearly straight to the basal angles, which are obtuse and slightly blunt; apex broadly evenly and rather strongly arcuate, distinctly wider than the base; disk broadly flattened toward the middle. *Elytra* three-fourths as long as the prothorax, and, at apex, not at all wider; sides convergent and scarcely arcuate from apex to base. *Abdomen* as wide as the elytra, parallel, one-half longer than the anterior parts; sides straight; border moderate, equal; surface transversely and feebly convex. Length 1.7 mm.; width 0.3 mm.

Alaska (Ft. Wrangel). Mr. Wickham.

I have seen only a single specimen, probably a male, the sixth ventral plate being broadly, very obtusely lobed behind.

THECTUROTA n. gen.

The body is extremely slender, parallel and subdepressed. Head large, flat, slightly broader toward base, the eyes small, far before the middle and slightly prominent. Antennae short, feebly incrassate. Mentum small, transverse. Ligula with the apical process short, cylindrical, thin and perfectly simple, the labial palpi three-jointed, with the first joint nearly as long as the next two, cylindrical; second thinner, longer than wide; third still more slender and a little longer than the second. Maxillae well developed, the cardo large, the lobes very small, short, the palpi small, the third joint but slightly longer than the second, but thick and obconical; fourth distinct, oblique. Gular sutures long, straight and parallel; infralateral carina wholly obsolete. Prothorax slightly narrowed toward base, the hypomera visible from the side. Middle coxae moderately large, contiguous, the mesosternal process very slender and acute. Metasternum large, the side-pieces rather narrow, parallel anteriorly but with the inner line approaching the elytra posteriorly, becoming very acute and narrow at the elytral apex. Legs very short; tarsi short and stout, plainly 4-4-5-jointed, the first four joints of the posterior equal, short, thick, the last moderate in length; claws moderate, slender, evenly arcuate.

The extremely small and slender forms referred to this genus remind us of *Hydrosmecta* Thoms., but are allied closely to *Thectura*, and resemble the latter in the peculiar posteriorly attenuate met-episterna, but differ in the complete absence of any of the caudal spines so characteristic of that genus. Several of the species have a deep transverse pit at the extreme base of the occiput, and the types of one or two have the head thrown back slightly, obscuring this part, but it is probably a generic character. In *Hydrosmecta subtilissima* the middle tarsi are five-jointed, and the gular sutures converge from the base.

The species of *Thecturota* are among the smallest, and are probably the most slender, of the Aleocharini; they will prove to be tolerably numerous, and the four in my cabinet may be separated by the following characters.

Head gradually perceptibly wider behind, the eyes very small and the upper surface coarsely and distinctly punctured... **tenuissima**

Head parallel or very nearly so, the eyes larger and the surface finely, feebly and very indistinctly punctate.

Head and prothorax equal in width and distinctly narrower than the elytra.
Elytra distinctly longer than the prothorax; pubescence denser.

capito

Elytra not longer than the prothorax; pubescence sparse; body slightly
more slender.....**demissa**

Head and prothorax subequal in width to the elytra; pubescence dense;
elytra much longer than the prothorax.....**exigua**

I have not been able to discern any marked sexual modifications.

T. tenuissima n. sp.—Linear, strongly shining throughout, dark piceous-brown, the pronotum, tip of the abdomen and legs pale flavate; antennae dusky, pale toward base; pubescence sparse, moderately long, subrecumbent, coarse, not conspicuous; head coarsely, sparsely, conspicuously but not very deeply punctate, the punctures wanting along the median line; pronotum and elytra very minutely sparsely and inconspicuously punctate, polished, not at all reticulate; abdomen finely, sparsely but more distinctly and subasperately punctured. *Head* large, fully as wide as the prothorax and as long as wide, the sides behind the eyes straight and feebly divergent to basal fourth, then broadly rounded to the wide neck; surface with a small deep elongate impression in the middle just behind the eyes; antennae one-third longer than the head, feebly incrassate, the basal joint much longer than the second, the latter as long as the next two, obconical and nearly twice as long as wide, fourth to tenth very strongly transverse, close but somewhat perfoliate, feebly increasing in width and also in length, eleventh slightly longer than wide, obtusely rounded at tip, as long as the preceding two. *Prothorax* about one-third wider than long, the sides feebly convergent and straight from near the apex to the obtuse and indistinct basal angles; base scarcely as wide as the apex; disk feebly convex, with a very feeble but entire median impressed line. *Elytra* nearly as long as wide, equal in width to the prothorax and quite distinctly longer; sides straight and parallel. *Abdomen* linear, rather longer than the anterior parts, at base very slightly narrower, but at the apex of the fourth segment somewhat wider, than the elytra; first four segments feebly impressed at base; fifth much shorter than the fourth; sixth large and distinct. Length (abdomen strongly extended) 1.1 mm.; width less than 0.2 mm.

Rhode Island.

The coarse punctures of the large, posteriorly enlarged head, minute size and linear form, will render the identification of this species quite certain.

T. capito n. sp.—Piceous to blackish, the legs pale flavate, antennae dusky, paler toward base, integuments feebly shining, the head somewhat strongly reticulate, very minutely, somewhat closely punctate; pronotum and elytra minutely and more densely punctate; abdomen more asperately, pubescence rather dense, sparse and longer on the abdomen. *Head* fully

as wide as the prothorax, nearly as in the preceding species but rather less dilated behind and with somewhat larger eyes; upper surface broadly impressed in the middle anteriorly, and with a small deep impression near the centre, also with a deep transverse sulcus at the extreme base of the occiput; antennae nearly as in *tenuissima*, but with the fourth joint less transverse, tenth more than twice as wide as long. *Prothorax* one-third wider than long; sides feebly convergent from apex to base and broadly, feebly arcuate; basal angles very obtuse; disk broadly, feebly impressed along the median line. *Elytra* quadrate, distinctly wider and two-fifths longer than the prothorax; humeri obliquely rounded to the prothorax and slightly visible. *Abdomen* scarcely as long as the anterior parts, very little narrower than the elytra; sides subparallel, the tip of the fourth segment scarcely visibly wider; fifth slightly longer than the fourth; border moderate. Length 1.1 mm., width 0.2 mm.

Texas (Galveston).

This infinitesimal animal seems to be widely diffused, for I have taken specimens, either of it or of a species so similar as to be almost undistinguishable with my present material, also at Austin and Waco in Texas, and Tucson in Arizona. The transverse sulcus at the occipital base receives the anterior margin of the pronotum when the head is thrown back.

T. demissa n. sp.—Minute, slender, rather convex, strongly shining throughout, the abdomen still more polished, black, the pronotum feebly piceous, the elytra still paler, rufescent; antennae black, piceous toward base; legs pale flavate; anterior parts finely but not strongly reticulate, minutely, subobsoletely punctate, the elytra scarcely more distinctly so, the abdomen very minutely, sparsely and subgranularly; pubescence short, rather sparse, not conspicuous, very sparse on the abdomen. *Head* large, rather longer than wide, fully as wide as the prothorax, the sides parallel; eyes at a little more than their own length from the base; surface deeply concave along the middle anteriorly, and with a deep conspicuous fovea at the centre; antennae short, feebly incrassate, scarcely visibly longer than the head and prothorax, the basal joint thicker and nearly as long as the next two, second longer than wide and nearly as long as the third and fourth, constricted at base, outer joints distinctly transverse. *Prothorax* not more than one-fourth wider than long; sides broadly arcuate, becoming gradually almost straight and slightly convergent in about basal half, apical angles deflexed and broadly rounded; basal obtuse and more narrowly rounded; base broadly arcuate, scarcely as wide as the apex; disk convex, narrowly and rather strongly impressed along the median line throughout. *Elytra* much shorter than wide, toward apex distinctly wider than the prothorax, not longer, the sides feebly divergent from the slightly exposed humeri. *Abdomen*, contracted, subequal to the anterior parts, at base distinctly narrower than the elytra; sides straight and just perceptibly divergent from the base, the apex of the

fifth appreciably wider than the base; fourth and fifth segments equal in length and each distinctly longer than one to three. *Legs* very short, stout. Length 1.0 mm.; width scarcely 0.2 mm.

New York (Catskill Mts.). Mr. H. H. Smith.

The more polished, more sparsely pubescent integuments, less transverse prothorax and shorter elytra, will readily distinguish this species from *capito*.

T. exigua n. sp.—Extremely slender, parallel and linear, moderately convex, shining, minutely, rather closely but not conspicuously punctate, the pubescence rather long, close and distinct, streaming obliquely on the elytra and transversely on the pronotum; color rather pale brown, the head piceous, the abdomen black toward apex; legs and antennæ toward base pale, flavescens. *Head* large, rather convex, deeply impressed just before its centre; sides parallel; eyes at fully one-half more than their own length from the base; antennæ nearly as in *demissa*. *Prothorax* one-third wider than long; sides feebly convergent and straight from apex to base; base and apex broadly, strongly arcuate, the former slightly the narrower; disk strongly, rather widely impressed along the median line. *Elytra* quadrate, barely wider than long, one-third longer but scarcely perceptibly wider than the prothorax; sides parallel, straight; humeri very slightly exposed. *Abdomen*, extended, a little longer than the anterior parts, at base perceptibly narrower than the elytra; sides straight; apex of the fifth segment distinctly wider than the first and fully as wide as the elytra; first four tergites impressed at base, the impressions successively and uniformly decreasing in depth and width. *Legs* very short, stout. Length 1.3 mm.; width 0.2 mm.

Iowa (Cedar Rapids). Dr. E. Brendel.

Almost as extremely slender as *tenuissima*, but with a minutely punctate and parallel head. I can find only a single specimen amongst my material, and the sex of the type is undetermined.

THECTURA Thoms.

The anterior and middle tarsi in this genus are distinctly four-jointed, the posterior five-jointed, the basal joints very short and equal and the last joint long; its position among the allies of Colpodota is therefore erroneous, and it should be transferred to the neighborhood of Homalota Mann, with which however it cannot be united because of its three-jointed labial palpi. The following species is closely related to *cuspidata* Er. :—

T. americana n. sp.—Slender, parallel, linear, very strongly depressed, piceous-black; antennæ toward base and legs pale; anterior parts dull and alutaceous, the head strongly, sparsely punctured, the pronotum and elytra

excessively finely and indistinctly so, the abdomen with a few scattered asperate punctures; pubescence fine, rather dense but not conspicuous. Longer and sparser on the abdomen. *Head* very nearly as wide as the prothorax, wider than long, the sides parallel; eyes well developed, convex and prominent; antennae distinctly incrassate, short, barely as long as the head and prothorax, the last joint as long as the two preceding. *Prothorax* one-third wider than long, the sides just visibly convergent and almost straight from near the apex to the rounded basal angles; base arcuate; disk broadly, feebly impressed along the middle. *Elytra* fully as long as wide, not wider than the prothorax and one-half longer, parallel and straight at the sides, humeri exposed. *Abdomen* as long as the anterior parts, slightly narrower than the elytra, parallel and straight at the sides, the border strong. Length 1.6 mm.; width 0.3 mm.

New York.

The middle spine of the sixth dorsal plate is as well developed as in *cuspidata*, but is more inclined backward; its apex is notched anteriorly, the posterior spur more abruptly bent forward over the tip than in *cuspidata*; lateral spines small and distinct. The male has, at the middle of the second tergite, two small tubercles distant by one-half the width, on the third two rather stronger tubercles distant by two-thirds the width, on the fourth two much feebler tubercles distant by barely one-third the width, the fifth broadly impressed in the middle. A single male.

This species differs from *cuspidata* in its slightly more incrassate antennae with longer terminal joint, in its wider and distinctly more transverse prothorax, and in the position of the tubercles of the fourth dorsal, which are distant by one-half the discal width in the European species; also by the more posteriorly inclined terminal spine, somewhat differently modified at apex, and in the entire absence of the discal impression of the sixth segment at the base of the spine.

OLIGUROTA n. gen.

Body minute, parallel, subdepressed. Head large, quadrate, the eyes moderate, convex and prominent, before the middle; infra-lateral carina completely obsolete. Antennae short, incrassate, the basal joint large, thick; second shorter; second and third strongly constricted at base, the former much the larger; outer joints transverse. Mentum very small, transversely trapezoidal. Ligula with a minute, apparently simple terminal process and two stiff bristles, the palpi well developed, three-jointed, the first thick, clon-

gate, cylindrical, the second narrower and much shorter; third slender, as long as the first. Maxillary lobes small, short, thick, ciliate within; the palpi small, with the third joint longer than the second; fourth minute. Gular sutures perfectly straight and parallel throughout. Prothorax quadrate, the hypomera narrow but entire, feebly inflexed and distinct from the side. Elytra moderate. Abdomen normal, parallel, not at all spinose at apex, the four basal segments feebly, narrowly impressed at base; fourth and fifth equal and longer than the others. Prosternum rather well developed before the coxæ. Intermediate coxæ small, approximate, the mesosternal process short, angulate. Metasternal side-pieces wide, parallel, the epimera well developed, disappearing under the elytra at basal third. Legs and tarsi very short, the tarsi 4.4-5-jointed, the basal joint of the middle and posterior slightly longer than the second; last longer; claws small, slender.

This genus is allied to *Thectura*, but differs in the absence of caudal spines, in its shorter elytra and metasternum, and especially in the conformation of the metaparapleuræ, which in *Thectura* are quite remarkable, being narrow and parallel anteriorly, but with the inner margin oblique toward the elytra behind, so that they become exceedingly narrow at the elytral apex, the epimera invisible. In both of these genera the coxæ are unusually small for the present tribe.

O. pusio n. sp.—Parallel, pale piceous-brown, the head and abdomen darker, blackish, the tip of the latter, legs and antennæ paler; integuments rather shining, coarsely and feebly reticulate, not densely and almost imperceptibly punctate throughout; pubescence rather long and sparse but distinct. *Head* just perceptibly wider and distinctly longer than the prothorax, as long as wide, the neck two-thirds as wide; sides parallel; surface with a small impression in the middle between the eyes; antennæ one-half longer than the head. *Prothorax* nearly one-third wider than long; sides parallel, nearly straight, the apical and basal angles rounded; base and apex about equal, arcuate; disk narrowly and feebly impressed along the median line. *Elytra* much wider than long, very slightly wider and longer than the prothorax; sides nearly parallel and straight. *Abdomen* shorter than the anterior parts, slightly narrower than the elytra, parallel and straight at the sides; border rather fine. *Legs* rather stout. Length 1.2 mm.; width 0.2 mm.

Indiana.

One of the most minute of the *Bolitocharides*, and probably occurring under bark; the unique type is apparently a female.

LEPTUSA Kraatz.

The first species here described seems to be truly congeneric with the European *analis*, but has the prothorax much smaller and narrower, the elytral humeri being exposed at base.

L. brevicollis n. sp.—Slender, subparallel, rather convex, shining, the abdomen still more polished, dark red-brown; legs paler, more flavate, antennæ concolorous; head piceous; abdomen brighter rufous, with a black subapical cloud; head and pronotum very feebly punctulate; elytra coarsely, somewhat rugosely but not at all asperately so; abdomen finely and sparsely; pubescence sparse but rather long, subrecumbent and distinct. *Head* orbicular, convex, much wider than long, distinctly narrower than the prothorax, the eyes rather large and prominent, at less than their own length from the base; labrum truncate; antennæ as long as the pronotum and elytra, moderately incrassate, second and third joints elongate, subequal, fourth obconical, as long as wide, four to ten gradually wider, the latter nearly twice as wide as long, eleventh rather small, not longer than the two preceding. *Prothorax* transverse, fully three-fourths wider than long, widest at two-fifths from the apex where the sides are narrowly rounded, thence convergent and feebly arcuate to the apex, equally convergent and broadly sinuate to the basal angles, which are obtuse but sharp, the apical deflexed but also not at all rounded; hypomera extending to the apex; base transverse, equal to the apex; disk strongly convex, extremely obsoletely impressed along the middle and transversely before the scutellum. *Elytra* large, parallel, slightly wider than long, one-fourth wider and one-half longer than the prothorax; sides nearly straight; humeri exposed at base; suture finely beaded. *Abdomen* parallel and straight at the sides, much narrower than the elytra, as wide as the prothorax; only the first three segments strongly impressed at base; fifth distinctly longer than the fourth. *Legs* rather long, slender; posterior tarsi short, with the first joint distinctly longer than the second. Length 2.1 mm.; width 0.55 mm.

Pennsylvania.

The type is a male, the fifth dorsal plate having a small feeble longitudinal carina in the middle. The labial palpi are apparently three-jointed, but the first is small and anchylosed to the second, which is subequal to the more slender third; the process of the ligula is slender, parallel and simple at apex. The metasternum is large and long, with the side-pieces very narrow and parallel, quite different from the form occurring in *Sipalia*. The middle acetabula are deep and sharply limited by an acute beaded edge, except for the extremely short distance between the apices of the sternal processes, of which the mesosternal is acutely produced to the middle with its apex slightly blunted, the coxæ quite appre-

ciably separated. This species seems to be somewhat intermediate between *Leptusa* and *Silusa*.

The two following species are similar in structure throughout and possibly belong to *Leptusa*, but differ considerably in facies from *brevicollis*, because of the much longer prothorax and the densely opaque and lustreless anterior parts of the body; they may be defined as follows:—

Stouter, the anterior parts of the body velvety blue-black and perfectly opaque; fourth and fifth ventral segments exactly equal in length.

opaca

Much more slender, the head and pronotum opaque, brown, the elytra rather more shining; fifth ventral a little longer than the fourth...**seminitens**

In *opaca* the conformation of the parts about the middle coxæ is exactly as in *brevicollis*, but the mesosternal process extends as far behind as the apex of the metasternal; it is however free and not continuous on the same level.

L. opaca n. sp.—Stout, blackish, opaque, the abdomen shining, rufo-testaceous, the last two segments black; legs pale, the posterior femora clouded with piceous toward apex; antennæ blackish, pale toward base and with the eleventh joint abruptly pale flavate; head and pronotum completely lustreless, not punctate, minutely and extremely densely granulate-reticulate throughout; elytra sericeous, indistinctly punctate; abdomen rather strongly, not very densely punctate, sparsely so toward apex; anterior parts finely, very indistinctly pubescent, the abdomen more sparsely but distinctly so. *Head* more than three-fourths as wide as the prothorax, the eyes rather prominent, at less than their length from the base; antennæ about as long as the prothorax and elytra, strongly, gradually increasing in width, the outer joints strongly transverse, eleventh longer than the two preceding. *Prothorax* two-fifths wider than long, widest at anterior third where the sides are strongly rounded and prominent, thence strongly convergent and distinctly sinuate to the base, which is transversely arcuate and equal in width to the apex; basal angles obtuse but scarcely at all blunt; disk convex, even, not impressed. *Elytra* slightly wider than the prothorax and about one-third longer, parallel, the sides nearly straight; humeri slightly exposed at base. *Abdomen* a little longer than the anterior parts, about as wide as the prothorax; sides parallel, scarcely visibly arcuate; border thick. Length 2.0 mm.; width 0.6 mm.

Pennsylvania.

The four specimens in my cabinet do not indicate any variation.

L. seminitens n. sp.—Slender, parallel, dark red-brown, the abdomen bright rufo-testaceous, with a subapical black cloud; legs pale; antennæ blackish, paler toward base, the eleventh joint abruptly pale; head and pronotum opaque, feebly pubescent, impunctate and minutely, very densely gran-

ulato-reticulate; elytra feebly shining, indistinctly punctate, feebly pubescent; abdomen polished, strongly, closely punctate toward base, very minutely and remotely so toward tip, the pubescence longer, sparse but distinct. *Head* transverse, very nearly as wide as the prothorax, the eyes small, at more than their length from the base; antennæ feebly incrassate, rather longer than the prothorax and elytra, the outer joints but slightly wider than long. *Prothorax* large, one-fourth wider than long, widest and rather strongly rounded at apical third, the sides strongly and distinctly sinuate in more than basal half; base broadly arcuate, rather narrower than the apex; basal angles obtuse, scarcely at all blunt; disk broadly convex, even, with a very feebly impressed line along the middle. *Elytra* slightly wider than long, equal in width to the prothorax and but very slightly longer, sides parallel; humeri slightly exposed at base. *Abdomen* fully two-thirds longer than the anterior parts, perfectly parallel, about as wide as the elytra. *Posterior tarsi about two-thirds as long as the tibia. Length 2.4 mm.; width 0.5 mm.

New York.

Evidently allied to the preceding, but distinguishable very readily by the slender and more parallel form, longer abdomen, more shining elytra, longer and more slender antennæ, smaller eyes and several other structural features

ASTHENESITA n. gen.

Body minute, parallel, not very narrow, somewhat convex. Head long, ovo-conoidal, convex, the eyes very small, at some distance from the mandibles and antennæ, and at fully twice their own length from the base; labrum rather elongate, rounded; infra-lateral carina very feeble, subobsolete. Antennæ long, evenly and gradually incrassate, the second joint nearly as long as the next two; third strongly obconical; four to ten equal in length, transverse, gradually wider, the tenth more than twice as wide as long; eleventh ovoidal, as long as the preceding two. Mentum trapezoidal, truncate. Ligula with a slender terminal process which is distinctly bifid at apex; labial palpi three-jointed. Maxillary palpi normal, the third joint much longer than the second, the fourth very minute, oblique. Prothorax narrowed and sinuate toward base, nearly as in *Leptusa*. Elytra well developed, broadly emarginate at apex, the suture not distinctly beaded. Abdomen very feebly narrowed toward base, the first three segments deeply impressed at base; fifth very much shorter than the fourth, the latter not at all impressed. Middle coxæ and sterna as in *Leptusa*. Metasternal side-pieces narrow, parallel. Legs short; tarsi stout, 4-4 5-jointed,

the posterior but little more than one-half as long as the tibiae, with the first joint just visibly longer than the second or third, the latter scarcely longer than wide.

This genus is closely allied to *Leptusa*, but differs in the longer antennae with much shorter third joint, in the longer head and labrum, in the bifid ligula and very short fifth segment of the abdomen, which is not perceptibly more than one-half as long as the fourth; also in the more robust tarsi and minute size.

A. pallens n. sp.—Pale rufo-testaceous throughout, the fourth dorsal segment piceous-black; integuments slightly reticulate, feebly shining, the abdomen polished; head, pronotum and elytra very minutely and scarcely visibly punctulate; abdomen more sparsely but not distinctly so, pubescence sparse but long, coarse and distinct. *Head* rather longer than wide, a little narrower but longer than the prothorax, convex, even; sides parallel and evenly arcuate; antennae as long as the head, prothorax and elytra, pale throughout. *Prothorax* one-third wider than long, the sides broadly, feebly arcuate, more convergent and nearly straight in basal half, the basal angles very obtuse but not rounded; apical deflexed, right-viewed laterally—not rounded; base very feebly arcuate, slightly narrower than the apex; disk convex and declivous at the sides, more flattened above, with a broad region along the middle which is very feebly impressed, more distinctly so toward base and densely granulate-reticulate and opaque throughout. *Elytra* distinctly wider than long, parallel and straight at the sides, just visibly longer and fully one-fourth wider than the prothorax, the humeri distinctly expanded and transverse at base. *Abdomen* as long as the anterior parts, behind the middle as wide as the elytra, but at base distinctly narrower; sides scarcely perceptibly arcuate; border moderate, not thick. Surface transversely convex behind. *Legs* short. Length 1.25 mm., width 0.3 mm.

Florida.

In the male the fifth ventral plate is transverse at apex, with a short acute spicule projecting horizontally from the middle of the edge, the sixth lobed in the middle.

SIPALIA Rey.

This genus seems to be distinct from *Leptusa* although closely allied.

S. frontalis n. sp.—Parallel, thick, rather convex, shining, the abdomen polished, rufo-testaceous, the antennae dusky except at base, abdomen piceous, the fifth segment and apices of the first three, pale; pubescence coarse, sparse but rather long and distinct; head and pronotum extremely finely, feebly but rather closely punctulate; elytra coarsely, more sparsely and asperately punctate; abdomen sparsely so. *Head* orbicular, convex, slightly

narrower than the prothorax, fully as long as wide; eyes at fully one-half more than their own length from the base; clypeus rather prolonged in front of the antennae, truncate; antennae nearly one-half as long as the body, distinctly incrassate, second and third joints elongate, subequal, fourth to tenth very evenly, gradually increasing in width, the latter fully twice as wide as long, eleventh conoidal, longer than the preceding two. *Prothorax* rather large, strongly and evenly convex, but slightly wider than long, widest at apical third, the sides thence distinctly convergent and feebly sinuate to the base, the latter transverse and slightly narrower than the apex; basal angles obtuse but not at all blunt; apical deflexed but not at all rounded; hyponera continuous to the apex. *Elytra* at apex as wide as the prothorax, gradually, feebly narrowed toward base, the two bases equal; suture just perceptibly shorter than the pronotum; sides feebly arcuate; apex transverse and slightly trisinnate; disk rather convex, not impressed on the suture, the latter finely beaded. *Abdomen* as wide as the elytra, as long as the anterior parts, parallel, the sides nearly straight; border moderate; first three segments strongly impressed and more coarsely punctate at base; fourth scarcely at all impressed; fifth distinctly shorter than the fourth. *Legs* moderate, posterior tarsi slender, nearly two-thirds as long as the tibiae, the first joint slightly but distinctly longer than the second. Length 2.0 mm.; width 0.5 mm.

California.

This species is allied closely to *recteri* Epp., but the latter has the first four segments equally impressed at base and the fifth fully as long as the fourth. In *frontalis* the labial palpi have the first joint shorter than the second, the third nearly as long as the first two, the metapapule very wide, with the inner margin rapidly divergent from the elytra, the epimera large, occupying nearly the entire width behind and disappearing under the elytra near basal third. The mesosternal process is long, acute, extending two-thirds the length of the very narrowly separated coxae, the apex free, the metasternal process short, subangulate, not attaining the mesosternal, the acetabula rather shallow behind but limited everywhere by a fine beaded edge, except along the very short intersternal isthmus.

BRYOBIOTA n. gen.

Body parallel and linear, somewhat thick and convex. Head fully as wide as the prothorax and as long as wide, with the sides parallel; basal angles right but rounded; base transverse; neck scarcely one-half as wide as the head; labrum twice as wide as long, truncate; eyes small, anterior; infralateral carina completely obsolete. Antennae long, the second joint longer than the third.

Mentum transverse, trapezoidal, the apex feebly sinuato-truncate. Ligula with a simple slender process; labial palpi three-jointed, the first more robust than the second and twice as long, third thin, not quite as long as the first. Maxillary palpi nearly normal, the second joint slightly arcuate and much shorter than the third; fourth very small. Prothorax narrowed toward base, the apical angles deflexed and very broadly rounded; hypomera distinct laterally, not attaining the apex; base of the pronotum superposed on the base of the elytra and transversely arched in the middle. Elytra very short. Abdomen long, parallel, as wide as the elytra, the first four segments impressed at base; fourth and fifth equal. Middle coxæ not distinctly separated, the acetabula being simply very feeble impressions posteriorly and not at all limited, the mesosternal process short but acutely triangular. Legs moderate; tibiae rather slender, clothed with rather coarse pubescence, without trace of spinules; tarsi 4-4-5-jointed, the posterior rather slender, with the basal joint as long as the next two; unguis small, slender, arcuate.

Bryobiota is allied to Sipalia, but differs in the feebly impressed and undefined middle coxal cavities. From *Arena* Fvl. it may be known at once by the distinct but rather wide neck and longer antennae. It is represented as far as known to me by a single species from the southern salt beaches of California:—

B. bicolor Csy.—Bull. Cal. Acad. Sci., I, 1885, p. 311 (Phytosus).

This species is not at all allied to *Phytosus*, the tibiae being completely devoid of spinules.

BOLITOCHARA Mann.

A widely diffused genus, decidedly isolated in general habitus and coloration from all those which are structurally most closely allied to it. It can always be recognized, among the Bolitocharides, by the coarse subasperate sculpture and variegated elytra. Our species as far as known may be separated as follows:—

Elytra very much longer than the prothorax.

Prothorax distinctly narrower than the elytra. Pacific coast.

Elytra coarsely and less densely sculptured, usually dark only externally toward apex and sometimes near the scutellum.

Abdomen sparsely punctured **notata** Makl.

Abdomen densely punctured, especially toward base.

californica Csy.

Elytra more finely and densely punctate, black, each elytron pale at base except near the scutellum, also narrowly along the suture in apical two-thirds and along the apical margin; abdomen finely, sparsely punctate..... **nigrina** Csy.

Prothorax on the disk as wide as the base of the elytra. Atlantic coast.

Abdomen coarsely, densely punctate; carina of the fifth male tergite long and strong..... **blanchardi** n. sp.

Abdomen finely, densely punctate; carina of the fifth tergite extremely small, reduced to a small point near apical fourth.

marginella n. sp.

Elytra shorter; "Flügeldecken wenig länger als das Halsschild." "

alternans Sachse.

Silusa alternans, from its indicated size and coloration, seems to be more appropriately placed in the present genus, but I have not been able to identify it; *Silusa gracilis* is however a true *Silusa*, and it may be possible therefore that Dr. Sachse was not mistaken as to the genus of *alternans*, but the coloration is certainly not at all distinctive of *Silusa*, viz., "rufo-picea, elytrorum angulo exteriore abdomineque ante apicem nigricantibus." Of *notata* Muhl. I have several specimens, taken by Mr. Wickham at Fort Wrangel and in Vancouver; on the whole, it is a larger, stouter form than *californica*, and differs specifically in abdominal sculpture.

Honulota trimaculata Er. is possibly a *Bolitochlora* allied to *blanchardi*, but joints five to ten of the antennae are said to be transverse in that species.

B. blanchardi.—Pale flavo-testaceous, the head, pronotum except feebly along the sides and base, elytra toward the external apical angles and feebly near the scutellum, abdomen feebly at the middle near the bases of the first three segments, throughout the fourth and in basal two-thirds of the fifth, blackish; antennae fuscous, the last joint somewhat less dark, the first four pale flavate; head feebly but distinctly, rather sparsely punctate, the pronotum and elytra strongly asperately and densely so, the latter slightly the more coarsely; abdomen strongly and closely but not so densely punctate, pubescence fine, very short, not conspicuous. Head orbicular, convex, about as long as wide, nearly three-fourths as wide as the prothorax, eyes very large, separated from the base by about one-half of their own length, antennae distinctly longer than the head and prothorax, monasate, first three joints elongate, third a little shorter than the second, tenth scarcely wider than long, a little longer and less transverse than the ninth. Prothorax transverse, fourth-fifths wider than long, widest and broadly subangulate at base, the sides convergent and feebly arcuate thence to the apex, base broadly arcuate, much wider than the apex, basal angles distinct but blunt, disk convex, strongly bimpressed in the middle near the base. Elytra slightly transverse, a little

wider and much longer than the prothorax; humeri obliquely rounded to the prothorax. *Abdomen* long, at base distinctly narrower than the elytra; sides straight, feebly convergent throughout; first three segments strongly impressed at base; fourth and fifth equal in length. *Legs* moderate. Length 2.4-3.5 mm.; width 0.8 mm.

New York; Iowa.

The male has the fifth tergite strongly carinate almost throughout its length, the sixth dorsal feebly emarginate, the emargination coarsely and obtusely crenulate. The species is dedicated with pleasure to Mr. Frederick Blanchard of Lowell, Mass.

B. marginella.—Pale flavate, the head blackish; elytra clouded with piceous toward each external apical angle, the dark area always separated from the apex by a distinct pale margin; abdomen with a large subapical blackish cloud; antennæ slightly infusate toward apex; integuments feebly shining, the abdomen more polished; head extremely minutely, sparsely punctate, the prothorax finely, densely, subasperately so, the elytra more strongly but still not very coarsely, densely punctate, the abdomen finely, evenly and densely so; pubescence fine, very short, not conspicuous. *Head* orbicular, much wider than long; eyes rather large, at one-half their length from the base; antennæ rather short, about as long as the head and prothorax, third joint but little shorter than the second, outer joints strongly transverse, closely perfoliate, tenth a little longer than the ninth, almost twice as wide as long, eleventh conoidal, pointed rather longer than the two preceding. *Prothorax* four-fifths wider than long, the sides parallel and feebly arcuate in basal two-thirds, then gradually rounded and convergent to the apex; base slightly wider than the truncate apex, broadly arcuate, becoming straight toward the angles which are obtuse and distinctly rounded; disk feebly impressed in the middle before the base, the impression not geminate. *Elytra* distinctly transverse, slightly wider and much longer than the prothorax, the humeri obliquely, strongly rounded to the base of the latter; sides just visibly divergent, very feebly arcuate; disk slightly impressed behind the scutellum. *Abdomen* long, at base distinctly narrower than the elytra; sides straight and feebly convergent throughout; fifth segment much longer than the fourth. Length 2.0-2.6 mm.; width 0.7 mm.

New York (Catskill Mts.).

The male has a very small raised point on the fifth tergite near apical fourth; the sixth also has a very small dorsal elevation and has the apex broadly emarginate and obtusely crenulate. This species is much smaller than *blanchardi*, and may be distinguished at once by its finer sculpture.

THINUSA n. gen.

Body very narrow, parallel and linear, thick, opaque. Head wider than long, slightly narrower than the prothorax; sides parallel toward base, the latter very broad and inserted within the prothorax; eyes moderate; labrum truncate. Antennae short, moderately incrassate, the second joint as long as the next two. Mentum transverse, trapezoidal, truncate. Maxillary palpi normal, the second joint shorter than the third; labial three-jointed, the first joint apparently longer than the second. Infralateral ridge obsolete. Prothorax strongly narrowed from near the apex to the base; hypomera feebly inflexed, rather narrow but extending almost to the apex; base of the pronotum superposed over the base of the elytra and broadly, feebly arched throughout the width. Elytra very short. Abdomen long, linear, as wide as the elytra, the first four segments impressed at base; fifth much longer than the fourth; sixth visible. Coxae very large, the anterior extremely so; middle cavities deep, distinctly limited, approaching extremely close to the posterior margin. Metasternum very short, the side-pieces narrow, parallel to the oblique edge of the elytra. Legs stout; tibiae very short, the anterior and middle spinulose externally; tarsi short, stout, the first four joints of the posterior subequal.

This genus is allied to *Phytosus* but distinguished at once by its very short elytra and extremely abbreviated metasternum. From *Actosus* it may be known by the much narrower and more lineate body, the narrower met-episterna, which are perfectly parallel to the edge of the elytra, and by the much less developed met-epimera. The single species is common about San Francisco.

T. maritima Cay.—Bull. Cal. Acad. Sci., I, 1885, p. 312 (*Phytosus*).

The European *Actosus balticus* must form part of the genus *Phytosus*, or else be regarded as the type of a new genus allied to *Thinusa*; it is altogether generically distinct from *Ac. nigriventris*—the type of *Actosus*—in its narrow parallel metasternal side-pieces, these being very strongly triangular in *nigriventris*. All of these genera differ, in addition, from *Thinusa*, in having the infralateral carina of the head distinct toward base and the hypomera much more dilated behind.

HYGRONOMIDES.

Antennæ 11-jointed; tarsi 4-4-4-jointed.

GYRONYCHIA n. gen.

Body elongate, linear and depressed. Head moderate in size, constricted at base, the neck usually about one-half as wide; eyes large, distant from the base, sparsely setose; labrum short, truncate; infralateral carina obsolete, feebly traceable anteriorly. Antennæ very long, slender, subfiliform or feebly and gradually incrassate from near the base; basal joint elongate, longer than the second or third, the latter elongate and subequal; outer joints seldom at all transverse. Mentum moderate, transversely trapezoidal, truncate, impressed on the disk at each side. Ligula with a stout parallel apical process, the labial palpi moderate, three-jointed, the basal joint the longest and thickest, cylindrical. Maxillary palpi moderate, the third joint but slightly longer than the second; fourth small. Mandibles simple and acute at apex. Prothorax oblong, feebly narrowed behind and broadly sinuate—viewed sublaterally—the apical angles abruptly and feebly deflexed; hypomera feebly inflexed, very distinct from the side, entire. Elytra large, long and well developed. Abdomen elongate and linear, the fifth segment usually distinctly longer than the fourth; first four segments more or less impressed at base. Middle coxæ contiguous, the mesosternal process very acute, prolonged to the middle, the metasternal process extremely short, broadly angulate, scarcely at all entering between the coxæ, the distance from its tip to a point beneath the free apex of the mesosternal occupied by a fine linear compressed and cariniform isthmus; acetabula tolerably well defined behind. Metasternum large, the side-pieces narrow, linear and parallel; epimera rather small, disappearing under the elytra well behind the middle. Legs rather short; anterior tibiae normal; tarsi short, 4-4-4-jointed, the first joint of the posterior more or less elongate, generally not quite as long as the next two and subequal to the last, the latter rather stout but scarcely at all incrassate; ungues well developed, divergent, abruptly bent downward behind the middle and somewhat broadened at the point of flexure.

This very interesting genus is the American representative of the European *Hygronoma*, and is probably rather extensive, extending from the Atlantic to the Pacific and occurring in the high-

lands and lowlands. In outward appearance it bears a striking resemblance to *Calodera*, but possesses none of the essential characters of that genus. From *Hygronoma* it is at once distinguishable by the very long subfiliform antennae and abruptly bent tarsal claws, resembling *Diglossa* in this latter peculiarity.

Gyronecha is allied also to the Central American *Bamona* of Sharp, but differs in its much more slender linear and depressed form, wider neck, longer, relatively narrower elytra and short tarsi, with a distinctly shorter basal joint. It is probable that some of the species assigned to *Bamona* by Dr. Sharp should be referred rather to the present genus; in fact the sexual spine near the base of the abdomen in *Bam. robusta* Shp., proves almost conclusively that this at any rate is a *Gyronecha*. The falagrioid form of the body in *Bamona* is especially alluded to in the original diagnosis, but in *Gyronecha* there is no vestige of such a facies.

The following species will serve as types of the genus:—

Head narrower than the prothorax; antennae very long.

Third antennal joint obconical, elongate, fully as long as the second.

Dorsal plates two and three broadly impressed and subimpunctate at base through about one-half of their length; male with dorsal carinae.

Prothorax wider than long, laterally rounded and narrowed in apical third..... **valens**

Prothorax nearly as long as wide, rounded and narrowed only in apical fourth; body much narrower; antennae more slender..... **texana**

Dorsal plates throughout feebly impressed only very near the base, flat and strongly, evenly punctate throughout; male apparently without abdominal carinae..... **obscura**

Third antennal joint shorter than the second..... **fusciceps**

Head equal in width to the prothorax; antennae more incrassate.

Antennae long, the outer joints barely perceptibly wider than long; third elongate, slightly shorter than the second..... **lineata**

Antennae much shorter, more compact and strongly incrassate, not much longer than the head and prothorax; second antennal joint subequal in length to the next two together; eyes much smaller.

Neck rather more than one-half as wide as the head..... **attenuata**

Neck slightly more than one-third as wide as the head..... **pertenuis**

G. valens n. sp.—Parallel, depressed, somewhat wider than usual, piceous-black, the elytra paler, clouded near the scutellum; abdomen dark rufotestaceous, clouded with blackish near the tip; legs very pale throughout; antennae black, paler toward base; head and pronotum extremely minutely, closely punctate, feebly shining, the former more sparsely punctate toward the front; elytra rather less finely, more strongly and much more excessively densely punctate and alutaceous; abdomen with the first four segments closely,

comparatively coarsely and conspicuously punctate in apical half, impunctate in the polished basal impressions, fifth very remotely, subasperately punctate; pubescence very short, extremely dense on the elytra, transverse on the pronotum, longer but very sparse on the abdomen. *Head* slightly wider than long, a little narrower than the prothorax; eyes large, rather prominent, at their own length from the base; neck fully one-half as wide as the head; antennae two-fifths as long as the body, slender, all the joints longer than wide, first three equal, very long, together constituting one-third of its length, remainder obconical, except the eleventh which is pointed and not as long as the two preceding. *Prothorax* slightly wider than long, the sides rounded anteriorly almost continuously around the apex from apical third, feebly convergent and straight thence to the basal angles which are obtuse and not rounded; base broadly arcuate; disk broadly, feebly flattened in the middle toward base. *Elytra* two-fifths wider and one-half longer than the prothorax, subquadrate; sides parallel and straight; humeri exposed at base; surface flat, strongly impressed on the suture toward base. *Abdomen* quite distinctly narrower than the elytra, as long as the anterior parts; sides parallel and straight, feebly convergent near the apex; border moderate; fifth segment much longer than the fourth. Length 3.5 mm.; width 0.75 mm.

Texas (Austin).

The type is a male, having a strongly elevated carina in apical half of the first visible dorsal plate, the carina projecting posteriorly to a slight extent; the fifth segment also has a small feeble carina in the middle near the base. One specimen.

G. texana n. sp.—Narrow, parallel, pale brown, the head blackish; abdomen more rufous, with a large feeble blackish cloud near the apex; legs very pale; antennae blackish, paler toward base; head and pronotum very minutely, densely punctate, strongly shining; elytra more coarsely and asperately but not quite so densely punctate, rather shining; abdomen polished, finely, moderately closely punctate, very sparsely so on the fifth segment; anterior parts finely, very densely, the abdomen much more coarsely and sparsely, pubescent. *Head* distinctly shorter and narrower than the prothorax, slightly wider than long, the neck one-half as wide; eyes large, at fully their own length from the base; antennae slender, a little longer than the prothorax and elytra, the first joint much longer than the second or third, the latter elongate, equal, fourth to tenth obconical, longer than wide, eleventh slender, pointed, scarcely as long as the two preceding. *Prothorax* nearly as long as wide, rounded near the apex, the latter feebly arcuate in the middle, sides feebly convergent and straight from apical fourth to the basal angles, the latter obtuse but not rounded; base very feebly arcuate, subtruncate; disk almost imperceptibly impressed along the median line and feebly flattened in the middle before the base. *Elytra* quadrate, one-third wider and longer than the prothorax; sides parallel and nearly straight; humeri distinctly exposed at base; disk narrowly, strongly impressed on the suture toward base. *Abdomen* scarcely wider than the prothorax, a little longer than the anterior parts,

parallel and straight at the sides except near the apex; border rather thick; fifth segment longer. Legs short; posterior tibiae swollen toward apex, slender near the base, the tarsi scarcely three-fifths as long. Length 2.7-3.0 mm.; width 0.55-0.6 mm.

Texas (Austin).

The male has a strongly elevated carina at the middle of the first dorsal, becoming gradually feebler and ending at the basal impression; at apex it projects slightly beyond the margin; there is also a very small carina near the base of the fifth.

In both of these species the fourth antennal joint is distinctly shorter than the fifth; in *obscura*, however, these two joints are subequal. The present species, although closely allied to *valens*, differs greatly in the longer basal joint of the antennae, form of the prothorax, sparser elytral and much finer and sparser abdominal punctuation, and in its smaller size and more slender form. Three males, exhibiting no variation.

G. obscura n. sp.—Depressed, rather wide, blackish, the pronotum slightly, the elytra distinctly, pale; abdomen scarcely paler toward base but with the tip flavescent; legs pale; antennae not distinctly paler toward base; anterior parts extremely minutely, rather densely punctate, somewhat strongly shining, finely, densely pubescent; abdomen more strongly, rather closely, evenly punctate, with longer and somewhat sparse but distinct pubescence. Head a little wider than long, distinctly shorter but only slightly narrower than the prothorax, the neck one-half as wide as the width across the eyes, the latter at fully their own length from the base; antennae slender, fully as long as the prothorax and elytra, equal in width from the fourth joint, the first three greatly elongate, the first longer, second and third equal, fourth scarcely visibly shorter than the fifth, fourth to tenth obconical, longer than wide, the tenth fully as long as wide, eleventh slender, pointed, not quite as long as the two preceding. Prothorax very slightly wider than long, the sides rounded and convergent in apical third, the apex more feebly arcuate in the middle; sides straight and just visibly convergent in basal two-thirds, the base broadly, distinctly arcuate, basal angles obtuse and distinct; disk even, not perceptibly impressed. Elytra quadrate, one-third longer and wider than the prothorax, parallel and straight at the sides, with the humeri exposed at base; disk impressed on the suture behind the scutellum. Abdomen distinctly narrower than the elytra, as long as the anterior parts, sides parallel and evenly, just visibly arcuate, border strong; first four segments equal and nearly flat; fifth one-half longer. Length 2.9 mm.; width 0.6 mm.

California (Pomona). Mr. H. C. Fall.

The truncate sixth ventral plate would seem to indicate the male, but there is no trace of the dorsal carina so well developed in the two preceding species, and the present differs also in its more

pubescent abdomen, with the basal impressions much shorter or finer, extending only very slightly upon the disk of the plates. Two specimens.

G. fusciceps n. sp.—Slender, depressed, pale rufo-testaceous, the head darker, piceous; elytra more flavate; antennæ dusky, pale toward base; legs very pale; head shining, minutely, densely and distinctly punctate; pronotum feebly alutaceous, somewhat reticulate, very minutely and not distinctly punctate; elytra feebly alutaceous, minutely, very densely and rather more distinctly, the abdomen minutely feebly and sparsely, punctate; pubescence fine, short, dense, especially on the elytra; abdomen very sparsely but more coarsely pubescent. *Head* nearly as long as wide, distinctly shorter and slightly narrower than the prothorax, the neck two-thirds of the width across the eyes, the latter moderate, at one-half more than their length from the base; vertex just visibly, longitudinally impressed in the middle; antennæ long, very feebly incrassate, fully as long as the prothorax and elytra, the basal joint longer and slightly thicker than the second, the latter subcylindrical and perceptibly longer than the third, which is obconical and elongate, four to ten obconical, loosely connected, deeply concave at apex as usual, the fourth as long as wide, shorter than the fifth, tenth very slightly wider than long, eleventh rather large, fully as long as the two preceding. *Prothorax* nearly quadrate, rounded at the sides and narrowed in apical third, the apex broadly, feebly arcuate; sides feebly convergent and straight in basal two-thirds; base feebly arcuate, the angles nearly right and very pronounced; disk feebly, transversely convex, scarcely at all impressed. *Elytra* quadrate, parallel and straight at the sides, one-third wider and longer than the prothorax, the humeri exposed at base; suture narrowly impressed behind the scutellum. *Abdomen* as long as the anterior parts, distinctly narrower than the elytra, the sides parallel and straight, the first three segments with large deep impressions, the fourth scarcely impressed and much shorter than the fifth; basal segments with the raised basal part broadly emarginate posteriorly in nearly circular arc. Length 2.7 mm.; width 0.55 mm.

New York (Catskills); North Carolina (Asheville).

Readily distinguishable from those which precede by the less punctate abdomen, shorter third antennal joint and smaller eyes. I can see no sexual marks of prominence in my three specimens.

G. lineata n. sp.—Narrow, linear and depressed, rufo-piceous, shining, the abdominal apex, legs and basal parts of the antennæ pale; head and pronotum feebly reticulate, minutely, closely but not very distinctly punctate, the elytra more asperately and distinctly but scarcely more densely so, the abdomen sparsely, extremely minutely and feebly; pubescence anteriorly very short, dense, on the abdomen very sparse as usual, long and limbrate at the apices of the basal segments. *Head* large, fully as wide as the prothorax, nearly as long as wide, the neck very broad, fully three-fourths as wide; eyes

rather small, at fully three-fourths more than their length from the base; front with a feeble and posteriorly angulate flat depression, extending from the middle to the apex; antennæ long, distinctly incrassate, two-fifths as long as the body, the three basal joints gradually decreasing in length, four to ten obconical, the latter nearly one-half wider than long, eleventh well developed. *Prothorax* about as long as wide, the sides very feebly convergent and straight in basal three-fourths; apex and base equally and distinctly arcuate, the former slightly the narrower; basal angles obtuse but rather distinct; disk just visibly impressed along the median line except near the base and apex. *Elytra* quadrate, parallel and straight at the sides, one-fourth wider and longer than the prothorax; humeri narrowly exposed; disk flat, rather widely impressed on the suture near the scutellum. *Abdomen* linear, parallel and straight at the sides, distinctly narrower than the elytra, the first two segments strongly and widely, the third and fourth very feebly, transversely, impressed at base, the raised basal part emarginate in circular arc; fifth nearly one-half longer than the fourth. Length 2.4 mm.; width 0.45 mm.

Nevada (Reno).

The two specimens serving as types appear to be females. This species is quite distinct from any of those described above by the larger head, smaller eyes, more incrassate—though not much shorter—antennæ, wider neck and relatively somewhat smaller elytra.

***G. attenuata* Csy.**—Bull. Cal. Acad. Sci., I, 1885, p. 306 (Calodera).

This species is nearly similar to *lineata*, but has the antennæ shorter and much stouter and the prothorax quite distinctly wider than long. Length 2.0 mm.; width 0.45 mm.

***G. pertenuis* n. sp.**—Narrow, linear, depressed, piceous-black, the pronotum and elytra slightly paler; legs and basal parts and tip of the abdomen pale flavate; integuments highly polished, the punctuation excessively minute, sparse, the pubescence of the head and pronotum rather long, sparse, of the elytra a little shorter and closer, of the abdomen very sparse, the erect setæ sparsely bristling along the sides. *Head* rather convex, unimpressed, fully as wide as the prothorax, nearly as long as wide, the neck distinctly less than one-half as wide as the width across the eyes, the latter small, at about twice their length from the base, the basal angles broadly rounded. *Antennæ* short, scarcely longer than the head and prothorax, distinctly incrassate, the first joint a little longer and much thicker than the second, the latter as long as the next two, tenth nearly one-half wider than long, the eleventh large, rather wider than the tenth, pointed near the apex and much longer than the two preceding. *Prothorax* nearly as long as wide, broadly rounded and convergent at the sides in apical third, the sides thence feebly convergent and just visibly sinuate to the distinct basal angles; base broadly arcuate, fully three-fourths wider than the apex; disk broadly, feebly convex, even. *Elytra*

rather longer than wide, one-fourth wider and one-third longer than the prothorax, parallel and straight at the sides, the humeri distinctly exposed; suture deeply, narrowly impressed just behind the scutellum. *Abdomen* scarcely as long as the anterior parts, linear, distinctly narrower than the elytra, the sides parallel and straight; first four segments narrowly deeply and equally impressed at base, the impressions more coarsely punctate; fifth much longer than the fourth. Length 1.45 mm.; width 0.25 mm.

New Jersey.

The single specimen seems to be a female. This species is by far the most minute of the genus, and is somewhat aberrant in its sparser punctuation.

BAMONA Sharp.

A small Californian species is referred to this genus, but not without some doubt. It cannot be associated generically with *Gyronecha*, although the tarsi are four-jointed throughout and the tarsal claws similarly abruptly bent downward, for the reason that it differs in having a distinctly falagrioid habitus and in its short transverse abdominal segments; it also differs conspicuously in the structure of the sterna between the middle coxæ. The mesosternum is only very slightly produced between the coxæ and forms a very short broad and gradually depressed cusp; behind this cusp the narrow but perceptible space between the coxæ is depressed, forming a low rounded ridge, gradually regaining the level of the metasternum behind but without trace of a metasternal process defined by an acute line or bead; the coxal cavities are gradually less impressed and not well defined behind. At a very short distance behind the mesosternal cusp there appears, however, to be a fine transverse suture in the depressed ridge, and this may constitute the anterior limit of the metasternum proper. The posterior tarsi are rather long and slender, but the neck seems to be much broader and the antennæ shorter than in the Central American forms.

Although I am not sure, therefore, of the generic identity of the present species, its discovery is interesting in proving that these peculiar hygronomoid species form an important element in the Aleocharini of America, and include at least several distinct genera.

B. falliana n. sp.—Narrow, slightly convex, polished throughout, piceous-black, the antennæ black, paler at base; legs pale, brownish-flavate throughout; head finely, very sparsely punctulate; pronotum equally minutely but much more closely, evenly punctulate, each puncture having a very minute stout decumbent hair quite different from those of any other part of the body,

the punctures and peculiar vestiture abruptly and completely disappearing near all the edges; elytra and abdomen minutely sparsely and indistinctly punctulate; pubescence of the head and elytra stiff and rather long, distinct although not very dense, of the abdomen longer, the pronotum with a series of three or four long erect setæ along the lateral edges. *Head* rather longer than wide, at the eyes almost imperceptibly wider than the prothorax; sides subparallel; base transverse; angles rounded; neck two-fifths as wide as the perocular width, the eyes large, at their own length from the base; antennæ short, scarcely longer than the head and prothorax, the two basal joints equal in length, the first slightly thicker, second elongate, as long as the next two, third obconical, longer than wide, four to ten mutually almost perfectly similar, scarcely at all increasing in width, distinctly obtrapezoidal, one-half wider than long, eleventh conoidal, as long as the two preceding. *Prothorax* as long as wide, widest at apical third, where the sides are strongly rounded and somewhat prominent, thence rapidly oblique to the neck and distinctly convergent, broadly, feebly sinuate to the base; apical angles strongly deflexed, rounded; basal also deflexed, slightly obtuse but not at all rounded; base very feebly arcuate; disk perfectly even, without trace of impression. *Elytra* quadrate, about as long as wide, not quite twice as wide as the prothorax and about two-fifths longer; sides subparallel and straight; humeri very broadly exposed and transverse at base; disk feebly convex. *Abdomen* short and broad, scarcely as long as the anterior parts, narrower than the elytra but much wider than the prothorax; sides parallel, slightly convergent at the fifth segment, which is but slightly longer than the fourth; first three impressed and polished at base. *Legs* slender, the posterior tarsi slender; fully three-fourths as long as the tibiae, with the basal joint rather longer than the next two. Length 1.75 mm.; width 0.4 mm.

California (Los Angeles Co.). Mr. H. C. Fall.

This is one of the most interesting aleocharinides which has been discovered on the Pacific slope, although quite insignificant in point of size.

OLIGOTIDES.

Antennæ 10-jointed; tarsi 4-4-4-jointed.

SOMATIUM Woll.

The following species differs from the European *flavicornis* in its more convex surface, much sparser pubescence and coarser, more uneven imbricate sculpture of the elytra.

S. nugator n. sp.—Oval, convex, polished, black, the legs dark brownish-rufous; antennæ still paler throughout, head almost impunctate, remainder of the upper surface very minutely, sparsely punctate, the elytra and abdomen very coarsely imbricate, the latter becoming smooth toward tip;

pubescence rather long, stiff and sparse, subrecumbent but longer erect and bristling on the abdomen, especially beneath. *Head* small, evenly convex; eyes large, not prominent; antennæ about one-half longer than the head, the second joint longer and narrower than the first and as long as the next two, the latter not wider, five to seven gradually wider, eight and nine subequal, abruptly strongly transverse, twice as wide as long; tenth short, bluntly ogival. *Prothorax* twice as wide as long, the sides strongly divergent from apex to base, evenly arcuate and continuous in curvature with the sides of the elytra; base broadly evenly and strongly arcuate throughout; disk sparsely feebly, subasperately punctate. *Elytra* slightly wider than the base of the prothorax, one-half longer than the latter, two-thirds wider than long, broadly, angularly emarginate at apex; disk evenly convex. *Abdomen* short, as broad at base as the elytra; sides convergent and feebly arcuate; fifth segment longer than the fourth. Legs short. Length 0.9 mm.; width 0.5 mm.

Pennsylvania.

The club of the antennæ is stouter than in *flavicornis*, and the eighth joint is much more transverse. The single type has the abdomen contracted.

S. claviger n. sp.—Stout, suboval, convex, strongly shining, black throughout, the legs piceous; antennæ pale toward base, the large club piceous-black; head minutely, sparsely, the pronotum a little more strongly, asperately and rather closely punctate; elytra strongly and closely imbricate; abdomen more coarsely imbricate, the lines finer, the sculpture of the fifth tergite extending very nearly to the apex; pubescence rather coarse, moderate in length and density. *Head* strongly deflexed, evenly convex, wider than long and fully three-fifths as wide as the prothorax; eyes large, attaining the prothorax; antennæ one-half longer than the head, the second joint as wide as the first and a little longer, as long as the third and fourth, third slightly elongate, fourth scarcely longer than wide, fifth but little thicker, quadrate, sixth decidedly thicker, one-third wider than long, seventh still much wider, transverse, sixth to ninth rapidly and evenly increasing in width, the latter more than twice as wide as long, tenth as wide as long, very obtuse, as long as the two preceding, ninth joint more than twice as wide as the first. *Prothorax* fully twice as wide as long, the sides arcuate and strongly convergent from base to apex; base very strongly, broadly arcuate, fully three-fourths wider than the apex; disk strongly, evenly convex. *Elytra* as wide as the base of the prothorax, much longer than the latter; sides feebly convergent and arcuate toward base; disk slightly longitudinally prominent along the sides toward apex. *Abdomen*, when contracted, scarcely as long as wide, subquadrate, shorter than the anterior parts, slightly narrower than the elytra, the sides feebly convergent toward apex; border moderate; fifth segment longer than the fourth. Tarsi slender. Length 1.0 mm.; width 0.65 mm.

Iowa (Keokuk).

This species is larger and still broader than *nugator*, and differs

in its more finely and closely imbricated elytra, and still larger and longer but more gradually formed antennal club. Two specimens.

8. oviforme n. sp.—Broadly oval, convex, polished, black, the legs piceo-testaceous; antennæ flavate; punctures of the head and pronotum fine, moderately close, even; elytra and abdomen with imbricate sculpture; pubescence moderate in length, fuscous, rather conspicuous. Head vertical, not visible from above, the eyes large, attaining the base; antennæ short, one-half longer than the head, the second joint longer than the first and longer than the next two combined, third longer than the fourth and nearly twice as long as wide, three to seven subequal in width, the latter somewhat transverse, club abrupt, parallel, loose, the ninth joint one-half wider than long. Prothorax small, about twice as wide as long; base strongly arcuate; apical angles deflexed and right, narrowly rounded; basal almost obliterated; disk evenly convex. Elytra together broadly emarginate at base and equally broadly, triangularly emarginate at apex, at apical third much wider than the prothorax, one-third longer; sides strongly arcuate toward base, continuous in curvature with the prothorax. Abdomen, when contracted, a little wider than long, about as long as the elytra, subcontinuous in outline with the latter, conical, the sides nearly straight; fifth segment as long as the two preceding together. Legs slender, the posterior tarsi much shorter than the tibiae. Length 0.75 mm.; width 0.5 mm.

California (Los Angeles Co.).

Differs from the preceding two species in its more evenly elliptical outline, more abruptly formed antennal club and longer fifth ventral segment.

NOTE.

The species described by Say as *Allochra simplicicollis* (Trans. Am. Phil. Soc., VI, p. 155), is identical with *Microglotta suturalis* Sahlb.

OXYTELINI.

OXYTELUS Grav.

Considering the general homogeneity of facies in *Oxytelus*, there is an unusual amount of variation in the structure of important organs, such as the mentum, and especially a very great amount of diversity in the male sexual modifications; these may manifest themselves at either end of the body, sometimes virtually at the head only, in other species at the abdominal apex, but occasionally also quite noticeably at both extremities. The females are often very similar among themselves, and it is frequently almost impos-

sible to accurately identify an isolated example of that sex. I have consequently drawn all the characters of the following table and subsequent descriptions from the male alone, when that sex could be examined.

In the Oxytelini true ocelli, such as characterize the Omalini, do not exist, but in Oxytelus their place is taken by two strongly setigerous punctures, occupying very nearly the same position at the base of the vertex. I have not noticed these punctures in Trogophleus, nor in Aploderus, and they may possibly be peculiar to Oxytelus.

Most of the species are subarctic, but those in which the front is spinose or spiculate in the male appear to be more partial to tropical conditions, and are abundant in Central America. Those known to me at present may be distinguished by the following characters:—

- Eyes large in both sexes, the tempora subobsolete; seventh ventral plate of the male with two deep remote and parallel-sided fissures, the median lobe truncate, not projecting beyond the lateral parts and with its edge slightly thickened in the middle.....**sculptus**
- Eyes moderate, the tempora always large and well developed.....2
- 2—Frontal margin armed in the male with a short stout acuminate or triangular process.....3
- Frontal margin not armed in the male.....4
- 3—Frontal process simple and finely acute at apex; head large, subquadrate; elytra longer than the prothorax.
- Eyes at their own length from the basal angles; elytra closely punctate; mandibles arcuate.....**insignitus**
- Eyes at much more than their own length from the basal angles; elytra more coarsely and sparsely punctate; mandibles almost straight, arcuate at apex.....**munitus**
- Frontal process notched at apex; head smaller, strongly transverse.
- breviceps**
- 4—Male with the seventh ventral plate abruptly produced in the middle in the form of a flattened ligula, which is generally subtruncate at tip.....5
- Male with the seventh ventral bisinuate or biemarginate at tip, the median lobe rounded or broadly angular, sometimes obsolete.....10
- 5—Pronotum with three longitudinal impressed grooves.....6
- Pronotum even, without longitudinal impressions.....9
- 6—Vertex with two grooves convergent from the base.....**convergens**
- Vertex with the grooves parallel.....7
- Vertex without impressed grooves.....8
- 7—Sides of the prothorax sinuate near the basal angles, the latter more or less prominent.

- Antennæ moderately incrassate; joints seven to ten equal, eleventh small, not as long as the two preceding; basal joint slender, strongly constricted near the apex..... **fuscipennis**
- Antennæ more incrassate; joints seven to ten increasing in width, the eleventh large, as long as the two preceding; basal joint stouter, cylindrical, not constricted..... **nimius**
- Sides of the prothorax without trace of sinuation before the basal angles, the latter obtuse but generally not rounded, not at all prominent.
- Tempora more prominent than the eyes; posterior tarsi long, fully two-thirds as long as the tibiæ..... **montanus**
- Tempora not more prominent than the eyes; posterior tarsi scarcely more than one-half as long as the tibiæ..... **invenustus**
- 8—Pronotal sulci very feeble..... **pennsylvanicus**
- 9—Vertex not at all impressed; upper surface smooth and even.
incolumis
- 10—Sides of the prothorax more or less distinctly crenulate, antennæ rather long and slender.
- Front flattened and strongly, densely granulose and opaque between the antennal prominences; eyes moderate in size..... **rugosus**
- Front finely, sparsely punctate and polished; eyes very small..... **niger**
- Sides of the prothorax not crenulate..... 11
- 11—Sculpture coarse and moderately dense, rather small species..... 12
- Sculpture very finely, longitudinally strigose; species still more minute..... 15
- 12—Prothorax moderately transverse, with the sides parallel; abdomen very strongly reticulate and dull toward base..... **placuosus**
- Prothorax strongly transverse, with the sides convergent behind..... 13
- 13—Sides of the prothorax distinctly emarginate just before the basal angles; median sulcus of the pronotum alone distinct..... **densus**
- Sides of the prothorax not emarginate near the base; pronotum with three more or less distinct longitudinal impressions..... 14
- 14—Sculpture very dense; lustre dull, the abdomen reticulate and but feebly shining; antennæ rather more slender and less incrassate.
alpicola
- Sculpture not so dense, except on the elytra of some species, the lustre somewhat shining; abdomen always polished; antennæ more incrassate.
- Elytra distinctly impressed near the suture toward base; elytral punctures distinct, not forming long rugæ at least toward base..... **nitidulus**
- Elytra very narrowly impressed along the suture near the base, the punctures indistinct, forming long coarse parallel rugæ, the elytra shorter and more transverse than in *nitidulus*..... **suspectus**
- Elytra not in the least impressed along the suture, perfectly flat, the punctures indistinct, forming long fine anastomosing rugæ..... **robustus**
- 15—Antennæ longer, slender, the outer joints but slightly wider than long; surface more shining and less densely strigilate..... **vegrandis**
- Antennæ short, stouter, strongly incrassate, the outer joints strongly transverse; lustre very dull.

Elytra but slightly longer than the prothorax; abdomen polished, very remotely and obsoletely punctulate **nanus**

exiguus

Elytra much longer than the prothorax; form broader, the abdomen strongly reticulate, finely, more densely and subgranularly punctulate.

tetracarinatus

It will be observed that the species are not quite as abundant as in the European fauna, but others will probably be discovered, as these obscure little insects are seldom collected. Four of the twenty-three are common to the two continents.

O. sculptus Grav.—Mon., p. 191; *marens* Mels.: Proc. Ac. Phila., II, p. 42; *antennatus* Steph.; *longicornis* Mann.; *testaceipennis* Fairm.

The head in both sexes is small, narrower than the prothorax, with a single median impressed channel toward base and large eyes. The prothorax is moderately transverse, with three distinct impressed channels, the elytra increasing in width from base to apex, a little wider and much longer than the prothorax, rather coarsely, subrugosely sculptured. The mentum has a fine arcuate discal groove extending from one basal angle to the other. Length 3.4–4.0 mm.; width 1.0–1.1 mm.

This species is represented in my cabinet from Iowa, Wisconsin, California and Europe. The European and American forms do not differ at all. The male appears to be much less abundant than the female.

O. insignitus Grav.—Mon., p. 188; *americanus* Mann.: Brachél., p. 48.

In the male of this species the head is large, slightly wider than long, with the eyes at their own length from the basal angles, the antennæ about one-third longer than the head, exclusive of the mandibles, the latter very long, decussate, almost evenly arcuate and acutely pointed, the frontal porrect process acute and simple. In the female the head is very much smaller, transverse, with the frontal margin not armed, the eyes about equally large but almost attaining the base, the antennæ fully one-half longer than the head and the mandibles much smaller, thicker and more strongly arcuate. The mandibular tooth is situated at nearly the same distance from the base in both sexes, but is very much nearer the apex in the female. In the male the head, prothorax and elytra are nearly equal in width and the elytra are distinctly longer than the prothorax, strongly and rather closely punctured. It occurs through-

out the Atlantic States from New York to Texas and far into Mexico. Length 2.4-3.0 mm.; width 0.75-0.9 mm.

O. munitus n. sp.—Parallel, stout, flavate, the pronotum darker, rufescent; head and abdomen still darker, piceous; antennæ black, pale toward base; mandibles and legs pale; integuments polished throughout; pubescence very sparse, the abdominal setæ rather long; head impunctate and polished, except near and at the sides, where there are some coarse elongated antrugi-form punctures, the under surface impunctate; pronotum coarsely, very sparsely, rugosely, the elytra also coarsely sparsely and unevenly punctate; abdomen minutely, sparsely punctulate. *Head* very large, as wide as the prothorax, slightly wider than long, with a very large uneven smooth impression at each side at about lateral third, the frontal margin abruptly prolonged in a short acute porrect spine; eyes moderately convex, at very much more than their own length from the basal angles; tempora behind the eyes nearly straight and feebly divergent, then broadly rounded to the neck which is three-fifths as wide as the head; mandibles very long, nearly straight, arcuate at apex, toothed near the base; antennæ only slightly longer than the head exclusive of the mandibles, the basal joint large, stout, constricted at base, nearly as long as the next four, second a little shorter and stouter than the third, which is longer than the fourth, the latter slightly elongate-oval, five to eight increasing rapidly in width, eight to ten equal, moderately transverse, eleventh small, conoidal, not as long or wide as the preceding two. *Prothorax* short and transverse, nearly twice as wide as long, the sides strongly convergent from apical fifth to the basal angles, which are very obtuse and nearly obsolete, the edges feebly crenulate and with a slight sinuation just before the basal angles; apex broadly bisinuate; apical angles well marked; disk strongly trisulcate, broadly impressed toward the sides. *Elytra* two-fifths wider than long, equal in width to the prothorax and fully two-fifths longer; sides subparallel, feebly arcuate; humeri broadly, transversely exposed at base; suture broadly, strongly margined; disk of each broadly impressed along the middle. *Abdomen* short, nearly as wide as the elytra, parallel, the border thin and deep. Length 3.0 mm.; width 0.8 mm.

Pennsylvania.

This species is allied to *insignitus*, and resembles it strongly in the general form of the head and simple acute apex of the frontal process, but differs in the straight mandibles, eyes more distant from the basal angles and in the much coarser and sparser sculpture of the pronotum and elytra; the oblique rugæ near the base of the head toward the sides in *insignitus* are wanting in *munitus*. The description is taken from the male, which is the only sex that I have seen.

O. breviceps n. sp.—Moderately broad, parallel, dark, brownish-testaceous; mandibles and palpi concolorous; elytra and legs flavate; antennæ

black, flavate at base; head blackish; abdomen dark piceous-brown, the apices of the segments paler. *Head*, exclusive of the mandibles, one-half wider than long, a little narrower than the prothorax, finely reticulate and alutaceous, minutely, sparsely punctate, strongly, longitudinally rugose toward the sides, broadly impressed, the impression as usual very deep within the antennal tubercles; eyes moderate, at less than their own length from the basal angles, the tempora feebly divergent behind them; basal angles broadly rounded; mandibles moderate, strongly, evenly arcuate, decussate; frontal process notched at tip; antennæ fully one-half longer than the head, nearly as in *insignitus* and *munus*. *Prothorax* fully three-fourths wider than long, the apical angles nearly right, distinct; sides thence nearly straight, feebly divergent for a short distance, then rather strongly convergent to the broadly rounded basal angles; edges finely crenulate; disk strongly trisulcate, broadly impressed laterally, rather closely, strongly punctate. *Elytra* very short, strongly transverse, at base as wide as the prothorax, at apex a little wider, the suture not longer than the prothorax; humeri transverse at base; disk scarcely impressed, strongly distinctly and closely punctate. *Abdomen* parallel, very slightly narrower than the elytra, minutely feebly and sparsely punctate. Length (extended) 3.0-3.5 mm.; width 0.7-0.9 mm.

New York (Catskill Mts.).

The description is taken from three males, which are perfectly similar among themselves, except that the notch in the tip of the frontal process varies in size, in some specimens being very narrow. The female greatly resembles the female of *insignitus*, except that the eyes are somewhat less basal, the elytra shorter and the neck a little wider.

O. convergens Lec.—Trans. Am. Ent. Soc., VI, 1877, p. 236.

Head in the male large, at base rather wider than the prothorax, coarsely, rugosely punctate, with a large apical concavity, the eyes convex, at their own length from the basal angles, the tempora strongly divergent behind the eyes, the frontal margin slightly produced in a short broad truncate process; antennæ a little longer than the head, the tenth joint slightly wider than long. *Prothorax* nearly twice as wide as long, deeply trisulcate, broadly impressed laterally, strongly, rather closely punctate. *Elytra* a little longer and wider than the prothorax, strongly, moderately closely punctate. Length 3.8 mm.; width 1.1 mm. Georgia and Florida.

The mentum is as usual composed of three parts, the basal limited by a deep groove, trapezoidal in form, extending from one basal angle to the other and advancing anteriorly more than one-half the entire length, the apical consisting of a narrow transverse

semi-membranous margin. In the male the sixth ventral plate has two small feeble teeth on the apical edge, separated by one-third of the total width; the seventh is prolonged in the middle in a liguliform process which is as long as wide, gradually narrowed toward the truncate apex, the surface of the segment perfectly flat and even throughout, except a very feeble swelling at the tip of the ligula.

O. fuscipennis Mann.—Bull. Mosc., 1843, II, p. 233.

Black, the elytra rufescent; legs pale brown; surface highly polished, the punctures strong but, rather sparse, closer and feebly subconfluent on the elytra. The head in the male is large, about as wide as the prothorax, with a large deep apical concavity, the middle of the frontal edge broadly sinuate, the sinuation limited by rather prominent angular projections; eyes rather small, at nearly twice their length from the neck, the tempora evenly, strongly arcuate from the eyes to the neck; antennae a little longer than the head, the outer joints strongly transverse. Prothorax not twice as wide as long, deeply trisulcate, also longitudinally, obliquely impressed toward the sides. Elytra a little wider and distinctly longer than the prothorax. Length 4.0 mm.; width 1.2 mm. Alaska to California.

The sixth ventral is not modified, the seventh abruptly produced in the middle in a gradually narrowed ligula, a little longer than wide, subtruncate at apex, the surface of the segment thrown up in the middle at the base of the ligula in a short transverse ridge which is steep behind, gradually declivous anteriorly, the summit of the ridge scarcely one-half wider than the apex of the ligula, with its lateral limits very acute, each bearing a stiff seta; surface of the ligula perfectly flat throughout. The transverse groove of the mentum attains the middle of the length, is parabolic in form and interrupted in the middle.

In connection with this species, I do not understand the reference by Mr. Fauvel to *laqueatus* Marsh., as the sexual characters in my representative of that species are altogether different, nor to *luteipennis* Erichs., by Dr. Sharp in the "Biologia," as that species is stated by Erichson to have the sixth ventral plate bituberculate at apex. I think there can be no doubt that I have correctly identified Mannerheim's species, as there seems to be none other at all like it found in Alaska. There is a large series in my cabinet. Dr. LeConte confounded with this species one or more eastern

forms, and the indicated sexual characters of the male (l. c., p. 235) must surely have been inadvertently taken from a specimen of *O. sculptus*.

O. nimius n. sp.—Stout, black, polished, the elytra dark rufous; legs and basal parts of the antennæ pale; integuments glabrous, with a few erect stiff setæ, the two occipital distinct. *Head* just visibly narrower than the prothorax, nearly as long as wide, strongly but rather sparsely punctate, broadly concave anteriorly, the frontal margin very broadly, feebly produced and slightly sinuate, with the lateral angles obtuse; eyes convex; tempora strongly arcuate from the eye to the neck, one-half longer than the former and equally prominent; neck two-thirds as wide as the head; antennæ one-third longer than the head, the outer joints rapidly incrassate, basal joint long, stout and cylindrical. *Prothorax* not quite twice as wide as long, widest scarcely before the middle; sides broadly rounded, convergent and sinuate posteriorly, the basal angles prominent; base arcuate; apex truncate, feebly sinuate laterally; disk strongly trisulcate, strongly, longitudinally impressed sublaterally; strongly but sparsely punctate. *Elytra* a little wider and distinctly longer than the prothorax; sides feebly divergent; humeri exposed; base broadly emarginate in circular arc; disk flat, coarsely, closely punctate, the punctures becoming slightly confluent along the middle of each. *Abdomen* slightly narrower than the elytra, almost impunctate, minutely, sparsely punctulate toward base. Length 5.0 mm.; width 1.25 mm.

Pennsylvania.

The male from which the description is drawn, has two extremely obsolete dentiform subapical elevations on the sixth ventral plate, separated by one-fifth of the entire width, the seventh abruptly produced in the middle in a short gradually narrowed ligula, much shorter than wide, with its apex slightly thickened, beveled and transversely truncate, the surface of the segment and ligula perfectly even and flat throughout, the eighth narrowly, deeply impressed throughout the length along the median line.

This species is allied to *fuscipennis*, but differs in the male sexual characters and antennal structure.

O. montanus n. sp.—Stout, black, glabrous, highly polished throughout, the elytra scarcely visibly rufo-piceous; legs piceous-black, the tarsi paler; antennæ scarcely paler at base. *Head* slightly narrower than the prothorax, distinctly shorter than wide, strongly, not densely punctate, the mandibles stout, arcuate, the apical concavity large, transverse; frontal margin very broadly, feebly produced, distinctly sinuate, with rather prominent angles; eyes moderate, prominent; tempora strongly arcuate from the eyes to the neck, not twice as long as the eye and rather more prominent; antennæ one-half longer than the head, strongly incrassate, the eleventh

joint barely as long or wide as the preceding two, basal joint slender, feebly constricted toward apex. *Prothorax* twice as wide as long, the sides broadly, evenly arcuate from apex to base, parallel nearly to the middle, then convergent to the basal angles which are obtuse and scarcely evident; base broadly arcuate; apex truncate, the sinuations distant and very feeble; disk strongly trisulcate, broadly impressed toward the sides, strongly but not densely punctate throughout. *Elytra* as wide as the prothorax and distinctly longer; sides almost parallel; humeri feebly exposed; disk strongly, evenly, not densely punctate throughout, the punctures tending to unite longitudinally. *Abdomen* a little narrower than the elytra; sides parallel and slightly arcuate; punctures minute, rather numerous toward base, very remote and obsolete toward apex. Length 3.6-4.0 mm.; width 1.1-1.2 mm.

California (Lake Tahoe).

This species is allied to *fuscipennis*, differing in the more strongly and less sparsely punctured integuments, dark elytra and legs, rounded sides of the prothorax with nearly obsolete basal angles, and in the male sexual characters. The sixth ventral plate is not modified, the seventh abruptly produced in the middle in a very short gradually narrowed ligula, much wider than long, with the apex feebly sinuato-truncate, the angles rounded, its surface tumid and widely beveled toward apex, the surface of the segment with two approximate subconfluent setigerous tubercles at some distance anterior to the base of the ligula, and distant by less than the apical width of the latter.

***O. invenustus* n. sp.**—Stout, black, highly polished and glabrous, the elytra dark piceous; legs and basal joint of the antennæ pale; sparse erect setæ long and distinct. *Head* small, wider than long, distinctly narrower than the prothorax, deeply concave at apex, the median parts of the clypeus flat, with the apical margin broadly sinuate and biangulate; punctures strong but sparse; eyes moderate, convex; tempora strongly, evenly arcuate to the neck, but slightly longer than the eye and not more prominent; antennæ one-half longer than the head, strongly incrassate, the first joint long, slightly contorted and broadly constricted near the apex; tenth scarcely one-third wider than long, eleventh small, not as long as the two preceding. *Prothorax* not twice as wide as long, widest at the middle, the sides parallel, evenly, broadly arcuate throughout; base and apex very nearly equal; basal angles broadly obtuse but not blunt; disk strongly trisulcate, broadly and strongly impressed sublaterally, strongly but rather sparsely punctate, the punctures fine on the median ridges. *Elytra* distinctly longer than the prothorax, at base equal in width, at apex a little wider; disk strongly but rather sparsely, nearly evenly punctate. *Abdomen* distinctly narrower than the elytra; sides parallel, feebly arcuate toward apex; surface subimpunctate; border rather deep, moderately thin. Length 3.7 mm.; width 1.1 mm.

Maryland.

The small head may be exceptional and an individual feature in the unique type, for it varies a good deal in *fuscipennis*; I find, however, that the sexual characters at the ventral apex are very nearly constant, whatever may be the size of the head. The present species is allied closely to *fuscipennis*, but differs in having two small feeble tubercles at the apex of the sixth ventral plate, separated mutually by only one-eighth or one-tenth of the entire width, also in the parallel sides of the prothorax. The seventh ventral is abruptly produced in a narrow, gradually almost parallel, narrowly truncate ligula, longer than wide, with the surface at apex broadly and feebly beveled, the surface of the segment at the base of the ligula acutely and confluent bituberculate and bisetigerous. The transverse groove of the mentum is entire and in the form of a circular arc.

O. pennsylvanicus Erichs.—Gen. Staph., p. 792; Lec.: Trans. Am. Ent. Soc., VI, p. 235.

Dark rufo-piceous, the elytra, legs and basal parts of the antennæ pale, brownish-flavate; surface polished, glabrous. Head scarcely visibly narrower than the prothorax, transverse, the frontal margin not produced, broadly arcuate in the middle; antennæ not quite as long as the head and prothorax, moderately incrassate. Prothorax three-fourths wider than long, widest at the middle, the sides almost evenly arcuate; base and apex subequal; disk finely, sparsely punctate like the head. Elytra slightly wider and distinctly longer than the prothorax, rather sparsely, not coarsely punctate, a broad median area of each feebly impressed and more closely punctured. Abdomen parallel, distinctly narrower than the elytra, subimpunctate. Length 3.4–4.4 mm.; width 0.75–0.95 mm. New York to the Gulf States.

The sixth ventral plate of the male has at apex two small tubercles, distant by one-sixth of the entire width; the seventh is feebly produced in a gradually narrowed, short flat ligula, much wider than long, with its apex emarginate, and the surface of the segment at the base of the ligula is obtusely elevated in the form of a short, transverse, anteriorly arcuate ridge, the highest point of which is the middle and not the setigerous lateral extremities as in *fuscipennis* and its allies. The arcuate line of the mentum is very fine and is subinterrupted in the middle. The head in the female is much smaller than in the male, with the eyes relatively larger.

O. incolumis Erichs.—Gen. Staph., p. 791; Lec.: l. c., p. 235.

Head black; prothorax and abdomen dark brownish-rufous; elytra and legs pale flavate; antennæ rufo-fuscous, slightly paler toward base; integuments polished, glabrous, very finely, sparsely punctate, the elytra a little more coarsely and deeply, the abdomen finely punctate and sparsely clothed with short, stiff pubescence. Head and prothorax without longitudinal grooves, the antennæ moderately incrassate, the tenth joint in the male strongly transverse, the eleventh unusually long, equalling the preceding three. Elytra equal in length and width to the prothorax. Abdomen parallel, a little narrower than the elytra, the border rather thin and deep. Length 3.5 mm.; width 1.0 mm. Southern States.

One of the most distinct and isolated of our species, easily known by the characters given above and by the parallel and feebly arcuate sides of the prothorax. The sixth ventral of the male has at apex two feeble, broadly cuspid tubercles, separated by between one-sixth and one-eighth of the width, the seventh produced in a flat ligula, a little wider than long, with the sides rapidly convergent to the feebly sinuato-truncate apex, the surface not beveled at its apex, and the surface of the segment perfectly flat and even throughout.

O. rugosus Fabr.—Syst. Ent., p. 267; *basalis* Mels.: Proc. Ac. Nat. Sci., Phila., II, p. 41; *rugulosus* Harris nec Say.

This fine species is too well known to need extended notice; the American specimens do not differ at all from the European, except perhaps in the less finely substrigose sculpture of the head. The head is large in the male, with the antennæ as long as the head and prothorax, the outer joints not at all transverse and the eleventh much shorter than the two preceding. Prothorax arcuately narrowed from near the apex, as wide as the elytra and fully three-fourths as long. Abdomen minutely granulate-reticulate and dull. Length 4.2–5.0 mm.; width 1.0–1.1 mm. United States and Europe. I have not seen it, however, from the Pacific Coast.

The mentum differs greatly from that of *fuscipennis* and the other allied species preceding, having no trace of the transverse groove; it is rectangular, twice as wide as long, finely, densely granulate-reticulate and dull, with a wide membranous apical margin. The male sexual characters are also of a different type, the fifth ventral having a strong porrect median tooth, the sixth a

feebly elevated bisinuate subapical elevation, and the seventh is deeply, almost equally and angularly biemarginate.

O. niger Lec.—Trans. Am. Ent. Soc., VI, 1877, p. 235.

Parallel, rather narrow, somewhat convex, polished, black throughout, the antennæ not at all paler at base; legs dark reddish-brown. Head slightly transverse, convex, a little narrower than the prothorax, impressed only at the inner side of the antennal prominences, the frontal margin finely beaded, transversely truncate; punctures fine but strong, not dense; eyes very small; tempora large, rounded, more prominent than the eye; antennæ as long as the head and prothorax, feebly incrassate, the basal joint long, cylindrical, narrowed gradually toward base, tenth very slightly transverse, eleventh nearly as long as the preceding two. Prothorax two-thirds wider than long, narrowed behind from near the apex, trisulcate, the median sulcus deeper, scarcely impressed toward the sides, not very coarsely but strongly, sparsely punctate. Elytra equal in width to the prothorax but not quite as long, rather coarsely but sparsely punctate, somewhat uneven. Abdomen very remotely and obsoletely punctulate, rather coarsely so and distinctly pubescent beneath. Length 3.3 mm.; width 0.75 mm. California (San Francisco and Lake Tahoe); British Columbia—LeConte.

The sixth ventral plate of the male is obtusely tuberculate at its centre, and also has, on the disk near the posterior edge, two small erect very approximate tubercles arranged transversely, the seventh broadly biemarginate, the median lobe broadly rounded, the eighth not longitudinally impressed. The mentum is transverse, shining though transversely rugulose, impressed along the basal margin, and with the usual pale semi-membranous apical piece.

O. placusinus Lec.—Trans. Am. Ent. Soc., VI, 1877, p. 237.

Pale reddish-brown throughout, the head and abdomen more piceous but only slightly darker; punctures rather coarse, very dense, forming long anastomosing rugæ, the depressed flat front of the head between the antennal prominences shining, almost impunctate; tergum subimpunctate but strongly reticulate and dull toward base; integuments glabrous, the tempora, and especially the venter, distinctly pubescent. Head narrower than the prothorax, as long as wide, subquadrate; eyes small, convex, at the middle; antennæ feebly incrassate, one-half longer than the head.

Prothorax rectangular, one-half wider than long, the sides parallel, very feebly arcuate; median groove feeble, the others almost completely obsolete. Elytra distinctly wider and longer than the prothorax, flat. Length 2.5 mm.; width 0.75 mm. District of Columbia.

Of this distinct and myrmecophilous species I have only seen the female. The mentum is smooth and polished, with a transverse, feebly arcuate broad and irregularly eroded subbasal groove, and the usual membranous apical margin.

O. densus n. sp.—Parallel, rather narrow, strongly shining, glabrous, the tergum with very minute sparse hairs, the venter minutely and extremely remotely pubescent; pronotum rufous; elytra darker, piceous; head and abdomen black; legs pale flavate; antennæ blackish, pale toward base; punctures throughout the head, pronotum and elytra rather coarse, very dense, subcoalescent; separated longitudinally by anastomosing rugæ, the front between the antennal prominences shining and subimpunctate; abdomen polished throughout, very minutely remotely and obsoletely punctulate. *Head* very slightly narrower than the prothorax, a little wider than long, the occiput feebly, remotely biimpressed at base only; eyes small, convex, at one-half more than their own length from the basal angles; tempora nearly straight and parallel behind them to the rounded basal angles, thence subtransverse to the neck; antennæ nearly as long as the head and prothorax, the basal joint cylindrical, as long as the next three, second much stouter than the third, outer joints moderately incrassate, tenth one-half wider than long, eleventh as wide and long as the two preceding, ogival. *Prothorax* nearly twice as wide as long, widest near apical third, the sides parallel, broadly, evenly arcuate from the apex to the antebasal notch, the latter distinct; base narrower than the apex, arcuate, the latter truncate; disk unusually convex toward the middle, the median groove deep, the others obsolete, not impressed toward the sides. *Elytra* slightly wider and much longer than the prothorax; sides divergent, broadly arcuate behind; humeri exposed; disk flat. *Abdomen* a little narrower than the elytra; sides parallel; border moderately deep, rather thin toward base, gradually very thin behind the middle. Length 1.9–2.1 mm.; width 0.5 mm.

Maryland; Texas.

Possibly also myrmecophilous, somewhat resembling *placuinus* but much smaller, with the abdomen polished, much less pubescent beneath, and the prothorax short, narrowed and laterally emarginate near the base. The female has the head smaller and shorter and the eyes relatively larger, situated at not more than their own length from the base. In the male the seventh ventral plate is broadly bisinuate at apex, the median lobe feeble but obtusely an-

gulate, the eighth not distinctly impressed. The mentum is nearly as in *placuosus*, but with a deeper, more even, feebly arcuate and unusually coarse subbasal groove. Numerous specimens.

O. alpicola n. sp. (Fauvel MS.)—Broad, flat above, dull, very densely sculptured, black throughout, the antennæ slightly paler toward base; legs dark rufo-testaceous; integuments deeply, densely but not very coarsely punctate, the punctures separated by longitudinally anastomosing rugæ throughout, the small depressed clypeus between the antennal prominences more feebly sculptured and somewhat shining; abdomen coarsely, strongly reticulate and dull, feebly, sparsely punctate and sparsely clothed with short hairs; which are more distinct but not at all closer on the polished under surface. *Head* subquadrate, nearly as long as wide, quite distinctly narrower than the prothorax, longitudinally trisulcate, the median impression narrow and distinct, the lateral broad and feebler; eyes small, at fully one-half more than their own length from the basal angles; tempora divergent and nearly straight behind them, broadly rounded behind, becoming transverse near the neck, which is narrow, only three-fifths as wide as the head; antennæ gradually, moderately incrassate, scarcely one-half longer than the head, the basal joint as long as the next three, second longer and thicker than the third, tenth one-half wider than long, eleventh fully as wide but not quite as long as the preceding two, obtusely ogival. *Prothorax* about twice as wide as long, the sides parallel and feebly arcuate, becoming strongly convergent in basal half, the basal angles very obtuse, almost obliterated; disk trisulcate, the median sulcus distinct and entire, the lateral partial and broadly impressed, scarcely at all impressed toward the sides. *Elytra* equal in width to the prothorax and nearly one-half longer, one-third wider than long; sides subparallel, feebly arcuate; humeri slightly exposed; disk flat, not at all impressed at the suture near the base. *Abdomen* subequal in width to the elytra. Length 2.1 mm.; width 0.7 mm.

Colorado.

The male is the only sex examined; it has very feeble abdominal characters, the seventh ventral plate being transversely truncate throughout its width, shorter than the dorsal plate, the infolded sides of which are visible laterally beyond its apex. The mentum has no groove, but a depressed basal area, extending beyond the middle and bounded anteriorly by an arcuate line from angle to angle, which is evenly, transversely rugose; anterior part polished, devoid of sculpture; apical membranous margin fine.

O. nitidulus Grav.—Micr., p. 107; *punctatus* Lec.: Tr. Am. Ent. Soc., VI, p. 236; *rugulosus* Gemm. et Har. nec Say.

Elongate, slender, parallel and rather depressed, shining, strongly but not densely punctate, black, the legs pale; elytra rufo-testaceous,

generally more or less infumate toward base. Head in the male nearly as wide as the prothorax, obsoletely trisulcate, the eyes at their own length from the basal angles, the tempora slightly divergent behind them and a little more prominent. Prothorax trisulcate, the median sulcus deep and narrow, the lateral broad and very feeble, also broadly impressed toward the sides. Elytra a little wider and distinctly longer than the prothorax. Length 2.1-2.9 mm.; width 0.6 mm. Pacific Coast and Siberia to Western Europe.

The male seems to be much less abundant than the female and has rather feeble sexual modifications, the sixth ventral plate being broadly and just visibly sinuate toward the middle, and the seventh moderately bisinuate. The groove of the mentum is feebly arcuate, very deep and somewhat uneven. A male which I took in the Sta. Clara Valley, California, has longer elytra, at least one-half longer than the prothorax, but does not differ much otherwise.

According to Mr. Fauvel the Mexican *rugulosus* of Say and *carbonellus* Solksy, are identical.

O. suspectus n. sp.—*O. nitidulus* Lec. nec Grav.: Trans. Am. Ent. Soc., VI, p. 237.—Parallel, polished, black, the elytra and legs pale brownish-testaceous; antennæ piceous toward base; integuments glabrous; the venter remotely, coarsely pubescent. Head very nearly as wide as the prothorax, slightly wider than long, coarsely, closely punctate laterally, finely, feebly so toward the middle, the subquadrate clypeus convex and scarcely at all punctured, finely impressed along the middle posteriorly to the base and with two distant impressions at the base of the occiput; eyes moderate, at their own length from the basal angles, the latter broadly rounded to the neck, a little more prominent than the eyes; neck two-thirds as wide as the head; antennæ as long as the head and prothorax, rather strongly incrassate and perfoliate, the tenth joint not quite twice as wide as long, eleventh small, conoidal, not as wide as the tenth and shorter than the two preceding. Prothorax strongly, closely, somewhat longitudinally punctate, three-fourths wider than long, widest at apical third; sides evenly rounded anteriorly, becoming gradually distinctly convergent and straight behind, the basal angles obtuse but distinct; base feebly arcuate, narrower than the subtruncate apex; disk trisulcate, the median sulcus deep and distinct, the lateral broad and feeble, also impressed toward the sides. Elytra a little wider and longer than the prothorax, transverse, flat, the sides feebly divergent; humeri exposed; disk of each very broadly, feebly impressed along the middle; punctures strong but rather fine, longitudinally confluent, separated by fine close anastomosing rugæ. Abdomen slightly narrower than the elytra, parallel, polished. Length 1.6-2.0 mm.; width 0.5-0.55 mm.

New York; North Carolina; Nebraska.

The female does not differ greatly, but has the head distinctly smaller. The sixth ventral plate of the male is not sinuate at apex, the seventh narrowly and feebly bisinuate in the middle at apex, the median lobe more advanced, small and broadly subangulate. The mental groove is coarse and deep. This species is readily distinguishable from *nitidulus* Grav., by its smaller size and much finer closer and aciculate sculpture of the elytra. It unquestionably does occur with ants, but I believe only occasionally, as I have found it in localities which were apparently not connected in any way with their nests.

O. sobrinus Lec.—Trans. Am. Ent. Soc., VI, 1877, p. 237.

Rather broad, depressed, moderately shining, black, the elytra with a slight piceous tinge; legs paler, piceo-testaceous; antennae scarcely at all paler at base. Head feebly trisulcate, strongly punctate, distinctly narrower than the prothorax, the eyes well developed, at their own length from the basal angles, the tempora parallel, not at all more prominent than the eyes; antennae strongly incrassate, the last joint not quite as long as the two preceding. Prothorax nearly as in *nitidulus*, but more densely sculptured. Elytra distinctly wider and nearly one-half longer than the prothorax; sides rather strongly divergent; disk between the slightly swollen upper limits of the flanks perfectly flat, finely, confluent punctate and closely, longitudinally rugose. Abdomen distinctly narrower than the elytra, parallel, finely reticulate, feebly alutaceous, finely, sparsely, subgranularly punctulate and minutely, sparsely pubescent, much more distinctly so beneath. Length 1.9–2.6 mm.; width 0.6–0.75 mm. California (Humboldt to Los Angeles); Southwestern Utah.

The head in the female is distinctly smaller. In the male the sixth ventral plate is unmodified, the seventh feebly bisinuate in the middle, the small median lobe slightly produced, rounded and extremely minutely fimbriate along its apex. The groove of the mentum is coarse, deep and entire. This species is allied to *nitidulus* and *suspectus*, but differs in its broader form and in the much finer, denser, substrigose sculpture of the elytra.

O. vegrandis n. sp.—Slender, parallel, depressed, feebly shining, minutely strigilate, black, the elytra piceous; legs pale, the femora blackish;

antennæ piceous at base. *Head* large, slightly transverse, as wide as the prothorax, feebly impressed along the middle; depressed clypeus strigilate and dull; eyes convex, at a little more than their own length from the basal angles, rather more prominent than the tempora, the latter straight and parallel behind them, abruptly rounded at base; antennæ rather slender, feebly incrassate, fully as long as the head and prothorax, tenth joint slightly transverse, the eleventh pointed, fully as long as the two preceding. *Prothorax* two-thirds wider than long, the sides feebly convergent, evenly and distinctly arcuate from apex to base, the basal angles obtuse and almost obliterated; disk with four polished feeble carinæ, separated by concavities of the surface, the two median very approximate, but becoming more distant from base to apex, rather strongly impressed also toward the sides. *Elytra* distinctly wider and longer than the prothorax, the sides nearly parallel and straight; humeri exposed at base; disk flat, finely, densely strigilate, also obscurely punctate, the strigilations slightly confluent and shining toward base. *Abdomen* a little narrower than the elytra, parallel, shining, very coarsely but feebly reticulate, minutely remotely and obsoletely punctulate, each tergite with two distant erect and stiff setæ at apex; under surface polished, very remotely pubescent. *Legs* slender, the posterior tarsi very short; anterior tibiæ not angulate externally near the apex. Length 1.4 mm.; width 0.35 mm.

California (near San Francisco).

While allied to *nanus*, this minute species differs in its coarser strigilation, longer, much more slender antennæ, and in the male sexual characters. The sixth ventral is fimbriate at apex and sinuate in median fifth, the seventh cylindrically impressed and finely pubescent along the middle, the apex produced in the middle in a small broadly rounded simple lobe, the eighth broadly impressed. The mentum is coarsely, transversely grooved in the middle.

O. nanus Erichs.—Gen. Staph., p. 797.

O. exiguus Erichs.—Gen. Staph., p. 798; *pygmaeus* Melsh.: Proc. Ac. Phila., II, p. 41; *parvulus* Melsh.: l. c., p. 41.

I cannot resolve the ample material in my cabinet into distinctly characterized species. It is easy to select two or three specimens which apparently represent species, but in all cases others are found which seem to be intermediate; so it is impossible to give any distinguishing characters at present. The species may be readily known by its opaque, minutely strigilate sculpture, less dense in the female, especially on the head, and its polished subimpunctate abdomen. Length 1.2–1.8 mm.; width 0.3–0.45 mm. New York to Florida; Lake Superior and Texas—probably extending through Mexico.

O. tetracarínatus Block.—Verz. Ins. Plauen., p. 116; *depressus* Grav., Micr., p. 103.

This species is added on the authority of LeConte and Fauvel, as I have seen no American specimens. It is very readily distinguishable from *nanus* by its larger, longer elytra, stouter form and less polished, somewhat reticulate abdomen, which is finely, subgranularly punctulate. Length 1.7 mm.; width 0.55 mm. Europe; Indiana—LeConte.

OMALINI.

The genera allied to *Lesteva* form a much more important element in the omaline fauna of North America than of Europe, and may be distinguished among themselves as follows:—

Third joint of the maxillary palpi very small, not longer than wide, the fourth extremely long as in *Lesteva*; pronotum not impressed at the sides; labrum as in *Lesteva*, composed of two nearly equal parts, the basal corneous, transverse and broadly truncate, the apical abruptly thin, translucent and rounded.

Elytra short, quadrate; first four joints of the hind tarsi subequal in length, the first not quite as long as the second; antennæ not clavate.

Pseudolesteva

Elytra long, extending to the apex of the third ventral; first four joints of the hind tarsi subequal, the first not appreciably longer than the second; antennæ with the last three joints longer and thicker than the eighth, forming an elongate and very slender club.....

Tevales

Third joint of the maxillary palpi longer than wide; pronotum always impressed near the middle of the sides.

Maxillary palpi filiform, nearly as in *Lesteva*, the second joint but slightly thicker than the third or fourth; third very slightly longer than wide and scarcely more than one-fourth as long as the fourth; labrum semi-circular, the central parts tumid, uneven and dense, the edges throughout thinned and translucent; antennæ filiform, the joints elongate.

Unamis

Maxillary palpi smaller, the second joint thick, nearly three times as wide as the very slender fourth, third one-half longer than wide, a little thicker than the fourth and less than one-half as long; labrum as long as wide, acutely parabolic, the edges throughout abruptly but very narrowly thinned and translucent; antennæ short, gradually incrassate, the outer joints not longer than wide.....

Artochia

Maxillary palpi filiform, the second joint not much thicker than the third or fourth, the second two to nearly three times as long as wide and one-half as long as the fourth or somewhat less; labrum short, broad,

entirely corneous, broadly rounded at apex, the disk abruptly, strongly, transversely impressed and thinned in apical third; antennæ filiform. Head completely devoid of any trace of ocelli; body small.....**Vellica**
 Head with two distinct and widely distant ocelli; body large.....**Tilea**

It is not possible to state at present whether the rather numerous European species of *Lesteva* display notable variation in tarsal structure, but certainly our *pallipes* and *cribratulus* are not at all conformable with *pubescens* and *longelytrata* which I have under observation, since both differ radically in tarsal structure, and *cribratulus* also in its much longer elytra, subclavate antennæ and narrower, more convex form of the body.

PSEUDOLESTEVA n. gen.

The three forms described by LeConte have been combined to form the single species *pallipes*. My material is not sufficiently extensive to enable me to pronounce any opinion of value, but, although extremely similar in form, it is possible that *pallipes* and *biguttula* (= *picescens*) may really be distinct, at least the two oblique spots of the latter seem to be very constant and characteristic; the true *pallipes* is entirely black with the legs pale flavate. *Pseudolesteva* is limited to the Atlantic regions of the continent.

TEVALES n. gen.

A single species, remarkably distinct from *Ps. pallipes* in general habitus, forms the type of this genus, which is also confined as far as known to the Atlantic faunal regions. These two genera of the Atlantic slope are much more closely allied to the true *Lesteva* than those of the Pacific fauna, and the latter are furthermore remarkable as a group in having the pronotum deeply impressed at the sides.

T. cribratulus n. sp.—Pale and uniform brownish-testaceous throughout, the legs slightly paler; surface rather shining; pubescence uniform, moderate in length, not dense. Head much wider than long, distinctly narrower than the prothorax and about as wide as an elytron, finely densely and distinctly punctate, indefinitely biimpressed, transversely impressed between the antennæ, the epistomal suture visible near the sides; ocelli distinct, just behind the line of the posterior limit of the eyes, distant by one third of the total width; eyes well developed, setose; tempora less than one-half as long; antennæ very slender, one-half as long as the body, second joint rather longer than the third, fifth nearly three times as long as wide, eighth shorter than the seventh or ninth. Prothorax one-fourth wider than long, the sides evenly

arcuate and convergent to the apex from just before the middle, convergent and strongly sinuate in basal half; base and apex equal; disk convex, even, finely densely evenly and very distinctly punctate. *Elytra* more than twice as long as the prothorax and three-fourths wider, longer than wide; humeri rounded and exposed; sides just visibly divergent throughout; disk strongly densely punctate. *Abdomen* short behind the elytra, feebly, sparsely punctulate. *Legs* short but slender; hind tarsi short, scarcely one-half as long as the tibiae. Length 2.7 mm.; width 1.0 mm.

Pennsylvania.

The single specimen is a male, having the sixth ventral feebly sinuato-truncate at apex. The maxillary palpi are as in *Lesteva pubescens*, the second joint stouter than the third and fourth, the third small, not quite as long as wide and scarcely more than one-sixth as long as the fourth. In *Lesteva* the head is constricted at a much greater distance behind the eyes, the ocelli being notably more basal, and the second antennal joint is rather shorter than the third. In *Pseudolesteva* the second antennal joint is much shorter than the third, and the fourth palpal joint is shorter and more gradually pointed toward apex.

UNAMIS n. gen.

The species previously described as *Lesteva truncata* (Bull. Cal. Acad. Sci., I, p. 322) demands without any doubt a special genus for its reception. It is most closely allied to *Artochia*, resembling that genus in the basal position of the eyes and obsolete tempora, but differs in palpal structure and in the tarsi. In *Unamis* the hind tarsi are long and slender, with the basal joint equal to the next two together.

ARTOCHIA n. gen.

Body small, rather narrow, the head small, triangular, with the front somewhat prolonged; eyes basal, densely setose, the head transversely constricted immediately behind them; ocelli widely distant and on the edge of the transverse constriction. Antennae incrassate, much shorter than in any other genus of this group. Maxillae with the inner lobe elongate, arcuate and feebly unguulate at apex, with an inner fringe of very minute setae; outer lobe as long as the inner, very slender, gradually thicker near the base, arcuate at apex, the latter with a terminal tuft of minute setae; cardo very large, elongate, densely pubescent. Labial palpi with

the last joint slender and greatly elongate as usual. Coxæ all contiguous. Mesosternum feebly carinate; metasternum long. Elytra extending to the middle of the second ventral. Legs short and stout; tibiæ sparsely spinulose, the anterior thick but abruptly narrowed at base in the male; tarsi short, the first four joints of the posterior equal in length.

A. productifrons n. sp.—Black, finely, densely punctate throughout, the antennæ dusky; legs pale flavo-testaceous; integuments feebly shining, the pubescence fine, short and abundant. Head with labrum acutely triangular, longer than wide, evenly convex, just visibly and obliquely bi-impressed beyond the eyes, the latter large, moderately convex; epistomal suture feebly indicated; antennæ scarcely as long as the head and prothorax, gradually incrassate, outer joints barely as long as wide, eleventh conoidal, about as long as the two preceding, second much longer and thicker than the third, fourth shorter than the third. Prothorax transversely subquadrate, two-fifths wider than long, nearly one-half wider than the head, sides subparallel, very obtusely rounded at the middle, straight thence to the base and apex; base truncate, rather wider than the apex; disk transversely, evenly convex, impressed at each side, the margins thence to the base narrowly explanate. Elytra as long as wide, three-fourths longer and scarcely two-fifths wider than the prothorax; humeri very narrowly exposed, rounded; sides just perceptibly divergent, nearly straight; apex truncate; disk very broadly and feebly impressed along the suture except at base. Abdomen less punctate, much shorter than the elytra, rapidly acute at apex; border strongly inclined. Length 2.1 mm.; width 0.9 mm.

California (Gilroy Springs, Sta. Clara Co.).

The unique type appears to be a male, but the sixth ventral is rather longer than the fifth, and is feebly subtruncate at apex.

VELLICA Casey.

This genus, with *Tilea*, forms a group immediately distinguishable from the two preceding by the less basal eyes and absence of the transverse dorsal constriction behind them. The complete absence of any trace of ocelli is such an exceptional character, that I have taken care to verify it in a number of specimens and under the most favorable optical conditions. Otherwise *Vellica* is closely allied to *Tilea*, differing in the small size of the body, narrower and more convex form and non-explanate sides of the pronotum.

TILEA Fauvel.*Phlæopterus* Mots. i. litt.; *Phlæopterus* Csy., olim.

This is the most conspicuous of the endemic North American genera of Omalini, although probably occurring also in Siberia; I believe there is no record of its having been taken there, however. The two species previously assigned by me to *Phlæopterus*—an erroneous quotation of *Phlæopterus* Mots. i. l.—belong in reality to *Tilea*, which has the fourth joint of the maxillary palpi, not one-half longer than the third as stated in the original description, but about twice as long as the third in the female, and often distinctly longer, especially in the male.

The sexes differ but very little in general appearance, the female is however usually a little larger, relatively broader, and often with the elytra distinctly longer, and the male has the anterior tarsi slightly stouter toward base. The sixth ventral segment in the male is more or less sinuately or arcuately truncate, but is longer and parabolically rounded in the female.

There are a number of distinct species of *Tilea* in North America, all confined to the true Pacific fauna, which descends to some extent also from the north along the crests of the Rocky Mountains indefinitely to the southward. Of *T. cavicollis* Fvl. I have examined two specimens, one forming part apparently of the original lot from Vancouver, and the other taken in the high sierras of California; it differs distinctly from *longipalpus* in its narrower form and in thoracic structure.

The seven species thus far discovered may be readily distinguished as follows:—

Elytra long, always distinctly more than twice as long as the prothorax; body black or piceous-black.

Femora paler toward base, 6.75 mm. Unalaska Island.....**fuscognira**

Femora not paler toward base. California to Vancouver.

Prothorax strongly transverse.

Sides of the pronotum broadly, feebly reflexed behind the fovea but only very narrowly and feebly declivo-subexplanate from the lateral angles to the apex; prothorax smaller when compared with the elytra—♀**cavicollis**

Sides of the pronotum deeply concave and strongly reflexed continuously from the apical angles to the base, more broadly behind the fovea; form distinctly broader, the prothorax nearly as wide as the elytra—♀**longipalpus**

Prothorax much smaller and only slightly wider than long, perfectly similar in the two sexes.

Larger species, the elytra each strongly rounded at apex; hypomera narrow, much less than one-half as wide as the distance thence to the coxæ; tempora not one-third as long as the eye—♂**rufitarsis**

Smaller, the elytra narrower, each subtruncate at apex, the lateral angles much less broadly rounded and oblique; hypomera fully one-half as wide as the distance thence to the coxæ; tempora nearly one-half as long as the eye and more prominent than in *rufitarsis*—♂.

filicornis

Elytra short, always distinctly less than twice as long as the prothorax; color of body paler, castaneous throughout. Rocky Mts.

Head strongly and densely punctate throughout; antennæ with the intermediate joints more than three times as long as wide, more finely and densely pubescent; sides of the prothorax oblique and very feebly, broadly sinuate from the lateral angles to the base; large species, the male with the sixth segment sinuato-truncate at apex—♂.

brevipennis

Head minutely and remotely punctate especially toward the middle; antennæ with the joints rather shorter and more coarsely pubescent; sides of the prothorax very strongly constricted behind, deeply sinuate, becoming subparallel toward base; male with the sixth segment somewhat lobed in the middle, the anterior tarsi more noticeably dilated; size much smaller—♂**castanea**

It is possible that *fusconigra* Mäkl. may be the same as *cavicollis* or *longipalpus*, but considering the remote locality and the undoubted plurality of species in the genus, the chances are decidedly against such identity.

T. rufitarsis n. sp.—Rather shining, black throughout, the trochanters and tips of the coxæ feebly rufescent; pubescence dense, suberect, consisting of longer stiffer and more erect, and shorter and finer hairs, confusedly intermingled especially on the elytra. Head finely, densely punctate, distantly biimpressed between the eyes, transversely impressed between the antennæ, the latter slender, filiform, black, not at all incrassate, more than one-half as long as the body, the joints fully three times as long as wide and feebly obconical; eyes well developed, prominent; tempora very short; ocelli small, separated by two-fifths the entire width; fourth palpal joint one-half longer than the second and much more than twice as long as the third in both sexes. Prothorax small, one-third wider than long, widest and laterally subangulate at two-fifths from the apex; sides thence to the base convergent and evenly sinuate throughout, to the apex more feebly convergent and broadly arcuate; basal angles nearly right but slightly blunt; disk finely, densely punctate, even though feebly distantly and obliquely biimpressed at basal third, and with a large deep impression at each side at the middle; surface anteriorly broadly, evenly convex from one lateral edge to the other, the side margin

not at all explanate even near the basal angles. *Elytra* in the male two and one-half times as long as the prothorax, in the female nearly three times as long, longer than wide, near the apex almost twice as wide as the prothorax; sides nearly straight, feebly divergent, external apical angles very broadly rounded and oblique; punctures fine but strong, dense. Scutellum more finely and extremely densely punctate. *Abdomen* very short behind the elytra, extremely minutely, densely punctulate. *Legs* slender. Length 6.0-6.3 mm.; width 2.3-2.6 mm.

California (Siskiyou Co.).

The male has the intermediate tibiae very feebly swollen, slightly constricted in apical fourth, the constricted part glabrous; in the female the same tibiae are more slender and have the glabrous terminal part scarcely at all constricted but occupying almost one-third of the total length. Three specimens.

T. brevipennis n. sp.—Strongly shining, castaneous, the legs and coxae paler, rufous; pubescence fine, moderate in length, abundant and uniform. *Head* finely, densely punctate, nearly as in *rufitarsis*, the fourth palpal joint fully twice as long as the third and one-half longer than the second; antennae very slender, filiform, rufous, three-fifths as long as the body, the joints very elongate, scarcely perceptibly obconical, the tenth very nearly three times as long as wide. *Prothorax* one-half wider than long and one-half wider than the head, widest and obtusely subangulate at the sides just before the middle; sides thence to the base convergent and feebly sinuate, becoming more sinuate only extremely near the basal angles which are right and not blunt, to the apex feebly convergent and slightly arcuate; apex feebly bisinuate; disk finely, closely punctate, not at all impressed on the disk near the base, the lateral impression large but only moderately deep; sides broadly, feebly reflexed from the hind angles past the fovea to apical fourth. *Elytra* not quite as long as wide, four-fifths longer than the prothorax, and, near the apex, two-fifths wider than the latter; sides nearly straight and divergent from the exposed but rounded humeri nearly to the apex; disk strongly, moderately densely punctate. *Abdomen* short, very minutely, densely punctulate. *Legs* very long and slender. Length 6.5 mm.; width 2.6 mm.

Wyoming.

The single male before me has the intermediate tibiae slender and almost evenly cylindrical, with the glabrous apical part extremely short and not in the least constricted, differing greatly in this respect from *rufitarsis*.

T. castanea n. sp.—Less broad, strongly shining; castaneous; legs and antennae rufo-testaceous; pubescence fine, dense, uniform and inclined. *Head* finely punctate, sparsely so toward the middle, otherwise as in *rufitarsis* but with rather longer and more angulate tempora; antennae filiform, three-fifths

as long as the body, stouter than in *brevipennis*, the outer joints more strongly obconical, the tenth scarcely more than twice as long as wide. *Prothorax* minutely but closely, strongly and evenly punctate, evenly convex, nearly as in *brevipennis* but with the sides broadly constricted toward base, becoming nearly parallel for some distance before the basal angles, which are right and not blunt; base broadly, feebly sinuate, narrower than the apex, the latter feebly bisinuate; disk simply feebly subexplanate from the fovea to the basal angles, not in the least reflexed, declivous to the edge from the lateral obtuse angulations to the apex; lateral foveæ large and very deep, the bottom punctiform. Scutellum large, very densely and more finely punctate. *Elytra* as long as wide, not quite twice as long as the prothorax, and, near the apex, about one-fourth wider; humeri broadly rounded to the base of the prothorax, but slightly exposed at base; sides straight, divergent; disk strongly, evenly, moderately closely punctate. *Abdomen* subobsoletely punctulate. *Legs* moderate in length, stouter and shorter than in *brevipennis*. Length 4.7-5.0 mm.; width 1.9-2.0 mm.

Colorado.

The two specimens represent a species allied to *brevipennis* but differing in the much smaller size, relatively longer elytra, stouter antennæ and legs, deeper pronotal impressions and unreflexed lateral edges of the pronotum, as well as in the sparser, finer punctures of the head and the male sexual characters at the ventral apex. The anterior tarsi of the male are more strongly dilated toward base than in *brevipennis*, and both the anterior and intermediate are papillose beneath. As in *rufitarsis* the elytra are distinctly longer in the female than in the male.

OROBANUS LeConte.

In view of the radical difference in palpal structure, the approximation of this genus to *Lesteva* is very remarkable. It resembles *Lesteva* in the very slender cylindrical posterior tarsi, with the basal joint subequal to the next two, in the filiform antennæ, duplex labrum, and in general appearance, but the spinules of the tibiæ are replaced by a few long slender flexible setæ, and the maxillary palpi are short stout and densely pubescent, with the fourth joint small slender and subulate. The pronotum is feebly impressed at the sides, thus conforming partially to the general law affecting all the Californian allies of *Lesteva*. The three species may be separated as follows:—

Eyes smaller, subequal in size to the tempora and not more prominent; outline and humeri as in *rufipes*. Rocky Mts.....**simulator** Lec.

Eyes larger, much longer and more prominent than the tempora.

Elytra with the sides strongly divergent from the humeri, which are obliquely rounded to the prothorax. Pacific fauna.....**rufipes** Csy.

Elytra with the sides feebly divergent, the humeri much more broadly exposed, becoming transverse at base near the prothorax. Sonoran fauna.

densus Csy.

All of these species are minutely, very densely punctate and pubescent.

GEODROMICUS Redt.

The members of this genus include some of the larger of the Omalini and are abundant in the western parts of North America. As remarked by Mr. Fauvel, the form of the body recalls *Lesteva*, or, it might be added, *Orobanus*, rather than *Anthophagus* with which the species were united by Gemminger and Harold; in the structure of the palpi they are somewhat intermediate between *Orobanus* and *Anthophagus* and differ greatly from *Lesteva*. The posterior tarsi, however, with the first four joints short and stout, together scarcely longer than the fifth, will at once distinguish the genus from *Anthophagus*. At the same time, *integer*, although perfectly normal in tarsal and palpal structure, seems to diverge in the direction of *Anthophagus* in the form of the prothorax, and a divergence in the same direction is also observable in the tarsus of *debilis*.

The American species known to me may be distinguished by the following characters:—

Prothorax never transversely quadrangular, the disk not at all explanate near the hind angles.

Pronotum with a more or less distinct impression along the median line, the prothorax often much larger and of a different form in the male; last joint of the maxillary palpi longer, subulate and much narrower than the apex of the third, although frequently nearly as long as the latter.

Larger species, pale castaneous, clouded with blackish toward the apices of the elytra, the abdomen paler and with a large blackish subapical cloud. Atlantic regions**brunneus**

Smaller, the abdomen black or slightly piceous and uniform in coloration.

Sides of the prothorax deeply sinuate posteriorly, becoming subparallel near the base.

Pronotum strongly and closely punctate, the prothorax much larger in the male than in the female.

Elytra more finely, moderately densely punctate; anterior tibiae of the male slender, nearly equal in diameter throughout, fully twice as long as the tarsi, the latter moderately dilated.

strictus

Elytra more coarsely deeply and sparsely punctate; antennæ stouter; anterior tibia of the male shorter, thick, narrowed near the base and less than twice as long as the tarsi, the latter more dilated.....**fauveli**

Pronotum more finely feebly and much more sparsely punctured; discal parts of the elytra more or less indefinitely clouded with a paler rufescent tinge.

Elytra shorter, with the sides very strongly divergent, coarsely, very sparsely punctate; abdomen with five exposed segments; border very wide; size larger, the form broader—♀.

ovipennis

Elytra longer, the sides less divergent; punctures finer and more abundant; abdomen with scarcely more than four exposed segments; border narrower—♀.....**nubilatus**

Sides of the prothorax oblique and feebly sinuate behind, the base relatively wider; small species, pale flavescent in color, the punctuation fine and sparse; elytra small, much shorter than wide; tarsi longer and more slender.....**debilis**

Pronotum without trace of an impressed median line, almost similar in the male and female; body intense polished black throughout. California.

Tempora rounded but rather prominent and subrectangular; prothorax wider than long; punctures smaller and closer; last joint of the antennæ much longer than the tenth.....**temporalis**

Tempora very convergent and broadly rounded, not at all prominent; prothorax not distinctly wider than long, nearly as in *Orobanchus* but more convex; punctures strong and sparse; last joint of the antennæ only just visibly longer than the tenth; last joint of the maxillary palpi smaller.....**humboldtianus**

Prothorax transverse, nearly as in *Anthophagus*, the sides but feebly convergent behind and very feebly, broadly sinuate; surface explanate toward the hind angles; last joint of the maxillary palpi short, subulate; posterior tarsi short, stout and normal.....**integer**

G. brunneus Say.—Journ. Ac. Phila., III, p. 158; *verticalis* Say: Trans. Am. Phil. Soc., IV, p. 463; *cæsus* Er.: Gen. Staph., p. 853.

It is somewhat remarkable that Erichson should have failed to recognize in his *cæsus* the species described by Say as *brunneus*, for the cloud of black near the apex of the tergum, in connection with the size of the body—slightly under a quarter of an inch or 6 mm.—is very characteristic of the species. *Verticalis* is probably a smaller female specimen, the great difference in form of the male and female prothorax possibly not having been noticed by Say.

G. strictus Fvl.—Rev. d'Ent., 1889, p. 126; *nigrita* Fvl. nec Müll.: Not. Ent., 7, 1878, p. 90.

Abundant from New York and Massachusetts to Michigan. Easily known by its black polished integuments and smaller size from *brunneus*, the only other species inhabiting the same districts.

G. fauveli n. sp.—Stout, feebly convex, polished, dark and uniform piceo-castaneous throughout; pubescence short and very sparse. *Head* finely and sparsely punctate, three-fourths as wide as the prothorax; eyes large and prominent, the tempora not one-half as long, rapidly convergent and feebly arcuate; vertex deeply impressed in the middle and with two short deep divergent grooves; epistoma impunctate, deeply, arcuately impressed, the depression connected with the vertical impression by a feeble channel; antennæ filiform but rather stout, nearly three-fifths as long as the body, the basal joint stout, twice as long as wide, second shorter than the fourth, third very much longer, obconical, three times as long as wide, eleventh one-half longer than the tenth. *Prothorax* one-half wider than long, the sides strongly, evenly rounded, rapidly constricted toward base, becoming parallel in basal fifth or sixth; base truncate, one-third wider than the apex; disk widest before the middle, deeply, rather coarsely and closely punctate, deeply impressed along the median line except near the apex, with a deep transverse pit before the scutellum. *Elytra* scarcely as long as wide, as long as the head and prothorax, near the apex two-fifths wider than the latter; sides straight, strongly divergent; humeri widely exposed; humeral width scarcely four-fifths of the sub-apical; punctures coarse, deep and not dense. *Abdomen* finely but not very densely punctate; border moderate. *Legs* and coxæ pale rufo-ferruginous; under surface blackish-piceous. Length 5.8 mm.; width 2.0 mm.

Oregon (The Dalles).

Allied to *strictus* but amply distinct in its broader form, much more divergent sides of the elytra, longer and stouter antennæ, and the sexual differences in the anterior legs, which are very marked. A single male.

G. ovipennis Lec.—Bull. U. S. Geol. Surv., 1878, IV, ii, p. 452; Fvl.: Not. Ent., 7, p. 89; *plagiatus* Fvl. nec Fab.: Rev. d'Ent., 1889, p. 125.

The specimens of *ovipennis* which I have examined can be distinguished very readily I think from *plagiatus* or *nigrita* by their broader form, much sparser punctures which are coarser on the elytra, the latter being much more abbreviated, and by the broader abdominal border. I have seen no North American examples which could be referred very satisfactorily to *plagiatus*.

G. nubilatus n. sp.—Polished black with a feeble piceous tinge, the apex and lateral margins of the abdomen slightly paler; legs, mouth parts

and antennæ ferruginous; elytra each with a rufescent cloud from near the humerus to the middle; pubescence fine, subrecumbent, sparse but rather long. *Head* fully four-fifths as wide as the prothorax, deeply impressed and bistrigate in the middle between the eyes, the epistomal depression scarcely connected by a groove; eyes large, very convex, the tempora scarcely more than one-half as long, very convergent, broadly arcuate; antennæ three-fifths as long as the body, moderately stout, the outer joints not quite three times as long as wide, equal, eleventh one-half longer than the tenth. *Prothorax* not quite one-third wider than long, widest at apical third; sides strongly constricted behind, becoming abruptly parallel in basal fifth or sixth; base truncate, much wider than the apex; disk finely, very sparsely punctate, feebly but distinctly impressed along the median line from the apical margin to the deep transverse antebasal fovea. *Elytra* not quite as long as wide, distinctly longer than the head and prothorax; humeri broadly exposed; sides moderately divergent; outer apical angles rather broadly rounded; disk not coarsely, somewhat sparsely punctate, broadly impressed along the suture toward base. *Abdomen* barely as wide as the elytra and much shorter, polished, finely, sparsely punctulate; border moderate. Length 4.4 mm.; width 1.55 mm.

New Mexico (Las Vegas).

Distinguishable from *ovipennis* by its smaller size, longer elytra with much less divergent sides and many other characters. The fourth joint of the maxillary palpi in the single female before me is very nearly as long as the third, fusiform and gradually pointed, and by this character, as well as the stouter antennæ and much finer, sparser punctures of the head and pronotum, it can be readily separated from *plagiatus* or any of its varieties.

In the female of *ovipennis* the humeral width of the elytra is not more than three-fourths of the subapical, while in *nubilatus* the ratio is fully four-fifths.

G. debilis n. sp.—Highly polished, very sparsely and rather coarsely pubescent, pale flavo-testaceous, the head a little less pale and the abdomen picescent. *Head* scarcely visibly narrower than the prothorax, the eyes small, strongly convex, scarcely longer but very much more prominent than the tempora; surface very finely, remotely punctate, the median impression and diverging lines distinct, not connected with the strong epistomal depression; ocelli extremely feeble; fourth joint of the maxillary palpi almost as long as, but much narrower than, the obconical third; antennæ rather stout, filiform, three-fifths as long as the body, the tenth joint twice as long as wide, three-fifths as long as the eleventh. *Prothorax* scarcely visibly wider than long, rounded at the sides anteriorly, feebly, gradually narrowed behind, feebly constricted at basal fourth; disk finely, very remotely punctate, with a median impression attaining neither the apex nor the subbasal transverse fovea. *Elytra* small, three-fourths longer than the prothorax, and, near the

apex, twice as wide; sides nearly straight, very strongly divergent; humeral width scarcely more than two-thirds of the subapical; punctures rather strong but sparse. *Abdomen* well exposed, as wide as the elytra and rather longer, finely but not densely punctulate, the border moderate. Length 4.0 mm.; width 1.5 mm.

Colorado.

The type appears to be a female, but the ventral apex is concealed so that I cannot be entirely certain. The tarsi are aberrant, the first three joints of the posterior more elongate than usual and decreasing uniformly, the third and fourth subequal, fifth distinctly shorter than the first four together—a variation in the direction of *Anthophagus*. This species is altogether distinct from any other in its small size, small eyes, almost obsolete ocelli; small elytra and many other characters.

G. temporalis n. sp.—Moderately broad and depressed, polished, black throughout; legs, palpi and antennæ black; pubescence rather fine, sparse, of the usual length, shorter and much more abundant on the abdomen. *Head* distinctly narrower than the prothorax, the eyes large and strongly convex; tempora unusually strongly rounded but much less prominent than the eyes; vertexal impression distinct, the oblique grooves rather distant; epistomal depression large and strong; last joint of the maxillary palpi very much shorter and narrower than the third; antennæ filiform, rather more than one-half as long as the body, the outer joints strongly obconical, three times as long as wide, eleventh two-fifths longer than the tenth. *Prothorax* very slightly wider than long, widest at apical third where the sides are very evenly, strongly rounded to the apex, moderately convergent and feebly sinuate in basal three-fifths; base truncate, a little wider than the apex; disk strongly, rather closely, evenly punctate, with the usual median ante-basal impression. *Elytra* about as long as wide, twice as long as the prothorax and four-fifths wider; sides feebly divergent from the transversely exposed humeri, the humeral width fully four-fifths of the subapical; disk very feebly, broadly impressed on the suture toward base as usual, strongly and somewhat closely punctate. *Abdomen* with about four and one-half exposed segments, a little shorter than the elytra and equally wide; border wide; stomata distinct. *Legs* rather short and somewhat stout; tibiae gradually enlarged and more densely pubescent from base to apex; tarsi short, normal. Length 5.7–5.9 mm.; width 1.75 mm.

California (Sonoma Co.).

The description is drawn from the male, which has the sixth ventral feebly sinuato-truncate at apex and the anterior tarsi strongly dilated. The female differs extremely little in general appearance, having the prothorax relatively smaller but identical in shape. Three specimens.

On the disk of the pronotum two very broad feeble parallel impressions can be discerned behind the middle, which unite with the transverse subbasal fovea; these impressions are analogous to those of *Anthophagus alpestris* Heer, and perhaps some other species; here, however, the disk is very convex and resembles *Orobanchus* in outline, being not at all suggestive of *Anthophagus* in these respects.

G. humboldtianus n. sp.—Depressed, highly polished, deep black; coxæ and tarsi rufescent; antennæ black; integuments strongly and sparsely punctate, the abdomen minutely and densely so; pubescence sparse, suberect, uniform and coarse; moderately long, short subrecumbent and dense on the abdomen. *Head* as wide as the prothorax, as wide as long, strongly constricted at base, the constriction as usual extending sharply across the dorsal surface, where it is broadly, anteriorly angulate; surface with a deep depression in median third between the eyes, limited laterally by oblique excavated lines, arcuately impressed between the antennæ, the epistoma impunctate; ocelli on a line with the posterior limits of the eyes distant by less than one-third of the total width; eyes well developed, convex and very prominent; tempora shorter, not at all prominent, convergent and arcuate; antennæ slender, filiform, nearly three-fifths as long as the body, the joints fully three times as long as wide. *Prothorax* nearly as long as wide, the sides evenly rounded, becoming convergent and sinuate posteriorly, subparallel in basal fourth; base truncate, rather wider than the apex; disk widest at apical third, strongly, evenly convex, impressed in the middle near the base. *Elytra* twice as long as the prothorax, and, near the apex, twice as wide; humeri rather broadly exposed, rounded; sides straight and strongly divergent; humeral width three-fourths of the subapical; disk broadly, feebly impressed in the middle toward base. *Abdomen* with nearly four exposed segments, shorter than the elytra; border wide, moderately inclined. *Legs* long and rather slender, finely, densely pubescent; posterior tarsi less than two-fifths as long as the tibiae; claws long, slender, arcuate. Length 4.4 mm.; width 1.65 mm.

California (Humboldt Co.).

The type is a male, having the sixth ventral short and broadly emarginate throughout at apex, the median segment of the seventh with a thin laminate carina in the middle toward base; anterior tarsi moderately dilated. I obtained the unique representative on the under side of a small loose stone in the dry bed of a rivulet near Fort Gaston.

This species differs from *temporalis* in its smaller size, still sparser and stronger punctuation, less prominent and more convergent tempora, and in the very strong median lamina of the seventh ventral, which is completely wanting in *temporalis*.

G. integer n. sp.—Broad, more parallel, feebly convex, polished, black throughout; tarsi, tibiae toward tip and femora toward base feebly rufescent; pubescence moderate in length, inclined, rather abundant and distinct. *Head* scarcely more than two-thirds as wide as the prothorax, the eyes prominent; tempora short, strongly convergent and areolate; median impression wide, the oblique grooves distant; a median impressed channel connects the large deep epistomal depression; last joint of the maxillary palpi subulate, very much narrower than the third and only one-half as long; antennae filiform, three-fifths as long as the body, the joints very long, just visibly obconical, rather more than three times as long as wide, the eleventh but slightly longer than the tenth. *Prothorax* one-fourth wider than long, the sides evenly rounded anteriorly, feebly convergent and broadly, just visibly sinuate in basal half; base truncate, very wide, nearly one-half wider than the apex; disk evenly, broadly convex, rather strongly, closely punctate, feebly explanate at the hind angles, without distinct median impressed line and devoid of ante-basal fovea. *Elytra* nearly as long as wide, two-thirds longer than the prothorax, and, near the apex, two-fifths wider; humeri very slightly exposed at base, the humeral width but slightly exceeding that of the prothorax and about five-sixths of the subapical; sides noticeably divergent; outer apical angles rather broadly rounded; disk finely, rather sparsely but distinctly punctate. *Abdomen* scarcely as wide as the elytra and much shorter, with five exposed segments, minutely, sparsely punctate, the border moderate. *Legs* moderate in length and thickness; tarsi normal. Length 6.0–6.3 mm.; width 2.3 mm.

Washington State.

The male, which serves as the type, differs from the female only in its larger prothorax, the latter being however identical in shape; in the female the elytra are nearly twice as long as the prothorax and three-fourths wider. The male has the sixth ventral rather deeply sinuate at apex throughout the width, and the anterior tarsi strongly dilated.

PELECOMALIMUM Casey.

This genus will include nearly all the North American species hitherto assigned to *Amphichroum*, and differs radically and constantly from the latter in the structure of the tarsi. The tarsi throughout have the penultimate joint deeply bilobed and clothed beneath with long papillose pubescence; in *Amphichroum* they are slender, compressed, with the penultimate joint not at all wider and devoid of all trace of lobes, the fifth joint being inserted at its obliquely truncate apex. In the present genus the intermediate coxae are contiguous, while in *Amphichroum* they are narrowly but perceptibly separated.

Pelecomalium also differs from Amphichroum in a singular palpal character, the sexual nature of which I did not notice until shortly after my original description appeared, and which lead to the assignment of the two sexes of *modestum* to different genera. In the male the fourth palpal joint is strongly securiform, while in the female it is slender, slightly compressed and gradually somewhat obliquely narrowed to the apex, where it is very narrowly but obliquely truncate. In Amphichroum there are no discoverable sexual differences in the palpi, the last joint of which is stouter toward base and prolonged slender and cylindrical toward apex, differing noticeably from the form characterizing either sex of Pelecomalium.

To Amphichroum there are but two described North American species assignable at present, viz.: *maculatum* Lec. (Stachygraphis) which is quite homologous with *canaliculatum*, and *floribundum* Lec. (= *flavicornis* Csy. ♀), which is slightly aberrant in sculpture and in its much longer and more slender maxillary palpi, agreeing however otherwise. I have in my cabinet a female taken at Lake Tahoe in June, which differs from the male of *maculatum*, as figured by Dr. Horn, in its broader form, much shorter and wider prothorax and uniformly flavate elytra; there is no way of proving its identity, but in view of the limited number of specific forms assignable to Amphichroum in both continents, and of the fact that in *floribundum* and some species of Pelecomalium the female is notably paler as well as broader than the male, I think there can be little doubt that it is the female of *maculatum*.

The species are rather closely allied among themselves but may possibly be identified by the following tabular statement:—

Punctures of the elytra more or less sparse, never extremely dense.

Species of the Pacific coast fauna.

Larger, not less than 4 mm. in length; pronotum more or less alutaceous and subimpunctate.

Prothorax transverse, fully one-half wider than long in the male; body flavate, immaculate, the head and abdomen blackish...**testaceum**

Prothorax subquadrate, scarcely one-third wider than long in the male, testaceous, the head and abdomen black; elytra each with a large elongate discal spot of black beyond the middle.....**binotatum**

Smaller, always much less than 4 mm. in length.

Elytra extremely sparsely and obsoletely punctulate, the punctures scarcely distinguishable; surface throughout highly polished.

sparsum

Elytral punctures distinct and much less sparse.

Abdomen black.

Elytra piceo-fuscous.....**pilosellum**

Elytra flavate, with a triangular scutellar spot of blackish.

scutatum

Elytra clear and uniform pale flavate throughout.

puberulum

Abdomen flavate, more or less clouded with piceous toward the middle and apex; elytral punctures very strong.....**flavescens**

Species of the Atlantic region. Polished; prothorax transverse, subimpunctate; elytra piceous in the male, with paler side margins, frequently wholly flavate in the female, the punctures sparse, feeble and ill-defined.

laevicollis

Punctures of the elytra exceedingly dense.

Elytra normal, large, one-half or more longer than the prothorax.

Dark in color, the sides of the elytra sometimes feebly and indefinitely paler and the lateral and basal edges of the pronotum testaceous.

Ocelli small, clearly defined, more prominent and less distant.

Prothorax in the female less transverse, two-fifths wider than long, more strongly narrowed toward apex, the sides more narrowly flat and explanate near the basal angles; elytra in that sex one-half longer than the prothorax.....**opaculum**

Prothorax in the female nearly three-fifths wider than long, less narrowed toward apex and with the sides of the disk near the basal angles more broadly concave and reflexed; elytra in that sex nearly three-fourths longer than the prothorax (*veterator* Csy. ♀).

modestum

Ocelli large, suffused and distinctly more distant; pronotum more strongly punctate; antennæ noticeably more incrassate.

crassicorne

Pale in color and more rufous; elytra often feebly infumate along the apex; abdomen blackish; pronotum very densely and distinctly punctate nearly like the elytra.....**pallidum**

Elytra small, quadrate, distinctly less than one-half longer than the prothorax; body dark, piceous-black in color, the sides of the elytra and base and side margin of the pronotum in basal two-thirds paler.

alutaceum

The Australian species assigned to *Amphichroum*, with their transverse antennal joints, will in all probability also have to be separated generically.

P. flavescens n. sp.—Rather broad, depressed, polished throughout, flavate, the abdomen black; posterior portions of the head piceous; antennæ feebly infumate toward apex; pubescence very minute, sparse and inconspicuous. Head one-half as wide as the elytra, slightly wider than long; eyes convex, well developed; vertex and front flattened, the two divergent grooves

of the former distinct; antennæ slender, cylindrical, very feebly incrassate, one-half as long as the body, all the joints elongate, the eleventh cylindrical in basal half, thence conical to the pointed apex. *Prothorax* transverse, one-half wider than long, the sides broadly, almost evenly arcuate; apex four-fifths as wide as the base; disk impunctate but with small scattered punctures near the basal margin, broadly, feebly convex, even, just visibly flattened before the scutellum, narrowly explanate along the sides. Scutellum triangular, polished, impunctate. *Elytra* ample, quadrate, at base as wide as the prothorax, three-fourths longer; sides nearly straight, feebly divergent from base to apex; disk with sparse, evenly distributed and very distinct punctures. *Abdomen* fully as wide as the elytra but scarcely as long, sparsely and extremely feebly punctulate, the border wide, feebly delimited and more densely punctate. *Legs* moderate. Length 2.2-3.3 mm.; width 0.85-1.3 mm.

• California (Lake Tahoe).

The male characters, other than palpal, are very feeble, the general form of the body and length and structure of the antennæ being nearly identical in the two sexes; the fourth palpal joint is very strongly securiform, and the intermediate tibiæ are broadly and just visibly sinuate within. The tibiæ are very feebly and sparsely spinulose. Ten specimens.

P. pallidum n. sp.—Somewhat broad, feebly convex, shining though feebly alutaceous, flavate; abdomen black; elytra feebly clouded with piceous especially toward apex; head testaceous; antennæ blackish in apical half; pubescence short but abundant throughout. *Head* coarsely reticulate but with only a few very fine and remote punctures, flattened above; vertex feebly, obliquely bistrigate; eyes well developed; antennæ very feebly incrassate, cylindrical, rather more than one-half as long as the body, all the joints longer than wide, eleventh cylindrical in basal, and conical in apical, half. *Prothorax* transverse, almost two-thirds wider than long; sides rather strongly, nearly evenly arcuate; basal angles obtuse and rounded; apex truncate, three-fourths as wide as the base; disk feebly convex, narrowly explanate at the sides, much more obliquely and broadly so toward base, almost perfectly even, finely, densely punctate and rather coarsely reticulate, shining. *Elytra* ample, scarcely as long as wide, at base subequal in width to the prothorax, two-thirds (♂) to three-fourths (♀) longer than the latter; sides nearly straight, feebly divergent from base to apex; disk flat, abruptly convex and declivous at the sides, finely, very densely punctate but shining. *Abdomen* shining, very feebly punctulate; border wide, the dividing line very fine. *Legs* moderate; femora broad; tibiæ slender, finely and extremely sparsely spinulose. Length 2.3-2.6 mm.; width 0.8-1.0 mm.

California (Lake Tahoe); Nevada (Reno).

Easily distinguishable from the others of Fauvel's "Section B," by the pale coloration. The sexual differences in general form are

very slight, but as usual the head is a little larger and the prothorax a trifle less transverse in the male than in the female; in the former sex the fourth palpal joint is strongly and normally securiform, and the intermediate tibiæ broadly and distinctly sinuate within just beyond the middle. Fifteen specimens, almost uniform in size and coloration.

LATHRIMÆUM Erichs.

The species of *Lathrimæum* are rather abundant in the western parts of North America, but only one has been thus far recorded from the Atlantic regions. The seven representatives in my cabinet may be very readily distinguished as follows:—

Pronotum distinctly impressed along the median line except toward base.

Elytra flavate, each strongly, obliquely bimaculate with piceous-black, not modified at apex in the female; size larger.

Prothorax shorter and broader, more strongly arcuate at the sides; striae intervals of the elytra convex.....**subcostatum**

Prothorax smaller, feebly rounded on the sides; elytra smoother, the striae intervals not distinctly convex.....**pictum**

Elytra nearly uniform in coloration.

Larger species, never much less than 3 mm. in length, with the oblique discal impressions near the base of the pronotum nearly obsolete; apices of the elytra obliquely produced in the female.

Narrower, castaneous; prothorax three-fourths wider than long, feebly rounded at the sides; elytra much longer than wide.

flmetarium

Broad, piceous-black; prothorax twice as wide as long, strongly rounded at the sides; elytra but slightly longer than wide, the apices less produced in the female.....**nigropiceum**

Small species, never much more than 2 mm. in length, the two approximate oblique impressions near the base of the pronotum very deep and distinct, coalescent.

Prothorax very transverse, strongly and extremely widely reflexed at the sides; antennæ more slender, one-half as long as the body; color pale brownish-flavate.....**reflexicollis**

Prothorax narrower, less broadly reflexed at the sides; antennæ shorter, more incrassate toward tip; color piceous-black.....**spretum**

Pronotum not impressed along the median line; surface even; elytra short, not more than twice as long as the prothorax.....**sordidum**

Of *sordidum* I have before me a single mutilated specimen from Fredericksburg, Virginia; it is remarkably distinct; the oblique impressions of the pronotum are obsolete in this example, and the

scutellum has a few coarse punctures. The species previously described by me as *humerales* (Bull. Cal. Acad. Sci., II. p. 243) is the same as *subcostatum*.

L. nigropiceum n. sp.—Oblong, broad, rather convex, polished, glabrous and dark blackish-piceous throughout, the lateral edges of the pronotum and elytra slightly paler from diaphaneity; legs but slightly paler; antennæ black, with one or two basal joints paler. *Head* short, transverse, scarcely more than one-half as wide as the prothorax, broadly, feebly, longitudinally biimpressed, the ocelli at the feeble nuchal constriction separated by two-fifths of the entire width; eyes well developed; antennæ as long as the head and prothorax, gradually rather strongly incrassate, outer joints wider than long. *Prothorax* very short, fully twice as wide as long, the sides strongly, evenly arcuate; base transverse, wider than the apex; disk coarsely, strongly, rather densely and unevenly punctate, very broadly explanate at the sides and with the usual sublateral impression just before the middle; oblique subbasal impressions feeble but distinct. *Elytra* very slightly longer than wide, a little wider than the prothorax and more than three times as long; sides parallel and broadly, feebly arcuate. *Abdomen* entirely covered by the elytra. *Legs* rather short, moderately slender. Length 2.7–3.3 mm.; width 1.5–1.8 mm.

California (Sta. Cruz Co.).

The three specimens in my cabinet are females, and may be distinguished at once from the corresponding sex of *finetarium* by the dark color, shorter, broader form, and by the sculpture of the elytra which, though similar in general to that of *finetarium*, is more closely and unevenly punctate, the difference in size between the minute punctures of the intervals and the coarser sculpture of the series being much more marked than in that species.

L. reflexicollis n. sp.—Oblong, convex, very broad, polished, pale brownish-flavate, the head and elytra feebly picescent, the latter paler at the humeri and along the lateral margins. *Head* wider than long, rather large, fully three-fifths as wide as the prothorax, strongly, rugosely punctate toward base but finely and sparsely so anteriorly; ocelli distant by two-fifths the width; eyes well developed; nuchal constriction subobsolete; antennæ slender, feebly incrassate, the sixth joint nearly twice as long as wide, eighth distinctly longer than wide, teeth scarcely wider than long. *Prothorax* rather more than twice as wide as long, the sides broadly, somewhat unevenly arcuate; base a little wider than the apex; disk coarsely densely and rugosely punctate, more sparsely and evenly so near the sides, broadly, strongly reflexed laterally, with a punctiform fovea in the middle rather distant from the lateral margin; median subbasal impressions coalescent, forming a transversely arcuate channel. *Elytra* two and one-half times as long as the prothorax, and, toward apex, fully one-third wider; sides distinctly divergent from the feebly

oblique and unexposed humeri and nearly straight; outer angles broadly rounded; apex truncate; disk coarsely, not very densely and deeply punctate, the punctures forming uneven series with feebly convex punctate intervals. *Abdomen* very short and rapidly pointed behind the elytra, pale, shining and subimpunctate. Length 2.0 mm.; width 1.2 mm.

British Columbia (Stickeen River Cañon). Mr. H. F. Wickham.

The single specimen from which the description is taken is a male, and may possibly be immature. It is distinguishable at once by its small size and very broadly concave and reflexed side margins of the prothorax.

L. spretum n. sp.—Short, broad, polished, convex, piceous-black, the side margins slightly paler from diaphaneity; legs paler; antennæ black, paler at base. *Head* two-thirds as wide as the prothorax, wider than long, strongly, densely punctate toward base, the clypeus subimpunctate; ocelli separated by one-third of the total width, the nuchal constriction almost obsolete; surface impressed near each ocellus and also obliquely at the sides of the clypeus; antennæ but slightly longer than the head and prothorax, slender, rather rapidly strongly incrassate near the tip, sixth joint one-half longer than wide, the tenth transverse. *Prothorax* scarcely twice as wide as long, the sides rather strongly rounded, convergent and nearly straight toward base, widest before the middle; basal angles obtuse but not rounded; base not distinctly wider than the apex; disk strongly and closely but scarcely rugosely punctate, explanate at the sides, the sublateral fovea before the middle and near the edge; median subbasal impressions strong, coalescent, forming a posteriorly angulate transverse channel. *Elytra* quadrate, almost three times as long as the prothorax and nearly two-fifths wider; sides subparallel, nearly straight; humeri distinctly exposed at base; apex truncate, the sutural angles not at all produced; disk strongly punctate, the punctures forming dense close and rather well-marked series with the intervals feebly convex and finely remotely and subserially punctate. *Abdomen* extremely short and broadly obtuse behind the elytra, black, subimpunctate. Length 2.2 mm.; width 1.2 mm.

California (Siskiyou Co.).

The unique type is a female but cannot be confounded with *reflexicollis*, as the numerous differences are not at all suggested in the large series of males and females of *subcostatum* which I have before me. The present species differs from *reflexicollis* in the very much more narrowly explanate sides of the pronotum, in the less coarse and closer sculpture of the elytra, straight and not arcuate sides of the prothorax toward base, in the shorter antennæ, and in the distinctly exposed humeri; in color, rugosity of the pronotum and several other features there is also notable divergence.

DELIPHRUM Erichs.

The two following species are referred to Deliphrum, although in some characters they appear to be intermediate between that genus and *Lathrimæum*. In *æquicolle* the intermediate tibiæ only are sparsely spinulose, the others coarsely setose, or with spines only very slightly thicker than the ordinary setæ; in *occiduum* the spinules of the hind tibiæ are but slightly more visible. A few very short spines are also visible along the intermediate tibiæ of *Lathrimæum spretum*. In the general facies and fine even punctures of the pronotum both of these species agree very satisfactorily with *Deliphrum tectum* Payk.; they are very much smaller than *D. expansum* Lec. from Colorado.

The antennal differences given by LeConte and Horn (Class. Col. N. A.) to distinguish *Lathrimæum* and *Deliphrum* do not exist, these organs being equally incrassate in both; they are however longer and much more nearly filiform in *Olophrum*. In *Lath. subcostatum* the tibiæ are not spinose, but evenly covered with short stiff inclined setæ.

D. æquicolle n. sp.—Broad, polished, glabrous, dark piceous-brown, the head and abdomen blackish; antennæ black, slightly pale at base; legs, sterna and epipleuræ paler, flavescent. *Head* transverse, three-fifths as wide as the prothorax, very finely, remotely punctate, smooth; ocelli large, prominent, distant by two-fifths the width; dorsal constriction of the neck obsolete; surface feebly impressed before each ocellus and at the sides of the clypeus; lateral margins of the latter deeply interrupted as usual before the eyes for the reflexion of the antennæ; eyes moderate; antennæ two-fifths as long as the body, slender toward base but rapidly though gradually, strongly incrassate near the apex, sixth joint one-third longer than wide, eighth and tenth similar in form, slightly wider than long, the tenth very much the larger. *Prothorax* not quite twice as wide as long, the sides parallel, evenly, moderately rounded; basal angles obtuse and blunt; disk minutely, not very densely, evenly punctate, the punctures rather closer and stronger near the base, the surface narrowly explanate along the sides, not at all impressed in the middle, the sublateral foveæ before the middle very feeble. *Elytra* subquadrate, nearly parallel, truncate at apex, not as long as wide, not more than twice as long as the prothorax; sides nearly straight; humeri not exposed at base; disk coarsely deeply confusedly and not very densely punctate, the punctures having only the most indistinct lineate arrangement, altogether confused and denser near the suture. *Abdomen* with more than three exposed segments, subimpunctate, polished. Length 2.0 mm.; width 1.1 mm.

California (Lake Tahoe).

I took a single male only of this species, which is very distinct by reason of its short and coarsely, subserially sculptured elytra.

D. occidentale n. sp.—Oblong, convex, polished, glabrous, black, the elytra with the feeblest piceo-metallic tinge; legs piceous-black, the tibiae and tarsi rufescent; antennae black throughout. *Head* two-thirds as wide as the prothorax, nearly as in *æquicolle*, minutely, sparsely punctate; antennae slender, slightly longer than the head and prothorax, very evenly, feebly incrassate throughout from near the base, joints one to seven more or less longer than wide, eight to ten shorter, similar in form, scarcely as long as wide, increasing in size. *Prothorax* about twice as wide as long, the sides parallel, feebly and evenly arcuate; base and apex subequal; basal angles obtuse and narrowly rounded; disk evenly, transversely convex, not impressed, very narrowly explanate along the side margins, finely, rather strongly and somewhat closely punctate; sublateral foveae before the middle very feeble. *Elytra* toward apex nearly one-third wider than the prothorax, two and one-half times as long as the latter, fully as long as wide, truncate at apex, the sides feebly divergent, nearly straight; humeri not exposed at base, obliquely rounded to the prothorax, rather coarsely strongly and closely punctured, with a broad deep impression along each side of the elevated suture, the punctures almost evenly distributed, with very feeble subserial arrangement. *Abdomen* with nearly three exposed segments, polished, subimpunctate. Length 2.2 mm.; width 1.2 mm.

California (Siskiyou Co.).

Allied to *æquicolle* but differing altogether in the form of the antennae, which are here much more slender and very feebly gradually and evenly incrassate throughout, also in its rather more transverse prothorax and in the larger, more densely punctate elytra. It is represented in my cabinet by a single female.

OMALIUM Grav.

In this difficult genus the European species have been divided into several subgenera which appear to be amply valid, at least as such, there being notable differences in the structure of the maxillary palpi. The following species are to be added to those already known from North America:—

O. ater n. sp.—Narrow, convex, highly polished, intense black, the legs toward tip and antennae toward base rufescent; very narrow side margins of the pronotum also feebly rufescent from diaphaneity; pubescence excessively short, remote and scarcely visible. *Head* barely more than two-thirds as wide as the prothorax, wider than long, flat throughout above, finely, very remotely

and unevenly punctate; front broadly, strongly rounded; eyes large, at the base; tempora nearly obsolete; nuchal constriction immediately behind the eyes, extending transversely across the head; ocelli large, separated by two-fifths the total width, on the edge of the nuchal depression; third joint of the maxillary palpi small, not longer than wide, fourth fusiform, pointed toward apex, in the middle wider than the third, about three times as long; antennæ stout, not quite as long as the head and prothorax, basal joint cylindrical, twice as long as wide and as long as the next two, the latter equal in length, third narrow, obconical, nearly twice as long as wide, six to eleven gradually strongly incrassate and more densely pubescent, forming a six-jointed club, seven to ten strongly transverse; minute impressions before the ocelli scarcely distinct. *Prothorax* nearly one-half wider than long; sides parallel and broadly, evenly arcuate; base truncate, scarcely wider than the feebly arcuate apex; disk transversely convex, nearly even but with two obsoletely flattened median areas; punctures fine, deep, very sparse and rather unevenly distributed. *Elytra* but very slightly wider than the prothorax and twice as long, about as long as wide; sides straight, scarcely divergent; punctures somewhat coarse, deep, not very dense, forming indistinct longitudinal rugulations. *Abdomen* shining, minutely, sparsely punctate, as long and wide as the elytra; border moderate. *Legs* short and rather stout; tibiæ strongly spinulose externally and with an internal row of slender bristles which are very short on the anterior; hind tarsi nearly four-fifths as long as the tibiæ, the last joint barely as long as the four preceding together, the fourth distinctly shorter than the third; anterior feebly dilated in the male. Length 2.9 mm.; width 1.0 mm.

California (Sta. Cruz Co.).

Related to *florale* (= *rufipes* Fourc.) but much smaller, with the elytral punctures much coarser and not joined by anastomosing impressed lines as they are in that species.

***O. pacificum* n. sp.**—Narrow, moderately convex, feebly narrowed anteriorly, intense black throughout; legs and base of the antennæ rufescent; pubescence in the form of minute but distinct erect stiff setæ. *Head* three-fourths as wide as the prothorax, in form as well as structure of the palpi and antennæ nearly as in *ater*, the basal joint of the latter however not as long as the next two and the second longer as well as thicker than the third, outer joints strongly incrassate and transverse. *Prothorax* three-fifths wider than long; sides nearly parallel, broadly, evenly arcuate; base transversely truncate, very slightly wider than the apex; disk evenly, transversely convex, with scarcely any trace whatever of central flattening, finely strongly and densely punctate. *Elytra* toward apex slightly wider than the prothorax, nearly two and one-half times as long as the latter; sides straight, just visibly divergent; disk finely, deeply, extremely densely punctate, the sculpture feebly rugulose, longitudinally substrate near the middle. *Abdomen* fully as wide as the elytra and rather shorter. *Legs* short and stout, the tibiæ spinulose externally. Length 2.3 mm.; width 0.75 mm.

California (Siskiyou Co.).

This species is allied to *ater* and *megarthroides*, differing greatly from the former in its still smaller size, narrower form, more distinct setæ and much finer, denser sculpture, and from the latter in coloration and in its more parallel and less anteriorly attenuate form. In *pacificum*, *ater* and probably generally throughout the genus, there is a transverse row of longer erect setæ near the middle of each abdominal segment and the minute erect setæ of the elytral punctures are replaced at wide intervals by longer setæ; the small and ordinary elytral setæ in *ater* are very much more minute than in *pacificum* and can scarcely be discerned under comparatively high power. The type appears to be a female.

Of *megarthroides* I have many examples of all degrees of color and immaturity. The measurements given by Fauvel seem to be a little too great, my series of thirty-one specimens, taken in numerous localities from Los Angeles to Victoria, give as extremes of length 1.75–2.6 mm.; *megarthroides* appears to be extremely closely allied to *humile* Mäkl.

O. lacustre n. sp.—Narrow, elongate, subparallel, feebly convex, polished, rufo-testaceous throughout, the head and abdomen, especially toward apex, rather darker and more piceous; pubescence consisting of extremely minute suberect scarcely visible setæ, denser and much longer on the alutaceous under surface of the abdomen. Head distinctly but not greatly narrower than the prothorax, wider than long, triangular, with the epistoma truncate and one-half as wide as the base; eyes moderate, at one-half their length from the base; the tempora parallel, nearly straight and almost as prominent as the eye; base truncate, the constriction extending transversely and deeply across the dorsal surface; ocelli separated by two-fifths the entire width, on the edge of the constriction; occiput not impressed before them; surface finely, rather closely but unevenly punctate, very feebly blimpresed between the antennæ, the latter pale, very short, one-third longer than the width of the head, subcylindrical, scarcely visibly incrassate, outer joints transverse; last joint of the maxillary palpi subbulbose toward base, gradually finely attenuate and feebly arcuate thence to the apex, nearly three times as long as the third but scarcely as thick. Prothorax one-half wider than long, widest before the middle; sides broadly rounded, becoming rather more convergent and straighter toward base; disk finely, rather closely punctate, without anastomosing impressed lines, with two elongate subobsolete median impressions and another scarcely visible between them near the apex. Elytra but just visibly wider than the prothorax, quadrate, as long as the head and prothorax, scarcely as long as wide, finely, very densely punctate and obsoletely, longitudinally substriolate. Abdomen a little narrower and rather longer than the elytra, subparallel; border rather wide. Legs short; poste-

rior tarsi slender, very nearly as long as the tibiæ; fourth joint shorter than the third, first three somewhat elongate, first four together much longer than the fifth. Length 2.75 mm.; width 0.75 mm.

Michigan.

The single specimen is a male and has the anterior tarsi very feebly dilated; the sixth ventral is broadly, feebly arcuate at apex. This species closely resembles *longulum*, but differs in its much shorter and more densely punctate elytra, smaller and less incrassate antennæ, in the absence of anastomosing fine lines on the shorter pronotum, and, radically, in the structure of the posterior tarsi, which in *longulum* have the first four joints short, thick, oblique, equal and together rather shorter than the fifth.

O. capito n. sp.—Elongate, parallel, feebly convex, polished, black; antennæ, legs and elytra paler, castaneous; pronotum piceous-black; setæ extremely minute, sparse and scarcely discoverable, on the abdomen longer and distinct but sparse above and beneath, the venter shining. *Head* large, not as long as wide, much longer and only slightly narrower than the prothorax, finely, sparsely punctate, scarcely perceptibly biimpressed between the antennæ; eyes feebly convex; tempora subparallel, straight, nearly as long and prominent as the eye; base transverse and strongly constricted, the ocelli on the edge of the constriction, very feeble, separated by barely one-third of the width; antennæ stout, feebly incrassate, as long as the head and prothorax, third joint rather longer than wide, constricted and strongly compressed toward base. *Prothorax* two-thirds wider than long, widest before the middle; sides feebly convergent and just perceptibly sinuate toward base; disk scarcely visibly flattened in the position of the usual impressions, evenly convex, finely, sparsely punctate. *Elytra* about as long as wide, a little longer than the head and prothorax, very slightly wider than the latter, strongly, broadly impressed along the elevated suture, finely, very sparsely punctate, the punctures feebly lineate in arrangement toward the middle of each. *Abdomen* a little narrower and rather shorter than the elytra, minutely sparsely and indistinctly punctate, shining, just visibly alutaceous. *Legs* short; posterior tarsi very long and slender, as long as the tibiæ, the first three joints elongate, oblique at apex, second nearly twice as long as the first, two to four decreasing rapidly in length, first four together much longer than the fifth. Length 3.0 mm.; width 0.9 mm.

Wisconsin.

Allied to *lacustre*, having nearly the same peculiar structure of the tarsi and also similar in the form of the body and oral organs. It differs notably in the larger head, longer, stouter antennæ with compressed third joint, more approximate ocelli, longer tempora, longer elytra and much sparser punctuation throughout. The single specimen is a male, having the sixth ventral feebly arcuate

at apex and the anterior tarsi feebly dilated and densely pubescent beneath. If the usual definition of the genus is to hold, these two species will have to be separated because of the marked tarsal differences.

The following species have the body slender, parallel, subimpunctate and opaque or alutaceous, with the fourth joint of the maxillary palpi slender, cylindrical, much narrower than the third and somewhat more or less than twice as long; they constitute the subgenus *Phleonomus* of Heer:—

Fourth palpal joint shorter, one-half longer than the third. Arctic.

lapponicum

Fourth palpal joint twice as long as the third or very slightly longer.

Posterior tarsi distinctly more than one-half as long as the tibiae.

Surface opaque, strongly granulato-reticulate; prothorax very nearly as wide as the elytra. European subarctic **pusillum**

Surface much more shining, alutaceous, more coarsely and feebly reticulate; prothorax much narrower than the elytra; setae of the latter longer and more visible. American subarctic **laesicolle**

Posterior tarsi not more than one-half as long as the tibiae; legs longer; body much broader, feebly shining, alutaceous. American subarctic.

suffusum

Pusillum is simply included for comparison; it is closely allied to *laesicolle* but is distinct and does not appear to inhabit North America.

O. suffusum n. sp.—Suboblong, depressed, feebly shining, black, the legs and elytra rufous, the latter suffused with black near the scutellum and each external apical angle; antennae fuscous, pale in basal half; integuments subglabrous; elytral setae minute, erect, distinct under a power of 80. *Head* small, wider than long, three-fourths as wide as the prothorax; eyes large, convex; tempora feebly arcuate, short, strongly convergent to the nuchal constriction; ocelli distinct, on the edge of the constriction, separated by scarcely more than one-fourth of the total width; surface impressed before each, also broadly, strongly impressed at each side of the large rounded clypeus; antennae a little longer than the head and prothorax, outer six joints abruptly stouter, six to ten strongly transverse. *Prothorax* four-fifths wider than long; sides subparallel, feebly arcuate, slightly convergent and scarcely sinuate toward base; disk subimpunctate, explanate at the sides, more broadly toward base, also with two broad strong median impressions extending but slightly beyond the middle and a very feeble median impression at the apex. *Elytra* quadrate, one-fourth wider than the prothorax and twice as long, nearly as long as wide, much longer than the head and prothorax; humeri extremely narrowly exposed; sides parallel; disk very sparsely and obsoletely punctate. *Abdomen* as wide as the elytra and rather shorter, somewhat strongly

shining, feebly pubescent; border moderate. *Legs* slender, rather short; four basal joints of the hind tarsi together barely three-fourths as long as the last. Length 2.0 mm.; width 0.7 mm.

Alaska (Hunter's Bay, Prince of Wales Island). Mr. Wickham.

Much broader and rather more convex than *læsicolle*, to which it is allied. In *læsicolle* the fifth abdominal tergite is nearly two and one-half times as wide as long, while in the present it is scarcely more than twice.

O. quadripenne n. sp.—Oblong, feebly convex, black with a feeble piceous tinge except on the abdomen; legs rufous; antennæ fuscous, paler toward base; integuments polished, subglabrous, the abdomen finely, strongly reticulate and alutaceous. *Head* strongly, closely punctate, wider than long, fully two-thirds as wide as the prothorax; neck narrow, one-half the total width; eyes moderate, near the base; ocelli separated by scarcely more than one-fourth the total width; surface with a deep puncture before and exterior to each ocellus, also broadly impressed at each side of the large and broadly rounded clypeus; antennæ as long as the head and prothorax, gradually and moderately incrassate; fourth palpal joint as wide as the third and about three times as long, very feebly narrowed, the tip obtuse. *Prothorax* strongly transverse, four-fifths wider than long; sides broadly, evenly rounded, feebly convergent and nearly straight toward base, the basal angles obtuse; disk transversely convex, feebly explanate near the hind angles, with three distinct median impressions, the intermediate near the apex. *Elytra* parallel, quadrate, slightly wider than the prothorax and barely twice as long, very little longer than the head and prothorax, not quite as long as wide, strongly, very densely punctate and obsoletely, longitudinally rugulose. *Abdomen* as wide as the elytra and a little shorter; segments very short; border ample. *Legs* short, slender; four basal joints of the hind tarsi together scarcely more than two-thirds as long as the fifth. Length 1.8 mm.; width 0.7 mm.

Virginia (Fredericksburg).

Allied rather closely to *foraminosum*, but abundantly distinct in its broader form, larger prothorax, shorter elytra, much denser punctuation, shorter, broader abdominal segments and many other characters; from *cribrum* it may be known at once by the rounded sides of the prothorax.

In this and many other species there is a deep wide and oblique antennal groove on the upper surface of the head near the eye, the inner margin of which is frequently cariniform. It seemed at first as though this might serve to define the genus *Omalium* better than the variable posterior tarsi, but I find that it disappears in some species such as *lapponicum* and *læsicolle*, and moreover exists in some other genera such as *Lathrimæum*.

O. rugipenne Csy. is a very aberrant form in its small short elytra and large rounded abdomen, but belongs to the genus by all of its structural characters. *O. algarum* Csy. (= *fucicola* || Csy.) is closely allied to *theveneti* Fvl., but differs in its much larger size and relatively shorter antennæ. Of *exsculptum* Mäkl. I took a single specimen in Humboldt Co. California; the sculpture of the pronotum reminds us somewhat of *Lathrimæum*, but it is a true *Omalium*.

ANTHOBIUM Steph.

The species of *Anthobium* are really very numerous in America, especially in the regions near the Pacific Ocean, but had not been collected to any extent at the time Mr. Fauvel wrote upon them (Not. Ent., 7, 1878). During a four or five days collecting trip to Lake Tahoe in June 1886, I took four species in an area not exceeding several hundred yards in extent bordering this pretty little mountain sea. *Omalini* of several genera are especially abundant in those regions, which will yield many more interesting forms when the numerous secluded valleys can be carefully explored.

At the present time I have selected a number of the more distinct and interesting new species for description; these may be identified among themselves as follows:—

Elytra with the outer angle at apex moderately broadly rounded, the apex subtruncate.

Head black.

Entire upper surface intense black **nigerrimum**

Upper surface black, the pronotum and elytra dark piceous; sutural angles not prolonged in the female; prothorax in the male much larger than in the female..... **diversicolle**

Black, the pronotum slightly paler especially toward base; elytra pale flavate **gilvipenne**

Head testaceous.

Pronotum with a feeble subobsolete median impressed line, at least in the male.

Elytra transversely truncate or evenly arcuate at apex, in the female not in the least modified at the sutural angle; pronotum polished, very coarsely, deeply punctate **punctatum**

Elytra with the sutural angles abruptly and strongly produced in the female; prothorax in the male much more elongate than in the female **tibiale**

Pronotum without vestige of an impressed median line.

Sides of the prothorax broadly subangulate at basal third; large stout species, strongly punctate..... **subangulatum**

Sides of the prothorax very evenly rounded ; small species.

atriventre

Elytra with the outer angle very broadly rounded, the apex conjointly semi-circular in the male or gradually acutely pointed in the female ; prothorax relatively smaller **fraternum**

As several species, such as *finetarium*, *segmentarium* and *marginatum* are unknown to me, and *rugulosum* doubtfully determined, I am not able at present to give a complete statement of our species ; *sorbi* is somewhat doubtful as an American species.

A. nigerrimum.—Elongate, parallel, polished, the pronotum and abdomen reticulate and alutaceous, the abdomen finely, sparsely pubescent ; legs and antennæ pale rufo-testaceous, the latter infumate near the tip. *Head* transverse, two-thirds as wide as the prothorax, very finely, sparsely punctate, feebly and longitudinally impressed near the sides ; eyes large and prominent ; ocelli small, separated by less than one-third the width ; antennæ short, scarcely as long as the head and prothorax, outer joints gradually rather strongly incrassate, sixth longer than wide, seven to ten similar in form and a little wider than long. *Prothorax* three-fourths wider than long, the sides evenly and continuously arcuate, feebly divergent to beyond the middle, then very broadly rounded and strongly convergent to the apex which is scarcely three-fourths as wide as the base ; disk evenly, transversely convex, very feebly subexplanate at the sides just behind the middle, without trace of median impressed line, the punctures fine but strong and distinct, rather sparse. *Elytra* a little longer than wide, more than twice as long as the prothorax and scarcely visibly wider, the sides straight and subparallel ; apex broadly feebly and very evenly arcuate ; disk unusually coarsely deeply confusedly and rather closely punctate. *Abdomen* as wide as the elytra, with four exposed segments. Length 2.2 mm. ; width 0.9 mm.

Southern California. Mr. H. C. Fall.

The single male in my cabinet is related to *californicum* but differs in its intensely black and more coarsely sculptured elytra. The anterior tibiæ are simple and the median elevated plate of the sixth ventral segment is very large, transverse, twice as wide as long, extending to the apex and with its apex transversely truncate and its sides parallel.

The nuchal constriction throughout *Anthobium* is completely obsolete on the dorsal surface, and by this character the species can be distinguished from all the forms of *Omalium* which I have seen, although the constriction becomes very feeble in several species of the latter genus, such as *hamatum* and *megarthroides*, these also approaching *Anthobium* in general habitus as well.

A. diversicollis.—Subparallel, convex, subalutaceous, the elytra polished, black, the pronotum and elytra piceous-black; legs and antennæ pale flavate, the latter toward apex and the posterior femora toward base dusky. *Head* two-thirds as wide as the prothorax, broadly, longitudinally biimpressed, minutely, sparsely punctate; ocelli small, separated by more than one-third of the width; eyes rather small; antennæ much shorter than the head and prothorax, strongly incrassate toward apex. *Prothorax* large, rectangular,

middle and obsolete in the middle before the base; punctures fine, feeble and sparse. *Elytra* one-fourth longer than wide, the sides subparallel and nearly straight; apex transverse; humeri not exposed; disk scarcely visibly wider than the pronotum but nearly two and one-half times as long, coarsely strongly confusedly and not very densely punctate. *Abdomen* with nearly four exposed segments, shining, subimpunctate and not distinctly pubescent. Length 17-19 mm.; width 6.5-6.8 mm.

tate; antennæ much shorter than the head and prothorax, moderately incrassate. *Prothorax* large, subrectangular, one-third wider than long; sides subparallel, very feebly arcuate, a little more convergent anteriorly; base distinctly wider than the apex; basal angles slightly obtuse and blunt; disk strongly, evenly convex, minutely but strongly, evenly, rather sparsely punctate, very feebly impressed near the sides behind the middle and also extremely obsoletely and narrowly along the median line. *Elytra* rather longer than wide, twice as long as the prothorax, and, near the apex, almost one-third wider; sides feebly divergent, nearly straight; humeri not exposed; apex broadly, evenly arcuate throughout the width; disk rather finely but strongly, confusedly and closely punctate. *Abdomen* with about four exposed segments. Length 1.8–2.1 mm.; width 1.0–1.1 mm.

Arizona.

The description is taken from the male, in which sex the sixth ventral is abruptly thickened and transversely more convex in the middle, with the very short apex of the segment beyond thinned and transparent, and the apical margin of the thickened part bearing long stiff setæ; the anterior tibiæ are widest and obtusely prominent within at the middle, thence rapidly narrowed to the base and broadly sinuate to the apex. The female is quite different, the prothorax being very much shorter and more transverse as in *diversicolle*, and the elytra larger, fully three times as long as the prothorax, covering the entire abdomen, with the sutural angles very strongly and abruptly prolonged behind. Six specimens.

A. subangulatum.—Robust, subparallel, convex, rufo-testaceous and polished throughout, the abdomen black. *Head* large, four-fifths as wide as the prothorax, nearly as long as wide, scarcely at all impressed, finely but strongly, rather closely punctate; ocelli all but completely obsolete; eyes smaller than usual, the tempora distinct behind them; antennæ longer than usual, longer than the head and prothorax, sixth joint longer than wide, not wider than the preceding, seven to eleven forming a long loose five-jointed club, tenth but slightly wider than long. *Prothorax* transverse, fully four-fifths wider than long; apex truncate, fully as wide as the base; sides very broadly subangulate just behind the middle, thence feebly convergent and nearly straight to the distinct but rounded apical angles, more convergent and somewhat sinuate to the base, the basal angles obtuse and blunt; disk rather coarsely deeply and closely punctate, just visibly impressed before the scutellum and strongly so along the sides behind the middle. *Elytra* about as long as wide, near the apex slightly wider than the prothorax, more than twice as long; sides just visibly divergent, nearly straight; humeri slightly exposed; apex broadly, evenly subtruncate; punctures distinct, deep, subequal to those of the pronotum and rather less approximate, confused. *Abdomen* with about three exposed segments. Length 2.3–3.0 mm.; width 1.0–1.25 mm.

California (Lake Tahoe).

Described from the male, which has the sixth ventral broadly, feebly sinuate throughout at apex, with the surface not modified, the median segment of the seventh acutely parabolic, as long as wide, polished, with a few erect setæ; anterior tibiæ not modified, the tarsi distinctly dilated. The female is almost perfectly similar in general structure to the male, but has the head a little smaller and the sides of the elytra a trifle more divergent.

This is an interesting aberrant type of the genus, having longer antennæ, and differing also in male sexual characters and in tarsal structure; the first four joints of the stout posterior tarsi are together much longer than the last, with the second joint nearly twice as long as the first and as long as the next two together. The subobsolete ocelli makes the transition to the complete absence of them in *Vellica*, a comparatively easy one and also detracts somewhat from the importance of that character.

A. atriventre.—Subparallel, convex, shining, the pronotum but very feebly reticulate and alutaceous, pale rufo-testaceous, the abdomen black; antennæ darker at apex. *Head* fully three-fourths as wide as the prothorax, flat, minutely, sparsely punctate, very obsoletely biimpressed between the eyes and between the antennæ; ocelli large, diffuse, separated by fully one-third the width; eyes large, prominent; antennæ scarcely as long as the head and prothorax, moderately incrassate, the last five joints gradually larger. *Prothorax* transverse, fully three-fourths wider than long; sides broadly, evenly arcuate, much more convergent in apical half, the base truncate and nearly one-half wider than the apex; basal angles obtuse but not appreciably blunt; disk strongly, transversely convex, even, minutely but distinctly, sparsely punctate. *Elytra* distinctly longer than wide, more than twice as long as the prothorax, and, near the apex, one-third wider; sides feebly divergent, nearly straight; humeri slightly exposed at base; apex broadly, feebly arcuate, with a small notch at the suture; punctures strong confused and rather dense. *Abdomen* half exposed behind the elytra. Length 1.7 mm.; width 0.75 mm.

California (Los Angeles).

This species is allied to *gilvipenne*, resembling it in general form, but differs in its shorter, more transverse prothorax, which is much more narrowed toward apex, in its larger, more distant ocelli, and in coloration and size. The single male has the sixth ventral thin and transparent, broadly lobed in the middle, the surface before the lobe abruptly elevated, flat, transversely trapezoidal, with the apex of the thickened part not quite attaining the apex of the segment

and broadly sinuate in the middle, not truncate as in *gilvipenne*; anterior tibiae simple.

A. fraternum.—Broad, cuneiform, convex, pale rufo-testaceous throughout, alutaceous, the elytra polished. *Head* three-fourths as wide as the prothorax, the surface perfectly flat, minutely, sparsely punctulate; eyes large; ocelli large, separated by one-third the width, each immediately behind a small deep impressed fovea; antennae as long as the head and prothorax, gradually and rather strongly incrassate from the middle. *Prothorax* transverse, not quite twice as wide as long; sides feebly rounded, slightly convergent in basal and strongly so in apical half; apical angles obtuse but visible; base two-fifths wider than the transversely truncate apex; disk evenly convex, broadly, feebly impressed at the sides behind the middle, very widely so toward base; punctures very minute but rather close. *Elytra* large, longer than wide, transversely convex, one-half wider than the prothorax and nearly three times as long, semi-circularly rounded behind, covering all but the acute tip of the abdomen, finely but strongly, distinctly confusedly and not very densely punctate. Length 2.2–2.6 mm.; width 1.1–1.25 mm.

California (Hoopa Valley, Humboldt Co.).

The male, from which the above outline is drawn, has the tibiae simple and straight, the posterior tarsi long, stout, with the second joint notably longer than the first and almost as long as the next two—nearly as in *subangulatum*—the first four together much longer than the fifth, the fifth ventral broad, transverse at apex, with a deep abrupt parallel-sided median fissure nearly four times as deep as wide, the sixth short, broadly sinuate throughout, and the median ligula of the seventh large, longer than wide, convex and acutely triangular. The female is similar but larger, the elytra more oval, more than three times as long as the prothorax, covering the entire abdomen, slightly dehiscent at apex, and arcuately narrowed and conjointly acutely ogival from posterior third.

This species with the eastern *convexum* and the Californian *aurifluum* of Fauvel, constitutes a peculiar group of the genus, differing in the nature of the male sexual characters, in the larger oval and more convex elytra, and in tarsal structure.

Aurifluum, of which I took a large series at Lake Tahoe, is a small species, 1.5–2.0 mm. in length, having the anterior and middle tibiae flattened within and strongly arcuate throughout the length, the posterior tarsi shorter and more nearly normal, the fifth ventral unmodified and the sixth longer, narrower, trapezoidal, with the apex narrowly truncate. In the female the elytra pro-

ject far beyond the abdomen, are dehiscent in apical fourth, and obliquely narrowed from just behind the middle.

In the male of *convexum* the fifth segment is transverse and unmodified, the sixth very short, transverse at apex, with a small feeble median sinuation, the posterior tarsi somewhat as in *fraternum*. The elytra in the female are nearly as in *fraternum* but have the sides more parallel.

PSELAPHIDÆ.

On recently arranging my long-neglected material in this remarkable family, I found so much to correct and explain in my earlier work and, incidentally, so many undescribed and interesting species, which had been gradually accumulating, that it seemed to me a few notes might not be unacceptable to general students of the family. In the arrangement of the tribes I have followed the order proposed by Mr. A. Raffray, in his valuable revision published a few years since in the "Revue d'Entomologie."

The mode of antennal insertion in this family does not seem to have been dwelt upon thus far in systematic works. The first joint is attached to the under part of the sides of the front by the upper part of its base, the basal parts being, as it were, turned upward to the point of attachment. This structure, which is of course not essentially different from that seen elsewhere in the Coleoptera except in degree, is best displayed in such genera as *Pselaphus* and *Tychus*; but at the same time it is a constant peculiarity of the family; it restricts the motion of the antennæ almost to a horizontal plane.

FARONINI.

The general form of the body in this tribe resembles that of the *Euplectini*, but many features, and especially the tarsus of *Faronus* and its immediately related genera, show that it is also very closely allied to certain *Staphylinidæ*. The tarsus of *Faronus* is exactly similar in structure to that of many *Oxytelini*, and the transverse pubescent line of the first visible dorsal segment, a very important and characteristic modification in the true *Faronini*, is frequently seen in the *Omalini*. The tribe is thus truly intermediate between the *Staphylinidæ* and *Pselaphidæ*, but these remarks apply fully only to the small group having staphylinide tarsi referred to above.

The second section of Raffray, having the tarsi normally pselaphidous in structure, should constitute a distinct tribe, intermediate between the Faronini and Euplectini, for, in the present family, a difference in tarsal structure such as this, is of far greater importance than any possible modification of the unguis.

At the same time, an extraordinary character, hitherto escaping record as far as I can discover, shows that the tribe Faronini, in its limited sense, is in reality very isolated. The sexual modifications at the apex of the venter are bilaterally asymmetric. Whether or not this occurs in Faronus I am unable to state at present, but it is a common condition in both of our genera, and is confirmed by large series of several species in my cabinet.

The genera of this tribe thus far known are as follows, those not occurring within the limits of the United States being distinguished by an asterisk:—

Tempora obsolete, the eyes very large, extending to the base.

***Faronidius**

Tempora large and long behind the eyes, the latter smaller.

Tempora angulate; intermediate coxæ not separated by a mesosternal process; metasternum short.....***Faronus**

Tempora not angulate; intermediate coxæ separated by a narrow mesosternal lamina.

Metasternum and elytra rather short (types of genus *misella* and *parva* Shp.); front narrowed, the antennal prominences approximate, separated by a longitudinal sulcus which is expanded behind the frontal margin.....***Sagola**

Metasternum long, in a longitudinal line through the acetabula about twice as long as the intermediate coxæ; front wide, not tuberculiform, the antennal prominences widely distant, separated by a non-sulciform depression, having a very large, isolated, extremely deep and sensitive pit at some distance behind the apical margin; nuchal constriction simple beneath; elytra long; first visible dorsal segment very short, transversely lineate with minute pubescence.....**Sonoma**

Metasternum short, in the line of the acetabula scarcely at all longer than the intermediate coxæ; head as in *Sonoma*, but with two sensitive patches in the nuchal constriction beneath; eyes rather more convex and prominent; elytra short; first visible dorsal nearly as long as the second and entirely similar to it, completely devoid of the pubescent line.....**Rafonius**

Metasternum and elytra very short, the latter scarcely as long as the prothorax; front broad, the antennæ widely separated; vertex with two foveæ, not isolated from the frontal pit but joined by a foveiform channel; basal segment of the abdomen without the transverse subpubescent line.....***Delenda.**

Delenda Croiss. (= *Eusonoma* Reit.) has been recently proposed (*Coléoptérologiste*, 1891, p. 152) for a small species from Asia Minor. It is closely related to *Rafonus* but appears to differ decidedly in the structure of the upper surface of the head.

SONOMA Casey.

In this genus the head is generally small, the eyes well developed, the tempora somewhat variable, generally rapidly convergent and rounded to the neck, sometimes rounded and about as prominent as the eye, never in the least angulate. Upper surface constantly with two small nude post-median foveæ, and a large extremely deep abruptly excavated subapical pit, which is always more acutely rounded behind and with its anterior margin more transverse. On the under surface there is a deep transverse sulcus just behind the mentum and maxillæ, the plane of these parts sloping rapidly upward from the base, the base of the maxillary cardo greatly exposed; there is also a deep transverse and perfectly simple nuchal constriction. The under surface never has any sign of the singular and complicated excavations and carinæ so common in *Sagola*.

The maxillary palpi have the first joint minute, simple and scarcely more than one-third as long as the second, otherwise nearly as in *Sagola*. Antennæ submoniliform, with the joints loosely connected throughout, as usual in the tribe, gradually thicker toward apex and with the basal joint much thicker and longer than the second. The antennæ are more clavate than in *Sagola*, but much less so and shorter than in *Rafonus*. The pronotum has constantly two small discal foveæ at the middle, besides the complex subbasal impressions, and the metasternum a long broad deep canal extending posteriorly from the outer side of the middle acetabula.

The remarkable asymmetric modifications of the sixth ventral segment of the female and the ventral pygidium of the male have been alluded to above. They are present in both of our genera, and probably constitute one of the most characteristic distinguishing features of the tribe. The asymmetry affects very different forms in the various species of the same genus, as may be seen from the few examples figured on the plate.¹

¹ The staphylinide genus *Palaminus* is also remarkable in having asymmetric male sexual characters at the ventral apex.

I cannot entirely agree with Mr. Raffray in considering the head in Sonoma as even broadly tuberculate. If the front in this genus has an antennal tubercle, it is difficult for me to conceive of any method of distinguishing between the presence or absence of a tubercle. Probably there is no such line of demarcation, but assuredly if the front in Sonoma is tuberculate, there are very few genera known to me which might not be forced by effort of the imagination into this same condition. In my own opinion, the tuberculate condition can only obtain when the front is strongly narrowed and more or less prolonged, with the antennæ approximate at base, the two supra-antennal prominences then come together, or nearly so, to form the tubercle.

My reasons for maintaining the validity of this genus, which is said by Mr. Raffray (Rev. d'Ent., 1893, p. 15) to be identical with *Sagola*, are several. In the first place, the genus *Sagola* as constituted in the interesting work of Raffray, is evidently composite, and the cephalic characters alone of such species as *excavata* and *sulcata* of Broun, show that these at least are very aberrant and in all probability generically distinct. The peculiar frontal pit in Sonoma is such a constant and characteristic feature, that any decided modification of it is almost sure to be accompanied by other striking differences. Again, the fact that in our own fauna we have two distinct genera of this tribe, both conforming to the general organization of *Sagola*, tends still further to indicate that neither of them can be identical with that genus. Finally, the fact that a considerable number of Californian species, all indeed known from that region, have certain characters, previously disregarded but here assumed to be of generic value, perfectly and completely constant, tends to show that the genus *Sagola* as now organized is really a group of genera, perhaps as truly so as the old genus *Euplectus*. This will I think be admitted if, as in the present case, the newly discovered species range themselves into groups having certain peculiarities of abdominal, cephalic or thoracic structure in common. The generic value of these characters will depend solely upon their constancy throughout groups of species, and not upon any previously assumed criterion of their relative importance.

Our species are well characterized and may be distinguished as follows:—

Black or piceous-black, the elytra rufous; antennæ rather stout but of the usual length **isabellæ**

Rufous or flavo-testaceous in various shades, never in the least black or piceous.

Tempora as prominent as the eye, rounded.....**corticina**

Tempora always less prominent than the eye.

Head as wide as the prothorax; tempora parallel but less prominent than the eye; prothorax hexagonal.....**grandiceps**

Head invariably distinctly narrower than the prothorax.

Prothorax about as long as wide.....**longicollis**

Prothorax more or less strongly transverse.

Elytra fully twice as long as the prothorax; frontal margin much narrower than the neck.

Head larger; tempora at first moderately convergent, then strongly rounded to the neck.....**subsimilis**

Head very small, much narrower than the prothorax; tempora extremely convergent and broadly, feebly rounded from the eye to the neck.....**rubida**

Elytra distinctly less than twice as long as the prothorax; frontal margin subequal in width to the neck.

Prothorax widest before the middle.....**parviceps**

Prothorax widest at about the middle; smaller species, 1.6 mm. in length, paler in color, the head relatively larger, with the tempora more strongly convergent and broadly rounded from the eye; elytra shorter, more abruptly expanded and rounded at the sides behind.....**cavifrons**

S. grandiceps n. sp.—Slender, parallel, polished, subimpunctate, pale rufo-testaceous, the pubescence coarse and sparse. *Head* large, as wide as the prothorax, wider than long, the frontal margin bisinuate and as wide as the neck, equalling three-fifths of the maximum width; eyes well developed, moderately convex; tempora parallel behind the eyes but not quite as prominent, then strongly rounded to the neck; subapical fovea very large, deep, nearly as wide as long, triangular, with the apex behind; foveæ of the vertex as usual; antennæ slender, as long as the head and prothorax, the outer joints incrassate. *Prothorax* hexagonal, but slightly wider than long, widest and narrowly rounded at the middle, the sides almost equally, strongly convergent and nearly straight thence to base and apex, the latter but very slightly narrower than the base; large subbasal impression as usual, punctate in the middle and just behind each lateral extremity, also prolonged anteriorly at the sides, each spur extending to and including one of the usual discal punctures; lateral subbasal foveæ isolated. *Elytra* fully as long as the head and prothorax and one-half wider than the latter, rather longer than wide, the sides nearly straight, feebly divergent, broadly, feebly arcuate near the apex, the discal stria excavated beyond the middle. *Abdomen* rather longer than the elytra but scarcely as wide, parallel, the border relatively not quite as wide as usual; structure throughout normal, the fourth visible dorsal nearly one-half longer than the third. Length 1.4 mm.; width 0.35 mm.

California (Sta. Cruz Co.).

The male of this remarkably isolated species has the venter abruptly and strongly, subcircularly concave near the apex, the sides of the concavity on the disk of the fifth segment acutely elevated, the cusp-like elevation with a tuft of long stiff setæ. In the female the transverse apex of the sixth segment is a little more emarginate on the right, the middle produced as an abrupt rounded cusp. A single pair.

This is the smallest, narrowest and most parallel species of the genus.

S. longicollis n. sp.—Moderately stout, depressed, polished, impunctate, rufo-testaceous and coarsely, very sparsely pubescent throughout. Head about four-fifths as wide as the prothorax, distinctly wider than long, the frontal margin feebly arcuate, equalling one-half the maximum width and as wide as the neck; eyes rather large, moderately prominent; tempora to the neck as large as the eye, strongly rounded, not at all prominent; frontal pit large, oval, more acutely rounded behind, abrupt, extremely deep and cavernous, with the bottom spongy; foveæ of the vertex small, nude, situated behind the middle and distant by less than one-third of the total width; antennæ a little longer than the head and prothorax, gradually slightly thicker toward tip, eighth joint subglobular, ninth and tenth transverse. Prothorax very nearly as long as wide, widest before the middle where the sides are strongly rounded, very strongly convergent anteriorly, sinuate near the apex, the latter feebly subtubulate, convergent and nearly straight in basal half; discal foveæ minute, at the middle, separated by one-fourth the width; transverse impression just behind basal third straight, abruptly, minutely foveate at the middle and just behind each end; lateral foveæ at basal fourth large, nude and free. Elytra subquadrate, two-thirds longer than the prothorax and, near the apex, nearly twice as wide; sides more inflated and arcuate posteriorly; sutural striæ coarsely punctate near the base, discal very coarsely, deeply impressed and coarsely punctate in basal half, continued very feebly and indefinitely by a series of feeble punctures nearly to the apex, approaching the suture; intermediate region with a series of two or three coarse subbasal punctures. Abdomen about as long and wide as the elytra, the first visible dorsal scarcely more than one-half as long as the second, with the interrupted pubescent line broad. Length 1.6 mm.; width 0.6 mm.

California (Sta. Cruz Co.).

The single male before me has the abdomen deflexed behind, the venter broadly, indefinitely impressed near the apex but without further modification, except a very feeble transverse tumidity near the anterior margin of the sixth segment. Seventh or anal segment of the usual structure, with the oblique asymmetric median portion rounded throughout behind.

The unusually elongate prothorax will readily distinguish this species.

S. subsimilis n. sp.—Rather wide, feebly subcuneiform, polished, impunctate, rufo-testaceous throughout; pubescence very sparse. *Head* wider than long, slightly though distinctly narrower than the prothorax, the frontal margin arcuate, much narrower than the neck; eyes well developed, convex; tempora moderately convergent, broadly rounded to the neck; subapical pit large, very deep, abrupt, but slightly longer than wide; two punctures behind the middle separated by much less than one-third the width; antennæ two-fifths as long as the body, slender, last three joints gradually larger, basal joint thick, elongate, cylindrical, nearly as long as the next two. *Prothorax* one-third wider than long, widest at the middle where the sides are strongly rounded, strongly convergent anteriorly, more feebly so in basal half and feebly sinuate; base two-thirds wider than the apex; median punctures faint; subbasal excavation large, deep, transversely lunate, with a deeper punctiform fovea at the middle and each end; lateral subbasal foveæ isolated, large, deep. *Elytra* as long as the head and prothorax, two-thirds wider than the latter, about as long as wide; sides feebly divergent, broadly arcuate; discal punctate stria deeply excavated before the middle; the other punctures and sutural stria as usual. *Abdomen* about as long and wide as the elytra, the first visible dorsal short, with the usual pubescent line; fourth nearly one-half longer than the third. Legs slender. Length 1.7 mm.; width 0.65 mm.

California (Sonoma Co.).

In the single male the abdomen is deflexed toward apex, the venter broadly, indefinitely impressed behind, the fifth segment not modified but having the pubescence erect, with a very wide area in apical half completely glabrous, impunctate and highly polished, the posterior edge even throughout; sixth with a transverse, feebly tumid line behind the anterior margin, bearing a fringe of erect setæ. Anal segment with the unevenly oval included segment far to the left of the center.

This species is allied to *parviceps*, but differs in its larger head with relatively much narrower frontal margin, and in the male sexual characters.

S. rubida n. sp.—Broader, feebly subcuneiform, polished, impunctate, sparsely pubescent, deep rufo-testaceous throughout, the elytra paler. *Head* small, scarcely more than two-thirds as wide as the prothorax, wider than long; eyes large, convex, the tempora very rapidly convergent and broadly rounded to the neck, the latter distinctly wider than the truncate frontal margin and rather more than one-half as wide as the maximum width; frontal pit deep, abrupt, acutely rounded behind; foveæ small, behind the middle, distant by nearly one-third the width; antennæ two-fifths as long as the body,

gradually and distinctly incrassate toward apex. *Prothorax* fully one-half wider than long, widest at the middle where the sides are very strongly rounded, thence very rapidly convergent and broadly sinuate to the neck, less convergent and just visibly sinuate to the base, which is about twice as wide as the apex; median foveæ very feeble, separated by rather more than one-fourth the width; impression at basal fourth broadly, evenly arcuate, minutely foveate in the middle and at each end; lateral impressions large, disconnected. *Elytra* confusedly sparsely and very feebly punctulate, rather longer than wide, fully twice as long as the prothorax and two-thirds wider; sides very feebly, gradually divergent from base to apex and just visibly arcuate; discal stria deeply, coarsely impressed in basal half. *Abdomen* fully as wide as the elytra but barely as long; border strongly inclined, one-fifth as wide as the disk; first exposed dorsal one-half as long as the second, with the usual fine pubescent line; two to four gradually increasing in length. *Legs* moderate, slender. Length 1.6–2.1 mm.; width 0.6–0.7 mm.

California (San Francisco and Sta. Cruz).

The male has the abdomen more deflexed at apex, the venter broadly, indefinitely impressed near the tip, but not otherwise at all modified; the anal segment has a cuneiform, anteriorly pointed and submedian part, nearer the left than the right side and gradually flexed to the right anteriorly. This median part is probably homologous with the flat enclosed pygidium of certain Euplectini, but in the latter group it is bilaterally symmetrical. The female has the transverse apex of the sixth ventral modified in a feeble but complicated and indescribable manner, the anal segment behind it broadly angulate and slightly but acutely produced at tip.

Not closely allied to any other species, the largest of the genus, about equal to *Rafonus tolutæ*. It is represented before me by a large and homogeneous series.

S. parviceps Mäkl.—Bull. Mosc., 1852, ii, p. 372 (Euplectus); Brendel: Bull. Univ. Iowa, 1890, p. 79 (Paronus); Raffray; Rev. d'Ent., 1893, p. 30 (Sagola).

Rather broad, deep rufo-testaceous, polished, impunctate and sparsely pubescent throughout. Head small, transverse, fully three-fourths as wide as the prothorax, with the usual sculpture; tempora nearly straight behind the eye but distinctly convergent, then more strongly rounded to the neck, the latter but slightly wider than the apical margin. Prothorax rather large, about one-fourth wider than long, widest and strongly rounded distinctly before the middle, the sides convergent and deeply sinuate thence to the base, the latter two-thirds wider than the apex; sculpture

nearly as in *subsimilis*. Elytra longer than the head and prothorax, fully three-fourths wider than the latter, nearly as long as wide, with the usual sculpture. Abdomen rather longer than the elytra and fully as wide, of normal structure. Length 2.0 mm.; width 0.7 mm.

The male in the LeConte cabinet from which I have taken these characters, is in an imperfect condition, lacking the antennæ; it is one of the original Frankenhäuser types.¹ The fifth ventral is broadly, feebly emarginate almost in median two-fifths, the surface bordering the emargination feebly concave, polished and glabrous; sixth broadly, feebly lobed anteriorly, the lobe fitting the emargination of the fifth, the surface along the edge of the lobe thrown up in a distinct acute and arcuate ridge, bearing an erect fringe of setæ, and, behind the ridge, feebly impressed, glabrous and polished. Anal segment with the usual median piece far to the left of the center.

RAFONUS n. gen.

This genus resembles *Sonoma* in general organization and form of the body, but differs greatly in many points, the generic value of which it is difficult to overlook. The head is smaller than the prothorax, the frontal margin broadly angulate, subequal in width to the neck and rather less than one-half as wide as the width across the eyes, the antennal prominences strongly elevated, widely distant and separated by a broad rounded depression, which is not at all sulciform. Immediately behind the line of the antennæ there is a very large and extremely deep pit, as in *Sonoma*, abruptly defined throughout its circumference, more acutely rounded behind and subtruncate anteriorly; there are also two distant nude foveæ on the vertex. The maxillary palpi have the first joint very small. The antennæ are slender, moniliform, one-half as long as the body, the last three joints abruptly wider, forming a loose, but distinct club. Prothorax slightly transverse, with the usual complex transverse, subbasal impression and isolated lateral foveæ, without discal foveæ. Elytra much shorter than wide, but slightly longer though much wider than the prothorax, the sides strongly divergent. Abdomen at least three-fourths longer than the elytra, the four first visible dorsal segments gradually increasing in length.

The single species was described by LeConte under the name *Faronus latylæ*. It occurs in Pennsylvania and Georgia and appears to be rare.

EUPLECTINI.

The tribes or groups Euplectini and Trichonyini of Reitter and Raffray, cannot be maintained as distinct and natural aggregates of genera, and should be united to form the single tribe Euplectini. The auxiliary tarsal claw varies by successive degrees in different genera and species otherwise closely related, so that it is impossible to draw any line of demarcation between two groups founded upon this character, or any other which it seems possible to discover.

The second tarsal claw is distinctly visible as a minute hair-like appendage in at least several species of European Euplectus, in Trimiopsis, and also in Actium, which was recently re-described by Mr. Raffray under the name Proplectus and placed in the "Trichonyini." I have seen the second rudimentary claw plainly in *Bibloporus bicanalis* and *Euplectus californicus*. Finally in *Euplectus crinitus* the auxiliary claw becomes as large, conspicuous and fully formed as in Trichonyx itself, and yet in general habitus and details of structure *crinitus* is unmistakably very closely allied to Euplectus, and should not be widely separated from that genus.

The so-called second claw is always in the nature of an appendage, even in Trichonyx, Oropus and other typical trichonychide genera. That is to say—the large claw is in every case perfectly in the plane of the axis of the tarsus, the auxiliary claw projecting laterally from its base.

In view of the great diversity in the relative size and distinctness of the second tarsal claw, in pronotal structure and in the general type of male sexual characters among our species of Euplectini, a revision of them from a generic standpoint seems imperative. This I have attempted in the following table, it being unnecessary in treating a single limited fauna to indicate groups or subtribes by special designation:—

Antennæ inserted at the inferior apical angles of an extremely narrow advanced and porrect frontal process, the tubercle formed by a complete amalgamation of the antennal prominences without trace of dividing sulcus; basal joint of the antennæ elongate-oval; ungual appendage not distinct.

Rhinoscepsis

- Antennæ slightly less approximate, the frontal tubercle shorter and wider but very pronounced, with the sides behind it constricted, the antennal prominences narrowly separated by a very deep sulcus; antennæ as in *Oropus*; unguinal appendage visible but exceedingly minute.....**Morius**
- Antennæ not inserted on a frontal tubercle, more or less widely distant at base.....2
- 2—Antennæ geniculate, the basal joint elongate; prothorax bilobed; appendage of the tarsal claw distinct.....**Rhexius**
- Antennæ not geniculate, the basal joint normal.....3
- 3—Ungual appendage long and conspicuous, approaching one-half the length of the principal claw.....4
- Ungual appendage more or less minute, but generally visible, in some cases apparently obsolete.....5
- 4—Prothorax with an acute marginal tooth at each side near the base; first dorsal segment longer than the second; male sexual modifications affecting the fourth dorsal segment.....**Oropus**
- Prothorax without lateral spines, but frequently minutely and unevenly crenulate along the sides in basal half; first dorsal not distinctly longer than the second.
- Head more transverse; body shorter; pronotum with a fine subentire median groove; secondary male sexual characters affecting the fourth tergite.
- Rhexidius**
- Head less transverse; body longer, more parallel; pronotum without discal impression; male characters near the apex of the abdomen beneath, or near the middle of the lateral edges; maxillary palpi partially received in deep sublateral fossæ, which are separated from the carot of the maxillæ by minute slender porrect processes.....**Ramecia**
- 5—Antennal club gradually formed, the last joint relatively moderate in size.....6
- Antennal club consisting almost entirely of the larger abrupt terminal joint; pronotum without discal impressions; first dorsal segment subequal to the second.....12
- 6—Prosternum not carinate along the middle.....7
- Prosternum finely but strongly carinate in the middle throughout the length; antennæ less distant than in *Euplectus*.....11
- 7—Prosternum with two distant diverging longitudinal carinæ; elytra with two discal striæ and three basal foveæ; abdomen without trace of basal impressions or carinæ, the segments equal in length.....**Oropodes**
- Prosternum without diverging lines; abdomen at least impressed at the middle of the first two or three dorsal segments.....8
- 8—First dorsal not longer than the second; palpal fossæ wide, shallow, more inferior and posterior, and not separated from the maxillæ by porrect processes.....9
- First dorsal much longer than the second.....10
- 9—Eyes large, bordered above and beneath by a broad abrupt channel; pronotum with three very large, feebly connected, subbasal excavations, without discal impression; elytra and sexual characters as in *Euplectus*.
- Acolonia**

Eyes normal.

Pronotum with a subcentral discal impression; elytra with a discal stria.

Head large, truncate, the antennæ very remote; abdomen with distinct basal carinæ; male with a transversely subrhomboidal and longitudinally carinate terminal segment of the venter.....**Euplectus**

Head generally smaller, the front always more abruptly and strongly narrowed; antennæ less distant; abdomen without basal carinæ; male with the flat oval subenclosed ventral pygidium of *Ramecia* and *Actium*; species in general decidedly more minute than in *Euplectus*.

Thesiastes

Pronotum without a discal impression; elytra without a discal stria.

Biblopectus

10—Pronotum without a discal impression.....**Trimiopectus**

11—Pronotum with the three subbasal foveæ, not transversely connected; each usually prolonged forward in an impressed line.....**Bibloporus**

Pronotum having the subbasal foveæ connected by a transverse sulcus.

Antennæ moderately distant at base; eyes rudimentary in the female; prosternum long before the coxæ; tenth antennal joint normal; pronotum with an elongate discal sulcus; male with feeble abdominal characters.

Eutyphlus

Antennæ somewhat less distant at base; eyes nearly similar in the sexes; prosternum short; tenth antennal joint larger than usual; pronotum with a small subapical discal impression; body shorter, convex; male with a small flat subcircular and enclosed pygidium at the ventral apex.

Thesium

12—Prothorax with rather well-defined edges at the sides toward base, and with two distinct latero-subbasal foveæ on the disk; elytra with a discal stria.....**Actium**

Prothorax without lateral edges or sublateral foveæ, the transverse sulcus continued on the flanks; elytra without discal stria, the latter replaced by a larger deep and subelongate basal impression.....**Trimlopsis**

Distinguishing peculiarities in thoracic structure both pronotal and prosternal, it will be noticed, have been freely used in the above table in defining the genera. I am quite convinced that this is the proper course to take in dealing with the genera, at any rate in some parts of this particular tribe: first, because every distinct peculiarity in the structure of this part of the body, appears to be accompanied by radical divergencies in other important features. Taking the old genus *Euplectus* as represented within our faunal limits, for example, we find that all of those species without the discal pit of the pronotum are distinguished either (*Ramecia*) by a formation of the tarsal claws identical with that of *Trichonyx*, or (*Biblopectus*) by an extremely minute size of body and more

approximate antennæ, or (*Acolonia*) by a peculiar structure of the lateral parts of the head near the eyes.

Secondly, because we find these differences accompanied in every instance by radical divergencies in the type of male sexual manifestation, a feature which in the *Pselaphidæ* possesses an importance which has not always been duly appreciated. In many parts of this family the developmental energy, so to speak, or the energy expended in differentiating species, seems to have been exerted solely upon the males, the females remaining mutually almost similar. This is a familiar fact among the species of *Reichenbachia* and *Batrissus*. *Types* of male sexual modification have therefore great importance, and, when the same type pervades a number of species otherwise allied, we are frequently even compelled to separate and define genera by such characters alone, as has been done by Reitter in the case of *Ctenistes* and *Sognorus* and as I have already tried to demonstrate in regard to the allies of *Bryaxis* (Bull. Cal. Acad. Sci., II, p. 179).

MORIUS n. gen.

This remarkable genus occupies a position with respect to *Oropus* nearly corresponding with that of *Rhinoscepsis* to *Euplectus*. The head is strongly but gradually narrowed before the eyes, forming at apex a wide but strong antennal tubercle, rendered still more prominent by lateral constrictions immediately behind it, the very pronounced antennal prominences separated by a coarse, deeply excavated fossa, which behind them becomes shallower and bifurcates, sending a feeble oblique sulcus to each of the vertexal foveæ. The antennæ are almost exactly as in *Oropus* though very narrowly separated at base. The under surface is smooth and without trace of carinæ or palpal fossæ, but has in the middle just behind the mentum, a very abruptly and strongly elevated, broad and parallel elevation which terminates abruptly midway to the neck. Maxillary palpi well developed, sparsely pubescent; first joint small; second finely pedunculate in basal half, the apical half abruptly and strongly claviform; third smaller than the clava of the second, subglobular; fourth nearly as long as the preceding together, stouter, fusiform, twice as long as wide, with a long slender terminal process. The other oral organs are normal in structure, the mentum small, the labial palpi minute and slender. Prosternum long, obliquely, feebly biimpressed, the mesosternum with two anteriorly

convergent carinæ and three pubescent foveæ, and the metasternum in the middle one-half longer than the intermediate coxæ. The anterior coxæ are long and conical, the intermediate narrowly separated by the meso- and metasternal processes which meet just before their median line, the posterior transverse, contiguous, moderately prominent internally. Abdomen with six dorsal and seven ventral segments, the first ventral unusually long, greatly visible behind the coxæ throughout, and, in the middle, nearly one-half as long as the second, the latter very large, as long as the entire remainder; first dorsal covered, the second much longer than the third, with a deep, transversely oval and pubescent excavation at the middle of the base; margin moderately wide, inclined.

There appears to be but one species as follows:—

M. occidentis n. sp.—Moderately stout and convex, polished, dark rufo-testaceous throughout, subimpunctate, the elytra coarsely sparsely and very feebly rugoso-punctate; pubescence long, coarse, erect, not very abundant except at the antero-lateral and under surfaces of the head where it is erect bristling and very dense. *Head* as wide as the prothorax, as long as wide; eyes small, just behind the middle; outline behind them almost semi-circular; foveæ on a line through the eyes, distant by one-half the total width; antennæ a little longer than the head and prothorax, stout, first joint cylindrical, longer than wide, second a little narrower, globular, three to eight still slightly smaller, transverse, five and seven larger than six and eight, ninth and tenth larger, transverse, eleventh subquadrate, broadly conical at apex. *Prothorax* nearly as wide as long, widest at apical third, the sides thence feebly convergent and straight to the base but with a shallow emargination midway, strongly convergent and sinuate anteriorly to the neck, the latter two-thirds as wide as the base; disk with a strong transverse excavation at basal third from side to side, divided into three parts by two cariniform elevations, the lateral portions irregular and continued to the base, the median consisting of three large coalescent foveæ, the middle one more posterior, continued forward beyond the center of the disk by an almost imperceptible impression; surface just before the basal margin divided into five nearly equal deep impressions by four short longitudinal carinæ, the lateral communicating with the irregular lateral impressions as before mentioned, and the middle one similarly with the median discal impression, the two others deeper and more foveiform. *Elytra* short, two-fifths wider than long, one-half longer than the prothorax and fully twice as wide, one-half wider near the apex than at base; sides strongly oblique and nearly straight; humeri obsolete; disk with the single arcuate sutural stria only, also with a deep stria and post-humeral fovea on the flanks, each with four basal foveæ, the two infra-humeral coalescent and prolonged posteriorly for a very short distance as a broad gradually evanescent impression; intermediate fovea isolated, without trace of stria. *Abdomen* fully as wide as the elytra and distinctly longer. *Legs* slender; posterior

tarsi long and slender, the third joint a little longer than the second, with a rather long single claw, having an exceedingly minute basal appendage as in *Euplectus*. Length 1.6 mm.; width 0.6 mm.

California (Sta. Cruz Co.).

The unique type is unfortunately broken into a number of pieces from which the measurement has been compounded; it is apparently a female.

OROPUS Casey.

The median thoracic sulcus, which is so characteristic a feature of *Oropus* and *Rhexidius*, is subject to singular malformation in both of these genera, being sometimes completely interrupted or irregularly broken up, apparently by reason of accidental circumstances attending emergence from the pupa, when the integuments are in a plastic condition. I have figured one of these malformations in a species described under the name *interruptus*, and Dr. Brendel has recorded another case in his description of *Rhexidius intermedius*.

The species of *Oropus* are readily divisible into two groups as follows:—

First dorsal segment relatively shorter; eyes in the female much smaller than in the male, the latter with the fourth dorsal not greatly modified, having simply a transverse subbasal line of minute pubescence; females very rare in proportion to the males; species generally larger.

Head small, much narrower than the prothorax **striatus**

Head much larger, equal in width to the prothorax or extremely nearly so.

Head and prothorax relatively smaller, the thoracic teeth exceedingly minute..... **convexus**

Head and prothorax larger; thoracic teeth larger, more distinct.

Male with the fourth dorsal unimpressed, having a long very fine, transversely arcuate line of minute pubescence..... **interruptus**

Male with the fourth dorsal impressed along the broader and shorter, nearly straight subbasal line of pubescence; elytral striæ more abbreviated; size smaller **abbreviatus**

First dorsal relatively much longer; eyes in the female only slightly smaller than in the male, but with the facets smaller and mutually much more distant; male with the fourth dorsal broadly concave, the upper margin produced posteriorly and closing inferiorly the produced median lobe of the third; males rare, the females abundant; size generally smaller; elytra more abbreviated.

Larger species; pronotum sparsely and simply punctate throughout.

montanus

Small species; pronotum densely and strongly granulose between the transverse sulcus and the basal margin..... **cavicauda**

Among the fifteen representatives of the first group in my cabinet there is only one female, while among the sixteen specimens of the second group there are only three males. This indicates without doubt a difference in the life habits of the species composing the two sections of the genus, which should perhaps be treated as subgenera. The peculiar conformation of the elytral striæ mentioned by me in the description of *montanus* (Bull. Cal. Acad., II, p. 479) is a malformation; it is not observable in any other of the numerous examples in my cabinet, many of which are from Sta. Cruz Co.

O. cavicauda n. sp.—Moderately stout, convex, shining, dark rufotestaceous throughout; pubescence moderate in length, rather abundant. *Head* much wider than long, very slightly narrower than the prothorax, subhexagonal, the eyes small, much nearer the base than the apex, the tempora strongly convergent, rather longer than the eye and nearly straight; foveæ deep, widely separated, connected by the usual deep parabolic groove; antennal tubercles strong, each with a deep rounded fovea immediately above and behind the point of antennal insertion; surface polished, subimpunctate, beneath minutely punctate and finely, densely setose; antennæ short, stout, the tenth joint fully twice as wide as long, eleventh stout, conoidal, as long as the preceding four. *Prothorax* about as long as wide, widest at the middle; sides convergent and rounded to the apex, convergent and straight to the base; apex narrower than the base, subtubulate; lateral teeth small but well formed and distinct; disk with the usual foveæ and sulci, rather coarsely feebly and sparsely punctate, the punctures becoming granuliform near the base. *Elytra* not as long as wide, one-half longer and fully three-fourths wider than the prothorax, the three discal striæ deep, rather short, none extending much beyond the middle. *Abdomen* scarcely longer but a little narrower than the elytra, the first dorsal constituting one-half its total length from above, the basal impression two-thirds of the total width, not carinate. Length 1.4 mm.; width 0.5 mm.

California (Marin Co.).

A single male, having the third dorsal acutely produced in a triangular lobe, the fourth vertical, concave, not visible from above, glabrous, polished, impunctate throughout except abruptly, densely so along the lower margin. With the male type is associated a female from Siskiyou, which agrees very well. This is by far the smallest known species of the genus.

In all of the species of this genus the elytra have, along the apical margin, an even row of small slender porrect and strigose scales.

RHEXIDIUS Casey.

This genus is closely allied to *Oropus*, but differs in the absence of well-defined and acute marginal thoracic teeth, in the more minute size and shorter, more robust form of the body, and in the shorter first dorsal segment. This latter character, however, in view of the variation seen in the two groups of *Oropus*, may not be of decisive value. Although the different habitus of the two genera prompts me to believe that they are really distinct, there are two characters, in addition to general organization, which serve to show further how closely they are really allied, viz.: the presence of the peculiar granuliform sculpture of *Rhexidius* in *Oropus cavicauda*, and the fact that the part of the body subject to sexual modification is the fourth dorsal segment.

I have not seen the eastern species recently described by Brendel, but *Euplectus canaliculatus* Lec. appears to be congeneric, although differing in having but three basal foveæ and obsolete discal striæ, instead of the four basal foveæ and three short striæ of the two Californian representatives; even here however there is considerable variation in this respect, the two outer foveæ being much more approximate or semi-coalescent in *granulosus* than in *asperulus*. The basal foveæ will be shown to be without value as a generic character also in several other parts of the Euplectini. *R. canaliculatus* was recently redescribed by Mr. Raffray under the name *Prorhexius sylvaticus* (Rev. d'Ent., 1890, p. 197).

The two known Californian species are the following:—

Elytra short, transverse, but slightly longer than the prothorax, the head and prothorax relatively large; pubescence coarse, longer and sparser.

granulosus

Elytra large, about as long as wide, subequal in length to the head and prothorax together, the latter both smaller; pubescence shorter, denser and more decumbent **asperulus**

Both of these species are represented by large series in my cabinet.

R. asperulus n. sp.—Rather stout, convex, shining, dark rufo testaceous throughout, noticeably pubescent, the head and pronotum covered with small sparse granuliform punctures. closer on the head, the elytra and abdomen rather strongly, sparsely punctate, the punctures feebly asperate. Head transverse, thick, just visibly narrower than the prothorax, with two small deep nude and very remote foveæ which are entirely isolated, also, just behind

the frontal margin, a long deep abrupt evenly and feebly arcuate groove, not connected in any way with the foveæ but flexed obtusely outward at the sides, crossing the antennal tuberoles; eyes moderate; tempora convergent behind them; antennæ nearly as long as the head and prothorax, with the last joint subequal to the five preceding; under surface with rather dense erect setæ. *Prothorax* but slightly wider than long, widest and rather strongly rounded at the middle, the sides convergent and straight thence to the base; apex broadly and feebly subtubulate; median sulcus not quite attaining the apex, the transverse line beyond basal fourth. *Elytra* subquadrate, the humeri much more rectangular and wide exposed than in *granulosus*, nearly twice as wide as the prothorax; three discal striæ distinct, the outer very short. *Abdomen* scarcely as long as the elytra—viewed vertically—and but slightly narrower, the first dorsal not in the least longer than the second. Length 1.2 mm.; width 0.45 mm.

California (San Francisco and Sta. Cruz Cos.).

The male sexual characters are feeble, the fourth dorsal being broadly impressed at each side of the base, each impression extending from near the middle to near the lateral margin and having its posterior limiting line posteriorly arcuate, the impressed surface glabrous polished and impunctate; the punctures of the third dorsal become very dense along the apical margin, the latter not otherwise abnormal. In the male of *granulosus* the two basal impressions are almost contiguous. The sculpture of the head in both of these species is altogether different from anything known in *Oropus*.

In *canaliculatus* the general features of cephalic sculpture are the same, but in the male of that species the transverse frontal marginal ridge is tuberculate in the middle, and, further, the fourth dorsal is not modified, the venter having a broad shallow lunate impression near the apex. These differences, taken in connection with elytral structure, may be of subgeneric value.

RAMECIA n. gen.

The true affinities of this genus are rather difficult to state, for, in spite of its great similarity to *Euplectus*, it has the second tarsal claw well developed, and differs considerably besides in the structure of the mouth and palpal fossæ. The species also differ much among themselves, especially in general appearance, but are sufficiently homogeneous in oral and pronotal structure, as well as other essential points of organization.

The most variable of the minor structural features is perhaps the abdominal carinæ. These are short in all, and, in one at least, be-

come completely obsolete; in *crinita*, however, they are distinct and finely cariniform on the first three tergites. In *decora* they become very widely separated. The discal stria of the elytra is also very inconstant in form, and there may be three basal foveæ, although two appears to be the general rule.

The known species are only six in number and may be thus distinguished:—

Head smaller than the prothorax.

Body elongate, depressed and subparallel, the punctures dense and asperulate.....**crinita**

Body shorter, convex, smooth and polished, the pubescence much less conspicuous; integuments subimpunctate.....**capitulum**

Head as wide as the prothorax; body shorter, compact and more or less convex.

Elytra with two basal foveæ; abdominal carinæ minute.

Discal stria of elytra coarsely impressed, gradually dilated toward base; pubescence longer, distinct; basal carinæ of abdomen less distant.

The stria very short, vanishing far before the middle.....**arcuata**

The stria long, extending far behind the middle.....**discreta**

Discal stria very fine, arcuate, extending fully to apical fourth, more abruptly dilated and foveate at base; pubescence sparse and excessively minute; carinæ of abdomen minute and unusually distant, separated by fully one-half the discal width.....**decora**

Elytra with three basal foveæ; basal impression and carinæ of abdomen completely obsolete.....**dentiventris**

The finely subgranulate punctures of the anterior parts of the body in *crinita*, is interesting and significant in view of the prevalence of this type in *Rhexidius*.

In *arcuata* there seem to be two very short triangular abdominal carinæ; I cannot discover any however in *discreta*, but the type of this species is not in entirely perfect condition.

R. discreta n. sp.—Subparallel, moderately convex, polished, dark rufotestaceous; the abdomen somewhat more piceous; integuments subimpunctate; pubescence coarse, stiff, rather abundant and semi-erect. Head fully as wide as the prothorax, rather wider than long, the apex truncate and two-thirds as wide as the maximum width; foveæ distinct, separated by nearly one-half the total width, connected by a deep entire and impressed parabolic sulcus; antennal prominences crossed by a fine shallow groove; eyes small but prominent, much shorter than the tempora, the latter large, convergent; base very broad, sinuate; antennæ one-half longer than the head, normal in structure; under surface with a few widely scattered short erect and coarse capitulate setæ. Prothorax very slightly wider than long, widest at the middle, the sides thence convergent and broadly, evenly arcuate to the apex, also

abruptly convergent and just visibly sinuate thence to the base, the latter wider than the apex; disk even, with a transverse impressed biarcuate sulcus and two sublateral foveæ at basal third, the sulcus dilated in the middle. *Elytra* relatively small, one-half longer and wider than the prothorax, the humeri very oblique and subdentate behind the base, this appearance being due to the deep post-humeral fovea; disk with a deep coarse stria. *Abdomen* a little longer and slightly narrower than the elytra; dorsal segments equal, not perceptibly carinate, the fifth tumid in the middle. *Legs* short. Length 1.2 mm.; width 0.3 mm.

Pennsylvania.

A single female specimen, having the venter unmodified, the terminal segment large, nearly flat, and posteriorly produced at the middle in a rounded lobe.

R. dentiventris n. sp.—Moderately stout, convex, polished, paler, rufo-ferruginous throughout, impunctate, the vestiture rather long, coarse and somewhat abundant. *Head* large, rather wider than the prothorax, a little wider than long, the foveæ distant by nearly one-half the total width, connected by a coarse deep impressed semi-circular and entire sulcus; transverse frontal ridge very long, scarcely more than one-half as wide as the maximum width; eyes moderate, prominent, not longer than the tempora, the latter feebly convergent and nearly straight; base broadly sinuate; antennæ scarcely more than one-third longer than the head; under surface with a few widely scattered erect setæ. *Prothorax* a little wider than long, widest rather before the middle, the sides there evenly and not very narrowly rounded, gradually convergent and broadly sinuate thence to the base, strongly convergent near the apex, the latter much narrower than the base; transverse biarcuate sulcus at basal third deep and well developed. *Elytra* moderate in size, two-thirds longer and three-fourths wider than the prothorax, not quite as long as wide, convex, with a deep coarsely impressed, gradually attenuate discal stria, extending behind the middle. *Abdomen* not longer and distinctly narrower than the elytra, the segments equal. Length 1.15 mm.; width 0.4 mm.

Virginia.

The male has the anterior and intermediate legs shorter and stouter than the posterior as usual, the venter broadly, feebly impressed near the apex, with the sixth segment large, deeply sinuate at apex, receiving a nearly circular flat pygidium, and the third strongly obliquely toothed at the sides, the teeth prominent also from a dorsal point of view at the sides of the apparent second segment. This is a very distinct and interesting species, represented before me by a single male.

In the only antenna remaining, the sixth and seventh joints are

completely anchylosed, but this may possibly be a deformity. The second tarsal claw is distinct as in the other species, and nearly one-half as long as the principal.

OROPODES n. gen.

The body in this genus resembles *Euplectus* in general outline, but the head is smaller, more orbicular and with less distant antennæ; the elytra have two distinct though short discal striæ, and the abdomen is completely devoid of basal impression or carinæ. The prosternum is rather long before the coxæ, and has a fine impressed and carinate line extending from each ante-coxal fovea to the apical margin, where it is met by the similar fine raised line separating the prosternum proper from its parapleuræ. The dorsal segments are equal, the first ventral extending beyond the coxæ and greatly exposed throughout the width. Legs rather slender; hind tarsi more than one-half as long as the tibiæ, with the second joint a little longer than the third; claw well developed, the appendage not visible in the type.

The single species has a facies which is somewhat intermediate between *Euplectus* and *Oropus* :—

O. orbiceps n. sp.—Elongate, subparallel, feebly convex, polished, subimpunctate and dark rufo-testaceous in color throughout; pubescence rather long but sparse. Head slightly narrower than the prothorax, nearly as long as wide; eyes small, slightly prominent, the tempora large and long, at first feebly convergent, then broadly rounded to the neck which is not wider than the apex; occiput with a feeble tumor at the middle of the posterior declivity; foveæ small, deep, perforate, nude, distant by one-third the total width, situated distinctly behind the middle, each continued forward by a deep oblique sulcus, the two coalescent anteriorly in a large flat depressed area separating the large and prominent antennal tubercles; antennæ widely separated, stout, rather longer than the head and prothorax, the club gradual, eleventh joint subquadrate, obtusely pointed; under surface smooth, polished, subimpunctate, with fine sparse subrecumbent hairs, entirely devoid of erect capitate setæ, but having the usual deep rounded impression near the neck; maxillary palpi nearly as in *Euplectus* but stouter. *Prothorax* distinctly wider than long, widest just before middle, where the sides are broadly rounded and convergent to the neck, less strongly convergent and nearly straight in basal half, the base much wider than the apex; disk with a deep transverse pit at basal fourth, feebly connected with two large deep sublateral foveæ, also with a large feeble median impression between the subbasal pit and the basal margin, and another subinterrupted extending between this and each basal angle; also with a narrow, very feebly impressed, subentire median sulcus.

Elytra as long as the head and prothorax, one-half wider than the latter and fully as long as wide, the sutural stria deep and entire, the discal short, the outer terminating at basal fourth, the inner at basal two-fifths. *Abdomen* about as wide as the elytra and scarcely as long; border broad, one-fourth as wide as the disk. Ventral segments two to four decreasing almost imperceptibly in length; hind coxæ contiguous, the abdominal process short and acutely triangular. Length 1.5 mm.; width 0.45 mm.

California (Los Angeles Co.).

The unique specimen has no striking sexual modifications, and is apparently a female.

ACOLONIA n. gen.

The form in this genus is shorter and more convex than in *Euplectus* and the eyes are larger. The infraocular channel becomes narrowed anteriorly and communicates with the antennal excavation. The prosternum is long, not carinate, the first three dorsal segments equal, the first two each with two long strong divergent carinæ, the fourth much longer than the preceding. First ventral extending beyond the coxæ; two to five rapidly decreasing in length. Male with the large convex rhomboidal and carinate ventral pygidium of *Euplectus*. Legs rather short and stout, the tarsi short and compressed, the third joint of the posterior rather longer than the second; claw long, arcuate, with a very minute internal basal appendage. The pronotum has no discal impression, and each elytron has at base two pairs of deep foveæ. Our species has been described under the name *Euplectus caricollis* Lec.

EUPLECTUS Leach.

The somewhat numerous species within our boundaries agree satisfactorily with the European, but are probably more heterogeneous. Among those in my cabinet three subgeneric groups are readily observable:—

- Head not quite so large, sometimes very slightly narrower than the prothorax, with two larger widely distant foveæ situated behind the middle, the intermediate surface of the vertex strongly convex; body less slender, more convex I
- Head larger, flatter above, frequently much larger than the prothorax, with two smaller, more anterior and much more approximate foveæ; body smaller, narrower and more depressed.

- Antennæ longer, the club normally small; eyes more or less prominent;
 elytra much wider than the head.....II
 Antennæ short, the club larger and thicker, as long as the preceding six
 joints; eyes more inferior, scarcely visible from above; elytra parallel,
 not appreciably wider than the head.....III

Group I is represented by *difficilis*, *congener*, *sexualis*, *spinifer*, *linearis*, *hudsonicus*, *interruptus* and probably *longissimus*; group II by *longicollis*, *confluens*, *elongatus*, *californicus* and *iowensis* and group III by *pertenuis*. Group II is apparently homologous with European species of the *bonvouloiri* type.

The true position of *planipennis* and *rotundicollis* of Brendel cannot be definitely stated at present; they are apparently both peculiar, not only in the smaller head but in other features also, and in the subjoined catalogue I have placed them at the end as requiring further investigation.

The name *longicollis* is preoccupied by Reitter for a New Zealand species, but as the two may in reality belong to different genera it is not advisable to change the name just now. The same remark applies to *linearis* Lec. and *linearis* || King and *rotundicollis* Reitt. and *rotundicollis* || Brend.

The following species seem to be undescribed:—

E. hudsonicus n. sp.—Slender, somewhat convex, polished and pale rufo-testaceous throughout; pubescence short, coarse and rather dense; head and pronotum with very coarse feeble punctures, which can scarcely be individually defined but which give a feebly asperate and uneven appearance; elytra and abdomen subimpunctate. *Head* about as wide as the prothorax, a little wider than long, broadly truncate at apex, the foveæ distant, behind the middle, the middle of the vertex strongly convex; parabolic sulcus very deep; antennæ nearly as long as the head and prothorax, normal; eyes small but prominent, the tempora slightly convergent, nearly straight and a little longer than the eye. *Prothorax* distinctly wider than long, widest just before the middle where the sides are broadly rounded to the apex, convergent and unevenly serrulate to the base, somewhat prominent opposite the foveæ; disk with an elongate pit extending from near the apex to the middle, also with the usual deep subbasal excavation connected with the lateral foveæ. *Elytra* about as long as wide, nearly as long as the head and prothorax, one-half wider than the latter; base strongly quadrifoveate; discal stria distinct, vanishing before the middle; sides subparallel, broadly arcuate; humeri distinct. *Abdomen* subequal in length to the elytra and a little narrower. Length 1.25 mm.; width 0.35 mm.

New York.

The type is a male and has the fourth ventral segment even along its apical edge, but with two feeble approximate transverse

tuberosities. The fifth segment is deeply emarginate at its anterior edge, the emargination broadly parabolic, one-fifth as wide as the segment and extending to apical third of its length, the emargination bearing two or three short porrect and anteriorly projecting setæ. Sixth segment with two deep discal foveæ, distant by one-third the width and each subcarinate along its anterior edge; pygidium tumid, rhomboidal, finely carinate and indistinctly punctate. In some of my previous descriptions of the species of *Euplectus* I seem to have designated the true fourth ventral as the third.

In the male of *linearis*, to which this species is allied, the fourth ventral has two large transverse and much more distant tubercles, and the anterior emargination of the fifth is much smaller.

E. iowensis n. sp.—Linear, parallel, rather depressed, dark rufo-ferruginous and polished throughout; pubescence fine, short, subappressed, not very abundant; head coarsely, sparsely punctured above, more densely and deeply beneath, the pronotum finely and sparsely punctulate, the elytra and abdomen subimpunctate. *Head* large, wider than the prothorax, but slightly wider than long; eyes small, slightly prominent, the tempora behind them largely developed, straight, subparallel and longer than the eye, the basal angles nearly right and slightly rounded; foveæ small, feeble, distant by one-third of the interocular width, the connecting sulcus becoming broadly expanded and deep behind the frontal margin; antennal tubercles small, prominent, each with a deep nude fovea; antennæ not quite as long as the head and prothorax, normal; under surface without erect setæ. *Prothorax* slightly wider than long, widest near apical third where the sides are strongly rounded, thence convergent and broadly, just visibly sinuate to the base; disk with a large transverse median pit at basal third and two lateral fovea not connected, also with an oval discal fovea feebly connected with the sub-basal pit. *Elytra* one-half longer and two-fifths wider than the prothorax, a little wider than the head, the discal stria extending to the middle. Length 1.2 mm.; width 0.3 mm.

Iowa.

The male sexual characters are complex; the fourth ventral is feebly but abruptly emarginate in middle third, the bottom of the emargination broadly arcuate, with the apex of the lobe projecting as far as the sides and bearing two approximate porrect tufts of everted setæ; fifth transversely excavated anteriorly to receive the tufts; sixth transversely impressed and receiving the large rhomboidal subimpunctate and feebly carinate pygidium.

This species is allied to *confluens*, but differs in its smaller size, narrower and more depressed form and longer tempora. The appendage of the tarsal claw is distinct but very small.

The species of *Euplectus* seem to be completely devoid of the erect capitulate setæ of the under surface of the head, so characteristic of some other related genera.

THESTASTES n. gen.

In general organization the species of this genus resemble *Euplectus*, but have the body much more minute, the head smaller and especially shorter, the frontal truncature narrower, the eyes relatively larger and more prominent, the tempora shorter and the abdomen completely devoid of dorsal carinæ, although deeply impressed at the base of the first two or three segments. In spite of these differences I should have probably regarded them as one of the subgeneric groups of *Euplectus*, had it not been for the fact that the male sexual modifications at the apex of the venter were found to be of a completely different type. The large rhomboidal tumid and carinate seventh ventral of the male in *Euplectus*, is here replaced by the oval flat laterally enclosed pygidium so characteristic of *Ramecia*, *Actium*, and other more or less widely separated genera; this indicates a real divergence from *Euplectus* far more pronounced than might be inferred from general organization. The male sexual organs must indeed be remarkably different in structure.

Our known species are not numerous but many others will doubtless be discovered. They appear to live principally in turfy lands bordering brackish water, and may be distinguished in the following manner, the characters of *pumilus* being gathered from description, as the type is not accessible at present:—

Size larger, 1 mm. in length, dark brown, the discal pit of the pronotum broader, deeper and oval	fossulatus
Size very minute, never exceeding 0.8 mm. in length; discal sulcus narrower, feebler and fusiform.	
Color pale ferruginous; pronotum asperulate	pumilus
Color dark piceous-brown; pronotum sparsely but rather distinctly punctate.....	debilis
Color intense black, smooth, highly polished, with but the feeblest traces of pronotal punctuation	atratus

T. atratus n. sp.—Slender, convex, polished, black throughout; legs antennæ and trophi testaceous; head and prothorax sparsely extremely feebly and indefinitely punctate; pubescence short, not conspicuous but not very sparse. *Head* rather small, distinctly narrower than the prothorax, wider

than long, the foveæ large, deep, spongiose, at the middle, separated by nearly one-half the total width, the arcuate sulcus deep, evanescent anteriorly between the antennæ, and gradually declivous to the labrum; antennal tubercles strong, crossed by a fine groove; antennæ nearly as long as the head and prothorax, the funicle slender, third joint short, strongly obconical, club normal, gradual; eyes rather large, very prominent, longer than the tempora, the latter moderately convergent behind them; base broadly, strongly sinuate. *Prothorax* wider than long, widest before the middle where the sides are broadly rounded to the apex, convergent and nearly straight in basal half; disk with an elongate fusiform median sulcus and a transverse biarcuate sulcus behind basal third, the latter dilated at the middle and foveate near the sides. *Elytra* large, subquadrate, nearly as long as the head and prothorax, two-thirds wider than the latter, very nearly as long as wide; discal stria coarse, gradually dilated toward base, vanishing at basal two-fifths; three basal foveæ deep and well developed. *Abdomen* parallel, rather longer and much narrower than the elytra, the segments equal. Length 0.75 mm.; width 0.25 mm. or rather less.

Rhode Island.

A single male taken near the seashore. The venter is feebly flattened before the apex, and the terminal pygidium is small, flat, narrow, elongate-oval and as usual enclosed completely at the sides by the lateral portions of the anal or seventh segment. In the male of *fossulatus* the venter is very feebly, broadly impressed near the apex, and the flat pygidium is smooth, very large, but slightly longer than wide, oval, more narrowly rounded behind and broadly, very feebly arcuate anteriorly where it fits against the posterior margin of the sixth segment.

Atratus is allied to *debilis* but differs from my single female of that species in its intense black color, more feeble punctuation and smaller head. In *debilis* the head is about as wide as the prothorax.

BIBLOPLECTUS Reitter.

This genus as represented within the United States is undoubtedly valid, the species differing from *Euplectus* in their very minute size, smaller head, more strongly narrowed front, less distant antennæ, and in the absence of a discal pronotal pit; the importance of this last character has I think been underestimated. Another important difference relates to the discal stria of the elytra, which is wanting and replaced, as in *Trimium* and *Trimipsis*, by a larger, more or less elongate basal impression. The antennæ, also, have a

less robust and looser club, with the terminal joint more conoidal and more gradually pointed.

Our representatives differ from the European species of the *ambiguus* type in their more convex body and head, and in having a fine but strong carina extending from the transverse sulcus to the pronotal base; they should perhaps form a subgenus of *Biblopectus* and may be recognized as follows:—

Sides of the prothorax parallel and nearly straight in middle two-thirds of the length.

Size more minute, about 0.65 mm. in length; pronotum scarcely punctulate **ruficeps**

Size appreciably larger and stouter, more than 0.7 mm. in length; pronotum rather strongly punctate **integer**

Sides of the prothorax not parallel; size still larger, rather more than 0.8 mm. in length; surface smooth, polished and subimpunctate throughout.

leviceps

The species from Michigan, described by LeConte under the name *integer*, seems to be distinct from the more southern *ruficeps* and I take pleasure in restoring it to its true position. Judging by the type of *leviceps*, which I have before me, the measurements given in my original description are too great; it is possible that the larger specimen represents a different species.

TRIMIOPECTUS Brendel.

I have not seen the type recently published by Brendel under the name *obsoletus*, but according to the description and figures, it represents a widely distinct genus, singularly combining the characters of *Trimium* and *Euplectus*. The author placed with *obsoletus* several other species, such as *arcuatus* and *ruficeps*, which are however in no way very closely related. The elongate prothorax and basal segment of the abdomen, the latter with an unusually broad pubescent impression, reminding us of some species of *Ramecia*—where however the basal segment is never elongate,—the head in the form of “an equilateral triangle with arcuate corners,” and the sexual modifications at the ventral apex, as figured, form a combination of characters which render it impossible to discuss its true relationships without further study. The tarsal claw probably has an extremely minute or obsolete appendage as in *Actium* and *Triniopsis*, in the neighborhood of which it is probably most fittingly placed. The name selected by Dr. Brendel is certainly appropriate.

BIBLOPORUS Thomson.

This genus was redescribed by me under the name *Faliscus* (Cont. Col. N. A., II, p. 94), as correctly stated by Brendel in his recent monograph; it is widely distinct from *Euplectus* in the structure of the prosternum and pronotum. In *B. bicanalis* the rudimentary second tarsal claw is quite distinct, although not large enough to ally it with the trichonychide types of the tribe.

EUTYPHILUS LeConte.

Related to *Bibloporus* in the long carinate prosternum, but departing widely in pronotal structure and in the sexual modification of the eyes. It was described by me (l. c., p. 94), from the male especially, under the name *Nicotheus*. The two species in my cabinet may be recognized by the following characters taken from the female:—

Head relatively less transverse, the tempora longer and moderately convergent; dorsal carinae of the first segment strongly divergent, distant by one-third of the discal width **similis**
 Head very transverse, the tempora much shorter and extremely convergent; carinae of first dorsal less divergent and separated by nearly one-half of the discal width..... **prominens**

In both of these species there is a very fine pronotal carina extending from the transverse sulcus to the basal margin, as in the American species of *Bibloplectus*. The males seem to be extremely rare. The ventral segments are seven in number in both sexes, the last three short, the anal segment of the male enclosing an elongate flat pygidium as in *Thesiastes*. The terminal joint of the antennae consists of two distinctly defined parts, a large basal segment and a narrow conical apical portion placed far within the lateral margins of the former; this structure is more pronounced in the females than in the males, and probably offsets the more defective vision of that sex.

E. prominens n. sp.—Slender, somewhat convex, polished and bright rufo-testaceous throughout; pubescence rather long, coarse, shaggy but not very dense. *Head* short, as wide as the prothorax and scarcely more than two-thirds as long, transverse, abruptly narrowed before the very prominent acute tubercles bearing the rudimentary eyes; tempora very strongly convergent; foveae well developed, at basal third, distant by nearly one-half the maximum width, each continued forward in a deep oblique channel, the two

meeting in the depression between the antennal tubercles, the latter large, prominent, each crossed by the usual fine groove; vertex between the foveæ somewhat rugose, strongly convex; antennæ stout, not quite as long as the head and prothorax; under surface with a few erect setæ. *Prothorax* as long as wide, widest at apical fourth where the sides are broadly rounded to the apex, moderately convergent and nearly straight in basal three-fourths; discal impression elongate; transverse sulcus and foveæ deep and well developed; surface subimpunctate but sparsely punctato-rugulose between the sulcus and the base. *Elytra* not quite as long as wide, one-third longer and two-thirds wider than the prothorax, the sides feebly divergent, broadly arcuate, each with two large and very deep basal foveæ, the second continued posteriorly by a broad gradually evanescent groove, vanishing before the middle; sutural stria entire. *Abdomen* longer than the elytra and fully as wide, the sides very feebly arcuate; carinæ of the second dorsal very short but distinct. Last three ventrals together about equal in length to the second, two to four uniformly and very slowly decreasing in length. Length 1.25 mm.; width 0.35 mm.

Virginia (Lec Co.).

Readily distinguishable from the female of *similis* (= *tibialis* Csy.) by its smaller size, longer, more rectilateral pronotum, form of the tempora and many other characters.

THESIUM Casey.

Through the abrupt narrowing of the front before the eyes, the antennæ in this genus are less distant than usual, but there is no tubercle properly speaking, and the form of the head differs only in degree from that of the other Euplecti, resembling *Biblopectus* and *Thesiastes* in this respect, but with a much more robust body.

Apothinus of Sharp does not differ from *Thesium* by any feature mentioned in the description of that genus, but as the type is a much larger insect than our representatives of *Thesium*, it may actually be different. No mention of the structure of the prosternum is made in the diagnosis of *Apothinus*, so that but little of definite value can be said in regard to the extent of this relationship.

The basal foveæ of the elytra in *Thesium* are three in number, distinct, deep, circular and mutually rather distant, the first and second from the suture transversely connected by a deep sulcus, the second prolonged in basal fourth or fifth in an arcuate stria, the third prolonged for a short distance in a broad and deep, gradually wider and shallower excavation, the sides of which are rather

abruptly defined, giving the appearance of two short divergent striæ. Although the abdomen is impressed at base, the carinæ appear to be entirely obsolete.

The two forms known to me resemble each other closely in all generic characters, but are quite different specifically, as may be inferred from the following statement:—

Head larger, almost as wide as the prothorax, the frontal margin deeply interrupted in the middle; eyes slightly smaller; prothorax less transverse, more broadly rounded and parallel at the sides, the latter strongly convergent and sinuate only in basal third; size very minute, 0.75 mm. Mississippi Valley.....**cavifrons** Lee.
Head smaller, very much narrower than the prothorax, with the frontal margin feebly interrupted; prothorax more transverse, much more strongly rounded laterally before the middle, the sides strongly convergent and broadly sinuate in basal half; size appreciably less minute, 0.85–0.9 mm. Texas.....**laticolle** Csy.

ACTIUM Casey.

This genus is closely allied to *Trimiopsis* Reit., but the species are generally larger and have a distinct discal stria on the elytra, while in *Trimiopsis* the discal stria is wanting. It is further distinguishable at once from *Trimiopsis* by the structure of the prothorax, the disk of the pronotum having two subbasal foveæ and rather well-defined lateral edges in *Actium*, while in *Trimiopsis* there are no definite lateral foveæ or edges, the transverse sulcus being continuous down the vertical flanks, gradually disappearing beneath.

Both *Actium* and *Trimiopsis eggersi*—assumed here as the type—are easily distinguishable from *Trimium brevicorne* by the presence of a post-humeral fovea and pleural sulcus on the elytra, a character apparently of some importance. The basal foveæ of the elytra are however of no value generically in this group, and are often inconstant, one specimen before me having two foveæ on one elytron and three on the other. There are species having either two or three foveæ, not only in *Actium*, but in *Euplectus* and *Ramecia*. As an instance of the importance of the post-humeral fovea, however, *Trimiopsis specularis* Reit. may be cited. This species lacks the fovea completely, and is further distinguished by its shorter and stouter tarsi, and by a singular antennal character, the eleventh joint being split at apex in both sexes, the two segments apparently mobile.

The North American species hitherto placed in *Trimium* resemble the European *T. brevicorne* in the absence of a post-humeral fovea and discal stria, and, at the same time, perfectly resemble *Trimiopsis eggersi* in this latter feature and in the structure of the prothorax. In fact *Trimium brevicorne*, *Trimiopsis eggersi* and our own *Trimium convexulum*, *dubium* etc. are so extremely closely allied among themselves, that they might with propriety be treated as subgenera. I prefer for the present to regard our species as constituting an important section of *Trimiopsis*, distinguished by the absence of the post-humeral fovea.

The male of *Actium* is distinguished by the large oval flat and horizontal pygidium, almost surrounded by the anal segment, and sometimes also, by setose tubercles or spicules near the sides of the second and third ventral plates, both of these modifications being prominent, as before noted, in several other euplectide genera—for example *Ramecia*. *Trimiopsis* frequently presents the sub-lateral tubercles, but in *T. eggersi* the flat pygidium is wholly wanting. In *Ramecia dentiventris* the oblique pointed tubercles are at the extreme sides of the third segment.

Actium is widely diffused in North America but is essentially subarctic, while *Trimiopsis* is more especially tropical in distribution and probably contains a number of elements which will have to be removed eventually. The species known to me may be separated as follows:—

Elytra each with three basal foveæ.

Basal abdominal ridges fine and cariniform, generally about one-third as long as the segment and separated by about one-third of its discal width, larger species.

Form more slender; male without distinct setose tubercles near the sides of the abdomen, but with a minute internal subapical denticle on the anterior tibiae.

Head very small; eyes much longer than the tempora; abdominal carinæ separated by distinctly less than one-third of the discal width.....**californicum**

Head larger, the tempora as long as the eye; abdominal carinæ separated by fully one-third of the discal width.....**politum**

Form stouter; male with small setose tubercles near the sides of the second and third ventral segments, but apparently entirely devoid of the subapical tibial denticle.

Head very small, the prothorax relatively larger, ventral pygidium of the male almost perfectly circular.....**robustum**

Head relatively much larger; ventral pygidium of the male larger, very slightly longer than wide; body smaller and less stout.

testaceum

Basal ridges extremely short, flat and broadly but acutely triangular, separated by barely one-fourth of the discal width; smaller species, the male with minute setose tufts near the sides of the second and third ventral segments.

Head subequal in size to the prothorax; intermediate femora greatly swollen in the male.....**candidum**

Head much shorter and narrower than the prothorax; intermediate femora scarcely perceptibly larger in the male.....**marinicum**

Elytra with two basal foveæ.

Head smaller; elytra nearly as long as wide.

Cephalic foveæ large and very widely separated.

The foveæ near the antero-superior margin of the eye; abdominal carinæ strong, one-half as long as the segment.....**foveicolle**

The foveæ unusually posterior in position; abdominal carinæ two-thirds as long as the segment.....**costale**

Cephalic foveæ very small, nude, separated by one-half the total width; front parabolic in outline; abdominal carinæ finely triangular, flat, scarcely one-third as long as the segment.....**pacificum**

Head slightly larger; elytra very much shorter, transverse, species more minute.....**brevipenne**

The following species which I have not seen are attached provisionally to the present genus:—

Elongate, shining, black, the antennæ and legs testaceous. 1.3 mm. Sitka, Alaska. Probably a true *Actium*.....**clavicornis**

Head narrower than the prothorax; elytral striæ extending to the middle; abdominal carinæ very minute. 1.2 mm. Iowa. Probably a true *Actium*.

durum

Head transverse, nearly as wide as the prothorax, the foveæ pubescent and separated by one-half the width; elytra with two basal foveæ, the discal stria very short; base of the tergum not carinate, the segments subequal.

Iowa? Affinities somewhat doubtful.....**parabolicum**

Antennæ not longer than the head [Brendel]. 1.5 mm. Georgia. Affinities decidedly doubtful.....**globifer**

Head narrower than the prothorax, the latter wider than long; maxillary palpi with the last joint not larger than the third. 1.4 mm. Virginia. Probably not an *Actium*.....**impunctatum**

Costale Brend is also unknown to me in nature, but its relationship with *foveicolle* appears to be sufficiently evident. *Californicum* Lec. was described by me under the name *pallidum*; the discal stria is too short in the figure (Bull. Cal. Acad. Sci., II, Pl. xvi). The species has recently been described also by Mr. Raffray under the

name *Proplectus decipiens* (Rev. d'Ent., 1890, p. 197). *Parabolicum* Brend., was doubtfully referred to *Trinioplectus*, but the antennal and abdominal structure seems to prohibit this association.

The coloration of *clavicorne* Mäkl. is very unusual in this genus, all the other species being of a more or less pale testaceous. In regard to *impunctatum*, if the description and figure of the maxillary palpus published by Dr. Brendel are even substantially correct, it must form the type of a very distinct genus.

In drawing up the above table I have before me only the female of *politum*, and am unable to see the base of the abdomen in *marinicum*, the characters of these species being inferred from their resemblance to *californicum* and *candidum* respectively.

A. candidum n. sp.—Rather slender, moderately convex, polished, rufo-testaceous, subimpunctate; pubescence short, sparse, recumbent. *Head* rather large, with two small deep spongiöse foveæ midway of the length, separated by one-half the total width, connected by an acutely parabolic sulcus; antennal tubercles somewhat prominent, crossed by a fine deep sulcus; eyes rather prominent, barely as long as the tempora, the latter feebly convergent; antennæ twice as long as the head; under surface with long sparse capitate setæ. *Prothorax* slightly wider than long, widest at apical third; sides thence convergent and nearly straight to the base, the latter one-half wider than the apex; transverse sulcus deep, at basal third, deeply prolonged backward in the middle; foveæ small but deep. *Elytra* about as long as wide, two-thirds longer than the prothorax and nearly twice as wide; sides arcuate; discal stria extending not quite to the middle, sutural fine, deep, entire. *Abdomen* slightly shorter and narrower than the elytra, gradually pointed behind. *Legs* short, the two anterior shorter and stouter. *Prosternum* with two large spongiöse antecoxal foveæ; intermediate coxæ contiguous, the cavities confluent; corresponding trochanters toothed within in the male. Length 1.2 mm.; width 0.3 mm.

California (Santa Cruz Co.).

A single male, easily distinguishable among the Californian species by the unusually large head, this being only just perceptibly narrower than the prothorax. The male pygidium is perfectly flat, evenly elliptical and very slightly wider than long.

A. marinicum n. sp.—Moderately slender, strongly convex, polished, subimpunctate, pale yellowish-ferruginous throughout; pubescence short, sparse and subrecumbent. *Head* rather small, distinctly shorter and narrower than the prothorax, wider than long, rapidly and sinuately narrowed before the eyes, the width at the prominent antennal tubercles not quite one-half that across the eyes; foveæ small, deep, spongiöse, in the middle, separated by two-fifths the total width, connected by a broadly parabolic and

rather deep sulcus; eyes prominent, slightly longer than the tempora which are feebly convergent and nearly straight; antennæ twice as long as the head; under surface with sparse capitate setæ. *Prothorax* slightly wider than long, widest before the middle, the transverse sulcus deep, strongly dilated backward in the middle, situated at basal fourth; foveæ deep; sides convergent and nearly straight in basal half. *Elytra* not quite as long as wide, three-fourths longer than the prothorax and nearly twice as wide; sides strongly arcuate; discal stria fine, extending fully to the middle. *Abdomen* distinctly narrower than the elytra but nearly as long, parabolic behind. *Legs* scarcely modified in the male, the two anterior shorter but not much stouter. Length 1.1 mm.; width 0.4 mm.

California (Marin Co.).

In the unique male type, the sexual apparatus is fully protruded and is of immense size in proportion to the body. The flat pygidium, horizontal in its normal position, is seen to be the external covering of a large cylindrical sack-like body, one-half longer than wide and one-half as long as the entire abdomen, having attached to the anterior border of its free extremity, two long acute and complicated processes, which are gradually everted toward apex. The plate-like cover of the large cylindrical body, referred to as the flat pygidium, is displaced in this specimen, and the interior of the sack seems to be filled with a white spongy material.

A. pacificum n. sp.—Moderately stout, convex, pale flavo-ferruginous throughout, shining, subimpunctate; pubescence very short, recumbent, rather abundant. *Head* much narrower but only slightly shorter than the prothorax, nearly as long as wide, the eyes—viewed from above—feebly convex, not prominent, situated rather behind the middle on the sides and as long as the tempora, the latter straight and parallel behind them; outline before the eyes and around the apex almost evenly parabolic; surface rather flat; foveæ minute but deep, nude, at the middle, separated by one-half the total width, connected by a very feeble parabolic sulcus; antennal tubercles broad and flat, crossed by a fine but deep and conspicuous groove; antennæ missing; under surface very sparsely setose. *Prothorax* very nearly as long as wide, widest and broadly rounded near the middle; sides convergent and nearly straight thence to the apex and base, the former four-fifths as wide as the latter; sulcus deep, between basal third and fourth, strongly dilated in the middle; foveæ very large but nude. *Elytra* three-fourths longer than the prothorax and nearly twice as wide, the discal stria extending to the middle. *Abdomen* as long as the elytra but much narrower, parabolic toward apex. *Legs* moderate. Length 1.1 mm.; width 0.4 mm.

California (Siskiyou Co.).

The male has a large terminal pygidium which is not rounded as in the other species but rectangular, with straight sides and apex,

and is much longer than wide, with the surface longitudinally and broadly convex; also, at lateral fourth of the third ventral segment and at the middle of its length, a peculiar oblique lamelliform bilobed and setose process. This species is readily separable from any of the others by the peculiar form of the head.

A. brevipenne n. sp.—Minute, somewhat stout, convex, uniformly dark rufo-testaceous, polished, subimpunctate; pubescence short, subrecumbent, rather abundant. *Head* distinctly shorter and narrower than the prothorax, wider than long; foveæ small but deep, distant by one-half the total width, not distinctly spongiose, connected by a deep entire sulcus; antennal tubercles rather prominent; eyes moderate, from above slightly prominent, not quite as long as the tempora, the latter subparallel, feebly rounded and almost as prominent as the eyes; antennæ two-thirds longer than the head, second joint stouter than the first; under surface with sparso erect and finely capitate setæ. *Prothorax* slightly wider than long, the base and apex subequal, widest before the middle where the sides are broadly, evenly rounded to the apex, abruptly convergent and broadly, feebly sinuate from the middle to the base; sulcus fine, deep, at basal fourth, broadly, very feebly angulate but not perceptibly dilated in the middle; lateral foveæ large and nearly nude. *Elytra* not quite one-half longer and three-fourths wider than the prothorax, transverse; discal stria extending to apical third. *Abdomen* much longer and slightly narrower than the elytra. *Legs* moderate, the two anterior femora, and especially the intermediate, incrassate in the male. Length 0.9 mm.; width 0.3 mm.

California (Sta. Cruz Co.).

A single pair exhibiting scarcely any sexual differences in general form. The venter of the male is not tuberculate near the sides, but, as usual, the second ventral is broadly feebly impressed at lateral sixth especially toward base. The short elytra of this species will distinguish it at once from any other. It is the smallest of the genus.

BATRISINI.

BATRISUS Aubé.

The following interesting forms belong to the first division of LeConte, but differ altogether from *ferox* and *ionæ* in the type of male sexual modification, having the anterior legs simple but the posterior more or less distorted. This small group may also possibly receive *confinis* Lec., which is known only by the unique female type.

B. cavicrus n. sp.—Moderately slender, very convex, polished and coarsely pubescent throughout, brownish-rufous in color, the elytra brighter. *Head* distinctly wider than the prothorax, wider than long, coarsely but feebly rugoso-punctate, polished, with a long carina above the flanks; occiput tricristate; eyes at more than their own length from the base, well developed; nude foveæ joined by a circumambient sulcus; antennæ one-half as long as the body, second joint longer than the third, three to eight equal in width becoming shorter, ninth and tenth abruptly wider, slightly transverse, club paler in color. *Prothorax* a little longer than wide, widest near apical third; median subbasal fovea large, lateral distinct; median sulcus very feeble, on each side of it a series of two or three acute recurved spines; subbasal spiniform tubercles distinct; surface between the median fovea and base finely carinate, two foveæ also at the basal margin on each side of the middle, also one on the flank just before the base and adjacent to another belonging to the prosternal parapleuræ. *Elytra* about as long as wide; sides subparallel, broadly arcuate; humeri broadly exposed, rounded. *Abdomen* a little shorter and narrower than the elytra, the basal carinæ separated by rather more than one-sixth of the entire width. Length 1.7 mm.; width 0.65 mm.

North Carolina (Asheville).

The description is taken from the male, the female being nearly similar but having very much smaller and subrudimentary eyes. The special sexual characters of the male affect the

and base finely carinulate; general surface rather sparsely but asperately punctate. *Elytra* about as long as wide; sides very feebly divergent from the distinct humeri and nearly straight; intrahumeral excavation large and strong. *Abdomen* slightly narrower and much shorter than the *elytra*, the basal carinae strong, approximate, separated by scarcely one-tenth of the total width. Length 1.6 mm.; width 0.55 mm.

North Carolina (Asheville).

This species is allied to *cavicrus*, but differs in its unicristate occiput and very much in the sexual characters of the male, the venter in that sex having a larger wide impression at the apex. The posterior femora are bowed, with the convexity downward, strongly clavate, the clavate part strongly punctate externally but impunctate and polished internally, gradually narrowed at the middle and attached by a slender peduncle which is nearly one-half as long as the femur, the corresponding tibiae swollen toward the middle and the trochanters with a long contorted inferior process. Two males.

It is scarcely possible that this species can prove to be the same as *confinis* Lec., for that is much larger and apparently lacks the four anterior pronotal spines. *Cavicularis* is a new species.

Color paler, dark piceous to rufous, the elytra always brighter and rufescent.

Pygidium broadly, very feebly and evenly convex, similar in the sexes but a little shorter and broader in the female; elytra shorter, the humeri obsolete and the sides more oblique.....**occiduus**

Pygidium differing in the sexes, in the female strongly tumid, in the male nearly flat and unmodified.

Pygidial tumor of the female very large, compressed, broadly rounded in profile; body more robust (*aculeatus* Lec., i. litt.)....**albionicus**

Pygidial tumor abrupt, acutely rounded in profile, the highest point being at the lower margin, the surface thence broadly concave to the upper margin (var. *menulocino* and *speculum* Csy.)**zephyrinus**

Elytra strongly though sparsely punctate; head longitudinally carinate above the eyes; pygidial characters probably common to both sexes; ventral excavation of the male small.

Ambient sulcus of the head continued to the base; pronotum with a complex process at each side of the median subbasal fovea....**cicatricosus**

Ambient sulcus not continued posteriorly beyond the foveæ; pronotum with a simple erect spiculate elevation at each side of the median fovea.

Pygidium of the male small, transverse, broadly tumid, with a transverse polished and impunctate excavation along its lower margin.

pygidialis

Pygidium in both sexes with an abrupt, strongly elevated, compressed and cariniform tooth at the middle**denticauda**

In these species the anterior femora, apparently in both sexes, have an elongate narrow area on the under surface which is strongly and transversely punctato-rugose.

B. pygidialis n. sp.—Moderately slender, polished, bright rufo-testaceous throughout, the abdomen rather darker; legs pale, with the knees darker; pubescence rather long, coarse, very sparse. *Head* as long as wide, subequal in width to the prothorax; eyes moderate, very convex, scarcely behind the middle, outline behind them almost evenly, semi-circularly rounded; nude foveæ deep, connected by a distinct sulcus; vertex impunctate, finely carinate at the base of the occiput; surface outside of the supra-ocular carinæ finely sparsely and subasperately punctate; antennæ a little longer than the head and prothorax, moderately stout, the basal joint emarginate above at apex and impressed on the surface behind the emargination, second very much smaller and narrower than the first, equal to the second and but slightly longer than wide, two to eight subequal, ninth but very slightly longer than the eighth, tenth trapezoidal, foveate within, eleventh stouter with an anteriorly oblique spiculate tooth near the base. *Prothorax* not longer than wide, widest and broadly rounded before the middle, impunctate, the lateral sulci broadly impressed, median narrow, vanishing beyond the middle; three subbasal foveæ moderate, connected by an extremely feeble biarcuate groove, the lateral each with an erect spicule immediately behind it; spicule at the sides of the median fovea small, erect and simple; surface between the median

fovea and base minutely carinate, with two feeble foveæ at each side near the basal margin. *Elytra* not quite as long as wide, one-half longer than the prothorax and about twice as wide, convex; humeri tumid and minutely spiculate. *Abdomen* impunctate, the first segment longer than the fourth, with two minute basal carinæ separated by one-sixth of the entire width. Length 1.9 mm.; width 0.65 mm.

California.

The two specimens in my cabinet are males, the venter having a small deep rounded impression near the apex. The elytral punctures are not large but strong, asperate and very sparse.

B. denticauda n. sp.—Rather slender, polished, piceous-brown, the elytra rufescent; pubescence very sparse, coarse. *Head* but slightly wider than the prothorax, including the labrum a little longer than wide; eyes small, just behind the middle; basal parts behind them almost semi-circularly rounded; vertex impunctate; occiput feebly carinulate at base; sides longitudinally carinate above; foveæ connected by a sulcus which is feeble in front; interantennal depression feeble; antennæ short, not longer than the head and prothorax, the club gradual and heavy, eleventh joint with a slender anteriorly oblique tooth at basal fourth. *Prothorax* as long as wide, widest just before the middle; disk polished, minutely, very remotely punctulate; lateral grooves feeble, median impressed and traceable to apical fourth or fifth; subbasal spines strong, simple; biarcuate transverse sulcus distinct; lateral foveæ well impressed; surface between the median fovea and base finely carinulate; two sublateral foveæ at each side near the basal margin. *Elytra* not quite as long as wide, one-half longer than the prothorax and twice as wide; humeri elevated and with a minute recumbent spiculate tooth; disk distinctly but very remotely punctate. *Abdomen* as wide as the elytra but shorter, the basal dorsal longer than the next two combined, the carinæ short, distant between one-fifth and one-sixth of the total width. *Legs* moderate. Length 1.9–2.0 mm.; width 0.65–0.7 mm.

California (Siskiyou Co.).

The description is taken from a male specimen, the ventral modification consisting solely of a rather small but deep rounded impression near the apex. In the female the curious pygidial cariniform elevation is identical with that of the male, but the venter is not excavated; there is often, however, a very feeble impression at the position of the male excavation, this community of male and female impressions of the last ventral being a common character throughout large sections of the Coleoptera, as I have elsewhere shown; it is observable also in *albionicus*. An analogous condition, relating to the manifestation of male antennal structures in a rudimentary form in the antennæ of the female, will be referred to under *Reichenbachia tumida* and its allied species.

On comparing the male of *luculentus* with that of the typical *spretus* in the LeConte cabinet from northern Georgia, I find that the two are wholly dissimilar in the frontal modification, as may be seen from the following statement:—

Upper surface of the head flat, produced in the same plane beyond the antennæ in a short broad trapezoid, the apex transversely and evenly truncate and one-half as wide as the interantennal distance; clypeus below the trapezoid with a dorsal setose tubercle which extends upward nearly to the level of the frontal margin but distinctly in advance of it; basal joint of the antennæ compressed beneath, the lower outline broadly arcuate and the under surface strongly asperate.....**spretus**
 Front declivous, broadly truncate and biimpressed between the antennæ, bearing at the middle of the beveled edge two approximate suberect and tuberculiform teeth; clypeus beneath with a dorsal tubercle as usual; basal joint of the antennæ broadly arcuate beneath and coarsely but simply punctate.....**luculentus**

Spretus is one of the most minute species of the genus, appreciably smaller than *luculentus*. It is probably quite local in habitat.

The species described by me as *cephalotes* is identical with *striatus* Lec., which was long ago very carelessly suppressed as a synonym of *globosus*; it has scarcely anything in common with *globosus*, and possesses radically different frontal characters in the male. *Simplex* Lec. and *aterrimus* Csy. are both founded upon the female of this species, the types of *simplex* being two very immature females. *Striatus* may be readily known by its large head in the male, with the antennal joints two to four uniformly decreasing and with the basal joint not modified beneath, and also by the small pubescent vertexal foveæ.

ARTHMIOUS LeConte.

There can be no doubt of the validity of this genus, and its separation from *Batrisus* is a necessity in any natural scheme of classification. *Arthmius* differs from *Batrisus* in the complete absence of an impressed line and post-humeral fovea on the flanks of the elytra, and in having a radically different arrangement of the impressions and carinæ at the base of the abdomen; these characters alone would demand generic isolation, but, in addition, the form of the body is shorter and stouter—somewhat reminding us of *Bryaxis* as noted by LeConte,—the head entirely without trace of any

kind of foveal sulcus, and the prothorax devoid of longitudinal impressed grooves. In fact even the transverse line near the base is of a structure foreign to *Batrisus*, being simply a fine fold of the surface and not an impressed channel.

The conformation of the base of the tergum is wholly different from anything ever seen in *Batrisus*, there being two long strong carinæ mutually distant by about one-half of the entire width of the abdomen, each separating two large transverse impressions; so, instead of three impressions separated by two more approximate cusps, which is the constant condition in *Batrisus*, we have here four impressions arranged in two pairs; this is an extremely important character from a generic standpoint. The carinæ, although similar to those of *Bryaxis* and especially *Decarthron*, are, singularly enough, never divergent as in those genera but always feebly convergent. The tarsal claws are as in *Batrisus*.

It is useless to attempt to separate the species of *Arthmius* by referring to the females, as these possess no visible characters of differential value; I have therefore based the following arrangement of the four species in my cabinet upon male sexual modifications alone:—

Penultimate ventral segment transversely and deeply excavated.

The excavation broadly rounded in front, rather abruptly defined throughout and occupying nearly the entire segmental width; ventral pygidium strongly convex longitudinally, the surface ascending toward apex.

New York from northern Georgia.....**globoicollis**

The excavation small, with the edge ill-defined and rounded throughout, not more than one-half as wide as the segment; pygidium rather large, nearly flat; fifth antennal joint very much larger. Texas.....**bulbifer**

The excavation large, ill-defined and rounded at the edges except anteriorly where it is broadly angulate; pygidium nearly flat. North Carolina.....**involutus**

Penultimate ventral with an extremely deep excavation longer than wide, the sides of which are parallel and nearly straight, with rounded ill-defined edges. Florida.....**gracilior**

In many of the tropical species the head is remarkably modified in the male, but this is not the case in any thus far found within the United States. The modified antennal joints five to eight form, in all of our species, a more or less definite arc, and, on the under surface, are clothed with much shorter stouter and more recumbent setæ.

I have before me the female of two of these species, and in neither

of them is there any structure at all approaching that figured by Brendel for that sex (Mon. Pl. ix, f. 76b); the last ventral is always large, flat, or very feebly convex, perfectly even on the disk, and acutely rounded and feebly produced at apex. In considering the excavated penultimate ventral and terminal pygidium of the male and the large flat apically prominent last ventral of the female, it is impossible not to discern a marked homology with *Euplectus*. The male pygidium is altogether absent in *Batrissus*, this being another very important generic distinction.

The antenna figured in three positions by Dr. Brendel (l. c.) is very remarkable, and entirely different from anything which I have observed in this genus.

A. bulbifer n. sp.—Stout, strongly convex, highly polished and pale flavo-ferruginous throughout, impunctate, the elytra very sparsely punctulate; pubescence coarse, long but not dense. *Head* just visibly wider than the prothorax, subquadrate; upper surface smooth, with two small nude foveæ at basal third separated by rather more than one-half the total width, also with a feeble impression just behind each of the large feeble antennal prominences; eyes large, prominent, at one-half of their own length from the base; antennæ one-half as long as the body, the fifth joint very large, subquadrate, nearly twice as wide as the fourth, eighth strongly acuminate externally at apex, five to eight forming the usual arc. *Prothorax* as long as wide, widest and broadly rounded before the middle; sides feebly convergent and broadly sinuate toward base; disk even, strongly convex, with a small nude fovea at each side near the base, the two connected by a fine even straight and transverse fold of the surface; basal foveæ feeble. *Elytra* convex, one-third wider than long, nearly one-half longer than the prothorax and distinctly more than twice as wide; sides evenly arcuate; humeri nearly obsolete, feebly tumid. *Abdomen* from above fully as wide as the elytra but not quite as long, the first segment forming two-thirds of the whole. Length 1.5 mm.; width 0.7 mm.

Texas.

The unique male, from which the description is drawn, appears to be somewhat immature. The anterior tibiæ are strongly, triangularly toothed externally at apical third, and the penultimate ventral has an unusually small, strongly transverse excavation not more than one-half as wide as its disk, the impression nowhere abruptly defined; pygidium rather large, nearly flat. A female before me from Texas, probably of this species, is darker in color and with much shorter elytra.

A. involutus n. sp.—Moderately stout, highly polished, dark red-brown, the elytra paler, bright red; legs paler, brown; integuments impunctate;

pubescence long, coarse, erect but sparse. *Head* scarcely perceptibly wider than the prothorax, subquadrate, the upper surface smooth, even, not very convex, with two strong nude foveæ separated by one-half the total width; antennal tubercles wide and flat, each limited internally and posteriorly by a short oblique impression; eyes large, prominent, at fully one-half their length from the base; antennæ one-half as long as the body, fifth joint but slightly wider than the fourth, eighth but little produced outwardly at apex. *Prothorax* fully as long as wide, widest and broadly rounded at the sides before the middle, with a fine transverse fold before the base which is flexed abruptly forward at right angles for a very short distance at its lateral extremities, the right angles enclosing a small nude fovea; two foveæ at the basal margin at each side deep and distinct. *Elytra* one-fourth wider than long, one-half longer than the prothorax and more than twice as wide, convex, impunctate, the sides broadly arcuate; humeri rather prominent and tumid. *Abdomen* from above nearly as wide as the elytra but distinctly shorter, the basal segment forming one-half the length. Length 1.4-1.5 mm.; width 0.65-0.7 mm.

North Carolina (Asheville).

I took a large series of this species in the mountains of western North Carolina; there is very little variation, but the female differs considerably from the male, being smaller, unicolorous and darker, and especially narrower, with shorter elytra and relatively longer abdomen, the latter having the last dorsal acutely pointed as in some species of *Batrisus*. The description refers to the male, the anterior tibiæ having a lamelliform external tooth at apical third, the surface between this and the apex feebly impressed and with a small central foveola which encloses a condensed tuft of setæ; penultimate ventral with a large deep non-abrupt excavation, angulate and abruptly defined anteriorly. This species differs greatly from *bulbifer* in the form of the tibial tooth, in addition to the other sexual characters.

BRYAXINI.

RYBAXIS Sauley.

The species of this genus are not numerous, but appear to be well differentiated from *Bryaxis* by possessing a deep groove on the vertical flank of each elytron and a transverse biarcuate sulcus joining the lateral pronotal foveæ. Although the sulcus is perfectly constant, exhibiting no tendency to vary in the direction of *Bryaxis*, there is notable inconstancy in the median fovea, which may be large and spongiose or completely obsolete, the sulcus then being simply abruptly bent and very feebly dilated at this point. *Rybaxis*

is distinguished further from *Bryaxis* by the internally dentate anterior tibiæ of the male. The species known to me may be thus characterized:—

Median pronotal fovea large circular and spongiose; basal carinæ of the abdomen very short and remote.....**valida**

Median fovea obsolete or very feeble, never spongiose; abdominal carinæ less distant.

Antennal club nearly normal in the male, the anterior trochanters not apically spinose.....**conjuncta**

Antennal club very large compact and subcylindrical in the male, the anterior trochanters internally spinose near the apex.

Body as in *conjuncta*; male antennal club broader, the last joint not longer than the three preceding together; tenth joint more than twice as wide as long.....**brendeli**

Body as in *Reichenbachia rubicunda*, but with larger elytra; male antennal club more elongate, the tenth joint one-half wider than long, the eleventh as long as the four preceding, the tenth and eleventh with a large common flattened impression beneath, which, on the eleventh, is strongly and very coarsely asperate, on the tenth smooth....**mystica**

In *brendeli* Horn, the flattened lower surface of the tenth antennal joint in the male is not smooth, but coarsely asperate except near the base. *Valida* differs greatly from *sanguinea* in having a larger circular pronotal fovea. Dr. Brendel indicates two varieties of *conjuncta*; the first is not described and must therefore be regarded as unpublished, but, on the other hand, *truncaticornis* appears to be a valid species.

R. mystica n. sp.—Robust, convex, oval, black, the apical joint of the antennæ paler; elytra ruby-red, blackish at base and apex; legs pale ferruginous throughout; integuments polished, subimpunctate, the elytra sparsely and very obsoletely punctulate; pubescence moderate in length, coarse, sparse. Head wider than long, very slightly smaller than the prothorax; eyes large, prominent; foveæ large, deep, just behind the middle, separated by rather more than one-half the total width; antennal prominences separated by a large deep and smooth concavity, without trace of fovea; antennæ stout, one-half as long as the body, second joint stouter but not longer than the third, fourth smallest of all, quadrate, fifth to seventh larger, slightly modified, eighth narrower, wider than long, ninth twice as wide as long, more acute internally, tenth very much longer and wider than the ninth. Prothorax two-fifths wider than long, widest before the middle, the sides convergent and broadly, very feebly sinuate thence to the base; transverse sulcus gradually and feebly dilated in the middle but remaining abruptly defined; median fovea completely obsolete. Elytra but slightly wider than long, the sides feebly divergent, broadly arcuate, rounded at base for some distance to the

prothorax, the humeri distinct; discal stria extending to apical fourth or fifth. *Abdomen*, viewed laterally, scarcely as long as the elytra; basal segment with two straight divergent carinæ separated by one-third the discal width and scarcely one-third as long as the segment. Length 1.5 mm.; width 0.75 mm.

Rhode Island.

The description is drawn from a male example which is apparently unique.

BRYAXIS Leach.

Those species having the dorsal surface of the abdomen similar in the two sexes, separated by Thomson under the name *Brachygluta*, appear to be entirely wanting in the North American fauna, all of our species entering the true genus *Bryaxis* as limited by Saulcy, Reitter and others. *Nisa* Csý., is a subgenus, differing from the true *Bryaxis* in having the medial of the three spongiose pronotal foveæ much smaller than the lateral, and all very feebly impressed, in having the trochanters larger—often spinose in the male,—the first dorsal segment entirely devoid of carinæ, and the antennal club of the male curiously and intricately modified but with the tergum simple; the venter is generally broadly and feebly impressed nearly throughout the length in that sex. The following is a distinct and interesting species, with very complex abdominal modifications in the male, from which sex the description is taken:—

B. labyrinthea n. sp.—Moderately stout, convex, polished, bright rufo-testaceous throughout; pubescence rather long, coarse and sparse. *Head* impunctate, with three large spongiose foveæ, the surface between the occipital foveæ and the eye feebly impressed; eyes large, prominent, not quite attaining the base; antennæ long and slender, all the joints elongate, except eight to ten which increase gradually in size, obtrapezoidal in form, the eighth wider than long. *Prothorax* very feebly and sparsely punctulate, slightly wider than long, but little wider than the head, the median fovea much smaller, more basal and deeper than the lateral, very deeply impressed, with a small spongiose area at the bottom. *Elytra* convex, finely, very sparsely punctulate, nearly as long as wide, almost twice as wide as the prothorax. *Abdomen* shorter than the elytra, with two large exposed dorsal segments, the first three times as wide as long, with two equally trisecting parallel and very pronounced tumid ridges, gradually increasing in size and prominence from base to apex and each bearing upon its crest one of the fine abdominal carinæ, the latter entire and separated by one-third the width, just perceptibly divergent; apex abruptly perpendicular throughout the width, with a porrect setose process at lateral third far below the crest of the corresponding dorsal ridge, and also a small rounded porrect median lobe, bearing at apex two

small approximate and mutually everted reflexed and corneous laminae. Second segment slightly longer than the first, trapezoidal, one-half wider than long, the apex broadly sinuate with obtusely rounded angles and two-thirds as wide as the base, the surface not at all foveate at base, broadly, strongly impressed laterally especially toward base, the median parts obtusely but strongly elevated throughout the length, becoming broadly and gradually impressed toward apex thus forming the apical sinuation. The second segment only slightly overreaches the third, which is inferior and but slightly modified. Metasternum broadly impressed. Length 1.8 mm.; width 0.8 mm.

New York. Mr. W. Jülich.

It is almost impossible to describe the extremely complicated modifications on the transverse vertical wall which forms the apex of the first segment. This species is allied to *intermedia*, differing in the parallel and not oblique elevations of the first segment, the shorter broader and non-foveate second segment and in many other details.

The species described by me under the name *infinita* (Bull. Cal. Acad. Sci., II, p. 184), is an altogether different thing from *belfragei*, with which it has been considered synonymous. The differences can be noted in the following statement drawn from the females of the two species, the original types of each:—

Distinctly stouter in form; head much smaller and narrower than the prothorax, the eyes moderate in size, the tempora strongly convergent behind them to the neck; prothorax slightly transverse; subapical dorsal segments of the abdomen inferior and strongly inflexed.....	belfragei
Head very large, fully as wide as the prothorax, the eyes extremely large and prominent, extending to the base; tempora obsolete; prothorax much shorter and more transverse; abdominal segments feebly inflexed near the apex.....	infinita

The drawing of *belfragei* given by Brendel (Bull. Univ. Iowa, Pl. IX, f. 57) seems to have been taken from a specimen of *infinita*, and the male sexual modifications are probably of the same general type in both. There can be no doubt that the original series from which *infinita* was described, was composed entirely of females, and the differences signaled in the remarks beneath the description, were in some measure due to unconscious imagination while laboring under the impression that there ought at any rate to be one male among fourteen specimens.¹

¹ A lifetime might well be occupied in simply training the brain to see things as they really are and as revealed to us by the visual images on the retina, and the nearest we can ever get to truth is an approximation, depend-

Under the name *dentata* Say, two remotely isolated species have been confused, one having the body larger, pale brown throughout, with the first dorsal strongly conical and prominent at apex in the male, and the other smaller, black with paler elytra, the first ventral not prominent at apex. Neither of these species corresponds with Say's description, which states that the elytra are "half the length of the tergum;" body blackish, with paler elytra, the "tergum simple," and the length one-twentieth of an inch. No species of *Bryaxis* known to me has the elytra so short in comparison with the tergum. No mention is made of any sexual modification, but there is added "Var. a. Reddish-brown." In view of the name given by Say, and of the fact that he had before him reddish-brown specimens, I think the best way out of this dilemma is to apply the name *dentata* Say, to the species for which it is most appropriate, viz.: the larger brown species with strongly conical first dorsal, and to designate the smaller blackish species by another name, as suggested in the following description drawn from the male:—

B. intricata n. sp.—Moderately stout, convex, polished and subimpunctate throughout, black: antennæ piceous; elytra and legs rufo-ferruginous; pubescence short, subrecumbent, sparse. *Head* smaller and just visibly narrower than the prothorax, deeply trifoveate; eyes moderate, but slightly more than twice as long as the tempora, the latter strongly convergent; antennæ rather short and stout, as long as the head and prothorax, club gradual, robust, fourth joint scarcely longer than wide. *Prothorax* but slightly wider than long, widest at the middle, with three extremely large equal circular and spongiöse foveæ, the median much nearer the base than the lateral. *Elytra* but slightly wider than long, quite distinctly less than twice as wide as the prothorax, the sides moderately divergent, broadly arcuate; humeri distinct. *Abdomen*, viewed laterally, much shorter than the elytra. First dorsal nearly two and one-half times as wide as its median length, broadly, parabolically rounded behind throughout the width, with two fine short basal carinæ which are parallel and distant by about one-half the discal width, the surface evenly, feebly convex throughout; apex not deflexed but with the surface very slightly more transversely arched in median sixth or seventh, the edge of the arch broadly, very feebly and simply emarginate. Second segment scarcely one-half as long as the first, excavated in anterior two-thirds and median third, the excavation with two distant anteriorly divergent ridges which are densely clothed with short erect setæ; at the apical margin, under the apex of the

ing not only upon the amount and quality of this training, but upon the relative freedom of the brain from temporary bias and prepossession.

first segment, there is a thin transverse erect lamina, gradually curved backward, the apex appearing immediately under the middle of the emargination of the first segment; from the posterior base of the erect lamina there projects obliquely backward a small straight narrow ligula. Remainder of abdomen simple. *Legs* rather slender, the posterior tibiae bent, the intermediate shorter and thicker. Length 1.25 mm.; width 0.65 mm.

New York.

The abdominal characters of this species are more nearly homologous with those of the *texana* group than with *abdominalis* or *intermedia*. It is one of the smallest species of the genus.

In the desert regions extending from western Texas to southern California there are species of a peculiar type, pale ferruginous in color and having the first dorsal segment in the male very long, in fact constituting the entire abdomen when viewed from above, with the apex deflexed and more or less broadly sinuate in the middle. I have before me three species, all represented by the male alone, the female being apparently very rare; they may be distinguished as follows:—

Elytra but slightly wider than long, the suture very much longer than the first ventral segment, with the sides less divergent and more arcuate.

First dorsal segment with the sides subparallel, at the apex much wider than the elytra at the humeri; second nearly twice as long as the third, the apex broadly, feebly sinuate in middle fourth, the surface feebly and approximately biimpressed in median fourth and anterior half; second and third segments strongly punctate throughout; third and fourth subequal in length; last dorsal broader, even, entire and very broadly rounded at apex. Length 1.5 mm.; width 0.7 mm. Southern California.

loripes n. sp.

First dorsal strongly narrowed from base to apex, at the latter point scarcely wider than the elytra at the humeri; second transverse at apex, scarcely at all longer than the third, feebly, obliquely impressed on the disk at each side of median third in anterior half, and also along the apical margin, the central portion between the impressions very feebly elevated, strongly punctate and setose; third segment one-half longer than the fourth, with the apex broadly and very feebly sinuate in the middle; last dorsal with a short beveled spongiöse apical region, the anterior margin of which is abruptly limited and broadly anteriorly arcuate throughout the width; body otherwise nearly similar in form and size to *loripes* though rather less stout **texana** Csy.

Elytra short and transverse, the sides strongly divergent from the humeri and nearly straight; suture but slightly longer than the first dorsal; second dorsal scarcely more than one-half as long as the third, deeply emarginate in the middle of its anterior margin under the apex of the first, the surface with a transverse elevated median tubercle occupying the entire segmental

length and limited at each side by a feeble oblique impression, the latter more distinct anteriorly; third segment nearly twice as long as the fourth, the former scarcely perceptibly sinuate at the middle of the apex; punctures throughout fine and sparse; body smaller and less stout.

arizonæ Csy.

The lengths of the segments are measured along the middle line.

Of *foveata* Lec., I have before me several specimens taken in Utah by Mr. Soltan, and perfectly agreeing with the female type from Yuma, California. The male has the following abdominal characters:—

First dorsal a little more than twice as wide as long, with two feebly divergent basal carinæ more than one-third as long as the segment (very much shorter and feebler in the female), separated by one-half of the discal width; apical margin broadly, feebly arcuate; surface even but, near the apex at the middle, very slightly more transversely arched, the edge feebly emarginate in median eighth to tenth, the notch rounded, much deeper when viewed obliquely from behind; second segment less than one-half as long as the first, broadly, deeply impressed in median half and anterior two-thirds, the impressed area transverse, with a posteriorly arcuate rounded hind margin, the bottom smooth polished and nearly even throughout, the middle of the anterior margin narrowly reflexed and curved upward and backward far under the arched portion of the apex of the first segment.

Foveata belongs to the same group as *intricata* and resembles it in form and size, but is dark red-brown in color with paler elytra. There are no marked sexual differences in the antennæ, and the original type as described (Ann. Lyc. N. H., V, p. 215) appears to be a female. The description of the male sexual characters more recently published by LeConte (Tr. Am. Ent. Soc., VIII, p. 181) is somewhat misleading.

The sexual characters of some previously published species now united as varieties of *hæmatica*, indicate that they are really entitled to full specific recognition. This is especially the case with *perforata* Aubé. It is desirable therefore that *perforata* Brend. should receive another designation, and I would suggest the name **terebrata**. This species belongs to the same group as *foveata* and *intricata*.

REICHENBACHIA Leach.

Our eastern species of this genus are somewhat difficult to identify owing to the absence of strongly marked sexual characters; a few of them however, such as *scabra*, *gemmifer* and *puncticollis*, are

quite isolated otherwise. The typical *rubicunda* is rather stout, with subimpunctate polished integuments, elytra distinctly shorter than wide, abdominal carinæ rather long, divergent and separated by between one-fifth and one-sixth of the entire width, the pubescence long, bristling and coarse, and the male sexual characters feeble, the last ventral flattened and the last dorsal with a very small apical sinuation, two or three times as wide as deep, with its lateral limits not abruptly defined. In *gracilicornis* the body is equally stout and the carinæ similar, but the vestiture is a little shorter and coarser, and the last dorsal has at apex a small semi-circular nick, abruptly limited by acute angles, the last ventral just visibly impressed. *Gracilis* is narrower and still more hirsute than *rubicunda*, though similarly carinate, and has the last ventral deeply impressed, the last dorsal being broadly sinuate at apex, the sinuation about twice as wide as in *rubicunda* or *gracilicornis* but nearly similar in shape to that of the former. *Atlantica* also has the vestiture long, erect and hirsute, but the abdominal carinæ are much closer, nearly as in *divergens*.

On the other hand *divergens*, *facilis*, *cribricollis*, *congener*, *furtiva* and *inepta*, have the pubescence decidedly shorter and more recumbent, and the abdominal carinæ generally less distant though in different degrees; in *inepta* they are relatively a little more distant than in *rubicunda*, this species as well as *congener* being distinguished also by its minute size. In *congener*, *furtiva* and *cribricollis*—if I have correctly identified this species—the carinæ are a little less distant than in *rubicunda* but more distant than in *facilis* and *divergens*, where they are separated at base by a distance not greater than that of the sutural striæ at the middle of the elytra. *Cribricollis* has an unusually long prothorax.

Divergens was recently redescribed by Brendel under the name *canadensis*, specimens sent to me by the author agreeing completely with the types in the LeConte cabinet; the pronotum in these types is sparsely and coarsely but feebly punctate, more distinctly so anteriorly and not impunctate as stated in the original description. The species is easily recognizable by its short transverse and roughly scabro-punctate elytra. *Facilis* is a widely different species with longer, subimpunctate elytra and still more minute appressed pubescence; it differs also in antennal structure and male sexual characters, and was possibly described by Brendel under the name *divergens* Lec.

Inopia Csy., is the same as *litoralis* Brendel; this is one of the species confounded with *puncticollis* by LeConte. I agree with Dr. Brendel that the true *puncticollis* is, when mature, dark with reddish elytra, the pronotum being very strongly and closely punctate especially in the male. It is abundant in the swamps near New York and Washington. The prothorax in *inopia* is feebly punctate, especially anteriorly, and not impunctate, as originally stated.

The few remaining specimens of *nevadensis* in my cabinet are females, and it is quite certain that the male has never been taken. The head is without a true frontal fovea, but has a short distinct transverse linear and pubescent impression between the antennæ; otherwise it is so similar to the female of *fundata* and *deformata* that I have no hesitation in putting it near them for the present; in the females of those species there is no trace of the transverse frontal impression.¹

The species described by me as *franciscana* is identical with *compar* as surmised by Dr. Brendel. The name *polita* given by Brendel to one of our species is preoccupied by King for an Australian species—possibly belonging to the genus *Rybaxis* however. *Minuta* Brend. (Proc. Ent. Soc., Phila., 1865, p. 30) cannot be identified, and is not referred to by Dr. Brendel in his recent monograph.

The following species seem to have been overlooked:—

R. furtiva n. sp.—Stout, convex, polished, black or piceous-black with paler and more rufous elytra; legs and antennæ pale ferruginous; integuments sparsely and not distinctly punctulate; pubescence very short but stiff, almost recumbent, rather sparse. Head much narrower but only slightly shorter than the prothorax, deeply trifoveate; eyes moderate, very convex and prominent, at very nearly their own length from the base; antennæ slender, one-half as long as the body, the club very gradual, joints elongate, fifth twice as long as wide, eighth as long as wide. Prothorax nearly one-half wider than long, widest and evenly, strongly rounded at about the middle; apex scarcely two-thirds as wide as the base; median fovea small but distinct, lateral large, visible from above. Elytra large, nearly twice as long as the prothorax and fully twice as wide, not quite as long as wide; humeri narrow at base but distinct; discal stria evanescent at apical fifth. Abdomen, from above, much shorter than the elytra, equally wide, the first dorsal nearly

¹ The small circular fovea in the transverse frontal impression, mentioned in the original description of *nevadensis*, seems to be the result of slight injury to the type, which was the only specimen examined in this connection.

three times as wide as long, with two very short basal striæ which are strongly divergent and distant at base by one-sixth of the discal width. *Legs* rather long and slender. Length 1.3 mm.; width 0.75 mm.

Pennsylvania.

A single pair, differing only in the length of the abdominal carinæ. The carinæ appear to be variable in length as a general rule in this genus, but are less variable in direction and are quite constant in mutual distance asunder. The male type above described has the last ventral very large, very broadly and somewhat deeply impressed, the impression even; last dorsal very broadly but distinctly sinuate at apex.

This species belongs near *rubicunda* and *gracilicornis*, but differs greatly in its short subrecumbent pubescence and strongly marked male sexual characters of the last ventral, also in the very different form of the terminal notch of the last dorsal. It is also closely allied to *facilis*, having the same minute decumbent pubescence, but more distant abdominal carinæ; it is intermediate between *rubicunda* and *facilis* in many respects.

R. inepta n. sp.—Rather stout, convex, polished, subimpunctate, dark red-brown, the elytra brighter rufous; pubescence moderately abundant, rather short, stiff, inclined. *Head* much smaller than the prothorax, with three spongiöse foveæ, the two posterior smaller than the subapical; eyes moderate in size, well before the base; antennæ scarcely longer than the head and prothorax, rather slender, the club stout, fifth joint nearly one-half longer than wide, the eighth slightly transverse. *Prothorax* two-fifths wider than long, rounded on the sides and widest just before the middle; lateral foveæ distinct, intermediate subobsolete, consisting of an oval impression so feeble as to be discernible only in certain lights, near the posterior margin of which there is an excessively minute puncture, only distinct under rather high power. *Elytra* transverse, one-half wider than long, one-half longer than the prothorax and nearly twice as wide; sides strongly divergent; discal stria extending nearly to apical sixth. *Abdomen*, from above, but slightly shorter than the elytra and equally wide, the first segment nearly three times as wide as long, with two straight divergent carinæ in basal third, separated by about one-fourth of the discal width. Length 1.0 mm.; width 0.65 mm.

New Jersey.

The single specimen before me is a female. The species belongs near *rubicunda*, differing obviously however in its very minute size, shorter, coarser vestiture and nearly obsolete subbasal fovea of the pronotum. It is also allied to *furtiva* but has the pubescence longer and coarser, and the abdominal carinæ more distant; the size, also, is much smaller.

R. demissa n. sp.—Moderately stout, convex, polished, dark brown, the elytra paler; integuments subimpunctate; pubescence short, coarse, strongly inclined, not very dense but distinct. *Head* scarcely shorter but much narrower than the prothorax, excepting the eyes subquadrate; *foveæ* deep, the posterior widely distant, subapical larger, in the interantennal depression; eyes rather small, prominent; *tempora* to the neck a little longer than the eye, strongly rounded; *antennæ* about as long as the head and prothorax, normal, the club gradual but heavy, the eleventh joint nearly as long as the preceding four. *Prothorax* transverse, one-half wider than long, widest at the middle where the sides are rather strongly rounded; apex one-half as wide as the disk and two-thirds as wide as the base; lateral *foveæ* large, deep, just behind the middle, visible from above, median small, near the base. *Elytra* very feebly punctulate, together fully two-fifths wider than long, one-half longer than the prothorax and nearly twice as wide; sides strongly divergent; *humeral* broadly, obliquely rounded, not abrupt; discal stria deep, extending to apical fifth. *Abdomen*, from above, slightly shorter than the elytra but fully as wide; basal *carinæ* fine, fully one-third as long as the segment, very feebly divergent but slightly everted toward apex, separated by rather more than one-third of the discal width. *Legs* moderate; posterior *tibiæ* bent as usual. Length 1.1 mm.; width 0.65 mm.

District of Columbia.

The type is a male but with very feeble sexual modifications, having the last ventral feebly flattened and the sinuation at the tip of the last dorsal narrow and scarcely distinct.

This minute species resembles *congener* in size but belongs near *polita* in the Brendelian arrangement, differing in its smaller size, much shorter, broader form, more transverse prothorax and elytra, and in many other characters. Two specimens.

There is a remarkable group of *Reichenbachia* confined apparently to our southwestern country, which is distinguished not only by curious modifications of the intermediate joints of the antennæ, but more particularly by the fact that these modifications exist in a rudimentary manner also in the antennæ of the female, although the special function subserved by them in the former sex apparently cannot obtain in the latter. It seems as though this phenomenon might be parallel in some way with that presented by the rudimentary, though well-marked, *manimæ* of the male in the higher vertebrates.

The species of this little group may be distinguished in the following manner by the females, the males of *subtilis* and *complexens* being unknown:—

Fifth and sixth antennal joints almost exactly equal, distinctly stouter than the fourth, three-fourths longer than wide, feebly rounded internally, straighter externally; body larger and much stouter....**complectens**

Fifth and sixth joints cylindrical, not much thicker but very much longer than the fourth; fifth shorter than the sixth, the former less, the latter more than twice as long as wide.....**tumida**

Fifth antennal joint alone modified, slightly thicker, more arcuate internally toward apex, nearly twice as long as wide, as long as the two preceding together and two-thirds longer than the sixth; first joint much longer and thicker than the second, densely punctate and with long pubescence; eyes moderate; frontal fovea less apical, much nearer each of the vertexal foveæ than the transverse distance separating the latter, the triangle much wider than long.....**wickhami**

Fifth joint alone modified but in relative length only, twice as long as wide and not quite as long as the two preceding together; first joint not longer or wider than the second, sparsely punctulate and sparsely pubescent like the following; eyes much larger, twice as long as the tempora; foveæ of the head forming an equilateral triangle, the frontal much more apical, on the declivity and as distant from each of the vertexal as the latter are from each other; length 1.25 mm., width 0.6. Yuma, California.

subtilis

In *subtilis*, which is represented by the unique female type only, the circular spongiose frontal fovea is not at all smaller than the others, but if anything a little larger; it is however unusually apical, being situated on the anterior declivity and so may appear very slightly smaller or, more properly, elliptical, from a vertical point of view; in a posteriorly oblique line of sight it may of course soon be made to vanish. *Subtilis* may be very readily separated from *wickhami* by the larger eyes, position of the frontal fovea, and much smaller basal joint of the antennæ.

In all of these species the color is pale rufo-ferruginous throughout, the surface very convex, the elytra long and ample, the basal carinæ of the abdomen short, subparallel and separated by one-third of the total width, except in *tumida*, where they are sensibly more distant. In *tumida* the head of the male is very remarkable, the upper surface being nearly flat with two large distant foveæ at basal third, produced anteriorly beyond the antennæ in a short trapezoid, the apex abruptly transversely truncate, feebly bisinuate and as wide as one-half the interfoveal distance; at the narrow truncate apex the surface becomes abruptly vertical or even gradually feebly inflexed to the labrum, the vertical part one-half as long as the upper horizontal part; the frontal fovea is replaced by a

transversely fusiform spongiöse line at the angle separating the vertical from the upper portion, and is invisible from above. The large sixth antennal joint is deeply excavated almost throughout its extent beneath, the excavation clothed with erect subsquamiform setæ. In the female the head, as in *complectens* ♀, is simple, the three circular foveæ forming a large equilateral triangle. These four species, while agreeing generally among themselves, are all very isolated, and the discovery of the male of *subtilis* and *complectens* may be awaited with interest. In conformity with a general rule in the present genus, the female is smaller than the male, and has shorter elytra.

BYTHININI.

BYTHINUS Leach.

The presence or absence of small raised knobs on the under surface of the second palpal joint is not a generic character in this group of species, as these minute tuberosities may be traced more or less readily in nearly every representative; in our own *carinatus* they are extremely feeble, but in *tychoides* Brend. (*Tychus bythinoides* Br. olim) they are very distinct. In fact *Machærodes tychoides* agrees almost exactly with an example of *Bythinus italicus* in my cabinet, and I cannot perceive that there is even a subgeneric difference in any direction.

Pselaptrichus is extremely closely allied to *Bythinus*, differing only in the longer abdomen and more narrowed and produced frontal tubercle, but in view of the variation exhibited in the latter respect by the numerous species of *Bythinus*, this cannot be considered of very decisive value. The more elongate apparent first dorsal segment is the only really important differential character possessed by *Pselaptrichus tuberculipalpus* Brend., but there can be but little doubt that this alone is sufficient to establish its validity.

Bythinus is extremely poorly represented in America, but in Europe appears to be the most important element of the family.

CYLINDRARCTUS Schaufuss.

The more elongate third palpal joint, mentioned by Schaufuss and Raffray as a distinguishing feature of this genus, is, it seems

to me, one of the least decisive of the differential characters, for there is no species in which this joint becomes fully as long as the fourth, and there are several species of true *Tychus* which have the third and fourth joints quite similar to the usual form in *Cylindrarctus*; the second palpal joint is however more abruptly and strongly clavate and with a more slender peduncle in *Tychus*.

Cylindrarctus is very closely allied to *Tychus*, but differs in the more elongate and somewhat more depressed form of the body, the more elongate antennæ, in having the vertexal foveæ on the sloping sides near the eye—and not remote from the eye and visible from above as in *Tychus*,—and especially in the much less distant posterior coxæ.

In *Tychus* the basal joint of the antennæ is usually simple, while in *Cylindrarctus* it is generally modified in some peculiar manner; in the former the male may or may not have the anterior trochanters spiculate, and the last ventral is seldom foveate as in *Cylindrarctus*, but,—in *T. minor* for example,—has the surface broadly concave, the apex gradually deflexed to the level of the flat ventral pygidium. In *Tychus* the second joint of the posterior tarsi is subequal to or longer than the third, while in the present genus the second joint is shorter than the third. Duly considering all of these differences, I am therefore inclined to agree with Mr. Raffray in considering *Cylindrarctus* a genus distinct from *Tychus*.

The known species may be thus distinguished:—

- Third palpal joint angulate internally near the base; sixth ventral of the male with a deep indefinitely limited impression, which is acutely angulate anteriorly at the anterior margin, the apical margin deflexed and with an abruptly limited semi-circular notch **longipalpis**
- Third palpal joint more or less broadly rounded within behind the middle, not at all angulate.
- Basal joint of the antennæ obliquely carinate externally at base; sixth ventral of the male with a deep triangular excavation, the apical angle of which is at the anterior margin as in *longipalpis*; pubescence rather shorter than usual, very coarse **americanus**
- Basal joint not described; pubescence shorter than in *comes* and *crinifer*; sixth ventral with a deep circular fovea; body larger, 1.9 mm. in length. **ludovicianus**
- Basal joint obliquely flattened in a large external area at base; sixth ventral of the male with a small transversely lunate impression just before the ventral pygidium **comes**
- Basal joint compressed beneath, the lower margin strongly arcuate; females only known; vestiture very long and bristling **crinifer**

Of *americanus* Schauf. I have before me a single male from Illinois; it is blackish in color throughout and unusually narrow and elongate; the third palpal joint is evidently shorter than the fourth.

C. comes n. sp.—Moderately narrow and convex, polished, subimpunctate, dark rufo-testaceous, the abdomen piceous; pubescence sparse but very long, erect, the hairs of the elytra about one-third as long as the prothorax. *Head* longer than wide, as long as the prothorax but much narrower; eyes large, prominent, nearly at the base; antennal tuberoles convex; vertexal foveæ deep, perforate, on the sloping sides near the eye; subfrontal spicule midway between fovea and tubercle, small; palpi long, third and fourth joints beset with long erect setæ, the former much the shorter; antennæ one-half as long as the body, the club not quite as long as the funicle, first joint stout, longer than wide, with a large oval area at base which is flattened and well defined above and beneath, one to three decreasing feebly in thickness, three to seven longer than wide, eighth wider than long, ninth and tenth abruptly much wider, trapezoidal, eleventh as long as the preceding three. *Prothorax* convex, nearly as long as wide, widest and strongly rounded at the middle; sides thence strongly convergent to the apex which is three-fifths as wide as the base; near the basal margin a few small feeble impressions and on each side before the base a larger fovea. *Elytra* about as long as wide, as long as the head and prothorax, nearly twice as wide as the latter; humeri evident, widely exposed at base, the humeral width fully four-fifths of the subapical; impressed discal line extending to the middle. *Abdomen* scarcely as wide as the elytra and much shorter, the first visible dorsal distinctly longer than the second; border moderate. Length 1.6 mm.; width 0.7 mm.

Florida.

The male, from which the description is taken, has a short stout erect spine at the base of the anterior and posterior trochanters, the intermediate simple. The metasternum is tumid, the tumidity bearing two rather distant short erect and acute spines, arranged transversely just before the middle of the metasternal length, the posterior declivity broadly feebly and longitudinally impressed to the intercoxal sinuation. First and second ventrals not impressed, the sixth with a small deep lunate impression at apex, not extending beyond the middle of the segment and bordering the small flat ventral pygidium.

This species differs from *ludovicianus* Brend. in its smaller size and longer pubescence.

C. crinifer n. sp.—Rather convex, polished, dark rufo-testaceous throughout, often paler from immaturity; integuments subimpunctate; pubescence long, sparse, erect and bristling, the hairs of the elytra nearly one-third as long as the prothorax. *Head* scarcely as long as the prothorax and about

three-fourths as wide, convex; eyes moderate, near the base; supra-ocular foreæ at some distance from the eye; spicules very small; antennæ one-half as long as the body, the basal joint stout, compressed beneath, two to five longer than wide, six and seven quadrate, eighth wider than long, club large, abrupt; palpi long but stout, the last two joints pubescent with erect, minutely capitate setæ and smaller subrecumbent hairs. *Prothorax* one-fourth wider than long, widest at the middle where the sides are rather broadly rounded, strongly convergent and sinuate toward the apex, which is two-thirds as wide as the base; subbasal fovea at each side rather large, the surface before it somewhat broadly flattened. *Elytra* not quite as long as wide, scarcely as long as the head and prothorax; sides broadly, evenly arcuate throughout; humeri angulate and distinctly exposed, the humeral width fully three-fourths of the subapical; discal impression feeble, traceable to the middle. *Abdomen* rather narrower and much shorter than the elytra. Length 1.5-1.6 mm.; width 0.65-0.7 mm.

Indiana; Iowa.

The two type specimens are females, which leads me to think that the modifications of the first antennal joint in this genus may possibly be to some extent asexual.

TYCHUS Leach.

In both *Tychus* and *Cylindrarctus* the sexual characters are nearly as in *Arthmius*, the male having a small flat horizontal pygidium behind the last ventral segment; in the female the pygidium is wanting, and the last ventral is more or less acutely produced in the middle at apex. In these genera the first antennal joint is attached to the under side of the frontal tubercles as in *Pselaphus*, and the antennal cavities are very large and extremely deep, so that they meet internally, being separated—in an oval area—only by a thin transparent membrane. In both genera the upper surface of the head has a small nude puncture, more or less near the anterior part of the eye, and, between this and the frontal tubercles on each side, a small erect spicule which is a very constant peculiarity throughout. The antennal tubercles are large, approximate, and separated by a short longitudinal canal.

Our species are comparatively few in number, and none have yet been observed possessing sexual modifications of the antennæ; they are minute, closely allied among themselves, and may be distinguished by the following characters:—

Species of the Atlantic Regions.

Dark brownish-rufous in color; foveæ of the head extremely minute, perforate, the subfrontal spicules very feeble (*testaceus* || Csy.) **minor**
 Black, sometimes with slightly paler elytra; much smaller species, the vertexal foveæ larger, more impressed, the spicules large and conspicuous.
 Subfrontal spicules midway between the tubercles and vertexal foveæ.

spiculifer

Subfrontal spicules very near the foveæ, distant from the tubercles.

verticalis*Species of the Rocky Mountains.*

Body small, brown, coarsely, not densely pubescent, impunctate; eyes rudimentary. Length 1.4 mm. **microphthalmus**

Species of the Pacific Coast.

Antennæ normal, the club composed of three larger joints, the ninth abruptly much wider than the eighth; anterior trochanters generally not sexually modified.

Pubescence dual, composed of very long erect hairs with others much shorter and more decumbent **puberulus**

Pubescence simple or nearly so, shorter and much less conspicuous.

Elytra larger, the humeri broadly exposed at base, rounded (*bipuncticeps* Csy.) **cognatus**

Elytra smaller, more oblique at the sides to the base, the humeral angles obsolete **sonomæ**

Antennæ with a very stout club which is composed almost entirely of the last two joints, the ninth but slightly wider than the eighth; body very small, narrow, blackish, with the elytra red clouded with black toward base; pubescence rather long; anterior trochanters strongly spiculate at base in the male **tenellus**

In *cognatus* the sixth ventral of the male is feebly subimpressed, the apex with a broad feeble cuspidiform emargination; in *tenellus* the sixth ventral is scarcely impressed, the apex with a triangular emargination; in both, the male pygidium is very small.

T. spiculifer n. sp.—Minute, black, the elytra more rufous; legs and antennæ pale; integuments polished, subimpunctate; pubescence sparse, long and coarse. *Head* distinctly narrower than the prothorax and about as long; eyes situated at nearly their own length from the base; vertexal foveæ rather large, distinct from above, the subfrontal spicules distinct, midway between the foveæ and the large, somewhat flattened antennal tubercles; antennæ stout, fully one-half as long as the body, the club large, fully as long as the seven preceding joints, one to three decreasing in thickness, the third obconical, as long as wide, three to eight equal in thickness, four to eight transverse, ninth and tenth much wider, strongly transverse, eleventh large, almost as long as the preceding four together; maxillary palpi moderate in develop-

ment, the third joint broadly rounded within. *Prothorax* a little wider than long, widest and rather broadly rounded at the sides; apex three-fourths as wide as the base, lateral subbasal foveæ large. *Elytra* not as long as wide, one-half longer than the prothorax and nearly twice as wide; sides broadly arcuate behind, oblique; humeri scarcely at all exposed at base; humeral width barely more than two-thirds of the subapical; discal stria extending rather behind the middle. *Abdomen* a little shorter than the elytra and nearly as wide, the first dorsal slightly longer than the second. *Legs* moderate. Length 1.2 mm.; width 0.45 mm.

Pennsylvania.

The single type appears to be a female and is about equal in length to *tenellus* but broader. Another female from Illinois is a little larger, with slightly longer elytra, but I cannot perceive that it is specifically distinct.

T. verticalis n. sp.—Minute, piceous-black and polished throughout, the legs and antennæ pale, subimpunctate except the elytra which are sparsely punctulate; pubescence long, coarse and sparse. *Head* across the eyes fully as wide as long, narrower than the prothorax; eyes at about one-half their length from the base, large, prominent; antennal tubercles large, convex, vertexal foveæ large, visible from above, the spicules large and very near the foveæ, distant from the tubercles; antennæ rather stout, one-half as long as the body, the club not quite as long as the funicle, first three joints decreasing, third rather longer than wide, four to eight slightly transverse, the fifth but little wider than long, ninth to eleventh abruptly wider, increasing in width; third palpal joint broad, triangular. *Prothorax* distinctly wider than long, widest and rounded at the middle, the apex three-fourths as wide as the base; lateral subbasal foveæ deep. *Elytra* not quite as long as wide, two-thirds longer than the prothorax and distinctly less than twice as wide; sides oblique, rounded behind; humeri but slightly exposed at base, the humeral width three-fourths of the subapical; discal stria extending rather behind the middle. *Abdomen* a little narrower and much shorter than the elytra, the first dorsal much longer than the second. Length 1.2 mm.; width 0.45 mm.

District of Columbia.

The type is a female and resembles *spiculifer*; it may be readily distinguished however by the position of the subfrontal spicules, which are very near the foveæ, also by the larger and more basal eyes, more transverse prothorax and some other characters. Both of these species differ from *minor* in their much smaller size, blacker coloration, much larger vertexal foveæ, and larger subfrontal spicules.

VALDA n. gen.

This remarkably distinct and interesting genus is evidently to be associated with *Cylindrartus* and *Tychus*, but also evinces some affinity with *Arthmius* and *Pselaphus*, as is likewise the case with the genera mentioned. In *Cylindrartus* the tarsal claw has a distinct basal unguiform appendage, but here there are two long slender and well-developed but unequal claws as in *Batrisus*.

In *Valda* the body is nearly as in *Cylindrartus*, the first ventral segment very short but visible from side to side; the second and third ventrals—first and second visible dorsals—are long, but somewhat exceptionally, the former is distinctly shorter than the latter above and beneath. The trochanters are normally bythinoid, the anterior coxæ long and conical, the intermediate narrowly separated by the sternal processes and the posterior approximate, narrowly but quite perceptibly separated. Mesosternum long, finely but strongly bicarinate, the metasternum large. Maxillary palpi long and greatly developed, the first joint minute; second long flattened and contorted, the concave side smooth polished and glabrous, the convex covered with erect setæ; third small, triangular, partially setose; fourth large stout oval and subglobose, bristling throughout with short stiff capitate setæ, and without distinct terminal process.

The head has a broad frontal tubercle partly divided by a short canal, the antennæ long, inserted as in *Tychus* and *Pselaphus*; eyes large and prominent. Prothorax with two lateral subbasal foveæ connected by a rough and uneven transverse fold of the surface, and with five basal impressions separated by short ridges. Elytra large, each bifoveate at base and with a partial discal and entire sutural stria, the hairs longer stiffer and porrect near the hind margin as in *Pselaphus*. Abdomen margined, the first dorsal strongly and the second feebly bicarinate. Sexual characters as in *Arthmius*, the male having a small flat horizontal pygidium behind the sixth ventral segment. Legs and tarsi slender, the second joint of the hind tarsi much shorter than the third.

The single species may be described as follows from the male:—

V. frontalis n. sp.—Pale brownish-flavate throughout, polished, subimpunctate, the elytra slightly punctulate; pubescence rather short and sparse but very coarse. Head much shorter and narrower than the prothorax, scarcely as long as the width across the eyes, the neck strongly constricted; frontal

tuberoles convex, broad; surface behind them abruptly deeply and transversely excavated from side to side, the excavation trisected by two feeble carinæ at the bottom, its posterior margin acute and feebly bilobed; in the middle on the upper surface immediately behind each lobe there is a large fovea, the two approximate and each bearing a tuft of long erect setæ; occiput and vertex without other impressions, even, very strongly convex, arched and elevated above the eyes, the latter prominent and convex, near the base; tempora with a dense tuft of coarse setæ; under surface strongly but broadly convex behind the oral opening; antennæ not quite one-half as long as the body, the first joint a little longer and thicker, two to eight subquadrate, nine and ten but little larger, nearly as long as wide, eleventh large, thick, oval, obtusely pointed. *Prothorax* nearly as long as wide, hexagonal, widest a little before the middle; apex three-fourths as wide as the base. *Elytra* nearly as long as wide, three-fourths longer than the prothorax and nearly twice as wide; sides feebly arcuate behind; humeri strong, broadly exposed at base; discal stria extending to the middle. *Abdomen* a little narrower than the elytra but nearly as long; border as in *Cylindrarctus*; carinæ of the first and second dorsals subparallel, separated by a little less than one-third the discal width, the first two-thirds, the second one-fourth as long as the respective segment. *Metasternum* large but not tumid, perfectly even throughout. Length 1.8 mm.; width 0.7 mm.

California (Siskiyou Co.).

The male sexual modifications of the under surface are very feeble, consisting only of a small and very feeble impression of the sixth ventral, with a narrow feeble sinuation of its apex, the sinuation receiving the very minute transversely oval pygidium on the same plane. In the female the subfrontal excavation is doubtless wanting, but it would be interesting to note the position of the vertexal foveæ, as these seem to be peculiarly modified and connected in some way with the excavation in the male, if, indeed, the two foveæ mentioned above are really the two ordinary cephalic foveæ of the family.

PSELAPHINI.

PSELAPHUS Herbst.

In this singular genus there are two characters which, though probably not peculiar to it, are nevertheless strikingly developed. The first relates to the position of the two large spongiose foveæ of the head, which, in most genera possessing them, are situated on a comparatively flat surface and are distinct from a vertical point of view. In the present genus the upper surface becomes abruptly declivous far behind the middle, the declivous wall being almost

semi-circular in plan and forming the posterior limit of the long rostriform and ante-ocular part of the head, and also of its longitudinal groove; the foveæ are situated on the oblique side-walls of the declivity, and their large cavities extending under the surface horizontally, thin out the chitinous envelope above them, giving rise to the two large pale spots between the eyes. The second refers to the peculiar masses of vestiture of the under surface, especially of the head and sterna; these masses are difficult to analyze structurally, but appear to be formed of agglutinated scales of a remarkably broad and thick form and gelatino-membranous texture; this kind of vestiture has been alluded to as "sugary" by Dr. Sharp, an appropriate term as far as appearance is concerned. It is unnecessary at present to allude to the almost unique form of the body which isolates *Pselaphus* from all of our other genera.

The North American representatives do not appear to be numerous and the four in my cabinet may be readily separated as follows:—

Upper surface of the head bordering the frontal groove roughly punctate; club of the fourth palpal joint small, constituting one-third of the total length.....**erichsoni**

Upper surface smooth, polished and impunctate throughout; club much longer.

Palpal club gradually formed, smooth, bearing fine erect setæ only.

The club slender, occupying one-half of the total length....**longiclavus**

The club very long, constituting fully two-thirds of the total length, the peduncle more abruptly bent.....**fustifer**

Palpal club with semi-erect curved asperities in addition to the erect setæ, somewhat abruptly formed and constituting about one-half the entire length.....**bellax**

P. fustifer n. sp.—Moderately slender and convex, polished, subimpunctate and dark rufo-testaceous throughout, subglabrous. *Head* about as long and wide as the prothorax, the surface feebly reticulate anteriorly, feebly, sparsely punctate and setose behind, the frontal groove broad and deep, extending to the foveæ; occipital groove extending thence midway to the base; antennæ fully two-thirds as long as the body, the basal joint scabrous, cylindrical, as long as the next three, the latter decreasing feebly in size, seventh longer than the sixth or eighth, ninth thicker, longer than wide, narrower and rather longer than the tenth, eleventh large, obliquely oval, pointed, as long as the preceding three joints. *Prothorax* a little longer than wide, oval, truncate at base and apex, the latter nearly equal; sides strongly but broadly arcuate; surface impunctate and strongly convex. *Elytra* about as long as wide, nearly two-thirds longer and two and one-half times as wide as the prothorax, the sides broadly, feebly arcuate; humeri obsolete; base one-third as

wide as the apex; each with four even series of short stiff setæ. *Abdomen* as wide as the elytra and about three-fourths as long, the border of the first segment one-fourth of the discal width, the latter one-third greater than its median length. *Legs* moderate, the femora thick and subelavate, the tibiae strongly thickened toward apex; second posterior tarsal joint compressed, much thicker than the third and equal to it in length. Length 1.6 mm.; width 0.7 mm.

New York.

The single specimen is of undetermined sex. The fourth palpal joint is rather thick, about as long as the prothorax and has the clavate part thickly covered with long erect pale ashy hairs.

P. bellax n. sp.—Rather slender and depressed, polished, subimpunctate, nearly glabrous and dark rufo-testaceous throughout. *Head* rather longer than the prothorax and fully as wide, the upper surface sparsely setose, polished, not at all reticulate anteriorly, sparsely punctulate behind, especially at the posterior margins of the pale spots, these punctures bearing longer stiff setæ recumbent over and beyond the spots; frontal channel and occipital groove well developed; antennæ nearly two-thirds as long as the body, somewhat scabro-reticulate throughout, the cylindrical basal joint nearly as long as the next three, second almost as thick as the first, ninth longer and narrower than the tenth, eleventh stout, obliquely oval, as long as the preceding two joints combined, less scabrous but with sparse asperate punctures. *Prothorax* subcylindrical, widest at the middle; sides broadly arcuate; base and apex truncate and equal; surface very convex, impunctate. *Elytra* as long as wide, three-fourths longer than the prothorax and two and one-half times as wide; humeri very oblique and obtuse; base one-third as wide as the apex; each with four even series of erect distant setæ. *Abdomen* as wide as the elytra and three fourths as long, of the usual structure; border wide. *Legs* moderate, more slender throughout than in *justifer*, the second posterior tarsal joint but slightly thicker and decidedly longer than the third. Length 1.4 mm.; width 0.55 mm.

Massachusetts; Michigan.

This species is very closely allied to the European *heisei*, but differs in its rather smaller size, and especially, narrower form, in the somewhat stouter and more abruptly formed palpal club, and in the longer antennal club, the three last joints of the antennæ being together much shorter than the seven preceding in *heisei*, while in *bellax* the club is fully as long as the funicle. I obtained two specimens at Taunton in damp moss; the three specimens before me are equal in size and almost similar in structure, the sexual characters being apparently very feeble.

CTENISTINI.

BIOTUS Casey.

Could Dr. Brendel have had before him a representative of the European *Chennium*, I am sure that he would not have united that remarkable genus with *Atinus* and *Biotus* in his recent monographic study of the *Pselaphidæ*; the differences are manifold and very important; they may be expressed as follows:—

Middle coxæ distinctly separated by the wide sternal processes; sides of the clypeus conically and acutely prominent; mentum transverse, longitudinally convex and coarsely setulose; maxillary palpi with the last two joints large, distinct and covered with short recumbent squamiform setæ.

Chennium

Middle coxæ contiguous, their cavities broadly confluent; sides of the clypeus normal; mentum much more deeply seated, flat and subglabrous; maxillary palpi much smaller, with the last two joints apparently combined in one.

Labial palpi invisible; muzzle below the antennæ greatly extended beyond the eyes; antennæ cylindrical, nearly as in *Chennium* but with the second joint small; posterior tibiæ compressed throughout, rather narrower toward apex.....**Biotus**

Labial palpi robust and distinct; muzzle not produced; antennæ slender, normal, moniliform, gradually and strongly thickened toward apex; posterior tibiæ clavate at apex**Atinus**

In *Biotus* it is almost impossible to make out the true structure of the maxillary palpi without dissection. The entire organ is less than one-third as large as in *Chennium*, and all that can be clearly seen is a single oval truncate joint, which is robust, longer than wide, apparently flattened beneath and covered sparsely with minute recumbent hairs; there is quite certainly a small basal joint, and, apparently, a minute wart-like tubercle on the outer side of the second joint.

In the two species of *Atinus* the palpus differs surprisingly in size and form. In *monilicornis* it is very minute, scarcely larger than in *Biotus*, the second joint stout, sublunate, with the oblique pointed apex apparently setulose, while in *brevicornis* it is nearly twice as large, not lunate but somewhat spindle-form, gradually and finely produced beneath and bearing at apex a short appendage. In both of these species the organ is sparsely clothed with

long fine erect and remote setæ, differing greatly in this respect, as well as antennal structure, from *Chennium* and *Biotus*.

In all of these genera the first ventral segment is short, but visible from side to side behind the coxæ.

ATINUS Horn.

The two species of this genus may be readily distinguished by the following characters:—

Eyes smaller, between one-third and one-fourth as wide as the interocular surface; antennæ longer, the basal joint as long as the next two, the ninth and tenth joints much larger than the eighth, subglobose and as long as wide **monilicornis**

Eyes very large and prominent, fully one-half as wide as the interocular surface; antennæ shorter, the club apparently five-jointed, the seventh and eighth joints subequal in width and larger than the sixth, eighth to tenth similar in form, gradually increasing in size, seventh to tenth transversely oval, eleventh stout, conoidal, basal joint longer than the next two; size smaller **brevicornis**

The striking palpal divergences exhibited by these species have been referred to under the preceding genus. I recently took several specimens of *monilicornis* under a flat stone in the mountains of western North Carolina; they were in a colony of a small slender piceous-brown ant, having the antennal scape one-half longer than the head, with the funicle slender and non-capitate.

A. brevicornis n. sp.—Stout, scarcely shining, ferruginous, rather densely clothed throughout with small narrow recumbent squamules. Head rather wider than long, strongly constricted behind the frontal tubercle; eyes at the base, the tempora almost obsolete; antennæ but little more than one-half as long as the body, the basal joint cylindrical, twice as long as wide, with rugose sculpture. Prothorax two-thirds wider than long, distinctly wider than the head; sides feebly divergent from the base to the middle, then more strongly convergent to the apex which is broadly truncate and three-fourths as wide as the base; three pubescent foveæ shallow, not extending beyond basal third. Elytra large, not quite as long as wide, fully twice as long and wide as the prothorax; humeri broadly rounded, obtuse, feebly elevated, the humeral width nearly four-fifths of the subapical; sutural stria deep, discal evanescent near apical fourth. Abdomen distinctly narrower than the elytra but nearly as long; border strong; surface even; segments subequal in length. Legs rather stout; posterior tibiæ strongly swollen toward apex. Length 2.0 mm.; width 0.9 mm.

Texas.

I have not seen the ant with which this species lives, and am uncertain also of the sex of the unique individual. Sexual differences appear to be very feeble in this particular group of genera.

ANITRA n. gen.

Body short, compact, moderately convex. Head triangular, the antennal tubercle short, narrow, strangled at the sides, not at all divided by a median depression and continuous with the surface behind it; vertex with two very feeble subobsolete foveæ separated by nearly one-third the total width, and also another larger behind the tubercle. Eyes large, nearly at the base, half divided by the posterior canthus; sides of the head behind them transversely excavated beneath; sides between the eyes and the frontal constriction long convergent and perfectly straight. Maxillary palpi moderate, slender, cylindrical, three-jointed, the first minute; second arcuate, gradually increasing in thickness from base to apex; third shorter, cylindrical, with an internal and external seta at apex. Labial palpi slender, the terminal seta very long. Antennæ long, cylindrical, with an elongate terminal joint; club long, very feeble, three-jointed. Prothorax sinuate at apex above, with a broad longitudinal discal depression from the apex to basal fourth, where there is a pronounced obtusely elevated median tubercle before the basal margin. Elytra ample, with a fine sutural, and partial discal, stria, each coarsely bifoveate at base. Abdomen with the first four dorsals subequal, strongly margined; first ventral short but visible from side to side; second dorsal distinct at the lateral angles. Prosternum deeply, broadly emarginate at apex, prominent laterally, very short before the coxæ which are long and conical. Mesosternum short, smooth. Metasternum moderate. Intermediate coxæ very narrowly, the posterior rather widely, separated; intermediate trochanters long, the insertion terminal; anterior and posterior shorter. Legs rather slender; second joint of the tarsi shorter than the third; ungues well developed, stout, subequal.

This remarkable genus evidently belongs to the Ctenistini, but exactly in which direction its affinities are most pronounced it is difficult to state. In the recent table of the Ctenistini by Mr. Raffray I should be disposed to place it in a distinct section between Chennium and Ctenistes and the three principal headings would then read:—

A. 3—Maxillary palpi very small, of two or three joints.

Chennium, Atinus and Blotus

A. 2—Maxillary palpi moderate, elongate, cylindrical, of three joints.

Anitra

A. 1—Maxillary palpi well developed, of four joints **Ctenistes**, etc.

Although not at all resembling *Chennium*, it is probably more closely allied to that genus than to any other thus far described.

Mr. Raffray states on page 32 of the "Étude," that the *Ctenistini* and *Tyrini* are distinguished by having the first ventral very small and visible only between the coxæ; this is certainly not the case in *Desimia*, *Ctenisis* and *Sognorus*, typical ctenistide genera, in which I distinctly trace the first segment from side to side behind the coxæ. There also seems to be some uncertainty in the assignment of genera to the *Ctenistini* and *Tyrini*, *Tmesiphorus*, for example, apparently being much more closely allied to *Desimia* and *Ctenistes* than to *Tyrus*, not only in general structure but in the form of the palpi and in the latero-inferior excavations of the head near the base, with the resultant spiniform prominences near the eye.

A. glaberula n. sp.—Rather stout, polished and pale yellowish-brown throughout; integuments subglabrous, the anterior parts with excessively minute and remote suberect setæ, long coarse and denser behind the eyes, long sparse and bristling on the ocular canthus and on the large surface of the clypeus below the antennæ, longer and porrect at the apex of the elytra, on the abdomen closer even coarse and recumbent as in *Ctenistes*; the tubercle at the base of the pronotum is also densely clothed with long coarse decumbent setæ. Head as wide as long, the tubercle very narrow, scarcely more than one-fourth as wide as the width across the eyes; antennæ four-fifths as long as the body, the third joint feebly obconical, twice as long as wide, three to eight equal in width, the latter quadrate, ninth a little thicker, oval, tenth similar, though a little larger, oval, longer than wide, eleventh thicker, cylindrical, obtusely, obliquely pointed at tip, as long as the three preceding. Prothorax scarcely as wide as the head, widest at basal third where the sides are rounded, thence feebly convergent to the apex which is broad and subequal to the base; disk convex, strongly declivous laterally, one-third wider than long. Elytra not as long as wide, three-fourths longer than the prothorax and twice as wide; humeri elevated, rounded and obtuse, the humeral width four-fifths of the subapical. Abdomen as wide as the elytra and slightly shorter, convex, strongly declivous behind, the surface even throughout. Length 1.25 mm.; width 0.6 mm.

Arizona.

The single specimen is a male but with very feeble sexual characters as far as can be observed. This species is probably myrmecophilous.

SOGNORUS Reitter.*Ctenistes* Leo. neo Reich.

There is apparently but little doubt that the American species separated under this name by Reitter should be considered generically distinct from *Ctenistes*, for, apart from the radically different structure of the antennæ, the second joint of the maxillary palpi is very much more slender and elongate in the former than in the latter. The fact that the difference of antennal structure evinces itself principally in one sex does not by any means deprive it of significance in the present family, where sexual characters frequently become of generic import. *Sognorus* is truly very closely allied to *Ctenistes*, but I think that the characters given must compel us to treat it for the present as a valid genus.

The species of the United States may be known as follows:—

Smaller species, not exceeding $1\frac{1}{4}$ mm. in length. Atlantic and Gulf regions. Appendiculate processes of the maxillary palpi short, not longer than the width of the joints.

Blacker; elytra not as long as wide; antennæ shorter; pubescence sparse **piceus**

More testaceous or ferruginous, the pubescence denser shorter and more squamiform; antennæ longer **consobrinus**

Appendiculate processes very long, about twice as long as the width of the joints; antennæ very slender, more incrassate toward tip, the last joint stouter and subequal to the four preceding together in the male.

zimmermanni

Larger species, never less than 2 mm. in length. Arid regions of Arizona and northern Mexico.

Antennæ more slender, the fifth joint in the male shorter than the fourth, though one-half longer than wide; last two joints of the maxillary palpi gradually and greatly produced at the sides, with the apical appendage short.

Eyes small, from above about one-fourth as wide as the interocular surface and situated at one-half their length from the base; body stout.

Southern California **pulvereus**

Eyes very large and prominent, one-half as wide as the interocular surface, the tempora very short; body narrower and less robust.

ocularis

Antennæ long but much stouter, the fifth joint in the male much shorter than the fourth and but slightly longer than wide; last two joints of the maxillary palpi abruptly produced at the sides in a much shorter process bearing a short apical appendage; eyes large, prominent, about one-third as wide as the interocular surface; elytra longer, with more oblique sides and narrower humeri **abruptus**

The eastern species form a difficult study, and several specimens in my cabinet seem to indicate varieties or closely allied species, which it is impossible to define at present.

S. ocularis n. sp.—Elongate, somewhat convex, polished, subimpunctate and rather pale rufo-ferruginous throughout; pubescence coarse, sparse and recumbent but not squamiform. *Head* as long as the width across the eyes, the latter very large and extremely coarsely faceted; foveæ separated by one-third the total width; frontal tubercle narrow, scarcely wider than the eye; antennæ long, slender, cylindrical, fully two-thirds as long as the body, the eleventh joint scarcely perceptibly stouter, as long as the three preceding, the latter mutually subequal and a little shorter than the seventh. *Prothorax* just visibly wider than the head, two-fifths wider than long, the sides subparallel in basal half, feebly convergent thence to the apex; apex and base truncate, the former three-fourths as wide as the latter; three elongate foveæ occupying basal half densely pubescent. *Elytra* scarcely as long as wide, twice as long and twice as wide as the prothorax; humeri distinct, elevated, rounded; humeral width three-fourths of the subapical; discal impression broad, glabrous, very deep toward base, gradually evanescent toward apex. *Abdomen* as long and about as wide as the elytra; border very strong; first four dorsals equal in length. Length 2.2 mm.; width 0.8 mm.

Arizona.

Described from the male, which is the only sex known to me. Easily distinguishable from *pulvereus* by the characters given in the table.

S. abruptus n. sp.—Moderately stout, feebly convex, polished, subimpunctate and dark rufo-testaceous throughout; pubescence short, coarse sparse and recumbent but scarcely squamiform. *Head* about as long as the width across the eyes, the frontal tubercle one-third as wide as the latter; foveæ rather small; nuchal constriction densely pubescent laterally as usual; antennæ long and thick, scarcely at all incrassate toward apex, nearly two-thirds as long as the body, the last joint longer than the preceding three, oblique at tip, eighth much shorter than the seventh or ninth, transverse. *Prothorax* as wide as the head, one-fourth wider than long; sides subparallel in more than basal half then feebly convergent to the truncate apex, which is fully three-fourths as wide as the base; foveæ elongate, densely pubescent, small, extending not quite one-third the length from the base. *Elytra* large, about as long as wide, twice as long as the prothorax and rather more than twice as wide; sides very oblique from apex to base and scarcely arcuate; humeri feebly exposed; humeral width barely two-thirds of the subapical; disk rather flattened; discal line narrower, deep toward base. *Abdomen* not quite as long or wide as the elytra, of the usual structure; border relatively not quite as wide as in *ocularis*. Length 2.3 mm.; width 0.9 mm.

Arizona.

This interesting species, which is represented by the male only,

differs from *ocularis* and *pulvereus* not only in the structure of the palpi and antennæ, but in the smaller foveæ of the head and pronotum, and in the larger elytra, much more strongly narrowed from apex to base.

CTENISIS Raffray.

This genus was proposed by Mr. Raffray (Rev. d'Ent., 1890, p. 143) to receive certain American species previously described under the names *Ctenistes* and *Desimia*. It is related to the latter of these, but has the second dorsal segment not notably longer than the first and also differs in the form of the palpi. The antennæ are similar to those of the European *Desimia* and *Ctenistes*, but the palpi of *Desimia* have the last joint bifid and in fact perfectly similar throughout to those of *Tmesiphorus*; there are also other suggestive points of resemblance between *Desimia* and *Tmesiphorus*. In *Ctenisis* the last two joints of the palpi are in the form of a regular isosceles triangle, each attached by the acute angle near the internal angle of the preceding. The single known species entering the United States may be described as follows:—

C. raffrayi n. sp.—Rather slender, moderately convex, polished, subimpunctate and ferruginous throughout; pubescence short, subrecumbent, sparse, coarse but not squamiform. *Head* across the eyes rather wider than long, the eyes very large and prominent, one-half as wide as the interocular surface; upper surface flattened, with three foveæ forming an equilateral triangle; frontal tubercle narrow, not wider than the eye from above; antennæ long and slender, two-thirds as long as the body, joints three to seven small, moniliform, wider than long, eight to ten thicker, cylindrical, the eighth as long as the preceding four together, a little longer than the ninth but shorter than the tenth, the latter twice as long as wide, eleventh but little thicker, cylindrical, one-half longer than the tenth, obtusely pointed. *Prothorax* as wide as the head, two-fifths wider than long; sides parallel to the middle, then feebly convergent to the truncate apex, which is three-fourths as wide as the base; disk with three very densely pubescent subfoveate areas along the basal margin. *Elytra* nearly as long as wide, twice as wide as the prothorax and nearly twice as long; sides broadly rounded behind; humeri very obtusely rounded; humeral width four-fifths of the subapical; discal glabrous line evanescent toward apex. *Abdomen* a little narrower than the elytra but nearly as long; border strong, inclined. Length 1.65 mm.; width 0.65 mm.

Arizona (Tuçson). Mr. H. F. Wickham.

The description refers to the male, the anterior tibiæ being thickened somewhat as in *Tmesiphorus*. In the unique type the last ventral segment is very short, unimpressed but sinuate at apex; the

last dorsal is also sinuate at apex and is acutely elevated near the middle of the disk—generally a female character in *Batrisus* and *Arthmius*, although common to both male and female in *Batrisus denticauda*. The stómata of the last dorsal form round perforate and conspicuous foveæ at the extreme lateral angles of the disk; they are also visible at the sides of the disk on the penultimate segment. *Raffrayi* differs greatly from the Mexican *dispar* Shp. in the relative proportions of the antennal joints, and especially in the shorter eighth joint; it also differs in the narrower form of the body and uniform dull brownish-ferruginous color. It is presumably identical with the form referred to by Dr. Brendel (Tr. Am. Ent. Soc., XX, p. 282), as having been recently taken by Mr. Bolter in Arizona.

I take pleasure in dedicating this species to Mr. Achille Raffray, whose excellent work is doing so much to advance our knowledge of these fascinating little organisms. The plates recently published by Mr. Raffray, which appear to be simple reproductions of pencil drawings by photo-mechanical processes, were never surpassed by lithographer or engraver, and are doubtless as true to nature as they are beautiful in execution.

In the following synonymical list of the Pselaphidæ thus far described from America north of Mexico, the arrangement of Mr. Raffray is adhered to throughout, except where modified in the preceding notes:—

PSELAPHINÆ.		<i>Morius</i> Csy.	
FARONINI.		<i>occidens</i> Csy.	P.
<i>Sonoma</i> Csy.		<i>Rhexius</i> Lec.	
<i>isabellæ</i> Lec.	P.	<i>insculptus</i> Lec.	A.
<i>corticina</i> Csy.	P.	<i>substriatus</i> Lec.	G.
<i>grandiceps</i> Csy.	P.	<i>schmitti</i> Bndl.	A.
<i>longicollis</i> Csy.	P.	<i>Oropus</i> Csy.	
<i>subsimilis</i> Csy.	P.	<i>striatus</i> Lec.	P.
<i>rubida</i> Csy.	P.	<i>convexus</i> Csy.	P.
<i>parviceps</i> Mükl.	P.	<i>interruptus</i> Csy.	P.
<i>cavifrons</i> Csy.	P.	<i>abbreviatus</i> Csy.	P.
<i>Rafonus</i> Csy.		*	
<i>tolulæ</i> Lec.	A.	<i>montanus</i> Csy.	P.
EUPLECTINI.		<i>cavicauda</i> Csy.	P.
<i>Rhinosceps</i> Lec.			
<i>bistriata</i> Lec.	G.		

Rhexidius Csy.*Conoplectus* Bndl.*Prorhexius* Raffr.

granulosus Csy. P.

asperulus Csy. P.

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canaliculatus Lec. G.

sylvaticus Raffr.

trogasteroides Bndl. A.

intermedius Bndl. A.

Ramecia Csy.

crinita Bndl. A.

capitulum Csy. G.

arcuata Lec. A.

discreta Csy. A.

decora Csy. G.

dentiventris Csy. A.

Oropodes Csy.

orbiceps Csy. P.

Acolonia Csy.

cavicolis Lec. G.

Euplectus Leach.

difficilis Lec. A.

congener Csy. A.

sexualis Csy. A.

spinifer Csy. G.

linearis Lec. A.

hudsonicus Csy. A.

interruptus Lec. A.

longissimus Bndl. A.

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longicollis Csy. A.

confluens Lec. A.

elongatus Bndl. A.

californicus Csy. P.

iowensis Csy. M.

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pertenuis Csy. A.*planipennis* Bndl. M.*rotundicollis* Bndl. M.**Thesiastes** Csy.*fossulatus* Bndl. M.*pumilus* Lec. A. G.*debilis* Lec. G.*tenuis* Lec.*atratus* Csy. A.**Bibloplectus** Reit.*rufoceps* Lec. G.*integer* Lec. M.*leviceps* Csy. A.**Trimtoplectus** Bndl.*obsoletus* Bndl. M.**Bibloporus** Thoms.*Fulscus* Csy.*bicanalis* Csy. A.**Eutyphlus** Lec.*Nicotheus* Csy.*similis* Lec. ♀ A.*tibialis* Csy. ♂*prominens* Csy. A.**Thesium** Csy.*cavifrons* Lec. G.*laticolle* Csy. G.**Actium** Csy.*Propectus* Raffr.*californicum* Lec. P.*pallidum* Csy.*decipiens* Raffr.*politum* Csy. P.*robustulum* Csy. P.*testaceum* Csy. P.*candidum* Csy. P.*marinicum* Csy. P.

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foveicolle Lec. A.*costale* Bndl. A.*pacificum* Csy. P.*brevipenne* Csy. P.*clavicorne* Mäkl. P.*durum* Bndl. M.

parabolicum Bndl.	M.
globifer Lec.	A.
impunctatum Bndl.	A.

Trimtiopsis Reit.

gracilis Bndl.	M.
americana Lec.	A.
thoracica Bndl.	M.
laticollis Bndl.	M.
puncticollis Lec.	S.
dubia Lec.	A.
convexula Lec.	A.
discolor Lec.	G.
simplex Lec.	G.
parvula Lec.	G.
maja Bndl.	M.

BATRISINI.**Batrissus** Aubé.

ionæ Lec.	A.
armiger Lec.	A.
monstrosus Lec.	A.
v. <i>ferox</i> Lec.	
v. <i>cristatus</i> Lec.	
cavicornis Csy.	A.
confinis Lec.	A.
carolina Csy.	A.
juvencus Bndl.	M.

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monticola Csy.	P.
occiduus Csy.	P.
albionicus Aubé.	P.
aculeatus Lec. i. l.	
zephyrinus Csy.	P.
mendocino Csy.	
v. <i>speculum</i> Csy.	
cicatricosus Bndl.	P.
pygidialis Csy.	P.
denticauda Csy.	P.
schaumi Aubé.	A.
punctatus Lec.	
riparius Say.	A.
scabriceps Lec.	A.
lineaticollis Aubé.	A.
bistriatus Lec.	A.
frontalis Lec.	A.

globosus Lec.	A.
spretus Lec.	A.
foveicornis Csy.	A.
punctifrons Csy.	A.
virginæ Csy.	A.
furcatus Bndl.	A.
sinuatifrons Bndl.	G.
olypeonotus Bndl.	G.
luculentus Csy.	A.
denticollis Csy.	A.
triangulifer Bndl.	M.
spinifer Bndl.	
nigricans Lec.	A.
striatus Lec.	A. M.
cephalotes Csy.	
aterrimus Csy.	
simplex Lec.	

Arthmtus Leo.

globicollis Lec.	A.
bulbifer Csy.	G.
involutus Csy.	A.
gracilior Csy.	G.

Arianops Bndl.

Anops Bndl.	
amblyoponica Bndl.	A.

BRYAXINI.**Decarthron** Bndl.

abnorme Lec.	A.
exsectum Bndl.	A.
stigmatosum Bndl.	A.
brendeli Csy.	G.
marinum Bndl.	G.
strennum Bndl.	A.
longulum Bndl.	A.
scarificatum Bndl.	M.
seriepunctatum Bndl.	A.
discolor Bndl.	S.
formiceti Lec.	A. G.
velutinum Lec.	

Rybaxis Sanley.

valida Bndl.	A.
sanguinea † Lec.	

conjuncta Lec. A.
varicornis Bndl. i. l.
truncaticornis Bndl. M.
brendeli Horn. A.
clavata || Bndl.
mystica Csy. A.

Bryaxis Leach.

s. g. *Nisa* Csy.

luniger Lec. A.
cavicornis Bndl. A.
perpunctata Bndl. A.
elegans Budl. S.

s. g. *Bryaxis* Lch.

abdominalis Aubé. A.
floridana Bndl. G.
intermedia Bndl. A.
labyrinthea Csy. A.
ulkei Bndl. A.
illinoiensis Bndl. A.
dentata Say. A.
intricata Csy. A.
terebrata Csy. A.
perforata || Bndl.

foveata Lec. S.
belfragei Lec. G.
infinita Csy. G.
loripes Csy. S.
texana Csy. S.
arizonæ Csy. S.

Reichenbachia Lch.

gemmifer Lec. M.
divergens Lec. A.
canadensis Bndl.
cylindartus Bndl. M.
radians Lec. M.
facilis Csy. A.
atlantica Bndl. G.
congener Bndl. A.
scabra Bndl. A.
cribricollis Bndl. M.
rubicunda Aubé. A.
gracilis Csy. M.
gracilicornis Csy. G.
furtiva Csy. A.

inepta Csy. A.
trigona Lec. M.
bicolor Bndl. M.
puncticollis Lec. A.
inopia Csy. A. G.
litoralis Budl.
polita Bndl. A.
demissa Csy. A.
sagax Lec. P.
albionica Mots. P.
propinqua Lec. A. M.
informis Csy. P.
tumidicornis Csy. P.
tumorosa Csy. P.
compar Lec. P.

franciscana Csy.

depressifrons Bndl. P.
deformata Lec. P.
fundata Csy. P.
nevadensis Csy. P.
tumida Lec. S.
complectens Lec. S.
wickhami Bndl. S.
subtilis Lec. S.

minuta Bndl.

Nisaxis Csy.

tomentosa Aubé. A. G.
v. cinnamata Csy.
maritima Csy. G.

Scalenarthrus Lec.

horni Lec. S.

Eutrichites Lec.

zonatus Bndl. A. G.
zimmermanni Lec.
dixianus Zim. i. l.

Pselaptus Lec.

belfragei Lec. G.

Anchylarthron Bndl.

Verticinotus Bndl.
cornutum Bndl. M.
inornatum Bndl. ♀.

Eupsenius Lec.

glaber Lec.	A. G.
rufus Lec.	G.

BYTHINI.**Bythinus** Leach.*Macherodes* Bndl.

tychoides Bndl.	A.
<i>bythinoides</i> Bndl.	Olim.
carinatus Bndl.	A.

Pselaptrichus Bndl.

tuberculipalpus Bndl.	P.
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Cylindrarctus Schf.

longipalpis Lec.	G.
americanus Schauf.	M.
ludovicianus Bndl.	G.
comes Csy.	G.
crinifer Csy.	M.

Tyohus Leach.

minor Lec.	A.
<i>testaceus</i> Csy.	
spiculifer Csy.	A.
verticalis Csy.	A.
microphthalmus Bndl.	M.
puberulus Lec.	P.
cognatus Lec.	P.
<i>bipuncticeps</i> Csy.	
sonomæ Csy.	P.
tenellus Lec.	P.

Valda Csy.

frontalis Csy.	P.
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PSELAPHINI.**Pselaphus** Hbst.

erichsoni Lec.	A.
longiclavus Lec.	A.
fustifer Csy.	A.
bellax Csy.	A.

CTENISTINI.**Blotus** Csy.

formicarius Csy.	P.
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Atinus Horn.

monilicornis Bndl.	A.
brevicornis Csy.	G.

Antra Csy.

glaberula Csy.	S.
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Sognorus Reitt.*Ctenistes* † Lec.

piceus Lec.	A.
consobrinus Lec.	A.
zimmermanni Lec.	A. G.
pulvereus Lec.	S.
ocularis Csy.	S.
abruptus Csy.	S.

Ctenis Raffr.

raffrayi Csy.	S.
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Ceophyllus Lec.

monilis Lec.	M.
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TYRINI.**Tmesiphorus** Lec.

costalis Lec.	A. M.
carinatus Say.	A. M.

Cadius Lec.

ziegleri Lec.	A. M.
spinosus Lec.	A. M.

Tyrus Aubé.*Pytna* Csy.

humeralis Aubé.	A.
<i>compar</i> Lec.	
corticinus Csy.	P.
elongatus Bndl.	S.

Cercocerus Lec.

batrisoides Lec.	G.
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CLAVIGERINÆ.

Fustiger Lec.	
fuchsi Bndl.	A.
californicus Bndl.	S.

Adranes Lec.

cæcus Lec.	A.
lecontei Bndl.	M.

In this list the succession of names in the various genera is, as nearly as possible, that recently given by Dr. Brendel. The letters placed after the various species are intended to give a general idea of their geographic distribution; they represent (A) the Atlantic regions of the continent, (G) the Gulf States from Florida to Texas, (M) the Missouri region including the Great Lakes, (S) the Sonoran region from western Texas and Utah to southern California, and (P) the true Pacific Coast fauna. Because of insufficient data, no form of nomenclature more discriminating than this can be employed at present.

In comparing this list with the most recent catalogue of the European species, there are only three points to which special attention need be invited:—

1—The species are but slightly more than one-half as numerous as those at present recognized as valid in the European fauna.

2—The genera, however, exceed in number those of Europe by about one-third, with twelve, viz.: *Euplectus*, *Biblopectus*, *Bibloporus*, *Batrisus*, *Bryaxis*, *Reichenbachia*, *Rybaxis*, *Bythinus*, *Tychus*, *Pselaphus*, *Sognorus* and *Tyrus* common to the two continents.

3—There are no species at present recognized as being common to Europe and America.

The original estimate of LeConte, that the pselaphide fauna of North America surpasses in richness that of Europe, is true I think as far as the genera are concerned, but not in regard to the species. The conditions of land, water and mountain distribution, with resultant climate, are so much more varied in the vast expanses from Cape North to Gibraltar and the Caucasus, that it is not probable—in spite of the subequality of land area—that the species of America will be found to approach in number those of Europe, even when the two regions are similarly explored, especially, also, as there seems to be no difference in the relative abundance of individuals in the palaearctic region. That the number of genera in the United States should be greater, is to be accounted for, partially at least, by the fact that many neotropical genera such as *Thesium*, *Arthmius*, *Pselaptus* and *Ctenisis* so readily find their way across our Mexican frontier.

SCAPHIDIIDÆ.

The Scaphidiidæ are a small family of beetles, which to the general student of the Coleoptera are less interesting than usual, because of their unusually small size and the monotony in outward appearance characterizing the more minute forms, and, to the systematist, because of the fact that some of the more important sclerites of the under surface frequently become amalgamated, in such a way that it is often difficult and sometimes impossible to trace them. On the other hand there is sometimes a remarkable and inexplicable doubling of the sutures. This obliteration of the sutures, has led the author of a recent extended contribution to the literature of the family into the singular error of supposing that the mesosternal episterna in *Scaphisoma* and other allied genera, are very small and hidden under the elytra, or antehumeral, while, as can readily be seen by inspecting such genera as *Scaphium* or *Toxidium*, where the sutures are distinct, the truth is directly the reverse, the mes-episterna being unusually developed and extending almost to the coxæ.

There are no new genera among the American species, and to give the family characters would be almost a repetition of the language used by Lacordaire in the "Genera." There is but one point to which reference should be made in way of criticising the excellent introductory remarks referred to, it being stated (II, p. 237) that the metasternal parapleuræ "sont composées d'une seule pièce." The met-epimeron is nearly always distinct and well developed, although the suture separating it from the episternum very rarely disappears as in *Cyparium*.

In regard to the external affinities of the Scaphidiidæ but little can be said. A few characters seem to remind us of that ollapodrida of discordances known as the Silphidæ, and one or two features vaguely suggest certain parallelism with the Phalacridæ; but the family is really very isolated in the structure of the external skeleton, the connective bonds with other groups of Clavicornia having apparently disappeared.

The family comprises two distinct tribes as follows:—

Antennæ with a broad abrupt and somewhat flattened five-jointed club; scutellum well-developed; mes-epimera sublongitudinal, separating the episterna from the elytra throughout their extent; met-episternal suture double; tarsi shorter and thicker; elytral punctures seriate.....SCAPHIDIINI

Antennæ slender and subfiliform, the outer five or six joints elongate, flattened, loosely connected and more or less asymmetrically dilated; scutellum minute or wanting; mes-epimera transverse, variable in size, sometimes obliterated; met-episternal suture single; tarsi longer and more slender; elytral punctures not seriateSCAPHISOMINI

The genera may be thus epitomized :—

Tribe SCAPHIDIINI.

Suture between the metasternum and mes-episterna single; basal angles of the prothorax not posteriorly prolonged; eyes entire.

Basal joint of the hind tarsi short; posterior tibiæ not spinose externally; eighth antennal joint smaller than the seventh; prosternum well developed before the coxæ, not carinate**Scaphium**

Basal joint elongate; posterior tibiæ sparsely and finely spinose externally; eighth antennal joint not smaller than the seventh; prosternum very short before the coxæ, the head more inflexed**Cyparium**

Suture strongly double; posterior angles acute and somewhat produced; eyes emarginate; prosternum carinate and deeply biexcavate before the coxæ.

Scaphidium

Tribe SCAPHISOMINI.

Third antennal joint elongate and cylindrical.

Body oval; sutural stria of the elytra attaining the base; mes-epimera well developed; scutellum generally wanting, when present very transverse, parabolic**Bæocera**

Body compressed; sutural stria not attaining the base; mes-epimera not visible; scutellum wanting**Toxidium**

Third antennal joint very short, claviform or triangular, always strongly narrowed to the base; scutellum minute but never obsolete, equilaterally triangular; sutural stria attaining the base; mes-epimera variable in size.

Scaphisoma

All of these genera, except *Cyparium* and *Toxidium*, occur also in Europe, and the European *Scaphoschema* appears to be unrepresented in America.

SCAPHIUM Kirby.

The appreciable interval between the eyes and point of antennal insertion and the very short basal joint of the posterior tarsi, are characters which force us to place this genus at one of the extremes of the family. Its elongate form, small eyes and more regularly striate elytra, are also exceptional features.

We have a single subarctic species :—

S. castanipes Kirby—Faun. Bor. Am., IV, p. 109.

Elongate, oblong, convex, polished, black and glabrous, the antennæ rufous; legs piceo-rufous, the head minutely sparsely and obsoletely, the pronotum more closely and strongly punctate, the punctures coarse dense and confused in a transverse area near the base and also broadly along the median line near the base; elytra with feebly impressed, coarsely and closely punctured striae, confused near the apex and obliterated on the flanks, the intervals feebly sparsely and more finely punctate; sutural stria subimpunctate, becoming at base a series of coarse punctures, curved outward along the base to the fourth stria. Head not quite vertical, flat above; eyes convex, separated by four or five times their own width; antennæ about as long as the prothorax, the third joint a little shorter than the fourth, not quite three times as long as wide. Prothorax one-third wider than long, widest just before the middle; sides subparallel and strongly sinuate thence to the base, broadly rounded and convergent to the apex; base broadly evenly and feebly bisinuate. Scutellum large, semicircular. Elytra one-fourth longer than wide, oblong, nearly twice as long as the prothorax and one-third wider; sides subparallel, feebly arcuate. Length 4.8 mm.; width 2.3 mm.

Lake Superior. Taken in some abundance by Mr. Schwarz, to whom I am indebted for the two specimens in my cabinet. This species was unknown to Dr. LeConte when he drew up his synopsis of the family.

CYPARIUM Erichs.

This genus is very isolated, but seems to be somewhat more closely related to *Scaphium* than to *Scaphidium*, although resembling the latter in general form and habitus. We have only one species:—

C. flavipes Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 322.

Broadly oblong-oval, highly polished, glabrous, black, the elytra, legs and antennæ paler, rufo-castaneous; integuments not distinctly punctulate, the elytra with partial series of rather coarse punctures, confused at apex, the series becoming longer toward the suture, the sutural stria alone impressed, punctate, flexed outward at base, becoming a fine impunctate basal stria extending beyond the middle. Head slightly inflexed; eyes very large, separated by less than

their own width; antennæ as long as the prothorax, situated at the margin of the eyes, the third joint fully three times as long as wide, a little longer than the second and much longer than the fourth, sixth slightly longer than wide, tenth twice as wide as long, the club compressed as usual. Prothorax four-fifths wider than long; apex beaded throughout the width, less than one-half as wide as the base, the latter transverse, the scutellar lobe one-fourth of the entire width, feeble and broadly subtruncate; basal angles right, not rounded; sides broadly, evenly rounded from base to apex. Scutellum parabolic, nearly as long as wide. Elytra as long as wide, not quite twice as long as the prothorax, a little wider at basal fourth than at base; sides subparallel, feebly arcuate; apex equal to the base. Post-coxal plates not developed. Legs stout; posterior tibiæ arcuate, the tarsi two-thirds as long as the tibiæ, with the first joint as long as the next two and equal to the fifth. Length 3.5 mm.; width 2.1 mm.

North Carolina. The epipleuræ of the elytra are well defined throughout by the acute lateral edge, and are distinctly inflexed from base to apex.

SCAPHIDIUM Oliv.

The emarginate eyes and produced acute basal angles of the prothorax readily distinguish this genus from either of the preceding. The double transverse sutures between the middle coxæ, and between the mesosternal episternum and metasternum, are remarkably developed, and the apex of the metasternum appears to be somewhat bilobed. The male is distinguished from the female by a large depressed punctate and pubescent area occupying the median parts of the metasternum. We appear to have but two species, which may be separated by the following characters:—

Elytra each with two transverse red spots which extend inward two-thirds the entire width, the spots obsolete in var. *piceum*....**quadriguttatum**
 Elytra each with two small marginal spots of pale flavate, not extending inward more than one-third of the width; body more elongate; size somewhat larger; elytra without coarse discal punctures.....**obliteratum**

These species are evidently allied but appear to be sufficiently distinct. I am unable at present to compare them with the European *quadrimaculatum* Oliv., but they are probably closely related.

S. quadriguttatum Say.—Journ. Ac. Phila., III, p. 198; *quadripustulatum* || Say: l. o., p. 198; *quadrinotatum* Casteln? : Hist. Nat., II, p. 19; Dej. Cat., 3d, p. 133; var. *piceum* Melsh.: Proc. Ac. Phila., II, p. 103.

Oval, convex, highly polished, glabrous, black, the elytral maculæ red; antennæ, except the last five joints, testaceous; tarsi rufescent; head subimpunctate; pronotum sparsely and more or less deeply punctate, with a transverse, broadly bisinuate series of coarse punctures near the base; elytra with two to four short, more or less developed series of coarse punctures before the middle and nearer the suture than the sides, the sutural stria feebly impressed, more finely and closely punctate, except the part along the basal margin, which is coarsely punctate, extending to lateral third. Eyes large, separated by less than their own width; antennæ rather longer than the prothorax, the third joint slender, four times as long as wide, much longer than the second and a little longer than the fourth, sixth nearly twice as long as wide, tenth only slightly wider than long. Prothorax one-third wider than long, the convergent sides nearly straight from base to apex, the latter strongly beaded and one-half as wide as the base; scutellar lobe one-third the entire width, broadly, evenly rounded. Scutellum rather small, parabolic, nearly as long as wide. Elytra not quite as long as wide, one-half longer than the prothorax; sides arcuate; apex a little narrower than the base. Posterior tarsi scarcely three-fifths as long as the feebly arcuate tibiæ, the first joint a little longer than the next two, barely as long as the fifth. Length 3.8–4.7 mm.; width 2.2–2.65 mm.

New Jersey to Kansas. I do not know at present whether the variety *piceum* occurs with the spotted specimens or not; at any rate, it is impossible to discover any constant structural difference.

S. obliteratum Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 322.

The characters stated in the table are almost the only ones which can be given to distinguish this species from the preceding. The prothorax is a little shorter and more transverse, with more arcuate sides, and the elytra are as long as wide and three-fourths longer than the prothorax. Length 4.7 mm.; width 2.6 mm.

Rhode Island to Indiana. Appears to be rare; I have only seen the female.

BÆOCERA Eriolus.

In this genus the species are generally very small, but appear to be more constant and more isolated among themselves than in *Scaphisoma*. The most important structural features distinguishing these genera reside in the antennæ and scutellum, and there are but few if any others which are absolutely characteristic of either. The antennæ have the outer three joints enlarged, forming a slender loose club, generally almost bilaterally symmetric, but occasionally more developed on the inner side, thus reverting to *Scaphisoma*; this reversion is further recalled by the frequent, though moderate, enlargement of the seventh and eighth joints. The third joint is always slender and cylindrical, and is generally a little shorter than the fourth; in this form of the third joint really lies the most important antennal difference between the two genera.

The scutellum is usually completely wanting, and, when present, affects a form quite foreign to *Scaphisoma*, being broadly triangular. The post-coxal plate of the first ventral segment is never at all developed in *Bæocera*, and the series of coarse punctures along the posterior margin of the intermediate and posterior acetabula are much better marked than in *Scaphisoma*. The sexual characters seem to be very obscure except in the larger species allied to *concolor*.

The species known to me may be readily identified as follows:—

Scutellum wanting, the mesonotum completely covered by the prothorax.

Larger species, not less than 2 mm. in length.

Sides of the prothorax feebly and evenly arcuate when viewed laterally;
basal stria of the elytra entire.

Third antennal joint very long, slender, subequal to the fourth.

concolor

Third joint much shorter and thicker; size smaller, less broadly oval.

congener

Sides of the prothorax strongly bent downward posteriorly; basal stria of
the elytra broadly interrupted; third antennal joint long and slender.

deflexa

Smaller species, never much exceeding $1\frac{1}{2}$ mm. in length.

Narrowly oval, the third antennal joint not longer than the fourth;
epistomal suture distinct.

Larger species; mes-epimera extending two-thirds to the coxae.

speculifer

Minute in size, the mes-epimera longer and narrower.....**apicalis**

Broadly oval, minute; third antennal joint a little longer than the fourth;
epistomal suture obsolete.....**robustula**

Scutellum minute but distinctly advanced between the elytra.

Larger; basal stria of the elytra entire; third antennal joint as long as the fourth **texana**

Minute species; basal stria interrupted; third antennal joint much shorter than the fourth.

Basal angles of the prothorax acute; met-episternum narrow; color piceous-brown **picea**

Basal angles produced but truncate at apex; met-episternum broad, the suture arcuate; body intense black..... **dana**

B. concolor Fab.—Syst. El., II, p. 576 (Scaphidium).

Oblong-oval, broad, strongly convex, highly polished, subglabrous, very sparsely and obsoletely punctulate throughout, black; legs, antennæ and abdominal vertex more or less paler, rufo-piceous. Head vertical; eyes large; antennæ widely separated, very slender, not as long as the head and prothorax, the third joint fully five times as long as wide, very slightly shorter than the fourth, both shorter than the fifth, which is fully seven times as long as wide, seventh shorter than the sixth, eighth still shorter, seventh and eighth but slightly thicker, ninth longer than the tenth but shorter than the eleventh. Prothorax short, three-fourths wider than long, the apex one-third as wide as the base; side margin, viewed laterally, evenly, moderately arcuate. Scutellum wanting. Elytra barely as long as wide, scarcely twice as long as the prothorax, somewhat wider between basal third and fourth than at base, unusually broadly truncate at apex. Mes-epimera extending fully two-thirds to the coxæ; met-episterna between three and four times as long as wide, parallel, the suture coarse and deep. Posterior tarsi scarcely more than two-thirds as long as the tibiæ, the first joint fully as long as the next three. Length 2.7 mm.; width 1.6–1.7 mm.

Pennsylvania to Illinois. This is the largest known species within our boundaries, and may be known by its broadly sub-oblong-oval form. The description is taken from the female, the fifth ventral plate being broadly, feebly lobed in the middle, the sixth strongly produced in a more narrowly rounded lobe, the sides of the lobe feebly, evenly sinuato-oblique. In the male the fifth is broadly, feebly bisinuate toward the middle, the sixth abruptly produced in the middle in a short, gradually narrowed, narrowly rounded ligula, as long as wide, flanked on either side by a small but deep rounded emargination. There appears to be scarcely any sexual divergence in antennal structure. Three specimens, remarkably uniform in size.

B. congener n. sp.—Rather stout, oval, black, subglabrous, impunctate; legs and antennæ pale rufous. *Head* vertical, moderate in size; epistomal suture very feeble; antennæ rather distant, not as slender as in *concolor* or *deflexa*, distinctly shorter than the head and prothorax, the third joint not quite three times as long as wide, oblique at apex, much shorter than the second, barely three-fourths as long as the fourth, the latter equal to the sixth, fifth a little longer, seventh and eighth distinctly thicker and more developed on the inner side, club long, subparallel, the ninth joint but little longer than the tenth. *Prothorax* almost semi-circular in outline from above, fully three-fourths wider than long; basal lobe strongly rounded; side margins, viewed laterally, evenly, feebly arcuate; basal angles acute. Scutellum completely wanting. *Elytra* about as long as wide, not quite twice as long as the prothorax, a little wider at basal fourth than at base; apex obliquely and rather widely truncate, the angles moderately broadly rounded; basal stria entire. Mes-epimera narrow, extending only three-fifths to the coxæ; met-episterna narrow, feebly, gradually narrowed throughout to the humeri, the suture coarse, straight; epimera distinct, large, the dividing suture fine. *Legs* long; posterior tarsi slightly shorter than the tibiæ, with the basal joint fully as long as the next three. Length 2.0 mm.; width 1.25 mm.

New York (Long Island); North Carolina; Iowa.

This species closely resembles *deflexa*, but may be known by the short third joint of the antennæ, entire basal stria of the elytra and feebly, evenly arcuate lateral margin of the prothorax. From *concolor* it differs in its much smaller size and in antennal structure. The male has the fifth ventral bisinuate, the sixth produced in a triangular, narrowly rounded process, flanked by deep, strongly rounded emarginations as in *concolor*, except that in *congener* the lobe is larger and more acutely triangular. Three specimens.

B. deflexa n. sp.—Stout, broadly oval, subglabrous, the decumbent hairs being remote and very fine as usual, subimpunctate; under surface, legs and antennæ more or less paler, rufo-piceous. *Head* vertical; eyes large but not attaining the base; antennæ moderately distant, very slender, not quite as long as the head and prothorax, the third joint rather more than five times as long as wide, distinctly longer than the second, scarcely as long as the fourth, four and five equal and a little longer than six and seven, eight still shorter though scarcely thicker and four times as long as wide, ninth longer than the tenth, both oblique at apex and distinctly more developed on the inner than on the outer side of the axial line. *Prothorax* from above almost semi-circular, four-fifths wider than long; basal lobe rather large, strongly rounded. Scutellum completely wanting. *Elytra* fully as long as wide, twice as long as the prothorax, a little wider between basal fourth and fifth; apex moderately wide, the external angles broadly rounded; sutural and marginal striæ deep, the basal broadly interrupted. Mes-epimera rather broad, extending two-thirds to the coxæ; met-episterna narrow, exactly parallel, the suture

very coarse and deep; dividing line of the epimera very fine and feeble. *Legs* long, slender, the hind tarsi three-fourths as long as the tibiae, the basal joint as long as the next three. Length 2.5 mm.; width 1.4 mm.

Rhode Island (Boston Neck); Virginia; Indiana.

The type is a male, having the fifth ventral plate very feebly bisinuate toward the middle, the sixth produced in a slender, gradually narrowed, acutely rounded process, longer than wide, flanked by broadly rounded shallow emarginations which are larger and more feeble than in *concolor*. The species is also distinguishable from *concolor* by its smaller size, less obese form, relatively larger elytra with broadly and completely obliterated basal stria, and by the form of the lateral margin of the prothorax, which is more abruptly though broadly bent downward posteriorly. Four specimens.

B. speculifer n. sp.—Rather narrowly oval, highly polished, black; legs, antennae, tips of the elytra and abdominal apex paler, testaceous; integuments subglabrous and subimpunctate. *Head* small, the eyes large, separated by more than their own width; antennae slender, scarcely as long as the head and prothorax, joints three to seven subequal in length, eighth shorter, third four times as long as wide, seventh and eighth thicker, club almost symmetrical, joints nine and ten nearly equal, obconical, strongly compressed as usual. *Prothorax* short, two-thirds wider than long, strongly declivous anteriorly, the apex not visible from above but scarcely more than one-third as wide as the base; basal lobe strong but evenly rounded; angles rather acute. Scutellum completely wanting. *Elytra* rather longer than wide, twice as long as the prothorax, very broadly, feebly rounded at the sides but somewhat wider at basal fourth than at base; sutural and lateral striae deep, the latter slightly punctate; basal and apical striae entire; apex transversely truncate, the external angles broadly rounded. *Mes-epimera* rather short, barely extending two-thirds to the coxae; met-episterna narrow, subparallel, the suture coarse deep and unevenly punctate; epimera distinct. *Legs* slender, the posterior tarsi very slender but quite distinctly shorter than the tibiae. Length 1.6 mm.; width 0.9 mm.

Iowa (Keokuk).

This species perhaps resembles *apicalis* more than any other, but may be separated by its longer antennal joints and much more elongate mes-epimera, as well as by the more broadly oval form of the body and broader, less strongly rounded median thoracic lobe. Two precisely similar specimens.

B. apicalis Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 323.

Black, polished, subimpunctate and subglabrous; elytra rufescent along the suture and apex; legs and abdomen rufous. Antennae

short, not as long as the head and prothorax; third and fourth joints subequal, the former not quite three times as long as wide, slightly shorter than the sixth, much less elongate than the fifth and equal to the eighth, the latter much thicker; seventh as long as the fifth, evenly and symmetrically fusiform; club symmetrical. Prothorax short, more than one-half wider than long, the basal lobe small and rounded. Scutellum completely obsolete. Elytra longer than wide, rather more than twice as long as the prothorax, slightly wider at basal third or fourth, the sides broadly, almost evenly arcuate; sutural striæ rather distant; apex obliquely truncate, the outer angles rather narrowly rounded. Mes-epimera long and narrow, extending nearly three-fourths to the coxæ; met-episterna narrow, the suture coarse but smooth, arcuately approaching close to the elytra anteriorly. Legs slender; posterior tarsi not as long as the tibiae but with the basal joint as long as the next three. Length 1.25 mm.; width 0.7 mm.

Represented in my cabinet from Rhode Island, Pennsylvania and Michigan. The two specimens which I took near Philadelphia are both pale, but probably from immaturity, as I can perceive no structural differences. It does not vary much in size, and the measurements are taken from an average specimen.

B. robustula n. sp.—Broadly oval, highly polished, subglabrous and impunctate, black, the legs, antennæ and abdominal apex paler. Head slightly inflexed; eyes moderate, separated by nearly twice their own width; epistomal suture completely obsolete; antennæ rather widely separated, very slender, fully as long as the head and prothorax, the third joint slender, four or five times as long as wide, distinctly longer than the fourth and equal to the fifth, fourth, sixth and eighth equal, the latter only just appreciably thicker, seventh longer than any of the preceding four, ninth elongate, obconical. Prothorax one-half wider than long, the apex not visible from above, barely two-fifths as wide as the base, the median lobe of the latter rather feebly rounded but distinct; basal angles somewhat short but acute. Scutellum completely wanting. Elytra barely as long as wide, not quite twice as long as the prothorax, the sides very evenly elliptical and exactly continuous with those of the prothorax; apex unusually narrow, the angles rounded; sutural and lateral striæ deep, the basal entire though feeble near lateral fifth. Mes-epimera rather short, scarcely extending two-thirds to the coxæ, the met-episterna narrow, parallel, the suture deep and coarse; epimera distinct. Legs slender, the basal joint of the hind tarsi not as long as the next three. Length 1.2 mm.; width 0.8 mm.

Texas.

The unusually elongate third antennal joint, with the seventh

and eighth scarcely thicker, the obliterated epistomal suture, absence of scutellum and small, broadly and extremely evenly elliptical form, will readily serve for the identification of this distinct but minute species. Two specimens.

B. texana n. sp.—Evenly oval, highly polished, deep black; legs, antennæ and abdomen toward tip dark rufo-testaceous; integuments subglabrous, the head and pronotum subimpunctate, with remote and fine, decumbent and scarcely visible hairs; elytra remotely, obsoletely punctulate and similarly pubescent; sterna impunctate, the row of punctures behind the middle and posterior coxæ very strong. *Head* small; eyes moderate; antennæ slender, not quite as long as the head and prothorax, the joints three, four and six equal and four times as long as wide, five and seven longer, seven and eight thicker, arcuate within, the latter three times as long as wide, joints of the club rapidly increasing in length, the ninth not quite symmetrical. *Prothorax* three-fifths wider than long, the apex scarcely more than one-third as wide as the base; basal lobe rather feeble and broadly rounded; basal angles somewhat acute. Scutellum visible, more than twice as wide as long. *Elytra* as long as wide, three-fourths longer than the prothorax, scarcely at all wider behind the base; sutural stria deep, the lateral coarse, more or less punctate, the basal fine but entire; apex obliquely truncate, the outer angles rounded. Mes-epimera long, extending almost three-fourths to the coxæ; met-episterna more than three times as long as wide, the suture coarse and deep, feebly and arcuately approaching very near to the elytra anteriorly; epimera distinct. Posterior tarsi scarcely as long as the tibiae. Length 1.7 mm.; width 0.95 mm.

Texas.

Distinguishable at once from *speculifer* by its visible scutellum, and from *deflexa* by the same character, in addition to its much smaller size and narrower form.

B. picea n. sp.—Rather broadly oval, dark rufo-piceous, the legs, antennæ and abdominal vertex rufous; integuments subglabrous, impunctate and highly polished. *Head* small; eyes separated by more than their own width, minutely and feebly emarginated by the antennæ as usual; epistoma long, subquadrate, rather longer than wide; antennæ short, scarcely as long as the head and prothorax, the third joint scarcely more than twice as long as wide and only two-thirds as long as the fourth, four to six slender, subequal, seventh and eighth longer and much thicker, but slightly asymmetric, the eighth only slightly shorter than the seventh, eleventh more than twice as long as wide. *Prothorax* nearly three-fourths wider than long, the apex much less than one-half as wide as the base, the basal lobe well developed, rounded; angles acute. Scutellum visible, more than twice as wide as long. *Elytra* fully as long as wide, rather more than twice as long as the prothorax, quite distinctly wider at basal fourth than at base, the basal stria broadly interrupted. Mes-epimera

slender but not extending more than two-thirds to the coxæ; met-episterna long, narrow, the suture strong but even, feebly oblique toward the humeri throughout, almost straight; epimera distinctly separated. *Legs* slender; posterior tarsi almost as long as the tibia, the basal joint not as long as the next three. Length 1.25 mm.; width 0.75 mm.

Pennsylvania.

Allied somewhat to *nana*, but differing in its larger size, paler coloration, larger and longer epistoma, more distant antennæ, acute basal angles of the prothorax, narrower met-episterna with straight and not evenly arcuate dividing suture, and several other features. Two specimens.

B. nana n. sp.—Moderately broad, highly polished and completely impunctate throughout, black, the legs rufo-testaceous; antennæ slightly paler toward base; integuments with extremely sparse recumbent hairs on the head, femora and abdomen. *Head* small; antennæ as long as the head and prothorax, the first two joints as long as the next three, third scarcely more than twice as long as wide and distinctly shorter than the fourth, four to eight subequal in length, the fifth and seventh a little longer, seventh and eighth stouter, nine to eleven broader forming the long loose club. *Prothorax* one-half wider than long, the apex not quite one-half as wide as the base; median lobe distinct, rounded; basal angles but slightly produced and distinctly truncate. Scutellum distinct, more than twice as wide as long. *Elytra* as long as wide, nearly twice as long as the prothorax, widest at about basal fifth; apex truncate, the external angles rather broadly rounded; sutural stria extending along the base nearly to the middle, the lateral slightly inflexed at base. Mes-epimera narrow, extending fully two-thirds to the coxæ; met-episterna unusually wide, barely two and one-half times as long as wide, the suture parallel, distinctly arcuate, moderately coarse; epimera small, the suture deep. Posterior tarsi as long as the tibia, the first joint as long as the next two. Length 1.1 mm.; width 0.75 mm.

Rhode Island; Michigan; Texas.

Readily known by the truncate basal angles of the pronotum, the extremity of the lateral acute line of the prothorax being far below the line of the elytra, the met-episterna rather broader than usual with the suture arcuate, and by the evident scutellum. It is widely diffused, and the specimens in my cabinet differ very little among themselves even in size.

TOXIDIUM Lec.

This genus is exceedingly distinct and isolated, but approaches *Bæocera* in general organization much more closely than *Scaphisoma*. It resembles the former in the slender cylindrical third an-

tennal joint, complete absence of scutellum and absence of all trace of a dilated post-coxal plate on the first ventral segment, and suggests certain types of the latter by the excessively small or obsolete mes-epimera. It however differs from both in the compressed body, more transversely elongate and more narrowly separated hind coxæ, narrower met-episterna, narrowed posteriorly and not anteriorly, in the still longer tarsi and longer tibial spurs, in having the large side-piece of the mesosternum clearly separated by a longitudinal suture near the coxæ, and in the fact that the sutural stria of the elytra does not attain the base.

Our two species are very strongly differentiated but cannot be separated generically; they may be defined as follows:—

Basal angles of the prothorax only very feebly produced, obtusely angulate, the side-margin of the prothorax attaining their apices; metasternum generally with a cluster of four or five coarse punctures near the middle coxæ.

gammaroides

Basal angles not at all produced, obtuse and somewhat blunt; side-margin of the prothorax rapidly deflexed, meeting the sides of the pronotum far in front of the basal angles, the intervening edge upwardly oblique; metasternum coarsely, deeply punctured throughout.....**compressum**

In *gammaroides* there is a slight downward flexure in the acute lateral margins of the prothorax opposite the point where these margins terminate in *compressum*, suggesting a merely less developed form of the same structure.

T. gammaroides Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 324.

Narrow, polished, scarcely punctate, black; tip of abdomen, legs and antennæ rufous. Antennæ slender, nearly as long as the head and prothorax, the third joint slender, almost four times as long as wide, shorter than the fourth, the latter not as long as the fifth but equal to the sixth; seventh slightly stout; eighth more slender; club moderate in length. Met-episterna posteriorly only one-half as wide as near the base; suture coarse and deep; epimera small, extending inward far within the episterna, meeting the tips of the hind coxæ. Length 1.6–1.8 mm.; width 0.7–0.75 mm.

Rhode Island and New York; LeConte indicates "Southern and Western States," but may have confounded the next species.

T. compressum Zimm.—Trans. Am. Ent. Soc., 1869, p. 251.

Greatly resembles the preceding but rather shorter, broader and dark red-brown in color. Besides the characters already noted

compressum differs from *gammaroides* in the narrower and more parallel met-episterna. Length 1.4–1.7 mm.; width 0.7–0.8 mm.

Kansas and Nebraska to Florida. I can distinguish no distinct trace of mes-epimera in either of these species.

SCAPHISOMA Leach.

The species of *Scaphisoma* exceed in number those of *Bæocera*, but are less readily differentiable. The antennæ are generally longer and have the outer joints more bilaterally asymmetric as a rule, the third joint always very small, seldom more than one-half as long as the fourth, enlarged and more or less oblique at apex and constricted at base. There are two tolerably well-defined types of antennal structure, one having the sixth joint rather shorter than the fifth, the other with this joint greatly elongate, sometimes equalling the preceding three together. In the latter type the sixth joint is somewhat dilated within and bristling with erect setæ like those beyond it; in fact in the first type, the club—if the loose chain of peculiar flattened internally arcuate joints can be thus designated—begins with the seventh joint, and in the second with the sixth. I have made no use of these types of structure in classifying the species, as the character relating to the mes-epimera seems to be more important and less subject to sexual modification. The scutellum is present in all of our species, though very small and sometimes extremely minute; it is invariably equilateral or nearly so. The basal stria of the elytra is never entire, as it frequently is in *Bæocera*.

The following table may enable the reader to identify the forms in his cabinet, although there are probably a considerable number still to be discovered:—

Mes-epimera extending one-half or more to the coxæ, always distinctly defined.

Metasternum strongly though sparsely punctate throughout, the punctures extending also to the outer parts of the episterna.....**repanda**

Metasternum subimpunctate or only punctured in part.

Body black, sometimes castaneous from immaturity.

Larger species, never much under 2 mm. in length.

Elytra sparsely but strongly punctate.

Metasternum, between the middle and hind coxæ, coarsely and strongly punctate.....**convexa**

Metasternum minutely and remotely punctate; elytral punctures stronger; form a little more elongate-oval.....**castanea**

Elytra finely but much more closely punctate, the punctures almost twice as numerous as in *convexa*.....**punctulata**

- Smaller species, seldom more than $1\frac{3}{4}$ mm. in length.
 Elytra not paler at apex, except feebly and gradually from diaphaneity.....**suturalis**
 Elytra with a broad and rather distinctly defined pale apical margin.
 Larger, more broadly oval, the metasternum strongly punctured toward base.....**terminata**
 Small, narrowly oval, the metasternum minutely and scarcely visibly punctured.....**evanescens**
 Body pale rufo-testaceous throughout.....**rubens**
 Mes-epimera very small, sometimes completely undefined, and the suture obliterated; species generally smaller, occasionally minute.
 Coxal plate of the first ventral segment shorter, not extending to the middle; body more than 1 mm. in length.
 Body pale rufo-testaceous throughout.....**rufula**
 Body black, the elytral apex sometimes narrowly pale.
 Elytra finely but visibly punctate almost to the basal margin.
 Basal stria of the elytra extending outward beyond the middle of each; larger species.....**desertorum**
 Basal stria extremely abbreviated, scarcely extending at all beyond the outward flexure of the sutural stria; size much smaller.
inconspicua
 Elytra impunctate, except occasionally very obsoletely and indefinitely near the apex.
 Posterior elevated margin of the intermediate acetabula strongly rounded behind, extending posteriorly for more than one-fourth of the distance between the middle and hind coxæ.....**obesula**
 Posterior marginal plate shorter and more broadly rounded.
 Post-coxal plate bordered by a transverse series of small but deep punctures; fourth antennal joint much shorter than the fifth, three times as long as wide; met-episterna wide, narrowed anteriorly.....**carolinæ**
 Post-coxal plate without a distinct marginal line of punctures; fourth antennal joint longer and much more slender, fully four times as long as wide; met-episterna narrower, parallel; body slightly narrower, the elytra longer and the prothorax shorter.
arkansana
 Coxal plate of the first ventral large, extending to the middle of the segment; body 1 mm. or less in length.....**pusilla**¹

¹ The gender usually adopted for such words as *Scaphisoma*, *Tyloderma* and others, is the neuter, on the ground that the gender of the word in the Greek is neuter. It is evident, however, that as soon as a word is taken into the binomial nomenclature as the symbol of a genus, it immediately and by virtue thereof becomes Latin, whatever may be its derivation. As a genus in the binomial nomenclature, *Scaphisoma* is therefore a Latin word and should be given a gender corresponding with its Latin termination. It is manifestly

S. repanda n. sp.—Rather broadly oval, polished, black, somewhat piceous beneath, the legs and antennæ pale; integuments subglabrous, the decumbent hairs fine and very sparse; head and pronotum impunctate; elytra strongly, sparsely punctured throughout; metasternum, the inner part of its parapleuræ and the first ventral plate, except toward apex, strongly but not so coarsely, sparsely punctured. *Head* vertical, moderate in size; eyes large, distant by twice their width; antennæ distant, as long as the head and prothorax, the third joint not twice as long as wide, barely one-half as long as the fourth, which is four times as long as wide and not quite as long as the fifth or sixth, the latter equal, seventh longer, dilated and arcuate within, three times as long as wide, eighth much shorter and thinner, joints of club elongate, not much wider than the seventh. *Prothorax* three-fourths wider than long, the apex barely two-fifths as wide as the base, the median lobe broadly rounded; basal angles distinctly produced and acute. Scutellum minute but distinct. *Elytra* as long as wide, twice as long as the prothorax, a little wider at basal third than at base; apices obliquely truncate, two-thirds as wide as the maximum width, the angles rather narrowly rounded; sutural and marginal striæ distinct, the basal obsolete at about the middle. Mesepimera long, narrow, extending three-fifths to the coxæ; met-episterna wide, the suture fine and only moderately oblique. *Legs* slender; hind tarsi about as long as the tibiæ, the basal joint scarcely as long as the next three. Length 1.7 mm.; width 1.05 mm.

Iowa; Missouri; Massachusetts.

Readily known by the punctuation and by the fact that the usual post-coxal plate of the first ventral segment is as completely obsolete as in *Bæocera*, the hind margin straight and anteriorly oblique outwardly. The size seems to be very uniform.

S. convexa Say.—Journ. Ac. Phila., V, p. 183; Lec.: Proc. Ac. Phila., 1860, p. 323.

Broadly oval, highly polished, black, the under surface, legs and antennæ paler, rufous. Antennæ long, the third joint one-half longer than wide, enlarged at apex, scarcely one-half as long as the fourth, which is between three and four times as long as wide; fifth but little longer; sixth and seventh subequal, much longer, nearly as long as the fourth and fifth together, the sixth feebly dilated within, the seventh more strongly and arcuately so; eighth shorter; club very elongate and slender, not wider than the seventh.

impossible to modify a noun of one language by an adjective of another; the combination of letters "Scaphisoma" in the name *Scaphisoma rufula*, cannot therefore be Greek but must be Latin. Why we should maintain the Greek gender, or any other attribute of the symbol as a Greek word, it is difficult to understand.

Prothorax fully three-fifths wider than long, very obsoletely punctulate. Scutellum distinct, equilateral. Elytra about three-fourths longer than the prothorax, widest near basal third, the sides very broadly, evenly arcuate; surface strongly, remotely punctate, the basal stria becoming obsolete near lateral third; apical angles rather broadly rounded. Mes-epimera extending a little more than half way to the coxæ. Legs slender, the hind tarsi long, very slender, as long as the tibiæ, with the basal joint longer than the next two. Length 2.25–2.7 mm.; width 1.4–1.6 mm.

Entire Atlantic slope and westward to the Mississippi. The most abundant of the eastern species and distinguished by its large size, antennal structure and punctuation. The post-coxal plate of the first ventral is very short and broadly rounded behind.

S. castanea Mots.—Bull. Mosc., 1845, IV, p. 361; Lec.: Proc. Ac. Phila., 1860, p. 323.

This species resembles *convexa* very closely, but is on the whole a little larger, with the prothorax somewhat shorter and the elytra just visibly longer; the antennæ are a little thicker, the third joint but slightly longer than wide, and, as usual, strongly narrowed toward base, the fourth not more than three times as long as wide, shorter than the fifth, sixth much longer, not as long as the seventh and a little shorter than the fourth and fifth together. The elytra are, as a rule, somewhat more strongly and perhaps a little less remotely punctate. Length 2.25–3.0 mm.; width 1.4–1.7 mm.

The series before me consists of a very large number of specimens from many parts of California, British Columbia, Idaho, Utah, and one labeled "Arizona." The normal color seems to be black, but specimens occasionally occur which are castaneous, undoubtedly from immaturity.

S. punctulata Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 323.

Broadly oval, highly polished, black, the elytral apex not in the least paler; head, antennæ, legs and most of the abdomen above and beneath rufous; fine hairs unusually distinct on the under surface. Antennæ long and slender, fully as long as the head and prothorax, the third joint triangular, scarcely longer than wide; fourth three times as long as wide; fifth much longer, fully five times as long as wide, much longer than the third and fourth combined, shorter than the sixth, which is unusually long, even longer but

thinner than the seventh; eighth about as long as the fifth; joints of the club very long, not wider than the seventh. Prothorax two-thirds wider than long, extremely obsoletely punctulate. Scutellum minute, equilateral. Elytra scarcely visibly wider at basal fourth than at base; outer apical angles narrowly rounded; basal stria extending to the middle. Mes-epimera long and narrow, extending three-fifths to the coxæ; met-episternal suture fine, moderately oblique. Basal joint of the hind tarsi as long as the next three. Length 1.9–2.1 mm.; width 1.3–1.4 mm.

Georgia and Florida. Readily identifiable by the rather dense but fine, uniformly distributed and unusually close elytral punctuation.

S. suturalis Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 323.

Rather narrowly oval; body dark castaneous to black, highly polished throughout, the pronotum subimpunctate, the elytra strongly but remotely punctate from apex to base. Antennæ rather thick, the third joint triangular, oblique at apex, one-half longer than wide, one-half as long as the fourth, which is nearly four times as long as wide; fifth slightly swollen within, barely longer than the third and fourth together, very slightly longer than the sixth but distinctly shorter than the seventh; joints after the fourth all more or less dilated and arcuate within. Prothorax rather short, three-fourths wider than long, one-half as long as the elytra. Scutellum distinct. Elytra rather longer than wide, slightly widest at basal fourth; outer apical angles rather broadly rounded; sutural stria deep, the basal fine, extending to the middle. Mes-epimera long, narrow, extending two-thirds to the coxæ; met-episternal suture fine and only very slightly oblique. Posterior tarsi long and extremely slender, the first joint subequal to the next three. Length 1.75 mm.; width 1.1 mm.

Missouri and North Carolina (Hot Springs). The antennæ are unusually thick, the fifth joint being more slender in the majority of species. There is but little variation in the three specimens before me.

S. terminata Mels.—Proc. Ac. Nat. Sci., Phila., II, p. 104; Lec.: l. c., 1860, p. 323.

Oval, strongly convex, black, highly polished throughout, the apex of the elytra margined with flavo-testaceous; legs and an-

tennæ pale; head and pronotum subimpunctate; elytra distinctly, sparsely punctate, the punctures becoming finer toward base. Antennæ not quite as long as the head and prothorax, the third joint slightly longer than wide, only a little shorter than the fourth, which is barely twice as long as wide; fifth about as long as the third and fourth together; sixth slender, very long, distinctly longer than the third, fourth and fifth combined, fully as long as the seventh, the latter strongly inflated within. Prothorax short, one-half as long as the elytra. Scutellum distinct. Elytra a little wider at basal fourth than at base, the basal stria extending fully to the middle but approaching very close to the pronotum; sutural deep, feebly and somewhat unevenly arcuate; external apical angles distinctly rounded. Mes-epimera scarcely extending midway to the coxæ; met-episternal suture fine and very oblique. Metasternum coarsely, strongly punctured toward base except along the hind coxæ. Posterior tarsi slender, the basal joint as long as the next three. Length 1.8 mm.; width 1.25 mm.

New York. The very long sixth antennal joint, more than equal to the preceding three together, the coarsely punctured metasternum and pale apex of the elytra, will readily identify this species, which is much larger and rather more broadly oval than the next.

S. evanescens n. sp. —Narrowly oval, black, highly polished; elytra with a pale apical margin; antennæ, legs and abdomen toward apex pale, rufous; head and pronotum impunctate; elytra finely, sparsely punctate, the punctures completely evanescent and effaced in basal half; metasternum extremely minutely, sparsely punctulate. Head vertical, moderate; eyes large, separated by one-half more than their own width; antennæ not as long as the head and prothorax, the third joint very small, triangular, scarcely longer than wide, fourth very short, barely twice as long as wide, fifth four times as long as wide, distinctly longer than the third and fourth together and a little shorter than the sixth. Prothorax two-thirds wider than long, the basal lobe small, strongly rounded; basal angles produced and acute. Scutellum distinct. Elytra about as long as wide, twice as long as the prothorax, a little wider at basal fourth than at base; truncate apices nearly three-fourths of the maximum width; angles distinctly rounded; sutural stria fine, nearly straight, the basal fine, scarcely attaining the middle and distant from the pronotum. Mes-epimera rather wide, barely extending halfway to the coxæ; met-episternal suture very fine, strongly oblique, the parapleuræ wide behind; epimeral suture fine but distinct. Post-coxal plate of the first ventral rather strongly rounded behind and extending two-fifths of the length. Legs slender; basal joint of the hind tarsi not as long as the next three. Length 1.4–1.55 mm.; width 0.9–1.0 mm.

Iowa; Texas.

This small species resembles *terminata* in the distinctly defined pale apex of the elytra, but may readily be known by the strongly marked difference in antennal structure and feebly punctate metasternum, sculpture of the elytra and much smaller size.

S. rubens n. sp.—Narrowly oval, very convex, highly polished and pale rufo-testaceous throughout, subglabrous, the hairs very distant but visible; head, pronotum and metasternum subimpunctate; elytra finely feebly and very sparsely punctate. Head vertical, the eyes moderate, distant by nearly twice their own width; antennæ somewhat longer than the head and prothorax, the third joint almost twice as long as wide, feebly narrowed toward base, barely one-half as long as the fourth, which is evenly cylindrical and four times as long as wide, distinctly shorter than the fifth, the latter thicker beyond the middle, rather longer than the sixth, seventh longer than the fifth, inflated and arcuate within, eleventh much longer than the tenth. Prothorax two-thirds wider than long, the apex one-half as wide as the base; scutellar lobe moderate, rounded; basal angles produced and acute. Scutellum distinct, a little wider than long. Elytra fully as long as wide, twice as long as the prothorax, a little wider at basal third than at base, the truncate apex barely two-thirds of the maximum width; angles distinctly rounded; basal stria obsolete, the rather widely and deeply impressed sutural stria simply turned outward slightly at base. Mes-epimera extending halfway to the coxæ; met-episternal suture fine and distinctly oblique, the episterna however only moderate in width. Legs slender, the basal joint of the hind tarsi scarcely longer than the next two. Length 1.7–1.9 mm.; width 0.95–1.05 mm.

Massachusetts; New York (Catskill Mts. and Long Island).

The pale coloration of this species recalls *rufula* very greatly at first sight, but it is more elongate and differs altogether in the form of the mes-epimera.

S. rufula Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 323.

Oval, rather short and stout, highly polished and pale rufo-testaceous throughout, the head and pronotum subimpunctate; elytra extremely finely sparsely and obsoletely punctulate. Antennæ long, the third joint short, constricted at base, barely one-half as long as the fourth, which is four times as long as wide and distinctly shorter than the fifth, the latter a little longer than the sixth. Prothorax rather long, scarcely one-half wider than long; basal angles produced and acute. Scutellum excessively minute but present. Elytra not quite as long as wide, not much more than one-half longer than the prothorax; sutural stria deep, curved outward for a short distance at base, the basal stria represented thence to the middle by

the merest trace; external apical angles moderately rounded, the apex nearly three-fourths of the maximum width. Mes-epimera very short, the suture feeble; met-episternal suture distinctly oblique. Basal joint of the hind tarsi as long as the next three. Length 1.5 mm.; width 1.0 mm.

Arizona (Yuma). The pale coloration, short and broad form and short mes-epimera are features which render this species abundantly distinct. The first ventral segment is more strongly punctate in the middle toward base in one of the specimens before me, which is probably the male.

S. desertorum n. sp.—Rather broadly oval, black, highly polished; elytra gradually somewhat pale toward apex; antennæ, legs and abdomen in great part pale; head and pronotum excessively minutely and obsoletely punctulate; elytra finely and sparsely but distinctly punctate; metasternum obsoletely so, the first ventral segment remotely but more distinctly. *Head* moderate; eyes large, separated by one-half more than their own width; antennæ rather longer than the head and prothorax, the third joint longer than wide, expanded at apex, almost as long as the fourth, which is small, not quite twice as long as wide, fifth rather longer than the preceding two combined, though scarcely more than three times as long as wide, sixth very long, feebly dilated within, fully as long as the three preceding, scarcely as long as the seventh, which is strongly dilated and arcuate within. *Prothorax* rather long, about one-half wider than long, the apex barely two-fifths as wide as the base; scutellar lobe moderate. Scutellum extremely minute. *Elytra* not quite as long as wide, two-thirds longer than the prothorax, a little wider at basal fourth than at base; apex a little more than two-thirds the maximum width; apical angles rather narrowly rounded; sutural stria fine, the basal extending rather beyond the middle. Mes-epimera short, extending one-third to the coxæ, the suture strong; met-episternal suture fine, oblique. *Legs* slender; hind tarsi a little shorter than the tibiæ, the first joint not quite as long as the next three; second but slightly longer than the third; fourth much shorter. Length 1.9–2.0 mm.; width 1.3–1.4.

Arizona (Williams); Texas (El Paso). Mr. Wickham.

This species is quite distinct in antennal structure, somewhat shorter elytra and abbreviated mes-epimera. It was obtained apparently in some abundance.

S. inconspicua n. sp.—Somewhat narrowly oval, highly polished, black, the elytral apex not paler; under surface rufo-piceous; legs and antennæ still paler; head and pronotum impunctate; elytra finely, sparsely punctate, the punctures becoming almost obsolete toward base. *Head* moderate; eyes separated by one-half more than their own width; antennæ with the third joint small, triangular, scarcely longer than wide, about one-half as long as the fourth, the latter three times as long as wide, fifth longer, fully

four times as long as wide, distinctly longer than the sixth and a little longer than the preceding two together. *Prothorax* short, fully three-fourths wider than long; basal lobe moderate, rounded; angles briefly produced, somewhat deflexed, obtusely nuncate. Scutellum extremely minute. *Elytra* fully as long as wide, twice as long as the prothorax, rather abruptly narrowed to the base; apex three-fourths of the maximum width; angles moderately rounded; sutural stria straight, deeply and broadly impressed. Mes-epimera very small, the suture strong. Posterior tarsi about as long as the tibiae, with the first joint as long as the next three. Length 1.2 mm.; width 0.75 mm.

Florida.

A small species, the single type of which is in rather a poor state of preservation. It may be known by its punctured elytra from those more closely allied. The post-coxal plate of the first ventral segment is narrowly rounded, extending nearly through basal third of the length.

S. obesula n. sp.—Broadly oval, strongly convex, highly polished, the elytra very obsoletely and remotely punctulate toward apex, black, the legs, abdomen and antennae paler. Head moderate: antennae slender, the third joint clavate, one-half as long as the fourth, the latter four times as long as wide, fifth as long as the third and fourth combined and subequal to the sixth. *Prothorax* two-thirds wider than long, the apex two-fifths as wide as the base; scutellar lobe rather strongly rounded at apex; basal angles produced and acute. Scutellum extremely minute. *Elytra* scarcely as long as wide, three-fourths longer than the prothorax, somewhat wider near basal third than at base, the sides evenly arcuate; apex oblique, narrow, barely two-thirds of the maximum width; angles narrowly rounded; sutural stria rather fine but deep, the basal not extending beyond the basal arcuation of the sutural. Mes-epimera very small, the suture almost obsolete; met-episternal suture fine, oblique; post-coxal plate of the metasternum extending posteriorly almost one-third of the length; post-coxal plate of the first ventral very short, broadly rounded, with a transverse series of coarse punctures along its edge. Posterior tarsi about as long as the tibiae, the first joint as long as the next two. Length 1.5–1.6 mm.; width 0.95–1.05 mm.

Florida.

This species may be recognized at once by its broad form and subimpunctate surface.

S. carolinæ n. sp.—Rather broadly oval, highly polished, black and impunctate; abdomen more or less pale; antennae and legs rufous. Head vertical; eyes moderate, distant; antennae nearly as long as the head and prothorax, third joint triangular, only slightly longer than wide, not quite one-half as long as the fourth, the latter three times as long as wide, fifth as long as the third and fourth together and somewhat longer than the sixth. *Prothorax* rather short, three-fourths wider than long; apex a little less than

one-half as wide as the base; scutellar lobe small, rather strongly rounded; basal angles acute, moderately produced and somewhat deflexed. Scutellum small but distinct. *Elytra* not quite as long as wide, a little less than twice as long as the prothorax, slightly wider from basal third to fourth than at base; sides evenly rounded; oblique apex three-fourths of the maximum width; angles distinctly rounded; sutural stria deep, the basal obsolete. Mes-epimera very small, the suture obsolete; met-episternal suture coarse, feebly oblique, the episterna broad throughout. Post-coxal plate of the metasternum very short, broadly rounded, bordered by a series of deep conspicuous punctures extending outward along the anterior margin of the metasternum almost to the parapleuræ; post-coxal plate of the first ventral extremely short. Length 1.25 mm.; width 0.8 mm.

North Carolina (Asheville).

Resembles the preceding very much, but differs conspicuously in the form and extent of the elevated plate behind the middle acetabula, in the much less minute scutellum and smaller size.

S. arkansana n. sp.—Narrowly oval, impunctate, highly polished, black, the elytral apex not paler except from diaphaneity; under surface rufopiceous; antennæ blackish, the first six joints and the legs throughout testaceous. *Head* small, the eyes separated by a little less than twice their width; antennæ slender, one-half as long as the body, third joint not twice as long as wide and one-third as long as the fourth, the latter a little shorter than the fifth but correspondingly longer than the sixth, seventh distinctly wider and slightly longer than the fifth, eighth scarcely larger than the sixth, last three joints moderately compressed. *Prothorax* three-fourths wider than long, the apex arcuate and about one-half as wide as the base; sides evenly arcuate; basal angles produced and acute; median lobe distinct, rounded. Scutellum distinct but small, perfectly equilateral. *Elytra* as long as wide, twice as long as the prothorax and, at about basal fourth, a little wider; sides evenly arcuate; apex three-fifths of the discal width; outer angles moderately rounded; sutural stria extending only to the base, the basal stria obsolete. *Legs* slender; hind tarsi wanting in the type. Length 1.25 mm.; width 0.75 mm.

Arkansas.

A single specimen, kindly communicated by Mr. H. C. Fall. It is closely allied to *carolinæ*, but differs in certain well defined structural features referred to in the table.

S. pusilla Lec.—Proc. Ac. Nat. Sci., Phila., 1860, p. 323.

This species can always be recognized by its very minute size and generally by the coloration, the elytra being rufous in apical half; two specimens before me depart however in being pale testaceous throughout, and two others in being black with the apex only

paler. There seems to be considerable variation also in the size of the post-coxal plate of the first ventral, which generally attains the middle of the segment, but in one specimen it plainly does not extend so far and in another goes a little beyond the middle. The antennæ differ from those of any other species in being shorter and stouter, the outer joints shorter and less asymmetric than usual, with the large seventh joint rather wider than any one of the outer three; first two joints as long as the next four; third very small, triangular; fourth small, barely twice as long as wide; fifth fully as long as the preceding two combined; sixth unusually small, securiform, scarcely twice as long as wide, about three-fourths as long as the fifth and one-half as long and wide as the seventh. Length 0.75-1.0 mm.; width 0.5-0.7 mm.

Rhode Island to Lake Superior, Iowa and the Carolinas. It is possible that several very closely allied species may be indicated by the above described color variations, but I am unable at present to find any really decisive structural differences.

HISTERIDÆ.

But little progress has been made in the systematic treatment of this family since the completion of the superb monograph of Marseul, and but few American species have been made known since the synopsis published by Dr. Horn, now somewhat more than twenty years ago. A considerable number of new forms have been accumulating however, principally through recent collecting in California and parts adjacent, and, in rearranging my cabinet, it seemed desirable that these should be described.

A modification of the present classification would seem to be desirable in order to better determine the positions of the two aberrant genera *Bacanius* and *Plegaderus*. *Bacanius* is evidently out of place at present, although some affinity with *Abræus* may possibly be indicated by the transverse chain of pronotal punctures in *B. rhombophorus*, a feature which appears to be essentially characteristic of *Abræus* and *Acritus*. By placing *Bacanius* immediately after *Anapleus*, and then reversing the order of genera in the *Saprinini*, so as to bring *Abræus* and *Acritus* at the head, this difficulty can however be readily overcome.

According to Mr. Lewis *Tribalus californicus* Horn, is to be referred to *Stictostix* Mars.

HOLELEPTA Payk.

The species described below is allied to *princeps* Lec., and is therefore assignable to the subgenus *Leionota*. *Princeps* apparently cannot be the same as *yucateca* Mars. The sexual characters in the former are very feeble, as readily observable in the large series before me, the male being broader and shorter than the female, with longer mandibles and broader propygidium, but the groove along the lateral margin of the pronotum is almost identical in the two sexes.¹

H. vernicis n. sp.—Rather narrow, feebly, evenly convex, highly polished. *Head* without trace of frontal striæ, the lateral striæ near the eyes very short, basal, the surface behind them coarsely punctate; mandibles short, stout, not quite as long as the head, strongly arcuate and acute at tip; mentum broadly, feebly concave, even, finely sparsely and evenly punctate, deeply, subangulately emarginate; triangular gular impression almost obsolete. *Prothorax* four-fifths wider than long, the sides broadly arcuate and convergent anteriorly from the middle, becoming almost parallel and straight in basal half; lateral groove rather fine but deep, slightly dilated at apex; inflexed along the basal margin to lateral sixth; disk with a fine median stria in basal two-fifths, narrowly and sparsely punctate along the lateral stria especially toward base. Scutellum very small, equilateral. *Elytra* equal in width to the prothorax, parallel, the suture less than one-third longer; apical sinuation deep, rounded; subhumeral stria dilated, deep, attaining neither base nor apex; first dorsal deep and coarse, arcuate, scarcely attaining basal third, coarsely double at base, the humeri also with a short basal stria externally; second dorsal fine but deep, interrupted at basal fourth, the apical part beginning rather before the point opposite the termination of the first dorsal, and continuing almost to the apex. *Propygidium* rather sparsely but very coarsely, variolately punctate laterally, the punctate areas joined along the posterior margin by some very small sparse and feeble punctures; pygidium coarsely deeply and very densely cribrate. Anterior tibiæ 4-dentate, the basal tooth very broadly angulate and feeble, the others strong but not very acute; posterior tibiæ with three large acute and spiniform teeth. Posterior half of the prosternum triangular in form, the hind margin evenly rounded; apical half in the form of a rather narrow, transversely rounded and parallel ridge, the apex obtusely rounded. Length (exclusive of mandibles) 11.5 mm.; width 5.4 mm.

Arizona.

There appears to be no Mexican species with which this can be confounded, and it is widely distinct from any form hitherto de-

¹ The measurements of length include the entire body and head, except when otherwise stated.

scribed from the United States. The type seems to be a female. This species is much smaller and narrower than *princeps*.

OMALODES Erichs.

Of this interesting genus we have three species which may be distinguished as follows:—

Posterior tibiæ with three external spines; punctures of the pygidium and propygidium not interrupted behind.....**texanus** Mars.
Posterior tibiæ with four spines.

Propygidium coarsely punctate only toward the sides, the two areas of punctuation feebly united at apical fourth by a transverse band composed of very fine feeble punctures; pygidium coarsely punctured throughout except in anterior third; elytra without a marginal stria along the apex.

lubricans n. sp.

Propygidium coarsely punctate, the punctures becoming remote near the center of the disk, minute along the apex; pygidium coarsely punctate, the punctures fine along the anterior margin and almost obliterated toward apex; elytra with a marginal stria along the apex.

vitreolucens n. sp.

Texanus is unknown to me, but may be readily identified by the structure of the hind tibiæ; it is much narrower and more elongate than *lubricans* or *grossus*. The species are all intensely black, very highly polished and feebly sculptured.

O. lubricans.—Broadly oval, the extremely minute punctulation rather sparse but dense and distinct near the scutellum. Head concave in the middle, finely punctulate, the marginal stria subhexagonal, feebly reentrant in the middle, subentire. Prothorax not quite twice as wide as long, the well marked and deflexed apical angles separated by two-fifths of the basal width; sides oblique, nearly straight, not distinctly sinuate near the middle; marginal stria distinct at apex, very faint at base; lateral deep, entire; disk with a small ante-scutellar puncture, finely and not very densely punctured along the sides, almost equally from apex to base. Scutellum with a discal puncture. Elytra a little more than one-half longer, and, at the middle, but slightly wider than the prothorax; striae fine, that of the flank beginning slightly behind the humeri and becoming obsolete and broken toward apex; humeral excessively fine, extending to basal third; subhumeral arcuate, beginning at the middle and extending to the apex; first dorsal long but not attaining base or apex; second not attaining the base and broken into an uneven series of punctures behind; third extending not quite to the middle. Propygidium not impressed. Prosternum very broadly rounded at apex and extremely feebly margined, rounded and slightly dilated behind; mesosternum very short, broadly, deeply sinuate, the marginal stria somewhat narrowly interrupted. Anterior tibiæ strongly 4-dentate, the intermediate with three strong teeth

and two small subbasal denticles; posterior with four teeth, of which the one nearest the base is much the smallest. Length (median line of pronotum and elytra) 9.0 mm.; width 7.8 mm.

Arizona (Sta. Rita Mts.). Mr. Wickham.

Although allied to *texanus* and *grossus*, this species is distinct in several important characters. It is much broader than *texanus*, and *grossus* differs radically in the disposition and extent of the punctured areas of the pygidium and propygidium. Judging by the description and figures, it seems impossible to consider *texanus* and *grossus* identical, as surmised by Dr. LeConte; nor is the habitat of *texanus* necessarily open to doubt; *texanus* is not mentioned at all by Mr. Lewis in treating of the Mexican species.

O. vitreolucens.—Broadly oval, excessively finely punctulate throughout, the punctures especially evident and closer on the elytra toward the scutellum. Head broadly impressed along the middle throughout the length, finely, closely punctate, the punctures becoming stronger at base; marginal stria only present at the sides along the eyes; antennæ with the club piceous. Prothorax nearly twice as wide as long, the apical angles distant by scarcely more than two-fifths of the basal width; base oblique but scarcely sinuate laterally; sides oblique, nearly straight, rounded anteriorly, not distinctly sinuate near the middle; marginal stria evident only near the apical angles; lateral stria not quite entire, very close to the edge, deep near the apical angles; disk strongly, densely punctate near the lateral stria, the punctured area becoming narrower and evanescent to the base, broadest at apex; antescutellar puncture small. Scutellum equilateral, not deeply impressed. Elytra one-half longer, and, before the middle, distinctly wider than the prothorax; striae very fine; flanks with a strong sigmoid stria from the humeri extending unbroken along the apex to the suture; oblique humeral stria straight; subhumeral strongly arcuate, not extending to the middle and approaching close to the marginal at apex; first dorsal subentire; second nearly entire, abbreviated at base and consisting of an uneven series of punctures toward apex; third beginning at the basal margin, not attaining the middle. Prosternum with a short stria before each coxa, feebly dilated and broadly rounded behind, the apical lobe broadly rounded; mesosternum short, broadly, roundly sinuate, the transverse stria very widely interrupted. Anterior and posterior tibiae 4-dentate, the intermediate 5-dentate. Length (median line of prothorax and elytra) 7.0 mm.; width 6.0 mm.

Southern Florida. Mr. Jülich.

This species has been identified as *klugi* Mars., but the latter is undoubtedly different, although allied in having a transverse marginal stria at the apex of the elytra. In *klugi* the frontal stria is entire and semi-hexagonal, and the posterior tibiae are 3-dentate externally, while in the present species the frontal stria is only

represented by two oblique grooves at the sides not extending beyond the eyes, and there are four distinct tibial denticles, of which the basal is however small.

PSILOSCELIS Mars.

The following species belongs near *repleta* Lec., but is smaller and more depressed.

P. corrosa n. sp.—Oblong, depressed, piceous-black, moderately shining, densely punctate, the punctures large variolate and intermingled with others which are minute but deep, sparse toward the elytral suture but dense elsewhere, subconfluent on the elytra and almost obliterating the striae, rather fine beneath. *Head* transverse, densely, rugosely punctate, without a distinct marginal stria, the antero-lateral angles acute; mandibles stout, porrect. *Prothorax* four-fifths wider than long, the sides very feebly convergent from base to apex and feebly arcuate; marginal stria deep and distinct, not attaining the apex; lateral stria coarse, only visible in basal third where it is very close to the marginal, represented thence anteriorly only by feebly defined and detached fragments; disk densely and very deeply punctate even toward the middle. *Scutellum* very small, smooth and polished. *Elytra* not quite as long as wide, one-half longer than the prothorax and scarcely at all wider; sides subparallel, feebly arcuate; striae coarse but shallow and not well defined; outer subhumeral represented by a short longitudinal and outwardly arcuate stria in basal third, not attaining the base; inner subhumeral entire; first and second dorsals entire, the third obliterated toward base; fourth only visible near the apex. *Propygidium* large, coarsely but not very densely punctate, the punctures rounded and umbilicate; pygidium rather small, strongly and closely punctate. *Prosternum* not striate, the lobe long, deflexed, strongly rounded, margined; disk behind the lobe with two distant punctures. *Meso-sternum* with a small feeble median emargination; marginal stria subentire. *Legs* stout; anterior tibiae broadly triangular, with four broad external teeth arranged in two pairs; posterior tibiae parallel, very strongly compressed, the external edge thin and with a single series of four or five distant spinules. Length 4.3 mm.; width 2.4 mm.

Wyoming (Cheyenne).

The antennal cavities are deep and at some distance behind the apical angles, fully exposed, and not at all concealed by the anterior margin of the prosternum.

This interesting species is probably myrmecophilous, but no note to this effect accompanies the unique specimen, for which I am indebted to its discoverer, Mr. Hugo Soltau.

HISTER Linné.

In this genus I find a remarkable and puzzling inconstancy in a structural character, which ought apparently to be a very good one—the emargination of the prosternal lobe. For example in two otherwise completely similar specimens of *depurator* before me, both bearing the same label, the lobe is broadly subtruncate at apex, with the angles broadly and continuously rounded in one, while in the other it is visibly emarginate, with the angles acute, prominent and dentiform. Possibly these differences may be sexual, but until their origin is determined it will be unsafe to separate species upon them, unless sustained by decided divergencies in other parts of the body.¹

In *Hister* the elytra have nine striæ, besides the one or two sulci of the inflexed flanks, but several are more or less abbreviated or radically modified, so that the apparent number is much less. The first two from the suture are generally greatly abbreviated in front, the next four usually more or less nearly entire, the seventh is frequently represented by an obsolete subapical line of punctures which is rarely striiform,² the eighth by the outer subhumeral stria, sometimes obsolete or otherwise modified, and the ninth by a series of small, distantly spaced punctures along the crest of the lateral convexity. If this sequence be borne in mind, it will always be easy to understand the detached striæ and series of punctures met with in the various species. For instance in *abbreviatus*, the basal part of the coarse lateral stria is a basal remnant of the outer subhumeral, the apical part being the inner subhumeral. Besides the oblique humeral stria, there is in most species a short subtransverse outer humeral; it is impossible to state the exact significance of either of

¹ Since this was written I have examined good series of *depurator* and *incertus* and find that of nine specimens of the former, seven have the prosternum emarginate, and two broadly rounded. Of twelve examples of *incertus*, six have the prosternal lobe narrowly and evenly rounded, four broadly subtruncate with rounded angles, and two emarginate with acute angles.

² The oblique inner humeral is certainly not the basal part of this inner subhumeral as stated by Dr. Horn (Proc. Am. Phil. Soc., XIII, p. 287), the true base of the latter being sometimes seen as a short stria near the base of the former, as remarked under *Epiurus cornutus*. In *Psiloscelis repleta* Lec., the inner subhumeral is entire and similar to the first dorsal; it crosses the oblique humeral stria near its middle point and attains the basal margin, the striae not being at all distorted at the point of crossing.

these striae. The lateral line of fine punctures seems to become obsolete in *depurator* and its allies, and in that group the two or three fine marginal punctures of the pronotum are also obsolete. The meaning of these singular punctures is difficult to state, unless they be the remains of tactilo-setigerous pores.

The following species are assigned for convenience to the groups adopted by Dr. Horn:—

Group *Arcuatus*.

Margins of the prothorax fimbriate; anterior tibiae dentate.

H. semiruber n. sp.—Stout, oblong and convex, resembling *sellatus*. *Head* minutely, obsoletely punctulate, the frontal stria entire; mandibles minutely, sparsely punctulate. *Prothorax* fully twice as wide as long; sides moderately convergent, broadly, almost evenly arcuate from base to apex; marginal stria fine but distinct, entire; outer lateral entire, inflexed at apex, receding from the edge behind; inner lateral strong, nearly entire, somewhat uneven, the space between the two with one or two short striae anteriorly; disk subimpunctate, with a short deep stria before the scutellum. *Scutellum* equilateral, feebly impressed. *Elytra* rather less than one-half longer than the prothorax, and, at basal third, quite distinctly wider; apex obliquely arcuate, four-fifths as wide as the base; inflexed flanks coarsely bisulcate; outer subhumeral stria obsolete behind, but represented by a short deep stria near the extremity of the oblique humeral, which is fine; inner subhumeral feebly indicated by a few subobsolete punctures near the first dorsal; first three dorsals entire; fourth represented by a short distinct stria at base and a few subobsolete punctures at apex; fifth and sutural entirely wanting, sometimes rudimentary near the apex. *Propygidium* remotely coarsely and variolately punctate toward the sides, subimpunctate toward the middle behind; pygidium sparsely, feebly punctate, the punctures becoming larger and closer but shallow near the anterior angles. *Prosternal lobe* finely margined; posterior process spatuliform, received in the deep median emargination of the mesosternum. *Anterior tibiae* strongly bidentate, the apical tooth feebly bilobed; posterior confusedly spinose externally, remotely so toward base. Length 6.0 mm.; width 4.5 mm.

Utah (southwestern). Mr. Weidt.

Allied closely to *sellatus*, but differing in the form of the marginal stria of the mesosternum, which in *sellatus* evenly follows the rounded outline of the median emargination; in the present species it is posteriorly and acutely angulate at the emargination; it also differs in its much sparser and finer pygidial sculpture especially along the anterior margin, and in the presence of a distinct impressed appen-

dage of the outer subhumeral stria near the end of the oblique humeral, there being no vestige of this in *sellatus*.

H. sculpticauda n. sp.—Moderately broad, convex, resembling *ulkei* in color and form. *Head* minutely, sparsely punctate; frontal stria entire, transverse at apex; mandibles finely but deeply, extremely densely and conspicuously punctate. *Prothorax* not quite twice as wide as long, the sides moderately convergent, broadly, nearly evenly arcuate from base to apex; marginal stria fine, entire; outer lateral entire, arcuate at apex; inner almost entire, nearly straight, slightly approaching the outer toward base; disk minutely, sparsely punctulate, the punctures more distinct near the basal angles; there is a small puncture just within the posterior extremity of the inner stria, three minute and remote punctures along the fine marginal stria and a short deep stria before the scutellum, the latter equilateral and unimpressed. *Elytra* one-third longer and but slightly wider than the prothorax, widest very near the base, the sides feebly convergent, broadly and feebly arcuate throughout; apex oblique, broadly rounded; inflexed flanks bisulcate; punctures of the lateral series extremely minute and remote; outer subhumeral obsolete behind, represented by a short arcuate stria near the end of the oblique humeral; inner subhumeral represented by a series of punctures close to the first dorsal in apical third; first three dorsals entire, moderately coarse; fourth and fifth completely wanting; sutural deep and distinct from basal third to apical fifth. *Propygidium* extremely coarsely, deeply but variolately punctate, the punctures mingled with minute punctures; pygidium strongly, rather closely punctate, more finely so toward apex. Prosternal lobe broadly, evenly rounded, finely but strongly margined; posterior process dilated; mesosternum long, the emargination deep, broadly sinuate; marginal stria entire; sides strongly convergent from the base. Anterior tibiae strongly bidentate; posterior with two rather even external series of spinules. Length 6.5 mm.; width 4.4 mm.

New Mexico (Fort Wingate).

This species is allied to *instratus* and *ulkei*, but differs in the minutely, very densely punctate mandibles and coarse sculpture of the pygidia; the propygidial punctures are oval, more dense and even in distribution than in *ulkei*, generally separated by less than their own dimensions, and are coarser than in any other species of *Hister* known to me. The outer pronotal stria is more distant from the margin than in either of the species mentioned. The three small punctures along the marginal stria are present also in *instratus*, *ulkei* and other species, and seem to be very constant.

Group *Merdarius*.

Sides of the prothorax not ciliate; mesosternum emarginate; outer subhumeral stria entire; elytra with four subentire discal

striae, the pronotum with two entire or subentire striae, the outer distant from the margin.

This group contains a number of species, which can be distinguished among themselves as follows:—

Anterior tibiae arcuate externally, the apical tooth smaller and distinctly less prominent than the preceding.

Upper surface finely but distinctly and evenly punctured throughout.

harrisi Kby.

Upper surface subimpunctate, polished.

Sutural stria present in apical half more or less, either continuously or as a series of punctures.

Mesosternal emargination broad and extremely feeble; size small; front with an impressed puncture **stygius** Lec.

Mesosternal emargination narrower, distinct; size larger; front flat. Narrowly oval; pygidium finely, sparsely punctate; prosternal lobe narrowly and evenly rounded..... **interruptus** Beauv.

Broadly oval, the pygidium strongly and very densely punctate; prosternal lobe broadly truncate and subsinuate at tip.

virginiae n. sp.

Sutural stria very short, apical; prosternal lobe rounded, margined, very coarsely punctured laterally; pygidium strongly but not very densely punctate; body broadly suboblong. New Jersey to Louisiana.

immunis Er.

Anterior tibiae not arcuate, the apical tooth as prominent as the preceding.

Frontal stria distinct, sometimes interrupted in the middle; outer thoracic stria entire.

Propygidium coarsely sparsely and more or less unevenly punctate, the interspaces smooth and impunctate..... **merdarius** Hoffm.

Propygidium much more finely evenly and densely punctate, the punctures intermingled with others which are minute but deep and distinct.

Anterior tibiae broad, coarsely and strongly 5-dentate..... **pluto** n. sp.

Anterior tibiae narrower, much more finely and closely pluridentate; species much smaller **fractifrons** n. sp.

Frontal stria obsolete, represented only by feeble and unevenly disconnected traces toward the sides; outer thoracic stria abbreviated behind the middle..... **mormon** n. sp.

The above species are all intensely black throughout, the legs sometimes rufescent.

H. virginiae.—Broadly oval, highly polished, the minute punctules extremely feeble and sparse. Head rather more distinctly punctulate, the frontal stria not reentrant, narrowly and more or less completely interrupted in the middle. Prothorax twice as wide as long, the sides strongly convergent, broadly and rather strongly arcuate from base to apex; fine marginal stria

entire, with two small and very distant internal punctures; outer lateral stria subentire, strongly hooked at apex; inner strong, feebly sigmoid, generally somewhat abbreviated before the base; ante-scutellar stria short but deep. Scutellum unimpressed, small, equilateral. *Elytra* one-half longer than the prothorax, and, at basal third, distinctly wider; sides arcuate; apex feebly oblique, five-sixths as wide as the base; inflexed flanks coarsely, sparsely punctured, with a single fine, nearly entire stria; striae rather coarse, the subhumeral slightly abbreviated at base; ninth stria composed of small remote punctures along the convex flanks; inner subhumeral composed of more closely spaced punctures between the subhumeral and first dorsal, nearer to the former; oblique humeral very fine and feeble; first four dorsals subentire; fifth short, arcuate, occupying apical third; sutural represented by a series of coarse punctures from the apex to about the middle. *Propygidium* coarsely evenly and rather closely punctate throughout, the interspaces minutely, sparsely punctate; pygidium strongly, densely punctate. Prosternal lobe truncato-sinuate, with broadly rounded angles, finely margined, deeply but not very coarsely punctate laterally. Mesosternum deeply, broadly sinuate in median third, the marginal stria entire. Anterior tibiae rather closely 5-dentate, sometimes with a minute sixth denticle basally. Length 5.5-6.5 mm.; width 4.2-5.0 mm.

Virginia (Fredericksburg).

In view of the variations noticed in *depurator*, I am unable to estimate the true value of the truncate prosternal lobe in this species; it is however perfectly similar in the three specimens before me. The two minute punctures along the fine marginal stria of the pronotum are constant in size and position in these types.

II. *pluto*.—Rather narrowly oval, convex, polished, the punctures remote, scarcely stronger on the head but becoming distinct punctures toward the inner stria and basal angles of the prothorax. *Head* feebly impressed at the middle of the epistoma, the frontal stria distinct, subentire, with an acutely reentrant angle at the middle. *Prothorax* quite distinctly less than twice as wide as long; sides moderately convergent and broadly arcuate from base to apex; fine marginal stria entire, with two minute remote internal punctures; outer lateral stria straight, subentire, hooked at apex; inner subentire, coarse, slightly uneven; short ante-scutellar stria very deep. *Elytra* nearly as long as wide, one-half longer than the prothorax, and, before the middle, slightly wider; sides feebly, evenly arcuate; apex distinctly oblique and narrower than the base; inflexed flanks concave behind basal third, coarsely and rugosely punctate; lateral convexity with an entire series of even remote punctures; subhumeral nearly entire, the series of punctures between it and the first dorsal almost completely obsolete; humeral stria distinct; there is also a short basal stria external to this and the usual internally oblique striae from the humeral angles; first three dorsals strong, entire; fourth abbreviated more or less before the middle; fifth represented by a few subapical punctures; sutural short, subapical. *Propygidium* and pygidium densely evenly and not

very coarsely punctate. Prosternal lobe narrowly rounded, margined, finely but densely and deeply punctate laterally; mesosternum abruptly deeply and circularly emarginate in rather more than median third; stria entire. Anterior tibiae very broad, 5-dentate externally, the apical tooth acute and simple but with a small approximate denticle on the truncate apex. Length 6.6-8.0 mm.; width 4.7-5.1 mm.

Oregon; Kansas.

The specimen from Kansas has the pronotum subimpunctate near the striae and basal angles, but does not appear to differ otherwise from the Oregon types.

H. fractifrons.—Somewhat narrowly oblong-oval, moderately convex, very highly polished, the minute punctules very sparse, not much stronger or denser toward the sides of the pronotum. Head a little more distinctly punctulate, the frontal stria narrowly interrupted in the middle. Prothorax barely twice as wide as long, the sides moderately convergent, broadly and feebly arcuate from base to apex; marginal stria fine, entire, with two minute internal punctures; outer lateral straight, almost entire; inner sinuate at the middle, subentire; ante-scutellar stria feeble and extremely short. Elytra not quite one-half longer than the prothorax, and, at basal third, where the sides are somewhat more strongly rounded, slightly wider; apex broadly rounded, feebly oblique; inflexed flanks flat, strongly but not very coarsely or densely punctate; outer series of remote punctures distinct, entire; inner series between the subhumeral and first dorsal more approximate, distinct, extending to basal third; outer humeral fine, short, subtransverse; inner humeral fine, oblique; subhumeral strong, not quite attaining the base; first four dorsals entire, strong, the fourth only slightly abbreviated at base; fifth and sutural very short, apical. Pygidia rather finely evenly and very closely punctate. Prosternal lobe broadly rounded, finely and feebly margined, finely punctate; mesosternum abruptly and circularly emarginate in rather more than median third, the stria entire. Anterior tibiae with an external series of about seven small, closely placed teeth, formed principally by the short coarse spinules; posterior with an outer series of slender spinules and an inner series of stiff setae. Length 5.5 mm.; width 3.8 mm.

California (Lake Tahoe); Oregon

A variety of this species with shorter prothorax, much more widely interrupted frontal stria, and with slight but marked divergence in the serrulation of the anterior tibiae, was recently taken by Mr. Wickham in Vancouver. It may possibly be distinct, but I have at present only a single specimen.

H. mormon.—Stout, oblong-oval, convex, very highly polished, the punctules extremely minute, sparse, coarser and distinct near the posterior limit of the inner thoracic stria. Head scarcely more distinctly punctulate, flat, the occiput remotely bifoveate near the thoracic edge; epistoma very

broadly, feebly impressed; stria obsolete. *Prothorax* nearly twice as wide as long, the sides moderately convergent from the base, more convergent and rounded near the apex; fine marginal stria abbreviated behind the middle, the two marginal punctures distinct; outer lateral not entire; inner slightly uneven, subentire; ante scutellar stria well developed. *Elytra* one-half longer than the prothorax, and, at basal third, where the sides are slightly prominent, distinctly wider; apex broadly rounded, feebly oblique; inflexed flanks flattened, uneven, strongly but not densely punctate; outer series of punctures distinct, the interstitial row distinct; outer humeral very oblique, with an appendage; inner humeral distinct, not extending to basal third; sub-humeral not extending to the base, with a short oblique inferior appendage at the basal end; first three dorsals strong, entire; fourth obsolete in basal half; fifth and sutural represented by disconnected subapical punctures; there are also several short uneven oblique striae along the apex of each elytron, of which one between the first and second dorsals is especially distinct. *Pygidia* densely evenly and not very coarsely punctate. Prosternal lobe broadly rounded, strongly margined, finely, closely punctured; mesosternum broadly sinuate in median third, the stria deep and entire. Anterior tibiae with four strong, widely spaced teeth, of which the apical is bifid, and two minute sub-basal denticles; posterior with series of spinules on the acute edge, the outer series feeble, irregular and in great part discal. Length 7.5 mm.; width 5.3 mm.

Utah.

This appears to be quite an isolated species of large size; it forms a satisfactory transition to the next group.

Group *Fœdatus*.

This group is really a part of the preceding, the characters throughout being similar, except that the external of the lateral thoracic striae is more or less decidedly abbreviated, being sometimes altogether wanting; the extent of this stria is however a variable feature, and it is always more or less inconstant even within specific limits. The species are all intense black and polished, and generally smaller than the allies of *merdarius*; they are also more closely allied among themselves. Those known at present may be thus distinguished:—

Outer lateral stria of the pronotum distinct, though much abbreviated.

Sutural stria generally longer than the fifth dorsal and attaining the middle.

Form narrowly oval, the punctures of the propygidium coarse and strongly umbilicate **umbilicatus** n. sp.

Form broadly oval, the propygidial punctures fine and very dense; elytral striae much coarser **fœdatus** Le.

Sutural stria generally short, equal to the fifth dorsal and not attaining the middle.

Form broadly oval, the inner lateral stria of the pronotum very broadly arcuate at apex..... **hudsonicus** n. sp.

Form narrowly oval, the inner stria strong and narrowly arcuate at apex ; propygidial punctures fine even and extremely dense.

umbrosus n. sp.

Outer lateral stria completely obsolete, or represented by a few small disconnected punctures anteriorly.

Elytra with four entire dorsal striæ, the fourth inwardly arcuate at base ; form broadly oval **unicus** n. sp.

Elytra with three entire dorsal striæ, the fourth more or less abbreviated at base.

Form broadly oval, the pronotum punctate toward the lateral stria, the space between the stria and the lateral edges more or less convex.

Fourth dorsal stria abbreviated before the middle.

marginicollis Lec.

Fourth dorsal very nearly attaining the base..... **cognatus** Lec.

Form oblong, subparallel, the pronotum subimpunctate toward the lateral stria, the latter more distant from the edge, the enclosed space flatter ; fine marginal stria entire and inflexed at base..... **remotus** Lec.

The characters of *marginicollis* are taken from published descriptions, but the fine marginal stria of the pronotum is probably similar to that of *cognatus*, where it is greatly abbreviated and very different from that of *remotus* ; *fedatus* probably does not extend to the Pacific Coast, but is replaced there by the more narrowly oblong *umbrosus*. I have taken *remotus* at San Francisco.

H. umbilicatus.—Narrowly oval, the sides evenly arcuate ; minute punctures feeble, only slightly more evident toward the sides of the pronotum. *Head* even, not impressed, obsolete punctulate, the frontal stria entire, transverse at apex. *Prothorax* not quite twice as wide as long, the sides strongly convergent and almost evenly but feebly arcuate ; fine marginal stria abbreviated at the middle, the marginal punctures almost obsolete ; outer lateral stria greatly abbreviated ; inner strong, more or less abbreviated at base ; ante-scutellar stria very small, feeble. *Elytra* one-half longer than the prothorax, and, before the middle, distinctly wider, the sides evenly arcuate ; apex rather strongly oblique, feebly rounded ; inflexed flanks concave, scarcely punctate, finely unistriate ; marginal series of punctures feeble, not extending before the middle, the interstitial series feeble ; subhumeral stria subentire, with an oblique inferior basal appendage ; outer humeral fine ; inner extending to basal fourth ; dorsals moderately coarse, the first three entire ; fourth slightly abbreviated at base ; fifth present in apical third, the sutural in about apical half. *Propygidium* coarsely, closely punctate, the pygidium less coarsely but extremely densely and polygonally cribrate ;

all the punctures strongly umbilicate. Prosternal lobe finely but distinctly margined, narrowly rounded; mesosternum feebly but abruptly and circularly emarginate in median third, the stria entire. Anterior tibiae with five small acute teeth, the apical double. Length 4.4–5.5 mm.; width 2.9–3.4 mm. .

California (Marin Co.).

In one of the two specimens before me the outer thoracic stria is only a short straight line in apical fourth, not arcuate at apex; in the other it extends to, or a little beyond, the middle and is inwardly arcuate at apex; there is however no other perceptible difference, except in size and in the fact that the first mentioned has the mesosternal stria imperfectly interrupted in the middle. Another specimen, taken at San Francisco, is almost similar but has the punctures of the propygidium still coarser, less umbilicate and very noticeably less dense, in fact rather sparse, and the sutural stria shorter.

H. hudsonicus.—Broadly oval, convex, the minute punctules extremely feeble and sparse, becoming distinct punctures toward the apices of the elytra and very near the deep pronotal stria. *Head* obsoletely punctulate, feebly convex, unimpressed, the frontal stria deep and coarse, entire but somewhat uneven, feebly reëntrant at apex. *Prothorax* twice as wide as long, the sides strongly convergent, strongly, almost evenly arcuate from base to apex, the fine marginal stria entire; two marginal punctures distinct; outer lateral stria straight, extending almost to the middle, hooked at apex; inner coarse and subentire, nearly even, feebly crenulate along the apex; ante-scutellar stria very short but coarse. *Elytra* distinctly wider than long, about one-half longer than the prothorax, at or just before the middle a little wider; sides broadly, evenly arcuate; inflexed flanks unevenly punctate, unevenly unistriate; punctures of the lateral series fine, the interstitial series almost obsolete; outer humeral feeble, subtransverse; inner feeble, deeper at base; subhumeral strong, punctulate, subentire, with a transverse inner basal appendage and another oblique and inferior; dorsals coarse, subpunctulate, the first three entire; fourth slightly abbreviated at base; fifth and sutural equal and apical. *Propygidium* coarsely deeply densely and evenly punctate, the pygidium more finely but deeply, very densely so. Prosternal lobe evenly rounded, strongly margined, coarsely punctate laterally; mesosternum truncate, broadly, feebly emarginate in the middle, the stria deep close and entire, subpunctate. Anterior tibiae arcuate externally, with about six small serri-form teeth, principally formed by the short stout spinules; posterior with two even series of slender spines, the inner setiform. Length 6.0 mm.; width 4.7 mm.

New York.

Somewhat resembles *fadatus*, but readily distinguishable by its larger size, more broadly arcuate inner pronotal stria at the apical

angles, margined prosternal lobe, more strongly emarginate mesosternum, shorter sutural stria, more coarsely punctured propygidium and several other characters.

H. umbrosus.—Oblong, convex, the minute punctules invisible on the elytra but distinct and moderately close over the entire surface of the pronotum, with a few stronger punctures near the middle of, and behind, the inner stria. *Head* minutely punctulate, unimpressed, the frontal stria entire, transverse at apex. *Prothorax* twice as wide as long, the sides rather strongly convergent and evenly arcuate from base to apex; fine marginal stria abbreviated at the middle, the two marginal punctures visible; outer lateral stria straight, extending to the middle but scarcely at all hooked at apex; inner subentire, coarse, nearly straight; ante-scutellar stria short, strong. *Elytra* two-thirds longer than the prothorax and but little wider, the sides evenly, feebly arcuate; inflexed flanks minutely, strongly punctulate and convex anteriorly, abruptly, longitudinally excavated, smooth, more coarsely but sparsely punctate behind, unistriate throughout; lateral series of punctures only visible toward apex; outer humeral stria feeble, subtransverse; inner rather long, continued to apex by the interstitial series of punctures which are feeble; subhumeral subentire, inwardly hooked at base, the inferior oblique appendage feeble; dorsals rather coarse, the first three entire; fourth abbreviated at base; fifth and sutural equal, apical. *Propygidium* not very coarsely, densely and evenly punctate, the pygidium scarcely more finely, extremely densely so. Prosternal lobe rounded, feebly margined; mesosternum broadly truncate, the median emargination rather shallow; stria entire. Anterior tibiae arcuate externally, pluridentate, the teeth small, serriform, formed principally by the stout spinules; posterior with an outer series of spinules and an inner row of rather long, stiff, close-set setae. Length 4.4–5.4 mm.; width 3.3–3.7 mm.

Oregon

May be distinguished from *fædatus* by its more elongate and oblong form, more strongly punctulate entire disk of the pronotum, shorter sutural stria, more strongly emarginate mesosternum and less transverse elytra. It is however closely allied to *fædatus*, the principal differential character being the obviously narrower and oblong outline. Three specimens.

H. unicus.—Broadly oval, rather strongly convex, the punctulation completely obsolete on the elytra and nearly so on the pronotum, the latter strongly closely and rather coarsely punctate in a broad area along the lateral stria, equally broadly from apex to base, the convex surface thence to the lateral edge minutely but distinctly punctulate. *Head* subimpunctate, unimpressed, the stria strong, entire, the transverse apical part feebly sinuate throughout. *Prothorax* rather small, fully twice as wide as long, the sides strongly convergent and evenly arcuate from base to apex; fine marginal stria

entire, distinct, the marginal punctures obsolete; lateral stria strong, subentire, straight and somewhat orenulate, especially along the transverse apex; ante-scutellar stria extremely short, punctiform. *Elytra* transverse, one-half longer than the prothorax, and, at the middle, rather more than one-fifth wider; sides evenly and strongly arcuate; inflexed flanks flattened and feebly punctate posteriorly, the single stria much coarser in the flattened area; marginal series of distant punctures obsolete; interstrial row subobsolete; outer humeral short, oblique, feeble; inner rather long, fine, extending beyond basal third; subhumeral rather coarse, subentire, feebly arcuate basally, with a fine oblique inferior appendage only; dorsals coarse and deep, the first four entire, the fourth arcuate at base halfway to the scutellum; fifth and sutural finer, short, equal and apical; surface near the base of the first dorsal distinctly and broadly impressed. *Propygidium* rather coarsely evenly and very densely punctate, the pygidium strongly, very densely so toward base, gradually more finely and obsoletely toward tip. Prosternal lobe broadly rounded, subtransverse and strongly margined at apex; mesosternal emargination very feeble and broadly rounded. Anterior tibiae arcuate externally, and with about six small spiculiiform teeth; spinules of the posterior small but rather close-set. Length 4.5 mm.; width 3.6 mm.

New York (Catskill Mts.).

Readily distinguishable by the broadly oval form with subinflated elytra, and by the pronotal sculpture; from *marginicollis* it may be known by the entire and basally arcuate fourth dorsal stria and very densely punctate propygidium.

Group *Abbreviatus*.

Resembles the preceding, but with the subhumeral stria greatly abbreviated, interrupted or obsolete. The anterior tibiae are minutely serrulate externally, sometimes almost mutic. The two species here described may be known from any of the others by the coloration, which is similar to that of *militaris*:—

H. electus n. sp.—Oblong-oval, thick, convex, the punctulation extremely minute and sparse, the pronotum strongly, densely punctate along the basal margin, gradually more narrowly to the middle; elytra red and black. *Head* feebly punctulate, very broadly and feebly concave anteriorly; stria entire, the apical part wide and feebly sinuate. *Prothorax* twice as wide as long, the sides feebly convergent and nearly straight to beyond the middle, then more rapidly rounded; fine marginal stria entire; three marginal punctures very feeble; outer lateral stria strongly hooked at apex, extending only to apical third; inner subentire, nearly straight, very distant from the sides anteriorly, gradually approaching the edge posteriorly; ante-scutellar stria very short, strong. Scutellum small, equilateral. *Elytra* wider than long, not quite one-half longer than the prothorax, and, at basal third, scarcely perceptibly

wider; inflexed flanks feebly concave, sparsely, finely punctate, unevenly bistriate; lateral series of punctures feeble, present in apical half only; outer subhumeral completely wanting; inner represented by a feeble row of scarcely perceptible punctures; outer humeral feeble, subtransverse; inner very short and feeble, longitudinal and coarse at base; dorsal stria moderately coarse, feebly crenulate within, the first three entire; fourth and fifth subequal, not extending to the middle; sutural but little longer; all the striae ending abruptly at a considerable distance from the posterior margin. *Propygidium* rather coarsely, extremely densely punctate, the punctures contiguous, a small area at each side near the base impunctate; pygidium but slightly less coarsely, very densely punctate, subimpunctate at tip. Prosternal lobe finely, sparsely punctate, broadly rounded, scarcely at all margined at apex; mesosternal sinus deep, the stria entire. Anterior tibiae with five or six small external denticles formed by the robust spinules. Length 5.5 mm.; width 3.7 mm.

Washington State.

The coloration will distinguish *elertus* from any other species except the following, but in the complete absence of the subhumeral stria it is allied to *civilis*; the latter is much less convex.

H. oregonus n. sp.—Narrowly oblong, convex; minute punctules obsolete, the pronotum punctate along the base as in *electus*. *Head* impunctate, broadly, feebly concave anteriorly, the stria entire, the apical part very long and nearly straight. *Prothorax* notably less than twice as wide as long; sides parallel and nearly straight in basal half, gradually rounded and convergent anteriorly; fine marginal stria distinct, entire, slightly incurved at base; three marginal punctures almost completely obsolete; outer lateral stria slightly hooked at apex, extending nearly to the middle; inner subentire, distant from, but nearly parallel to, the sides, sinuate in the middle; surface between the two striae distinctly but finely, unevenly punctate. *Elytra* not more than one-third longer than the prothorax, and, near basal fourth, where the sides are a little more strongly rounded, only slightly wider; inflexed flanks with a broad dilated sulcus, which is coarsely and rugulose sculptured, the second stria not distinct; inner humeral stria very feeble, short, with a fine detached basal appendix; striae otherwise as in *electus*, except that the dorsals are finer and not crenulate, and the sutural extending to basal third. *Propygidium* not very coarsely but deeply, very densely punctate, with two distant impunctate spots near the base; pygidium scarcely, more finely, equally densely punctate, gradually becoming subimpunctate behind basal two-fifths, especially along the middle. Anterior tibiae triangular, with a prolonged outwardly oblique bifid terminal tooth, but without trace of further serration, except a minute isolated denticuliform spinule near basal third; posterior tibiae rather narrow but strongly, closely, biserially spinulose. Length 4.4 mm.; width 2.7 mm.

Oregon.

The sterna are nearly as in *electus*, to which this species is closely allied. It differs in the deep, coarsely sculptured and dilated sulcus of the elytral flanks, structure of the anterior tibiæ, in the smaller, more narrowly oblong and parallel body, more finely sculptured pygidia, longer sutural stria, subparallel inner thoracic stria and in several other features.

PHELISTER Mars.

The small species separated under this name by Marseul are peculiarly American and may prove to be tolerably numerous in the United States. Of those described thus far, *æneomicans* and *venustus* are metallic æneous and greenish-blue respectively. Of the non-metallic species *gentilis* has all the striæ entire, the sutural and next dorsal joined at base; *subrotundus* has the sutural stria alone abbreviated, the inner dorsal not hooked at base; *vernus* and *saunieri* have the inner dorsal and sutural striæ equally abbreviated at base, the former represented at base by a puncture, the fourth dorsal not hooked at base; the last two species must be very closely allied if distinct.

P. geometricus n. sp.—Broadly oval, rather feebly convex, highly polished, impunctate except a broad line of coarse punctures along the sides of the pronotum, dark rufo-castaneous, the elytra piceous-black except at apex. Head small, feebly concave, the stria feeble. Prothorax twice as wide as long, the sides moderately convergent and nearly straight, becoming more convergent and arcuate near the apex; fine marginal stria entire; submarginal fine, very close to the edge, abbreviated at the middle, broadly, inwardly hooked at apex; subapical stria crenulate, reflexed at the extremities. Elytra one half longer, and, before the middle, quite distinctly wider than the prothorax; sides evenly rounded; apex narrow, scarcely more than three-fourths as wide as the base; inflexed flanks finely crenulato-bistriate; inner and outer humeral striæ excessively faint; subhumeral completely wanting; dorsals rather coarse, punctulate; first four entire, the fourth strongly hooked halfway to the scutellum at base; fifth and sutural abbreviated at basal third. Propygidium moderately coarsely, densely and evenly punctate the punctures almost contiguous; pygidium very minutely and rather sparsely punctate. Prosternal striæ becoming subparallel; posterior margin not distinctly sinuate; mesosternum evenly, transversely truncate at apex. Antennal fossæ very deep. Length 2.0 mm.; width 1.5 mm.

Texas (Austin).

Readily distinguishable from *vernus* by the hooked fourth dorsal stria, impunctate surface and truncate mesosternum. One specimen.

PLATYSOMA Leach.

The following species is allied to *lecontei*:—

P. tabella n. sp.—Oblong, broad, parallel, depressed, highly polished, impunctate except along the sides of the pronotum, where the punctures are rather small but deep and sparse, closer smaller and more uneven near the apical angles. *Head* broadly, feebly concave anteriorly; stria fine but entire, convergent toward base. *Prothorax* not quite twice as wide as long, the submarginal stria entire coarse and deep; transverse apical stria extending to the apical part of the submarginal, where it is feebly reflexed. *Elytra* three-fourths longer and scarcely visibly wider than the prothorax; inflexed flanks closely bisulcate; humeral stria feeble, diverging but slightly from the first dorsal; dorsals rather fine but deep, impunctate, the first four entire; fifth and sutural short, not quite extending to the middle. *Propygidium* rather coarsely but sparsely punctate, finely so in the middle; pygidium rather coarsely but sparsely punctate, the punctures shallow and becoming small toward tip. *Prosternal lobe* large, very broadly rounded, minutely margined at apex; *mesosternum* broadly, distinctly sinuate at apex, the marginal stria fine but entire. *Anterior tibiae* acutely and strongly 4-dentate. Length 4.0 mm.; width 2.0 mm.

Indiāna?

Differs from *lecontei* not only in its larger size, but in the perfectly entire fourth dorsal stria and in the apical angles of the prothorax, which are less transversely rounded and more anteriorly prominent. The locality is possibly somewhat doubtful, as the single specimen had no label in the Levette cabinet. There is no corresponding Mexican species however.

EPIERUS Erichs.

The species of *Epicurus* present but little diversity of appearance, but may be readily separated by the following structural characters:—

Elytra with all the striae entire, the fifth and especially the sutural, sometimes very feeble or obsolescent toward base.

Fifth dorsal and sutural striae distinct and strong to the base.

Inflexed flanks of the elytra strongly bisulcate; body strongly convex.

Form broadly oval; pygidium extremely finely and feebly punctulate; prosternal striae widely separated (*nigrellus* Say).

regularis Beauv.

Form more narrowly oval; pygidium distinctly but sparsely punctate anteriorly; prosternal striae narrowly separated and less divergent anteriorly.....**vicinus** Lec.

Inflexed flanks not bisulcate, unistriate or with a line of confused punctures.

Body convex.

Pygidium and pronotum more coarsely and strongly punctate.

novellus Zimm.

Pygidium and pronotum very finely punctulate; prosternal striæ becoming parallel and very close, not divergent anteriorly.

pulicarius Er.

Body subdepressed, elliptical; prosternal striæ feebly divergent anteriorly from the middle; subhumeral stria nearly straight, not inferior.

ellipticus Lec.

Fifth dorsal and sutural striæ subobsolete near the base, the former however always traceable; body strongly depressed; male with a small corniform frontal process; prosternal striæ very distant and strongly divergent anteriorly from the middle; sternal suture simple; mesosternal stria entire; apical stria of the pronotum broadly interrupted.

Short, broadly oval; prosternum extremely minutely, sparsely punctulate, the apical lobe not margined; elytra without trace of the inner subhumeral stria; pygidium indistinctly punctulate (*decipiens* Lec., *nasutus* Horn).....

planulus Er.

Elongate, narrowly oval; prosternum densely and strongly punctulate, the apical lobe finely, deeply margined; elytra with the inner subhumeral distinct in apical half and very close to the first dorsal; pygidium finely but strongly and distinctly punctate.

cornutus n. sp.

Elytra with the fifth dorsal and sutural completely obliterated in basal third; body short, strongly convex; transverse sternal suture double.

subtropicus n. sp.

In most of the species the two minute marginal punctures of the pronotum referred to under the various species of *Hister*, are evident and constant.

E. cornutus.—Rather elongate, oblong-oval, depressed, shining, black, the tarsi dark rufous; antennæ piceo-rufous, the club pale flavo-testaceous; integuments very finely, densely punctate throughout. *Head* not margined, more prominent at the sides above the antennæ; clypeus large, nearly vertical, with a short erect process at apex, bearing a short stiff seta, the clypeal suture feeble. *Prothorax* almost twice as wide as long, the sides feebly convergent, broadly, feebly arcuate throughout; marginal stria deep, inferiorly arcuate in the middle of the sides, broadly interrupted at apex; two marginal punctures distinct; disk with a very obsolete impression along the median line in nearly basal half. *Elytra* as long as wide, twice as long as the prothorax and only very slightly wider; sides evenly, feebly arcuate; base broadly, angularly emarginate throughout; inflexed flanks unistriate; marginal stria inferior, gradually ascending near the base; outer subhumeral represented by a few remote punctures; inner distinct toward apex and with

traces at base which appear to be independent of the oblique humeral, the latter distinct; dorsals strong, finely punctate within, entire; sutural obsolescent at base. *Propygidium* finely but strongly, rather closely, the pygidium more sparsely but equally distinctly punctate, the punctures intermixed with others which are minute. Prosternum strongly, remotely bistriate; mesosternum broadly, feebly sinuato-truncate; marginal stria entire. Length 2.3-2.5 mm.; width 1.2-1.3 mm.

New Mexico (Las Vegas).

Resembles *planulus*, but remarkably distinct by reason of the characters stated in the table. It is allied also to *longulus*, and there are probably several other species having the clypeus similarly tuberculate in the male. Three specimens.

In this species the marginal stria is the ninth, and is represented only by a row of distant punctures in Hister; the two or three remote and evanescent punctures on the convex flanks here represent the outer subhumeral, and the inner subhumeral evidently attains the basal margin irrespective of the oblique inner humeral.

E. subtropicus.—Broadly oval, strongly convex, highly polished, black throughout; antennal club very pale. Head minutely, closely punctate, equally prominent throughout the width between the antennæ; clypeus large, slightly inflexed, more densely punctate, the suture transverse and very fine; apical margin slightly tuberculate at the middle. Prothorax fully twice as wide as long; sides strongly convergent, a little more arcuate toward apex; marginal stria straight, not interrupted at apex; disk uniformly, finely but strongly and not densely punctate, the punctures coarser at the basal margin, rather broadly so in the middle. Elytra distinctly shorter than wide, not quite twice as long as the prothorax, and, near the middle, quite distinctly wider; sides evenly, distinctly arcuate; disk very minutely, evenly, sparsely but distinctly punctulate, less strongly than the pronotum; inflexed flanks unistriate; lateral stria entirely inferior, only slightly ascendent toward base; outer subhumeral wanting, the inner represented only by a short trace near the middle; oblique humeral fine but long; dorsal striæ not very coarse, abrupt, not distinctly punctate; first three entire; fourth not quite attaining the base; fifth and sutural abruptly abbreviated, the sutural also abbreviated before the apex. Propygidium finely but strongly, not densely punctate, the pygidium large, flat, with the punctures fine deep and rather close. Prosternum with the deflexed lobe very short, wide, strongly and finely margined at apex, the intercoxal striæ distant, becoming subparallel and slightly abbreviated anteriorly; mesosternum with a broad and shallow emargination, the apical stria broadly interrupted. Intersternal suture widely double, the anterior line broadly subangulate throughout the width, distinct, evenly crenulate, extending anteriorly two-thirds to the emargination; posterior line almost obliterated. Length 2.3 mm.; width 1.6 mm.

Florida.

This species is possibly the same as that which is identified in our lists as the Colombian *brunnipennis* of Marseul; it differs greatly from *brunnipennis*, irrespective of color, in its non-interrupted apical stria of the pronotum and by the widely interrupted mesosternal stria.

CARCINOPS Mars.

This genus is well distinguished from *Paromalus* by the distinct scutellum and striate elytra. In *conjunctus* and *opuntiae* the fine sculpture is very remarkable, the minute punctulation in the former being arranged in short transverse lines, each consisting of two or three minute approximate points, and in the latter, in more rounded clusters of two or three. In some of the allied species the minute punctures, although simple, bear evidence from their somewhat irregular outlines, of being an incipient stage of the clustered points of *opuntiae*. *Conjunctus* is abundant at Fredericksburg, Virginia.

The species allied to *gilensis* by the partial obliteration of the subhumeral stria, may be distinguished among themselves as follows:—

Surface convex, the prothorax longer, barely twice as wide as long.

Subhumeral stria obsolete; size larger, more oblong-elongate.

gilensis Lec.

Subhumeral represented behind by a fine stria or series of punctures.

Broadly oval; outer subhumeral at base—near the oblique humeral—long and striiform.....**consors** Lec.

Narrowly oval, smaller, the outer subhumeral represented at base by a deep elongate puncture.....**papagoana** n. sp.

Surface depressed; size smaller; prothorax much shorter, more than twice as wide as long.....**corticalis** Lec.

Corticalis is apparently not the same as *tenellus* Er., the size being much smaller, and the prothorax is still shorter according to the figure of Marseul. The width given by Marseul for *tenellus* is 1.5 mm., while the largest specimen of *corticalis* which I have seen is not more than 1.0 mm. wide; Marseul is however somewhat uncertain in his measurements. Of *14-striatus* I have a specimen taken in Lake Co., California; it is doubtless cosmopolitan.

C. papagoana.—Narrowly oblong-oval, black, the legs and antennae dark rufous, polished, the minute punctulation sparse, scarcely visible, simple, with stronger sparse punctures only narrowly along the elytral apex and

broadly, unevenly at the sides of the pronotum. *Head* evenly, feebly convex, not at all impressed, finely, sparsely punctulate, the punctures larger and minute intermingled, distinctly striate along the lateral edges almost to the front. *Prothorax* not quite twice as wide as long, the sides feebly convergent and nearly straight in basal two-thirds, more rounded and convergent at apex; marginal stria deep, entire, continuous along the apex. *Elytra* but little wider than the prothorax, three-fourths longer, the apex two-thirds as wide as the base; sides broadly, evenly arcuate; inflexed flanks strongly bistrate; inner subhumeral represented by a feeble series of uneven punctures; oblique humeral short and very fine; dorsals coarse, deeply impressed and finely crenulate; first four entire; fifth and sutural abbreviated at basal third. *Propygidium* rather coarsely deeply and densely punctate, except near the hind margin; pygidium finely but deeply, sparsely and unevenly punctate, also with intermingled minute punctules; stria attaining the basal angles. Prosternal lobe large, subquadrate, finely, dually punctulate; intercoxal part strongly bistrate; mesosternum broadly, very feebly sinuate, the marginal stria very broadly, posteriorly angulate. Anterior tibiae strongly bidentate. Length 1.9–2.2 mm.; width 1.2–1.25 mm.

Arizona (Benson).

Three specimens. In this genus there is no true antennal fossa, the antennae being simply protected by the anterior legs when the latter are folded into the large crural excavation toward the sides of the prothorax beneath.

PAROMALUS Erichs.

The species of this genus inhabiting the United States may be outlined as follows:—

Prosternum with two long deep striae; body larger, strongly depressed.

aequalis Say.

Prosternum not striate, except sometimes feebly or partially; body smaller, narrower and more convex.

Elytra without trace of sutural stria.

Elytra with two deeply impressed oblique striae sublaterally at base.

bistriatus Er.

Elytra with the oblique striae very feeble or obsolete.

Form cylindrical, short, resembling *Tetralix americanus*; prosternum flattened **feres** Lec.

Form oblong-oval.

Punctures small, much finer than in *difficilis* **debilis** Lec.

Punctures strong but sparse, fully as large as in *difficilis* but more distant **mancus** n. sp.

Elytra with a distinct abbreviated sutural stria.

Prosternum with two long feeble and interrupted striae; pygidium merely with a few fine vermiculate lines in the male; form oval, more convex,

smaller, the elytra subinflated at basal fourth, and distinctly wider than the prothorax; sides of the latter more convergent from the base.

seminulum Er.

Prosternum without striæ, or with two very short striæ posteriorly; form oblong-oval, the elytra but slightly wider than the prothorax.

Subdepressed, the elytra not quite as long as wide....**difficilis** Horn.

Rather more convex and elongate, the elytra longer and more narrowed at apex, fully as long as wide.....**complexus** n. sp.

I cannot distinguish *estriatus* and *affinis* of LeConte from *æqualis*, in which species there is considerable sexual disparity, some specimens—probably the males—being more narrowed posteriorly than others. *Æqualis* is very different in general appearance from the other species of the table.

The species above identified as *seminulum* is common in the Mississippi Valley and North Carolina, but does not agree very well with Marseul's figure, where the elytra are represented as only slightly more than one-half longer than the prothorax; in the specimens before me the elytra are twice as long as the prothorax, and there are several other notable differences.

P. mancus.—Narrowly oblong, moderately convex, black, polished, strongly but sparsely punctate, more finely and closely on the pronotum. Head even, finely punctate; marginal stria fine but entire, following the sub-lateral sinuations. Prothorax scarcely more than three-fourths wider than long; sides very feebly convergent and scarcely arcuate, becoming gradually more arcuate and distinctly convergent toward apex; marginal groove deep, entire, unbroken along the apex; punctures toward the sides scarcely at all larger but sensibly closer; base transverse. Elytra fully as long as wide, not much more than twice as long as the prothorax and only just visibly wider; sides feebly arcuate; apex three-fourths as wide as the base; inflexed flanks with a fine subcariniform entire stria, continuing unbroken around the apical angles, forming an apical stria which is curved slightly forward at the suture and then obliterated; two oblique striæ very feeble, the outer traceable far behind the middle. Propygidium finely, not densely punctate, the pygidium very minutely, less distinctly but less sparsely so, in one of the sexes with a few central vermiculate erosions. Prosternum with the lobe broadly rounded, not margined and finely, sparsely punctate, flattened behind, without trace of striæ, the process rounded; mesosternum not striate at apex, the emargination distinct; lateral striæ coarse; surface with a broadly trapeziform stria behind the emargination. Anterior tibiæ broad, semi-circularly rounded externally, and with four small acute equal and equidistant teeth, the apex broadly oblique and straight. Length 2.1–2.25 mm.; width 1.0–1.15 mm.

California (Humboldt Co.).

A little larger than *bistriatus* and with a broader prosternum. The suture between the meso- and metasterna is singularly and

variously modified in this genus; in *bistriatus*, for example, it becomes broadly double, the anterior margin strongly biarcuate; the trapeziform stria of *mancus* is also a peculiar and very different modification. Three specimens.

P. complexus.—Oblong-oval, moderately convex, polished, piceous-black, the legs and antennæ rufous; punctures of the head and pronotum very fine, sparse, even, of the elytra stronger but fine and rather sparser. *Head* not impressed, the marginal stria extremely fine and feeble but entire. *Prothorax* three-fourths wider than long, the sides feebly convergent and just visibly arcuate, becoming more convergent and arcuate toward the apex; marginal stria entire, not interrupted at apex. *Elytra* nearly as long as wide, three-fourths longer than the prothorax, and, before the middle, only very slightly wider; marginal stria with a row of distinct punctures internally, extending along the apex almost to the suture; oblique basal striæ feeble; sutural strong, straight, extending to basal third. *Propygidium* finely but deeply, evenly and rather closely punctate, the pygidium finely, about equally closely so, almost entirely occupied, except in basal fourth, by a large and very deep, circular excavation, which is longitudinally divided along the middle by a compressed carina, the bottom of the excavation coarsely granulose, two or three of the tubercles near the posterior extremity being large and prominent. Prosternum prominent and rounded behind, with two very short subapical striæ, the lobe large, strongly deflexed, not margined and more strongly punctate; mesosternum not margined at apex, the emargination deep; transverse suture feebly double, the anterior line unevenly, feebly bi cuspid. Anterior tibiæ with four nearly equidistant external teeth. Length 1.9 mm.; wid h 1.0 mm.

Alabama.

The single type is probably a male, the sculpture of the pygidium being very remarkable. *Complexus* is allied to *seminulum*, but in the male of that species the pygidium is simply vermiculate.

ONTHOPHILUS Leach.

The following species is allied to *lecontei*:—

O. soltau n. sp.—Evenly oval, moderately convex, polished, black, the legs rufo-piceous. *Head* finely, strongly, very densely punctate, more sparsely and coarsely so in the feeble impression between the slightly oblique latero-frontal ridges; epistoma large, evenly convex, trapezoidal, the suture obsolete. *Prothorax* twice as wide as long, the sides straight and parallel to the middle, then abruptly, strongly convergent and straight to the apex, the apical angles slightly obtuse and scarcely at all rounded; disk strongly but not very coarsely or closely punctate, the punctures somewhat uneven, large and small in size; lateral margin thickened and strongly, abruptly reflexed; lateral

ridge strong, becoming attenuated and outwardly curvate anteriorly in the direction of the apical angle, attaining apical fifth, perfectly straight and feebly, outwardly oblique throughout posteriorly, attaining the base; remaining ridges only feebly traceable, on each side one fine and basal, near the lateral ridge, another attaining neither base nor apex, and a third near the middle in apical half. *Elytra* more distinctly rounded in basal third, behind the base quite distinctly wider than the prothorax, more than twice as long, nearly as long as wide, each with seven strong fine and even ridges, the interspaces coarsely grooved, the grooves remotely, not strongly punctate and enclosed each by two fine, less elevated carinæ; inflexed flanks coarsely, strongly punctato-reticulate, with an abrupt deep and remotely punctate groove near the lateral ridge, inferiorly arcuate near the base, not attaining the latter, the carina fine only visible in basal fifth. *Propygidium* not twice as wide as long, strongly, rather closely but not very coarsely punctate, somewhat strongly carinate; pygidium very strongly inflexed, longer than wide, strongly, rather closely and unevenly punctate, the punctures finer toward apex. Prosternum wide, coarsely but sparsely punctate; mesosternum broadly, strongly cuspid at apex, fitting closely into the prosternum, very coarsely, somewhat closely punctate. *Legs* long, slender; tarsi notably elongate, the ungues very long slender and feebly arcuate. Length 3.0 mm.; width 2.2 mm.

Colorado (Denver).

Two specimens taken by Mr. Hugo Soltau, one of which he has kindly placed in my cabinet. From *lecontei* this species differs greatly in the broadly but strongly angulate sides of the prothorax, and in the wholly different form of the strong lateral ridges of the pronotum.

ANAPLEUS Horn.

The two species in my cabinet may be readily known as follows:—

Evenly oval, the elytral apex narrow, less than one-half of the maximum width; prosternum between the coxæ rather wider than long; punctures throughout very coarse and strong.....	marginatus Lec.
More oblong-oval; elytral apex fully one-half of the maximum width; prosternum narrower between the coxæ, about as long as wide; punctuation less coarse and more superficial.....	compactus n. sp.

These two species can be readily discriminated by certain peculiarities of facies, which are difficult to describe exactly.

A. compactus.—Oblong-subrotund, rufo-testaceous throughout, moderately shining, rather coarsely, densely punctate. Head concave between the antennæ, the point of insertion of the latter visible anteriorly. *Prothorax* about two and one-half times as wide as long, the apex one-half as wide as

the base, the latter broadly, obtusely angulate; sides strongly convergent, evenly and distinctly arcuate; disk with an acute lateral edge but devoid of marginal stria. Scutellum distinct, small, equilateral. *Elytra* not as long as wide, fully two and one-half times as long as the prothorax, and, near basal third, distinctly wider; apex transversely truncate; sides strongly, evenly rounded; epipleura distinctly unistriate; acute lateral edge feebly reflexed; disk with two short oblique and extremely obsolete elevated lines laterally at base; suture gradually and feebly elevated. *Propygidium* partially covered by the elytra, not exposed from above; pygidium large, moderately inflexed, convex, shining, finely, sparsely punctate. Prosternal lobe short, not margined, parallel intercoxal striæ distant; posterior margin truncate, feebly sinuate in the middle; mesosternum not margined at apex. Length 1.45 mm.; width 1.2 mm.

California (San Diego).

A single specimen of undetermined sex. Of *marginatus* I obtained a single specimen at Austin, Texas.

BACANIUS Lec.

The general characters of this genus indicate a strong affinity with *Anapleus*, and it bears much the same relation to the other genera of *Histrini* that *Abræus* does to *Saprinus* and its allies. The prosternal lobe is strongly developed throughout the genus, and there seems to be scarcely any other reason for associating it with *Abræus* than the minute size of the body. *Bacanius* is a very definitely limited and widely distributed genus, in which the species are much better defined and more isolated among themselves than in *Acritus*. The species of our fauna may be readily identified as follows:—

Elytra without an entire marginal carina.

Elytra without discal striæ.

Elytra with a fine entire and oblique sublateral stria: elytral punctures forming long coarse longitudinal rugæ; size minute.

punctiformis Lec.

Elytra with a fine sublateral stria in apical half; elytral punctures distinct rounded and isolated; size larger.....**tantillus** Lec.

Elytra with several coarse oblique discal striæ; surface very convex, the punctures isolated; size still larger.....**globulinus** n. sp.

Elytra with an entire marginal carina and an entire or subentire sublateral stria.

Sublateral stria entire; pygidium very minutely and remotely punctulate.

misellus Lec.

Sublateral stria abbreviated at base; pygidium strongly and rather closely punctate.....**debilitans** n. sp.

Elytra with two fine and acute, parallel approximate and entire marginal carinae; surface much less convex **acuminatus** n. sp.

Other forms doubtless exist in cabinets, but the species are much less numerous than in *Acritus*.

B. globulinus.—Broadly oval, very convex, polished, dark rufo-testaceous throughout. *Head* even, not concave, very minutely, sparsely punctulate, gradually more closely and strongly punctate toward the epistomal apex; antennal tubercles rather acute, not vertically prominent. *Prothorax* nearer thrice than twice as wide as long; sides very strongly convergent, broadly, strongly and evenly arcuate throughout; apical angles acute; marginal line acute, extending unbroken along the apex; punctures very fine and sparse anteriorly, becoming gradually slightly larger and less sparse toward base. Scutellum invisible. *Elytra* long, convex and declivous behind, narrowly subtruncate at apex viewed posteriorly, a little wider than the prothorax and three times as long, evenly rounded at the sides, the punctures moderately coarse, deep, rounded, rather sparse, gradually closer behind; inflexed flanks with the marginal stria very feeble, punctate, visible toward base; sublateral stria distinct in more than apical half; each elytron also with three or four coarse, oblique, sublateral striae toward base, of which the external appears to be the internal humeral. *Pygidium* rather coarsely, very densely punctate. Prosternum truncate behind, much wider than long, with a large deflexed and broadly rounded apical lobe, finely, sparsely punctate; mesosternum more strongly, less sparsely punctate, not striate at apex, the lateral striae very oblique from the coxae to the prosternal angles. Anterior tibiae very broad, rounded externally, with a fringe of very small erect setae, not spinulose. Length 1.1 mm.; width 0.8 mm.

California (Humboldt and Siskiyou Cos.).

Distinguishable by its rather large size and coarsely eroded elytral striae. It is not rare in northern California.

B. debilitans.—Somewhat broadly oval, very strongly convex, polished and dark rufo-testaceous throughout. *Head* finely, sparsely punctulate, more strongly anteriorly. *Prothorax* much more than twice as wide as long, the sides moderately convergent, broadly and almost evenly arcuate from base to apex, the apical angles acute; marginal line acute, entire along the apex but very fine; punctures fine, even and sparse throughout. Scutellum wanting. *Elytra* globose, twice as long as the prothorax viewed vertically, and slightly wider; sides broadly, evenly arcuate; punctures fine but strong, rather sparse; carina of the inflexed flanks very fine and puncto-crenulate, uniting with the first sublateral stria before the apex; disk also with an evanescent oblique stria extending to the middle of the base. *Pygidium* finely, strongly, rather closely punctate. Prosternum very short and transverse, finely, sparsely punctate, the lobe well developed, more closely punctate, finely margined at apex. Meso-metasternal surface finely but strongly, sparsely punctate. Anterior tibiae broad, rounded externally. Length 0.7 mm.; width 0.45 mm.

Florida (Crescent City). Mr. Schwarz.

This is the smallest species which I have seen, and is allied to *misellus*, differing by the characters mentioned in the table. In addition, *misellus* is broader and less convex, with a more transverse prothorax, more convergent and rounded at the sides, and there is no trace of the long median stria of the elytra.

B. acuminatus.—Evenly, rather narrowly elliptical, only moderately convex, shining, pale testaceous throughout. *Head* extremely minutely, sparsely punctulate, slightly more stronger and closely so on the epistoma. *Prothorax* much more than twice as wide as long, the sides very strongly convergent, broadly and evenly arcuate from base to apex; margin finely acute; punctures fine and very sparse, becoming almost obsolete anteriorly, slightly coarser near the base. *Scutellum* not definable but apparently not wholly wanting. *Elytra* from above nearly three times as long as the prothorax, only very slightly wider, together rather narrowly rounded behind viewed posteriorly, broadly rounded on the sides, apparently connate, the suture broadly, feebly impressed on the posterior declivity; punctures minute, rather sparse; surface finely, obliquely rugose except toward apex and toward base externally; discal striae wanting, the two fine carinae of the inflexed flanks equal entire and rather close throughout. *Pygidium* strongly inflexed as usual, nearly flat, minutely, remotely punctulate, more closely and strongly so toward the lateral and apical edges. *Prosternum* moderately broad between the coxae, the lobe large and well developed, deflexed, very finely margined at apex and minutely, remotely punctulate. *Anterior tibiae* broad, rounded externally, with a minute external spine near the apex. Length 0.9 mm.; width 0.65 mm.

California (Sta. Cruz Co.).

This is one of the most distinct species of the genus in having the sublateral stria of the elytra parallel and close to the marginal line throughout, and not inwardly oblique toward base as is usual. This character is suggestive of *Anapleus*, but the apices of the elytra are formed very differently, and there is no trace of the doubly carinate lateral edges of the pronotum, which is so characteristic a feature in *Anapleus*. A single specimen.

SAPRINUS Erichs.

The species of this large and difficult genus seem to be more especially subarctic in distribution and are abundant in the United States, especially on the Pacific Coast; those in the neighborhood of *fibriatus* are very closely allied and more than usually variable, necessitating large series and careful study in the discrimination of species. The following new forms are assigned to the various groups of Dr. Horn as follows:—

Group IV.

External subhumeral stria contiguous to the marginal; elytral punctures abruptly coarse posteriorly, not distinct near the base (type *pectoralis*).

Larger, black, without æneous lustre; mesosternum coarsely, densely punctate.....**obsidianus**

Smaller, more narrowly oval; lustre evidently æneous; mesosternum finely and sparsely punctate.....**subæratius**

External subhumeral distinct and diverging from the marginal; elytral punctures not abruptly coarse posteriorly and visible over the entire disk (type *obscurus*).

Dorsal striæ long, almost extending to apical fourth; body oblong-oval, larger.....**laramiensis**

Dorsal striæ shorter, extending but slightly behind the middle; body shorter, oval.....**audax**

Group V.

Form, coloration and sculpture very nearly similar to *pennsylvanicus*; pygidium tumid and carinate toward apex, broadly impressed toward the sides except near the base.....**profusus**

Group VI.

Elytra without distinct punctuation except in about apical half.....**socius**

Elytra punctate throughout, but generally feebly and finely so toward base, the punctures sometimes rather abruptly coarser and denser behind.

Pronotum evidently more coarsely and densely punctate near the sides.

lentus

Pronotum not more strongly and generally scarcely more densely punctate toward the sides, distinctly and evenly punctate throughout the disk.

Sutural stria entire; lustre dull; punctures strong and dense throughout.

opacellus

Sutural stria abbreviated at basal fourth; punctures strong and dense throughout, more or less confluent posteriorly.....**cribrum**

Sutural stria abbreviated or obsolescent in basal third; punctures sparse throughout; lustre polished.

Larger, broadly oval; sutural stria wholly obsolete toward apex.

detractus

Small, narrowly oval; sutural stria attaining the apex....**contractus**

Group VII.

Prothorax fimbriate at the sides; body black, opaque, punctured throughout.

intritus

Group VIII.

Elytra with a distinct sutural stria which is abbreviated or interrupted behind.

Elytra without trace of punctuation at any part.....**impunctellus**

Elytra punctured nearly as in *fraternus*; pronotal sculpture narrowly effaced along the lateral margins.....**laxatus**

Group IX.

Small species resembling *lucidulus*; anterior tibiae strongly tridentate; sides of the prothorax fimbriate.

Punctures of the elytra extending, near the suture, to basal fourth.

propensus

Punctures of the elytra not extending much within basal third, very small and sparse **servilis**

Group II of Dr. Horn cannot remain as originally proposed, and in reality comprises only *Gnathonecus rotundatus*. The other three species are widely discordant; *behrensi* belongs to group IV, and is probably not different from *pectoralis*, in which species the prosternal striae display a tendency to unite in front in some specimens, for, in *laramiensis*, there are examples having the two striae parallel, convergent in front, or shorter and completely united. *Planisternus* and *rugipennis* are aberrant types, each possibly requiring a special group.

The four species now placed at the end of group IX, belong to *Pachylopus* as extended by Marseul, and the genus is apparently valid.

S. obsidianus.—Oval, strongly convex, highly polished, black, the tibiae and tarsi rufescent. Head finely evenly and sparsely punctate, with a larger median puncture near the base; transverse frontal stria fine but distinct, widely interrupted at the base of the clypeus. Prothorax fully twice as wide as long, the sides distinctly convergent and feebly arcuate from the base, becoming strongly convergent and arcuate anteriorly; marginal stria distinct; disk subimpunctate except abruptly and coarsely so along the basal margin and more gradually coarsely and closely at the sides, the punctures much finer toward base. Elytra at basal third distinctly wider than the prothorax, one-half longer; sides broadly arcuate; marginal stria on the flank, distinct, gradually ascending toward base and confused with the outer subhumeral; inner subhumeral completely obsolete; oblique humeral line, distinct, straight, extending to basal third; dorsals coarse and very coarsely punctate, subequal, extending distinctly behind the middle, the first not extending beyond apical third, the fourth broadly arcuate at base, joining the deep entire and punctate sutural; punctures coarse, deep, moderately close in apical two-thirds near the suture and apical third at the first dorsal, not extending laterally beyond the latter. Propygidium densely punctate, the punctures gradually becoming very coarse posteriorly; pygidium closely punctate, finely so toward apex. Prosternal striae long, coarse, deep, gradually convergent anteriorly and almost confluent just behind the apical margin; surface convex. Anterior tibiae strongly arcuate externally in apical half, finely pleuridenticulate. Length 3.5 mm.; width 2.6 mm.

Alabama (Mobile). Mr. Soltau.

Differs from *pectoralis*, which it strongly resembles, in the coarser punctuation and especially in the much coarser and more coarsely punctate elytral striae. The prosternal striae are very much longer than is usual in *pectoralis*. A single specimen.

S. subaeratus.—Narrowly oval, convex, very highly polished, black, with a feeble but distinct æneous lustre; legs scarcely paler. Head finely sparsely and rather feebly punctate; frontal stria extremely fine, oblique at each side. Prothorax four-fifths wider than long; sides convergent from the base, broadly arcuate and strongly convergent anteriorly; marginal stria distinct; disk punctured as in *pectoralis*. Elytra rounded at the sides, one-half longer than the prothorax, and, at basal third, distinctly wider, the marginal and outer subhumeral striae as in *obsidianus*; inner subhumeral completely obsolete; oblique humeral straight, scarcely extending beyond basal fourth and distant from the first dorsal even at base; dorsal striae coarse and coarsely punctate, short, slightly irregular, extending to about the middle, the first scarcely longer and bent inward at base; second much more distant from the third toward base than the latter is from the fourth, which is broadly arched at base joining the sutural, the latter very fine toward base and not extending quite to the apex; punctures rather coarse and decidedly sparser, distributed nearly as in *obsidianus*. Pygidia finely but strongly, densely punctate throughout. Prosternum feebly convex, the striae nearly straight, distant behind, gradually convergent and almost contiguous just behind the apical margin. Anterior tibiae very finely serrulate externally. Length 2.8 mm.; width 2.1 mm.

Louisiana (New Orleans).

This species may be readily distinguished from the preceding by the smaller size, narrower form, æneous lustre and finer, sparser sculpture. They both differ from *pectoralis* in the coarser elytral striae and disposition of the elytral punctures, which in the latter extend forward scarcely more near the suture than laterally.

S. laramiensis.—Oblong, the sides broadly arcuate, moderately convex, highly polished, black, the elytra and femora dark rufo-piceous; tibiae and tarsi rufescent; lustre not metallic. Head finely, evenly, rather closely punctate, the marginal stria feebly traceable only at each side of the front; disk with a larger puncture just behind the middle and quite distant from the base. Prothorax a little more than twice as wide as long, the sides only feebly convergent near the base, broadly rounded and strongly convergent in apical third; marginal stria fine; punctures sparse but distinct throughout, finer toward the middle, only slightly closer laterally, much coarser near the basal margin. Elytra more strongly rounded at basal fourth where they are rather distinctly wider than the prothorax, one-half longer; punctures sparse and visible throughout, becoming gradually rather coarse posteriorly except toward

the sides; marginal stria inferior, distinct from the outer subhumeral at base; inner subhumeral distinct in apical half to two-thirds; oblique humeral deep but rather short; dorsals long, subequal, strong, slightly punctulate, the fourth rather narrowly arched at base, joining the entire sutural. *Pygidia* not very coarsely but deeply and closely punctate. Prosternum slightly convex, the striae rather approximate, variable in length, generally more or less convergent anteriorly. Mesosternum broadly sinuate, rather coarsely but not very densely punctate, the apical stria entire. Anterior tibiae expanded externally toward apex as usual, finely multispinulose. Length 3.0-3.4 mm.; width 2.0-2.25 mm.

Wyoming (Cheyenne). Mr. Soltan.

A fine distinct species, readily known from any other of this group by its oblong form and coloration. It may be placed near *floridæ*, but differs notably in the feebly convex and non-carinate prosternum.

S. audax.—Rather broadly oval, convex, black, polished, without metallic lustre. *Head* finely, sparsely punctate, the marginal stria obsolete above the eyes and at apex. *Prothorax* rather more than twice as wide as long; sides strongly convergent and very feebly arcuate, broadly so anteriorly; marginal stria deep, entire; disk finely, sparsely punctulate, rather coarsely and perforately but not densely punctate in a broad area at the sides and unevenly along the base. *Elytra* at basal third slightly wider than the prothorax, two-thirds longer, distinctly wider than long; punctures strong but very sparse, gradually becoming minute to the base throughout the width; marginal stria inferior, nearly straight, the attendant series of punctures strong and close-set; outer subhumeral acutely defined below the humeri, one-fifth the total length; inner represented by a mere short trace behind the middle; oblique humeral very fine and feeble; dorsals fine, broadly arcuate, punctured within, the first extending to apical fourth, two to four evenly, gradually shorter, the fourth ending at the middle, one to three hooked at base, the fourth broadly arched to the sutural which is only distinct in median third of the length; apical stria extending only to the middle of each elytron. *Propygidium* very short, five times as wide as long, strongly, densely punctate, gradually more finely so from apex to base; pygidium large, convex, strongly, closely punctate, the punctures gradually subobsolete toward apex. Prosternum evenly but distinctly convex, with a median fovea at some distance behind the anterior margin, the striae strong, distant, somewhat divergent anteriorly; sides anteriorly deeply foveate. Anterior tibiae finely serrulate. Length 2.9 mm.; width 2.2 mm.

New Jersey.

Greatly resembles *pæminosus*, but differs in the obsolete basal parts of the sutural stria, the shorter second and third dorsals, much less arcuate toward base, more approximate prosternal striae and several other characters.

S. profusus.—Broadly oval, strongly convex, highly polished, brilliant metallic bluish-green in color. *Head* nearly flat above, minutely, sparsely punctulate, with a small deep median puncture near the base; marginal striae entire but not united in front, where they are flexed forward to the middle of the clypeus; transverse clypeal suture sometimes distinct. *Prothorax* scarcely twice as wide as long; sides strongly convergent and nearly straight to apical third, then broadly rounded; marginal stria fine, not quite attaining the base; punctures wanting except sparsely and very narrowly along the basal margin, and in a moderately wide dense area from the apex to basal third at some distance from the lateral margin. *Elytra* nearly as in *pennsylvanicus*, the third dorsal longer, the sutural obsolescent toward base and the posterior punctured area scarcely extending beyond the middle. *Propygidium* coarsely, sparsely punctate; pygidium elongate, gradually attenuate and convex toward apex, rather coarsely but not very densely punctate, with two elongate-oval impunctate subapical areas, separated by a longitudinal carina, broadly impressed toward the sides. *Prosternum* nearly as in *pennsylvanicus*, but with the basal part of the striae longer, the apical much shorter; *mesosternum* strongly but sparsely punctate, the apical stria broadly interrupted. Anterior tibiae broad, with three or four strong external teeth. Length 4.0-5.5 mm.; width 3.0-3.8 mm.

Kansas; Colorado; Texas (Galveston).

This species closely resembles *pennsylvanicus*, but may be readily distinguished by the structure of the pygidium, more strongly trapezoidal prothorax, coarser broader and stronger denticulation of the anterior tibiae, broadly interrupted mesosternal border, less punctate integuments and several other details. From *æneicollis* it differs altogether in the structure of the prosternal striae and in elytral punctuation. The apical carina of the pygidium is at all times feeble and occasionally becomes obsolete.

S. socius.—Oblong-oval, piceous-black, highly polished, only moderately convex. *Head* feebly but densely, subrugosely punctate, the marginal stria obsolete; clypeus rather short and broad. *Prothorax* more than twice as wide as long, the sides broadly, rather strongly arcuate, becoming almost parallel near the base, marginal stria fine, distinct; disk minutely, sparsely punctulate, becoming broadly deeply strongly and densely punctate sublaterally, and narrowly along the basal margin. *Elytra* one-half longer than the prothorax, a little wider, slightly swollen laterally toward base; marginal stria coarse but feeble, inferior, not attaining the middle of the apices; internal subhumeral represented by a short deep stria behind the middle; oblique humeral deep, distinct and straight; four dorsals strong, evenly, feebly arcuate, scarcely punctate, long, almost exactly equal in length and attaining apical third, only slightly hooked at base, the fourth joining the sutural which is distinct to the apex; punctures strong but sparse, extending beyond the middle in the first three interspaces gradually becoming very fine, along the suture not extend-

ing much beyond apical third. *Pygidia* strongly, moderately coarsely, very densely punctate. Prosternum strongly convex but not compressed, the striae rapidly and strongly ascending; latero-subapical foveae small but deep, well defined; sides of the mesosternum strongly convergent; apical stria entire. Anterior tibiae triangular, not very wide, finely but strongly, rather closely serrulo-spinose externally. Length 1.9–2.7 mm.; width 1.4–1.9 mm.

Utah (southwestern). Mr. Weidt.

To be associated with *convexusculus* and *minutus*, resembling the former in its long dorsal striae but differing in the disposition of the elytral punctured areas; from *minutus* it differs in its much longer dorsal striae. Two specimens, differing greatly in size.

S. lentus.—Oval, strongly convex, highly polished, black with pronounced æneous lustre; legs rufescent. Head minutely but strongly, closely punctate, with a small but distinct puncture in the middle near the base; marginal striae obsolete above the eyes. Prothorax a little more than twice as wide as long, the sides strongly convergent, broadly, evenly arcuate from base to apex; apical angles narrowly rounded; marginal stria distinct; disk very minutely, sparsely punctulate, gradually more closely anteriorly, abruptly coarsely and very densely punctate near the sides and narrowly along the basal margin. Elytra not quite twice as long as the prothorax, and, at basal fourth, much wider, extremely, minutely, sparsely punctulate, somewhat abruptly, rather coarsely and densely punctate behind, from basal two-fifths near the first dorsal, to apical two-fifths near the suture; marginal stria deep, inferior, nearly straight; outer subhumeral distinct, separated from the marginal; oblique humeral coarse and deep, continued at some distance behind by the inner subhumeral, which is short and feeble; dorsals coarse, the first and third equal, extending nearly to apical two-fifths, second and fourth equal but slightly shorter, the latter broadly arched at base joining the entire sutural; transverse apical stria nearly attaining the suture. *Pygidia* finely but deeply, densely and evenly punctate. Prosternum evenly convex, the striae distinct, rapidly ascending, the foveae deep; mesosternum finely punctate, sparsely in the middle; apical stria entire, transverse; suture crenato-punctate. Anterior tibiae with about seven long and very acute, anteriorly inclined, serriform teeth. Length 3.5 mm. width 2.5 mm.

California (Truckee—elevation 6000 ft.).

Allied somewhat to *insertus*, but differing altogether in the punctuation of the pronotum and elytra, and in the widely distant and isolated external subhumeral stria.

S. opacellus.—Oval, strongly convex, deep black, dull or feebly shining. Head rather finely but strongly, very densely punctate, without trace of the subbasal puncture; marginal stria obsolete, not distinct even subapically. Prothorax twice as wide as long, trapezoidal; sides moderately arcuate, visibly more so toward apex; marginal stria fine; punctures not very coarse

but deep and dense throughout, gradually scarcely larger but extremely dense and contiguous at the sides, also coarser along the basal margin. *Elytra* at basal fourth quite distinctly wider than the prothorax, not quite twice as long; punctures close throughout, fine near the base, gradually, at about basal third, becoming coarse, very deep, extremely dense and subaciculate to the apex; marginal stria inferior, extending along the apex to the suture; outer subhumeral very close to the marginal but not confluent; oblique humeral fine, generally joining the inner subhumeral, which extends to apical fourth; dorsals moderate, acute externally, punctulate internally, nearly straight, gradually decreasing in length, the first extending to apical third, the fourth to or slightly beyond the middle, abruptly arched at base joining the entire sutural. *Pygidia* rather finely but deeply, extremely densely punctate. Prosternum convex, the striae remote, rapidly ascending; surface finely, extremely densely and deeply punctate; subapical foveae deep; mesosternum sparsely punctate, the marginal stria entire. Anterior tibiae with five or six low broad and oblique serrulations. Length 3.3–3.7 mm.; width 2.3–2.4 mm.

California (Humboldt Co.).

This species is closely allied to *insertus*, but differs greatly in its deep black, less shining, more coarsely and much more densely punctate integuments, and very much in the structure of the anterior tibiae, which, in *insertus*, are armed externally with a close-set series of long slender erect and spinuliform denticles. In *insertus*, also, the external subhumeral stria is not visible, being perfectly confluent with the marginal stria throughout its length. Three specimens.

S. cribrum.—Evenly oval, strongly convex, black, the legs just visibly picescent; lustre moderately shining, the narrow interspaces between the punctures polished. Head finely but strongly, very densely punctate, the marginal stria feebly traceable at each side of the epistoma, which is much wider than long. Prothorax rather more than twice as wide as long, the sides not fimbriate, strongly convergent and feebly, almost evenly arcuate from base to apex; marginal stria fine; disk rather coarsely deeply and very densely punctate throughout, the punctures separated by nearly their own diameters toward the middle. *Elytra* nearly as long as wide, three-fourths longer than the prothorax, and, at basal fourth, but little wider; sides broadly, evenly arcuate; disk rather coarsely, very deeply and densely punctate, the punctures longitudinally subcoalescent except near the scutellum; marginal stria strongly inferior, almost straight, continued along the apex to the middle of each elytron; outer subhumeral almost obsolete but distinct from the marginal; inner subhumeral represented by a short stria behind the middle; oblique humeral distinct; dorsals coarse but scarcely at all punctate, only very feebly arcuate, the first extending to apical fourth, the fourth to apical third, the latter abruptly, transversely hooked at base nearly to the scutellum; sutural obsolete in basal fourth, almost attaining the apex. *Propygidium*

very short, finely closely punctate, feebly subcarinate in the middle; pygidium large, vertical, feebly convex, a little more coarsely and very densely punctate. Prosternum transversely convex, finely, feebly punctate, the striae only distinct at the sides anteriorly; foveae deep. Mesosternum feebly sinuate, more coarsely but not very densely punctate; apical stria entire. Anterior tibiae with six or seven acute triangular external spines. Length 3.3 mm.; width 2.4 mm.

Wyoming (Cheyenne).

Also related to *insertus* and especially *opacellus*, but differing in the still coarser sculpture and in the obliterated basal part of the sutural stria.

S. detractus.—Rather broadly oval, strongly convex, black, polished. Head finely, closely punctate, the marginal stria feeble but long and oblique subapically, obliterated near the base. Prothorax more than twice as wide as long; sides very strongly convergent, feebly arcuate, more so near the apex; marginal stria distinct; disk rather finely but deeply and conspicuously—though sparsely—punctate, the punctures not distinctly larger but rather dense near the sides, a little coarser near the base only in the middle. Elytra three-fourths longer than the prothorax, and, at basal fourth, quite distinctly wider, finely, remotely punctulate toward base, gradually rather coarsely, deeply but sparsely punctate in apical two-thirds near the suture, to apical fourth near the end of the second dorsal; marginal stria inferior, extending along the apex to the middle of each elytron; outer subhumeral scarcely distinct from the marginal; oblique humeral with one or two uneven internal appendages; inner subhumeral represented by a short stria behind the middle; dorsals strong, feebly arcuate, slightly crenulate internally, the first three extending to about apical third, the fourth scarcely behind the middle, broadly hooked at base to the suture, the sutural stria only distinct in median third. Pygidia rather finely deeply and densely punctate. Sterna minutely and remotely punctulate, the prosternum broadly convex, the striae remote, strongly ascending, the foveae distinct; mesosternal stria fine but entire at apex; transverse suture strongly crenato-punctate. Anterior tibiae with seven or eight small close-set and acute, spiniform teeth. Length 2.2–2.6 mm.; width 1.7–1.9 mm.

Colorado; Kansas.

Allied to *laridus*, differing greatly however in its more broadly oval form and minute punctulation of the mesosternum, this being coarsely and conspicuously punctate in *laridus*; the latter species, in addition, has the outer subhumeral stria widely separated from the marginal. Each elytron seems to have an obsolete impression in the middle near the sutural stria. One specimen has the first dorsal stria very short, abbreviated at the middle on both sides of the body; it is simply a deformity however. My first specimen

was picked up in the streets of Denver, during a casual visit some years ago, and it has since been taken by Mr. Wickham at Greeley.

S. contractus.—Narrowly oblong-oval, moderately convex, highly polished, piceous-black, with a very feeble aeneous lustre. *Head* finely, closely punctate, the punctures rather rugose anteriorly; marginal stria wholly obsolete; antennal emarginations bisinuate. *Prothorax* a little more than twice as wide as long, the sides feebly convergent and arcuate near the base but becoming more so near the apex; marginal stria fine, feeble; disk finely but strongly and remotely punctate, the punctures less remote anteriorly and distinctly closer but not dense and not much larger near the sides, coarser at base near the middle. *Elytra* three-fourths longer than the prothorax and slightly wider at basal fourth, strongly, remotely but not very coarsely punctate, the punctures distinct at base, becoming gradually less remote and somewhat larger toward apex; marginal stria fine, gradually evanescent along the apex; outer subhumeral fine but distinctly diverging from the marginal; oblique humeral feeble; inner subhumeral rather long, oblique and uneven; dorsals somewhat fine, distinctly but finely punctate, subequal, extending to about the middle, the third slightly, fourth broadly, hooked at base, the latter not extending to the middle, sutural altogether untraceable in basal third. *Pygidia* very finely, extremely densely punctate. *Prosternum* evenly but strongly convex, the striae rather approximate behind, rapidly ascending, the parallel apical parts twice as distant as the basal; foveae elongate and feeble. Anterior tibiae finely, closely serrato-spinulose externally. Length 2.0 mm.; width 1.4 mm.

Arizona (Tuçson).

The single specimen before me represents a species which is also allied to *laridus*, but distinguishable readily by its sparser and coarser punctuation, more approximate basal part of the prosternal striae, and by the longer sutural stria, which fully attains the apical angles; it also differs in its stronger and rather denser sculpture of the pygidium.

S. intritus.—Stout, oblong-oval, convex, dull, black, the legs dark rufotestaceous. *Head* strongly, densely punctato-rugose, the clypeus still more densely and finely; margins of the front near the clypeus almost transverse; marginal stria obsolete. *Prothorax* a little more than twice as wide as long; sides feebly convergent and slightly arcuate, gradually much more convergent and broadly arcuate beyond the middle; marginal setae short; lateral margin broadly arched throughout the length when viewed laterally; stria fine, distinct; disk strongly, rather densely punctate throughout, the punctures finer toward the middle, extremely dense and somewhat rugose toward the sides. *Elytra* somewhat prominent at the sides near the base and slightly wider than the prothorax, one-half longer, much wider than long; lateral stria inferior, coarse, straight, fine along the apex to the suture; outer subhumeral distinct,

distant from the lateral; oblique humeral line; inner subhumeral isolated, short, strongly oblique, at about the middle; dorsals rather fine, acute externally, finely punctate within, one to three gradually longer, the first extending about to the middle, the third to apical third, fourth shorter, extending slightly behind the middle, broadly arched at base, joining the entire but fine sutural; disk strongly, distinctly punctate throughout, the punctures small and sparse near the scutellum, gradually coarse dense and acuminate behind. *Pygidia* not coarsely but deeply, extremely densely punctate. Prosternum acutely compresso-carinate, the striae fine, ascending, abbreviated behind the foveæ which are very small. Anterior tibiae multispinulose externally, the spinules erect and short. Length 3.5 mm.; width 2.6 mm.

California (San Diego).

This fine species is allied to *vestitus*, but is larger and blacker, with the punctuation coarser and denser, and the integuments still more opaque throughout. The prosternal striae are shorter and abbreviated far behind the foveæ, and the surface is more acute and compressed than in *vestitus*; in the latter, also, the apical stria of the elytra is abbreviated at outer third or fourth, and the punctures of the elytra become abruptly fine and excessively dense broadly along the apex.

8. *impunctellus*.—Broadly oblong-oval, strongly convex, polished, black, without mucous lustre. *Head* impunctate, arcuately and unevenly eroded anteriorly, surrounded at the sides and apex by a deep groove and beaded edge, rectangular at the sides. *Prothorax* twice as wide as long, the sides rather strongly convergent and nearly straight to apical third, then gradually broadly rounded to the obtuse apical angles; marginal groove deep, distinct throughout the apex; disk feebly and not densely punctato-rugulose, smooth in the middle except toward apex, coarsely closely and deeply punctate along the base. *Elytra* distinctly wider and three-fourths longer than the prothorax, completely devoid of all trace of punctuation at any part; marginal stria deep, not coarse, abruptly abbreviated at outer third of the apex; outer subhumeral line, distant from the marginal; striae throughout as in *sphaeroides*, except that the fourth is distinctly shorter than the third, the sutural broadly interrupted near the apex. *Propygidium* transversely bi-impressed and subimpunctate in basal half, the punctures apically very fine, dense; pygidium very finely, evenly, not densely punctate. Prosternum with the two almost entire approximate striae rapidly divergent behind; lateral convergent carinae strong, the subapical foveæ deep, rounded; mesosternum finely, sparsely punctate, the apical stria deep, entire; transverse suture punctate; metasternum with a clearly limited, transverse, strongly and confusedly punctured band posteriorly. Length 4.2 mm.; width 3.0 mm.

Indiana.

In general form and structure this species is a close ally of *sphaeroides*, but it differs greatly, not only in its larger size and wholly

impunctate elytra, but in the more strongly margined front and very radically in the serrulation of the anterior tibiae, which in the present species have about six strong triangular external teeth, increasing in size and prominence toward apex; in *sphaeroides* the teeth become broader and almost obsolete toward apex. The mesosternum in the form alluded to is much more coarsely and closely punctured.

S. laxatus.—Oblong-oval, convex, polished, black, without aeneous lustre. *Head* impunctate, strongly margined at the sides and apex, the lateral angles right; surface with a feeble and unevenly eroded chevron, ending behind in the subbasal puncture which is visible in many other unrelated species. *Prothorax* barely twice as wide as long, the sides rather strongly convergent, very feebly and evenly arcuate from base to the apical angles, which are broadly, transversely rounded; margin strongly striate, feebly sigmoid viewed laterally, distinct along the apex; disk very feebly sparsely obliquely and subrugosely punctate, the lateral margin rather broadly smooth posteriorly; central parts broadly smooth and unsculptured; basal margin closely coarsely and deeply punctate. *Elytra* throughout nearly as in *fraternus*, except that the outer subhumeral is more distinct from the marginal stria, the fourth dorsal a little shorter, the sutural wholly obsolete just behind the middle and not even traceable further, and the punctures of the posterior area finer and very much less dense. *Propygidium* feebly impressed and subimpunctate throughout the width in basal half, with a median cariniform interruption, finely, closely punctate posteriorly; pygidium very finely, sparsely punctate, closely so near the sides anteriorly. Prosternal striae abbreviated at apical third, gradually divergent throughout posteriorly, more rapidly behind; lateral converging carinae very strong, arcuate; subapical foveae small, deep; mesosternum minutely, remotely punctulate, the apical stria entire. Anterior tibiae with five or six erect subacute teeth, becoming much stronger, though still longer than wide, toward apex. Length 3.9 mm.; width 2.8 mm.

Florida.

Allied closely to *fraternus*, but a little larger than the largest of that species, with finer, much less dense elytral punctures and stronger but less numerous external denticles of the anterior tibiae. In *fraternus* the sutural stria can always be distinctly traced to the apex.

S. propensus.—Oblong-oval, convex, polished, dark piceo-rufous, the legs paler. *Head* distinctly margined at the sides and front, scarcely at all punctate, but with a transversely arcuate subapical line. *Prothorax* twice as wide as long, the sides moderately convergent, broadly, feebly arcuate; disk sculptured almost exactly as in *lucidulus*. *Elytra* slightly wider and one-half longer than the prothorax; lateral stria distinct and broadly arcuate; outer subhumeral not visible; oblique humeral coarse; inner subhumeral distinct,

very oblique; dorsals distinct, the first extending almost to the apex, arcuate behind, two to four abbreviated far behind the middle, the latter arched at base, joining the sutural which is entire but faint; punctures not fine but sparse and very shallow, extending, near the suture, fully to basal fourth. *Pygidia* rather finely, very densely and somewhat unevenly punctate. Prosternal striæ as in *lucidulus*. Anterior tibiæ with three very large external teeth. Length 1.9 mm.; width 1.4 mm.

California (San Diego).

This species greatly resembles a very small *lucidulus*, but is distinguishable at once by its small size and by the elytral punctured area advancing well toward the base. Both this species and the next differ radically from *lucidulus* in having the pronotal hypomera feebly inflexed, almost horizontal, coarsely, densely punctured and clothed with long coarse pubescence which bristles also along the sides. In *lucidulus* the hypomera are strongly inflexed, smooth and glabrous.

S. servilis.—Oval, strongly convex, polished, rufo-piceous in color. Head impunctate, with an arcuate subapical transverse line, strongly margined at the sides and apex; clypeus feebly sculptured. Prothorax about twice as wide as long, the sides strongly convergent and broadly arcuate from base to apex; marginal stria strong; disk sparsely, rather finely but strongly punctate toward the sides and apex, broadly impunctate behind the middle, moderately punctate along the base; punctures only feebly rugiform. Elytra near the base slightly wider than the prothorax, barely one-half longer, the punctures fine, sparse, not entering any of the interstriae; extending near the suture about to basal third; external stria strong, arcuate toward base; outer subhumeral wanting; inner feeble, oblique, separated from the oblique humeral, which is strong; dorsals distinct, the first nearly attaining the apex but becoming fragmentary and feeble behind, second to fourth abbreviated at the middle, the latter broadly arched at base, joining the sutural which is entire but fine. *Pygidia* not coarsely but deeply and rather closely punctate. Prosternal striae nearly as in *lucidulus*. Anterior tibiæ strongly tridentate, with some long distant hairs externally toward base, and a fringe of very long close-set hairs internally toward apex; anterior femora with a lower fringe of long broad flattened hairs. Length 2.0 mm.; width 1.4 mm.

Texas (Galveston).

Allied to the preceding, but readily distinguishable by its finer and sparser punctuation, longer prothorax with more convergent sides, shorter elytral striae, more evenly oval and less oblong form and many other characters. The three large teeth of the anterior tibiæ in this and the preceding species are formed principally by enormous inset spines, shortened and broadly rounded at tip. In

both of these species the spines of the intermediate and posterior tibiae are nearly as in *lucidulus* but less close-set.

The anterior tarsi are peculiarly modified in this and possibly allied species, the first four joints each having beneath a long thin transparent and spatuliform appendage; this is a common character also in the American species of *Pachylopus*.

ACRITUS Lec.

The following species belongs near *floridæ*, but differs in having a distinct scutellum, of which there is no trace whatever in the latter:—

A. cælator n. sp.—Oval, moderately convex, polished, piceous-black. *Head* finely, sparsely punctulate, more distinctly so on the large epistoma. *Prothorax* but little more than twice as wide as long, the sides broadly arcuate and convergent from base to apex; marginal stria very fine, continuous along the apex; punctures fine and rather sparse, the disk with a transverse line of punctures near the base, obsolete at lateral sixth, abruptly and anteriorly arched in less than median third. *Scutellum* equilateral, small. *Elytra* a little wider than the prothorax and about twice as long, evenly rounded at the sides, the apex truncate, three-fifths of the maximum width; inflexed flanks with a fine strong and entire stria; disk without trace of striæ; punctures fine, sparse, those toward apex each with an anterior striiform prolongation. *Pyggidium* minutely, sparsely punctulate; pygidium not distinctly punctulate. *Prosternum* nearly twice as long as its median interstitial width, the striæ about equally and strongly divergent toward base and apex; *metasternum* large, finely, sparsely punctate, without lateral striæ, the post-mesocoxal plate rounded behind. *Legs* slender; anterior tibiae not dilated. Length 0.9 mm.; width rather less than 0.7 mm.

Indiana?

A single specimen from the Levette cabinet. The species differs from *floridæ* in its rather more narrowly oval form, and from all other species most closely allied, in the strong anterior arcuation of the transverse chain of pronotal punctures. In the position and extent of the antennal fossæ and structure of the anterior tibiae, as well as prosternal and elytral structure, this genus is wholly different from *Bacanius*. In the latter the antennal fossæ are not at all defined, the antennæ being merely protected under the folded legs in the very large crural excavations.

I have before me several specimens from the Catskill Mts., New York, which seem to be referable to *cribripennis* Mars.; the elytra are more inflated toward base than in *exiguus*, and, if the identification is correct, the two forms are specifically distinct.

PLEGADERUS Erichs.

This is one of the most peculiar genera of the Histeridæ, although there are many singular forms which at first sight appear to be more isolated; it is generally found however, that the divergence in these cases is less real than apparent, the external organs and appendages of the body merely being specialized in various directions. Here there is a radical difference in the formation of one of the most important of the fundamental segments of the body, probably accompanied by corresponding modification of the internal anatomy. The division of the prothorax into two transverse lobes is met with in some other widely separated groups, such as the Paussidæ, but in the present family all forms leading up to or foretelling this peculiarity have seemingly disappeared, so that it is scarcely possible to reason upon its true etiological significance.¹

The deep diverging fossæ of the prosternum are obviously an extreme development of the usual prosternal striæ, but the transverse excavation uniting them is, as far as known to me, without any suggestion of parallelism in the entire family. I dwell with some emphasis upon this character because it has never been given the weight which apparently belongs to it. The genus should in fact be separated rather widely from those with which it is now associated.

The species are moderately numerous in the United States, and may be distinguished by the following table:—

Anterior prosternal lobe longer than wide, more or less acutely rounded behind, and strongly and rather closely punctate; punctures of the elytra rounded and not longitudinally confluent; transverse pronotal sulcus always deep and conspicuous.

Punctures of the elytra not very dense, distinctly separated; apical lobe of the pronotum much shorter than the basal.

Margin of the pronotum broad, less convex.

Meso-metasternal plate densely, coarsely punctate.....**sayi** Mars.

Meso-metasternal plate more finely and sparsely punctate.

consors Horn.

Margin of the pronotum narrower and more convex; entire body narrower and less depressed, piceous-brown, polished, sparsely and coarsely sculptured.....**fraternus** Horn.

¹ The transverse row of prosternal foveæ in *Glymina* does not bear much resemblance to the division in *Plegaderus*, for there is no sign of a division upon the dorsal surface. *Glymina* should probably be referred to the *Histrini*, the foveæ being the delimiting line of the prosternal lobe.

Punctures of the elytra extremely dense, very narrowly separated.

Prosternal grooves narrow behind, the intermediate posterior lobe wide and distinct; elytral punctures small; pronotum less unequally divided.

rigidus n. sp.

Prosternal grooves very wide behind, the enclosed-posterior lobe minute, compressed and subcariniform.

Pronotum closely punctate throughout, only a little more finely so anteriorly; lateral margins broad.....**cribratus** n. sp.

Pronotum finely, closely punctate anteriorly, coarsely and much more sparsely so behind; lateral margins narrower.....**molestus** n. sp.

Anterior prosternal lobe large but shorter and broader, not quite as long as wide, very remotely punctate; posterior lobe minute and subobsolete; elytral punctures longitudinally confluent; sulcus deep.

transversus Say.

Anterior lobe very small, wider than long, the posterior almost obsolete.

Pronotum with the transverse line distinct throughout; dorsal punctuation fine and remote; larger species**nitidus** Horn.

Pronotum with the transverse sulcus almost completely obliterated; sculpture coarse and not dense; size very small.....**barbelini** Mars.

Of *sayi* and *consors* I have single examples, taken in Indiana and Arizona respectively, of *fraternus* a large series taken in various localities in California. *Transversus* occurred abundantly, and *barbelini* in smaller number, under the bark of decomposed stumps at Houston, Texas, the former also at Asheville, North Carolina. My small series of *nitidus* is from Siskiyou, El Dorado and San Diego, California, the single example from San Diego, given me by Mr. Dunn, not differing in any way from the others.

P. rigidus.—Narrowly oblong-oval, moderately convex, shining, black, the pronotum feebly picescent; legs and antennal club pale; all the punctures bearing minute setæ. Head finely, somewhat closely punctate; front only very feebly concave. Prothorax two-fifths wider than long; sides subparallel, broadly rounded and feebly convergent toward apex, broadly sinuato-parallel in basal half; lateral groove deep, entire; marginal space rather wide, somewhat feebly convex, strongly, densely punctate; transverse sulcus deep, the segments convex, the anterior only slightly, though distinctly, shorter than the posterior, equally finely, deeply punctate, the anterior rather closely, the posterior a little more sparsely. Elytra feebly inflated toward base, quite distinctly wider than the prothorax and one-half longer, not very coarsely but strongly and very closely punctate, with two short feeble and oblique basal striæ externally; suture elevated except near the scutellum; inflexed flanks devoid of stria or carina. Pygidia rather finely but strongly, very densely punctate, the propygidium less densely so; punctures distinctly setulose. Under surface coarsely, rather closely punctate throughout; posterior lobe

of the prosternum a little longer than wide, large, distinct, subtruncate anteriorly. Mesosternum triimpressed between the coxæ, the oblique groove of the metasternum fine and striiform. Anterior tibiae dilated and thinner externally toward apex. Length 1.25 mm.; width 0.7 mm.

Utah (southwestern).

Readily distinguishable from the two following species by the narrower form, finer sculpture, prosternal structure, and less unequally divided pronotum. A single specimen, recently taken by Mr. C. J. Weidt.

P. cribratus.—Somewhat broadly oblong-oval, moderately convex, shining, black, the prothorax scarcely perceptibly picescent; punctures extremely minutely setigerous. Head strongly, closely punctate, the supra-antennal prominences feeble. Prothorax nearly one-half wider than long, the sides parallel and feebly sinuate to apical third, there broadly rounded to the apex; marginal stria strong and sinuate toward base; inner marginal strong, straight, flexed outward at base; interspace broad and feebly convex anteriorly, strongly, densely punctate; discal sulcus strong, the segments convex, the anterior three-fourths as long as the posterior, both deeply, closely punctate. Scutellum small, triangular. Elytra not quite as long as wide, rather abruptly tumid at the sides behind the humeri and slightly wider than the prothorax, about one-half longer, the oblique basal striae feeble; punctures rather coarse and very dense; suture distinctly, acutely elevated; inflexed flanks deep but not modified, the lower margin broadly angulate. Pygidia strongly, closely punctate, the propygidium less densely so. Under surface coarsely, densely punctate, the punctures more or less longitudinally subconfluent. Hypomera deeply impressed internally, the subapical internal emargination broadly rounded. Posterior lobe of the prosternum very small, narrow, feebly punctulate, tuberculiform and compressed; median line of the mesosternum feebly impressed. Length 1.4 mm.; width 0.85 mm.

Colorado.

This distinct species may be known at once by its dense cribrate sculpture and small posterior lobe of the prosternum.

P. molestus.—Rather broadly oblong-oval and convex, polished, dark piceous-brown, the prothorax dark rufous; legs and antennal club pale. Head finely but strongly, moderately closely punctate, the antennal prominences rather feeble. Prothorax about one-half wider than long, the sides subparallel and feebly sinuate in basal two-thirds, then broadly arcuate and convergent to the truncate apex; inner lateral groove strong, the marginal surface rather narrow, convex, strongly and closely punctate, becoming almost obsolete at base between the widely expanded marginal and lateral grooves; discal sulcus very deep, the segments convex, the anterior rather more than three-fourths as long as the posterior, finely but strongly, evenly and closely punctate, the posterior rather sparsely and unevenly so, the punctures much

coarser near the base. *Elytra* distinctly shorter than wide, broadly, evenly inflated and rounded at the sides toward base, distinctly wider than the prothorax but scarcely one-half longer; oblique basal striæ very short but deeply eroded; suture acutely elevated; inflexed flanks not striate; punctures coarse, circular, deep, perforate, separated by rather less than their own widths. *Pygidia* somewhat coarsely and closely punctate throughout. Under surface very coarsely, rather closely but not confluent punctate; hypomera coarsely, deeply concave; posterior lobe of the prosternum very small, rather feeble, tuberculiform, bearing a few rather long setiform hairs. *Legs* short; anterior tibiae somewhat abruptly dilated, externally rounded and with seven or eight short erect acuminate spicules in apical two-fifths. Length 1.2-1.3 mm.; width 0.7-0.75 mm.

California (Lake Tahoe).

The dense cribrate sculpture and minute posterior lobe of the prosternum will enable one to separate this species at once from *fraternus*, which occurs abundantly in the same region, and, from *cribratus*, it may be readily known by its smaller size, shorter elytra—more rounded at the sides and more rapidly narrowed behind,—more narrowly margined and more unevenly sculptured pronotum, pale coloration and several other characters.

PARNIDÆ.

The Parnidæ are closely related to the Heteroceridæ, and those genera allied to *Dryops* display, in addition, an unmistakable affinity with the Elateridæ. Their life habits are so obscure that probably only a somewhat small proportion of the species are known at present, and the number of genera is very large in proportion to the species.

PSEPHENUS Hald.

The species known to me may be arranged as follows:—

Impression of the head not longitudinally divided; elytra uniform in coloration.

Sides of the prothorax strongly convergent, the apex not more than one-half as wide as the base; antennæ longer (*trentonensis* Zimm.).

lecontei Lec.

Sides of the prothorax feebly convergent, the apex much wider, two-thirds to three-fourths as wide as the base.

Sides of the prothorax broadly rounded and subparallel toward base, more convergent and nearly straight anteriorly.....**falli** n. sp.

Sides evenly and feebly arcuate from base to apex... **veluticollis** n. sp.
Impression of the head longitudinally divided; elytra pale at base.

haldemani Horn.

The characters of *haldemani* are taken from the original description.

Ps. falli.—Rather depressed, subcuneate, wider behind, black, the second antennal joint paler; legs scarcely paler; integuments feebly shining, very finely, closely sculptured, the pronotal punctures fine, obscure, those of the elytra more distinct; vestiture dense, consisting of very small coarse dense and decumbent silvery hairs, intermixed with short stiff and sparser erect setæ. *Head* one-half as wide as the pronotal base, the eyes very convex and prominent; front broadly, evenly concave; antennæ as long as the head and prothorax, the two basal joints thicker, the first much longer than the second, remaining joints subequal in thickness, except the sixth which is just visibly larger, outer joints gradually shorter and a little more closely united; maxillary palpi long. *Prothorax* nearly twice as wide as long, the apex truncate, two-thirds as wide as the base, the latter transverse, deeply and evenly bisinuate; basal angles not rounded, directed posteriorly, less lateral than the sides at basal fourth where the width is greatest; disk convex toward the middle, even. *Scutellum* nearly as long as wide, rounded, pubescent. *Elytra* at base as wide as the prothorax, much wider behind, nearly three times as long, one-half longer than wide; humeri slightly rounded to the thoracic angles; disk feebly and rather broadly elevated along the suture, somewhat tumid near the base, the humeri prominent; impressed lines feebly traceable posteriorly. *Legs* moderate; femora stout; tibiæ slender, finely carinate externally, the carina becoming broader and feeble, glabrous and longitudinally, feebly strigilate toward apex; tarsi slender, moderate in length. Length 3.8 mm.; width 1.9 mm.

California (Los Angeles Co.).

The trochantin of the anterior coxæ is very large, nearly as wide as the entire coxa. The type is a male and I have not seen the female.

This species was recently alluded to by Mr. Fall as having been identified by me under the name *lecontei*. Since remounting the single specimen, however, I find that it cannot be referred to *lecontei*, and take pleasure in giving it the name announced above.

Ps. veluticollis.—Moderately depressed, suboblong, feebly inflated behind, rather shining though finely, closely punctulate, black throughout, the legs only slightly paler; pronotal punctures rather strong and dense anteriorly, becoming finer and sparse behind, sparse, fine and uneven on the elytra. *Head* small, scarcely one-half as wide as the pronotal base; eyes convex; frontal impression prolonged backward along the median line; antennæ about as long as the head and prothorax, the basal joint nearly twice as long

as wide, second but slightly wider and a little shorter than the third, remaining joints equal in width, feebly subserrate, slightly smaller and closer toward apex; maxillary palpi well developed, the last joint subsecuriform, rounded at apex, deeply canaliculate along the under surface at the cariniform outer edge throughout the length. *Prothorax* twice as wide as long, the apex fully two-thirds as wide as the base, the latter broadly, strongly bisinuate; disk widest at the basal angles, convex toward the middle, the lateral edges narrowly reflexed. Scutellum a little wider than long, opaque, impressed. *Elytra* one-third longer than wide, broadly rounded behind, dehiscent at apex, broadly impressed in the middle, and obliquely from the humeri, to beyond the middle, with feeble traces of impressed lines. *Legs* rather short; femora stout; tibiae finely carinate externally; tarsi slender, glabrous; claws moderate, strongly arcuate, with an internal dentiform swelling near the base. Length 3.2-4.8 mm.; width 2.0-2.7 mm.

California (Mendocino Co.).

I obtained a small colony of this species, almost motionless on the under surface of a stone near a running brook. The description is drawn from the male, the female being larger, with the pronotum dense and opaque velvety-black, the maxillary palpi much less developed, the last joint being small, obliquely oval, with the apex glabrous and polished, and the abdomen having only six segments. The shape of the prothorax is altogether different from that of *falli*, and the sexual differences in the palpi are remarkable, though probably more or less similar throughout the genus.

LUTROCHUS Erichs.

Our two species, both of which have long been known in collections, may be distinguished as follows:—

Smaller, less elongate, the vestiture yellowish. Head small, not more than one-half as wide as the thoracic base. Sides of the prothorax more convergent from base to apex. Scutellum smaller, but slightly wider than long.

luteus Lec.

More elongate-oval, the elytra acute and slightly prominent at apex; pubescence darker. Head large, fully two-thirds as wide as the thoracic base. Prothorax much more than twice as wide as long, the apex only slightly narrower than the base; sides just visibly convergent from base to apex, slightly arcuate; disk broadly convex. Scutellum one-half wider than long, broadly ogival behind, very broadly arcuate at base. Remaining characters nearly as in *luteus*. Length 2.9-3.6 mm.; width 1.6-2.0 mm. Michigan.....*laticeps* n. sp.

Laticeps is represented by a large series; it is closely allied to *luteus* but must be regarded as distinct.

Certain features of the under surface of this genus are suggestive of the Histeridæ. The glabrous intermediate tibiæ and tarsi do not seem to have been referred to in the books.

PELONOMUS Erichs.

The species of this genus are few in number; the one described below is closely allied to *obscurus*, but is shorter, broader and paler in color.

P. rufescens n. sp.—Dark red-brown, stout, convex, densely clothed with very short coarse hairs and less densely with longer erect setæ, the punctures fine but strong, extremely dense on the head and pronotum, less dense on the elytra, the latter with very feeble longitudinal impressed lines. Head two-thirds as wide as the pronotal base; eyes large, convex and prominent, densely setose; antennæ nearly as in *obscurus*. Prothorax one-half wider than long, the sides feebly convergent from base to apex, broadly, feebly arcuate, just visibly sinuate near the basal and apical angles, the latter acute and anteriorly prominent; disk evenly, rather strongly convex; apex subtruncate, the base broadly, strongly bisinuate and also emarginate at the scutellum. Scutellum transverse, obtusely angulate behind. Elytra barely twice as long as wide, a little more than three times as long as the prothorax, acutely ogival behind, the suture broadly and feebly impressed on the posterior declivity. Under surface paler, the three pairs of coxæ separated by exactly the same distance. Legs moderate, the tibial spurs short, stout, widely separated; tarsi slender, the posterior two-thirds as long as the tibiæ. Length 5.5–6.3 mm.; width 2.3–2.5 mm.

Florida.

Readily separable from *obscurus* by the more obese form, more widely separated middle coxæ, more transverse and much more broadly angulate scutellum, and by the very narrow and not broadly angulate apical prosternal fissure behind the eyes. The type is a female; the male has the last joint of the anterior tarsi very feebly dilated but scarcely as strongly so as in *obscurus*.

OBERONUS n. gen.

Eyes, palpi and general structure nearly as in *Pelonomus*. Intermediate coxæ large, subglobular, contiguous, the metasternum forming an acutely elevated transverse and feebly arcuate ridge behind them, the mesosternum a transversely tumid, deeply and anteriorly excavated process before.

O. obesus n. sp.—Broadly oblong-oval, convex, black; palpi, tibiæ, tarsi and abdomen toward apex rufescent, densely clothed with very short stiff

silvery hairs and long erect setæ; punctures fine but strong, very dense on the pronotum, smaller and much sparser on the elytra, the latter rather shining and with feebly impressed longitudinal lines. *Head* three-fifths as wide as the pronotal disk; eyes large, prominent, densely pubescent; antennæ closely approximate, nearly as in *Pelonomus*; last joint of the maxillary palpi nearly twice as long as the third, slender, subfusiform, slightly thicker beyond than behind the middle, acuminate toward apex. *Prothorax* two-fifths wider than long, the sides very feebly convergent from base to apex, feebly arcuate, straight near the basal angles, broadly, strongly sinuate near the apical, the latter acute and obliquely, anteriorly prominent; apex truncate; base transverse, deeply bisinuate, emarginate at the scutellum; disk evenly convex, the side-margins acute. Scutellum well developed, a little wider than long, rounded anteriorly, strongly angulate behind. *Elytra* three-fourths longer than wide, barely three times as long as the prothorax, gradually feebly inflated behind, at base as wide as the prothorax; apex broadly, obtusely ogival; disk declivous behind. *Prosternum* greatly developed before the coxæ, broadly arcuate, the sublateral fissures behind the eyes open but short, triangular; coxæ rather widely separated, the process obtusely acuminate, carinate along the middle, received in the deep mesosternal aperture. *Legs* short; femora stout, densely pubescent; tibiae and tarsi more sparsely clothed with longer flying hairs; tibial spurs small, remote; posterior tarsi two-thirds as long as the tibiae, nearly as in *Pelonomus*. Length 5.3 mm.; width 2.5 mm.

Tennessee (Memphis). Mr. Soltau.

The structure of the intermediate coxæ and of the adjoining parts of the metasternum is so radically different from *Pelonomus*, that I am forced to separate this species generically, although its facies is completely that of *Pelonomus*. The type is a male, having the last joint of the anterior tarsi dilated, more broadly than in *Pelonomus*, gradually more inflated toward base and with its under surface sensitive, though only feebly pubescent.

NARPUS n. gen.

Body narrow, convex, the elytra striato-punctate. Head received rather deeply in the prothorax, the eyes moderately large, nude, distant, somewhat coarsely faceted; antennæ widely distant, inserted in foveæ adjacent to the eyes; epistoma large, feebly trapezoidal with the angles rounded, the apex broadly sinuato-truncate; suture fine, straight; antennæ and oral organs missing in the type. Prothorax long, the pronotum very declivous at the sides, almost vertical toward apex, without sublateral line, the margin acute, narrowly reflexed; hypomera only inflexed very slightly beyond the vertical, wide, the inner margin wide and thickened, still more so

at the coxæ, which are transversely oval, furnished with a distinct external trochantin, and separated by a little less than their own width, the process gradually narrowed posteriorly, flat, obtusely rounded behind, the sides continued forward along the well developed prosternum to the anterior margin by diverging straight ridges; apical lobe short, broadly rounded and deflexed. Intermediate coxæ very remote, the mesosternum with a shallow median pit which receives the apex of the prosternal process. Posterior coxæ transverse, the upper margin not at all lamelliform, separated by about one-half the meso-coxal interval. Metasternum large, the parapleuræ narrow, parallel. Abdomen with five subequal segments, the fifth a little longer, the third and especially the fourth suture strongly flexed posteriorly at the sides. Legs slender, moderately long; tarsi very long, the posterior about as long as the tibiæ, with the four basal joints elongate, the fifth slightly longer than the two preceding combined; claws long, arcuate; tibial spurs small, remote.

This interesting genus is founded upon a single example, which I found dead and mutilated some years ago. It should be placed near *Dryops*, and differs in having raised prosternal lines, in its much longer prosternum and distinct epipleuræ; the latter are distinctly defined but narrow, not quite attaining the elytral apex and gradually slightly wider toward base.

N. angustus n.sp.—Slender, very convex, black, the tarsi paler; integuments shining, sparsely clothed with rather long coarse and decumbent silvery pubescence. *Head* only slightly visible from above. *Prothorax* nearly as long as wide, the sides feebly convergent and slightly arcuate from base to apex, the latter broadly arcuate, advanced beyond the greatly deflexed apical angles, which are acute and slightly prominent; base closely fitted to the elytra, transverse, broadly evenly and feebly bisinuate, not at all emarginate at the scutellum, the angles acute but not exposed; disk very convex, greatly declivous laterally, transversely biimpressed near the middle before the base, not very coarsely but deeply, perforately punctate, the punctures very dense laterally but well separated toward the middle. Scutellum moderate, as long as wide, ogival behind, parallel toward base, the latter truncate. *Elytra* very slightly inflated behind the middle, rather more than twice as long as wide, nearly one-third wider than the prothorax and scarcely three times as long, acutely triangular behind in apical third; humeri somewhat broadly rounded to the prothorax; disk gradually feebly declivous behind, with nine narrow but strong, even, coarsely and approximately punctate striæ, the intervals nearly flat, minutely, confusedly, not densely punctulate. Length 3.0 mm.; width 1.2 mm

California (Mendocino Co.).

The small size, narrow form and complete absence of any scutellar modification of the basal lobe of the pronotum, will readily distinguish this species from any *Dryops* known to our fauna.

ELATERIDÆ.

ALAUS Esch.

A. zunianus n. sp.—Elongate, very convex, shining, black throughout, the upper surface with sparse patches of dense yellowish-white squamiform pubescence; vestiture elsewhere less dense, black; integuments finely closely and distinctly punctate, the punctures larger on the prothorax, becoming coarse and very dense anteriorly, the elytra with series of small but strong, close-set punctures, the two or three series nearest the suture not coinciding with the feebly impressed lines. Head impressed anteriorly, coarsely, densely punctate, the punctures intermingled with finer punctules; vestiture in great part pale; antennæ scarcely extending to basal third of the prothorax, nearly as in *gorgops*. Prothorax scarcely as long as wide, parallel, broadly and distinctly arcuate at the sides, the ornamentation as in *gorgops*. Scutellum abruptly more declivous anteriorly. Elytra as wide as the prothorax and distinctly more than twice as long, the usual large black spot at the sides well defined and bordered anteriorly by a large solid patch of the pale pubescence. Under surface with some patches, more or less isolated, of pale pubescence near the sides; prosternum longitudinally canaliculate between the coxæ. Length 33.0–44.0 mm.; width 10.0–13.5 mm.

Arizona.

The three specimens before me represent a species allied to *gorgops*, resembling that species especially in the large uneven and isolated patches of pale pubescence, which are here still larger and less numerous. It differs greatly in general form and sculpture, the sides of the prothorax being nearly straight in *gorgops*, with the elytra scarcely twice as long, and with the elytral punctures very fine and sparse, the series composed of much smaller and more remote punctures, and coinciding with the feeble impressed lines. In *zunianus* the pronotum is finely but distinctly canaliculate along the middle, and the eye-like spots are more distant from the edge and more approximate than in *gorgops*; the last segment of the abdomen is devoid of pale vestiture in the three specimens before me.

Lusciosus Hope, with which *gorgops* is united by Candèze, is stated to be shorter in form than *oculatus*; this is distinctly true

of *gorgops*, but in *zunianus* the form is fully as elongate as in *oculatus*.

Note—*Chalcolepidius behrensi* Cand., has been taken by Mr. Dunn at Beuson, Arizona.

THROSCIDÆ.

FACTOPUS Lec.

The two species of this genus, which are indicated by the material in my cabinet, may be distinguished thus:—

Very elongate, the elytra more than twice as long as wide; prothorax strongly enveloping the humeri, the sides deeply sinuate anteriorly, as well as convergent; eyes larger, separated by about twice their own width. Length 4.6 mm.; width 1.6 mm. **horni** Lec.
 Less elongate, the elytra not more than twice as long as wide, the eyes rather smaller, separated by distinctly more than twice their own width; prothorax a little less strongly enveloping the elytral humeri, the sides strongly convergent to the apex but only very feebly sinuate. Remaining characters nearly as in *horni*, the intermediate coxæ very slightly more widely separated. Length 3.2–4.2 mm.; width 1.3–1.6 mm. California (San Francisco and Sta. Cruz Cos.)..... **fuchsi** n. sp.

Of *fuchsi*, I have three specimens, similar among themselves but differing greatly in size; they were very kindly presented to me by Mr. Chas. Fuchs of San Francisco, to whom I take pleasure in dedicating an interesting addition to the family. My four examples of *horni* are more uniform in size, and are from Washington State and Nevada; it is probably more boreal in habitat than *fuchsi*.

CERAMBYCIDÆ.

ANCYLOCERA Serv.

In general facies the species of *Ancylocera* are very similar among themselves, and the two separated below are identical in coloration; they may be distinguished as follows:—

Antennæ of the female two-thirds as long as the body; flanks of the prothorax transversely rugose as far as the coxæ, where the plications abruptly terminate, the prosternum before the coxæ very coarsely punctate.

bicolor Oliv.

Antennæ in the female one-half as long as the body; flanks of the prothorax simply punctate beneath, the prosternum much less coarsely punctate. Black, the elytra and abdomen red, polished. Head coarsely, strongly punctate, feebly impressed along the middle. Prothorax one-half longer than wide, the sides broadly arcuate, more convergent and feebly constricted near the base, the latter equal in width to the apex, both truncate; disk coarsely, deeply punctate, the punctures forming transverse rugæ which are obsolete along the median line and gradually evanescent beneath. Sentellum small, impunctate, the horizontal posterior part not carinate and not longer than wide. Elytra parallel, not quite twice as long as the prothorax, nearly two and one-half times as long as wide, narrowly truncate at apex, impressed and punctate nearly as in *bicolor*, but rather less densely. Length 8.5 mm.; width 2.0 mm. Florida.....**brevicornis** n. sp.

In *bicolor* the transverse area behind the buccal opening is more finely sculptured than in *brevicornis*, and the transverse prosternal constriction is very much deeper; *brevicornis* is slightly the smaller of the two.

TRAGIDION Serv.

The species of this genus may be known by the following characters:—

Third joint of the hind tarsi not longer, and but seldom visibly wider than, the second; elytra corrugated.

Antennæ more or less pale, the swollen apices of the pale joints black and abruptly more densely pubescent.

Antennæ entirely black toward apex; elytra strongly narrowed from base to apex; large species, the black hairs of the pronotum and legs with a strong cobalt-blue reflection**annulatum**

Antennæ pale throughout, the apices of all the joints black; elytra parallel; size smaller, black; the hairs without blue reflection; hind tibiae moderately dilated and compressed.....**auripenne**

Antennæ black throughout; apices of the joints feebly swollen but not more densely pubescent.

Third joint of the hind tarsi scarcely shorter than the second; posterior tibiae not distinctly modified; elytra varying from black with a small fulvous spot behind the humeri to completely fulvous except at the basal margin.....**coquus**

Third joint small, very much shorter than the second; posterior tibiae broader, strongly compressed; elytra fulvous throughout except at base.....**fulvipenne**

Third joint of the hind tarsi distinctly longer and somewhat wider than the second; elytra not corrugated, parallel, each with three feeble and minutely costuliform lines; pronotal punctures in the male minute and dense but becoming abruptly coarse in an apical band, the posterior transverse margin of which is multisinuate; in the female minute and dense throughout.

armatum

Fulvipenne Say, is not by any means a variety of *coquus*, but is specifically distinct. *Coquus* Linn. has the pronotum in the male rather coarsely punctured throughout, except near the base, but in the female very finely extremely densely so; this character may also be common to the other allied species, but cannot be verified at present because of their denser and longer vestiture. The sexual disparity of *armatum* in pronotal sculpture is very remarkable.

T. auripenne n. sp.—Parallel, convex, black, the elytra bright aureo-fulvous except at the basal margin; pubescence dense, assuming the color of the integuments, recumbent on the elytra where it is dense and arranged obliquely on the strong corrugations but very inconspicuous in the intervals, erect on the pronotum where it is short, not concealing the surface sculpture. *Head* moderate, densely punctate, the antennal prominences acute; antennæ very slender, about one-half longer than the body, basal joint oval, twice as long as wide, three-fifths as long as the third, second slightly longer than wide, four to seven equal, a little shorter than the third, eleventh with the appendage as long as the basal part and feebly bent at apex. *Prothorax* a little wider than long; apex slightly wider than the base, the acute and prominent lateral tubercles slightly behind the middle; disk opaque, feebly and finely 5-tuberculate, the median tubercle larger and polished; punctures coarse, very dense, abruptly fine and extremely dense near the base. Scutellum roughly punctate. *Elytra* three times as long as wide; sides parallel, the humeri obtusely prominent; apex conjointly broadly rounded; disk of each with five strong narrow ridges, the fourth joining the fifth before the middle. *Legs* slender, the posterior much longer, with the tibiæ somewhat dilated and compressed. Length 14.0–20.0 mm.; width 3.8–5.7 mm.

Utah (southwestern); Arizona.

The three specimens in my cabinet are males and I have not seen the female. This species is somewhat smaller than *coquus*, but all the species vary enormously in size.

Among the eleven specimens of *coquus* in my cabinet there are only three females; the elytral corrugations in that species are always much wider and more feeble than in *fulvipenne*; the form of the hind tibiæ will however distinguish them at once.

BATYLE Thom.

B. cylindrella n. sp.—Narrow, cylindrical, polished, bright red throughout, the elytral suture not darker, post-sterna blackish; legs pale, the tarsi black except near base and apex; antennæ rufo-testaceous, dark toward apex especially toward the apices of the joints; vestiture very sparse, coarse, erect, not very long, pale luteous in color. *Head* finely, remotely punctate, almost completely impunctate before the antennæ, the latter slender,

not quite as long as the body, the third joint one-third longer than the fourth. *Prothorax* nearly as long as wide, the base and apex subequal, truncate; sides parallel, evenly and strongly arcuate; disk even, finely feebly and very remotely punctate. Scutellum small, impressed, scarcely darker. *Elytra* long, fully two and one-half times as long as wide; humeri slightly prominent; sides parallel and straight; apices individually evenly and strongly rounded; suture margined; disk coarsely, sparsely punctate, the punctures less coarse toward apex. *Legs* slender, moderately densely clothed with rather short even pubescence; hind femora slightly darker at tip; tarsi slender, first joint of the posterior as long as the entire remainder, second rather more than twice as long as wide. Length 9.5 mm.; width 2.3 mm.

Texas (El Paso).

The male serving as the type has the prosternum before the coxæ scarcely depressed but coarsely very densely punctate and more densely pubescent, as in many species of *Stenosphenus*. This sexual mark exists also in *B. suturalis*, from which the present species differs in its more elongate form, shorter and coarser pubescence, which is pale and not black, less punctate head and more elongate legs.

OXOPLUS Lec.

The differences between this genus and *Crossidius* are exceedingly slight, and it is probable that the two will have to be merged at no distant day; the type of ornamentation is identical in each. The following species differs from any of those hitherto described in the development of the fine elytral ridges, which are distinct very nearly to the apex.

O. coccineus n. sp.—Moderately stout, convex, feebly shining, bright scarlet, the head, antennæ, entire under surface between the anterior and posterior coxæ, apical and basal beads of the prothorax, scutellum, basal margin of the elytra, and a common narrow sutural dash in apical half black; pubescence pale, extremely short, sparse and inconspicuous, rather short sparse and blackish on the legs. *Head* coarsely densely and unevenly punctate; antennæ slender, about one-fourth longer than the body, the appendage of the eleventh joint scarcely more than one-third of the total length, with its apex abruptly concave internally and arcuately pointed. *Prothorax* one-half wider than long, the lateral tubercles acute and strong; basal bead very prominent at the sides; disk very coarsely, closely punctate, with five large concolorous tubercles which are scarcely less punctate than the remainder of the surface. Scutellum finely, closely punctate. *Elytra* at base distinctly wider than the prothorax, fully four times as long; sides distinctly convergent from the rather prominent humeri to the apex, which is truncate, the sutural angles acute and slightly prolonged; disk very coarsely, closely punctate.

tate, less coarsely so toward apex, and with three fine almost entire carinules, narrowly impressed along each side of the suture toward base. *Legs* slender, the posterior long, with the tarsi fully three-fourths as long as the tibiae. Length 19.0-20.0 mm.; width 5.7-6.3 mm.

Utah (southwestern).

The description is taken from three perfectly similar males, the single female before me being slightly more robust, with more parallel elytra, in which the narrow sutural dash of black becomes very broad, abruptly narrowed to the suture just before the middle, not extending to the edges except at apex. The antennae in the female are scarcely three-fourths as long as the body but not much stouter than in the male, and the posterior legs, and especially the tarsi, are decidedly shorter. This species belongs near *corallinus* Lec.

CROSSIDIUS Lec.

C. blandi n. sp.—Narrow, cylindrical, shining, bright rufous, the head and postpectus black; elytral blue-black area extending from the base for a short distance, then abruptly contracted, extending narrowly along the suture, gradually becoming wider to the middle where it becomes parallel, extending with two-thirds of the total width to apical fourth where it is abruptly widened nearly to the lateral edges, thence extending broadly to and enveloping the apex; pubescence long, sparse, erect and cinereous throughout. *Head* very densely, coarsely punctate; antennae a little longer than the body in the male, two-thirds as long in the female, slender. *Prothorax* wider than long, parallel and evenly rounded at the sides, evenly convex, coarsely punctate, the punctures very uneven, dense near the apex, sparse elsewhere. *Elytra* slightly wider than the prothorax, a little more than twice as long as the head and prothorax combined, each broadly and evenly rounded at apex without trace of truncature, reentrant at the suture, the angles rounded; disk very coarsely punctate, the punctures everywhere distinctly separated and becoming but slightly less coarse toward apex. *Prosternum* before the coxae very coarsely punctate in the male, finely and inconspicuously so and less pubescent in the female. Length 7.7-9.5 mm.; width 2.0-2.5 mm.

Utah (southwestern).

This beautiful little species is widely distinct from *discoideus* in its smaller size, narrower form and sparse punctuation, especially of the pronotum, and from *pulchrior* Bland—which does not appear to be exactly the same as *discoideus*—it differs in the uneven pronotal punctuation, and in the gradually and not abruptly anteriorly narrowed black area of the elytra. In *discoideus* the elytra are always feebly but perceptibly truncate at apex, and the pronotum is scarcely ever devoid of the two subapical black spots, of which there is no trace in *blandi*. Four specimens.

XYLOTRECHUS Chev.

The following species is allied to *undulatus* Say, but differs in the much broader bands before and behind the middle of the elytra, interrupted only at the suture.

X. gemellus n. sp.—Moderately stout, convex, dark red-brown in color, densely clothed with short pubescence, generally dark in color but suffusedly white at the apex of the pronotum and obliquely at the sides toward base; on the elytra the white pubescence is suffused at base throughout the width, and, on each elytron there is a short longitudinal line behind the scutellum, a short transverse discal line near the base, a broad and transversely lunate band at basal two-fifths not produced anteriorly along the suture, a transverse internally dilated spot at apical third, and a more suffused apical band. *Head* with the two short frontal carinæ distinct; antennæ slender, filiform and equal throughout, two-fifths as long as the body, first four joints clothed with paler ashy hairs, third distinctly the longest, tenth fully one-half longer than wide. *Prothorax* wider than long, constricted and broadly pedunculate at base, coarsely and rugosely sculptured in short transverse confused ridges throughout. *Elytra* a little more than twice as long as wide, at base equal in width to the pronotal disk; sides nearly straight, distinctly convergent from base to apex, the latter broadly arcuate-truncate and feebly oblique, the external angle obtuse but not at all rounded. *Legs* slender; basal joint of the hind tarsi strongly compressed and much longer than the remainder. Length 14.0–15.0 mm.; width 4.0 mm.

Indiana.

From *undulatus* and its varieties this species may be known at once by the coarser sculpture of the pronotum, suffused pale pubescence at the base of the elytra throughout the width, much less prominent frontal carinæ and several other features. The transverse bands are wholly different in form, being wider, and posteriorly arcuate at the point where, in *undulatus*, they are anteriorly angulate. There can be scarcely any doubt of the distinctness of these species, although *gemellus* has possibly been regarded heretofore as a variety of *undulatus*. Two specimens.

CYRTOPHORUS Lec.

The two species may be distinguished as follows:—

Larger and stouter, the pronotum compressed and prominent along the middle; basal elevations of the elytra strong; third antennal joint strongly spinose.

verrucosus Oliv.

Smaller and less convex, the pronotum not at all compressed; basal elevations feeble; third antennal joint briefly dentato-spinose within at apex.

insinuans n. sp.

The second species makes one of the passages between *Cyrtophorus* and *Microclytus*, but the third joint of the antennæ in the latter is not in the least spinose, and the second is very nearly as long as the fourth; the body and legs, also, are clothed with long flying hairs, which are almost, but not quite, wanting in *Cyrtophorus*.

C. insinuans.—Parallel, moderately convex, black in color; antennæ, except the basal joint, and the legs in part more or less indefinitely paler; elytra rufescent toward base; head and pronotum densely dull, the elytra shining. *Head* finely, densely sculptured; eyes as in *verrucosus*, the upper lobe not acute; antennæ slender, almost as long as the body, the second joint scarcely more than one-half as long as the fourth, the latter distinctly shorter than the fifth, third nearly one-half longer than the fourth. *Prothorax* not quite as long as wide; sides parallel, feebly arcuate, strongly convergent near the base, the latter much narrower than the apex; disk finely, densely sculptured, the larger punctures isolated and defined by slightly elevated margins; pubescence short, decumbent and inconspicuous. *Elytra* more than twice as long as wide, one-third wider than the prothorax and more than three times as long; sides parallel; apices narrowly truncate; angles not prominent; pubescent spots and bands as in *verrucosus* but with the basal line much less oblique, more oblique however than in *Microclytus*. *Legs* short, slender; femora moderately clavate; tibiæ with short subdecumbent and uniform pubescence; tarsi short, the basal joint not as long as the remainder. Length 6.0 mm.; width 1.8 mm.

Canada (Ontario).

The characters given in the table will readily distinguish this species from *verrucosus*; in fact it much more closely resembles *Microclytus gazellula*, but differs in the characters which have been given to separate the two genera. A single example, probably male.

EUDERCES Lec.

E. exilis n. sp.—Moderately convex, pale rufous throughout, except the abdomen and apical half of the elytra, which are black; head and pronotum alutaceous, minutely but strongly, evenly reticulate, not at all longitudinally strigose. *Head* flat above, rather coarsely, unevenly punctate, the eyes completely divided, the upper lobe small, smooth, devoid of lenses except two or three near the upper angle; antennæ slender, three-fourths as long as the body, the second joint scarcely twice as long as wide, about one-third as long as the third, a little shorter than the fourth, the latter much shorter than five to seven, which are equal, third joint with a strong and distinct internal spine at apex, the fourth with a minute spine. *Prothorax* one-third longer than wide, the sides parallel and feebly arcuate in apical half, becoming

strongly convergent and arcuate toward base, the latter very briefly pedunculate and scarcely more than one-half as wide as the disk; apex broadly arcuate; disk impunctate, except in a large oblong-oval median area, where the punctures are small but strong, distinct and tuberculiform; interspaces perfectly smooth but dull. *Elytra* twice as long as wide, at base scarcely wider than the prothorax, gradually moderately inflated and more convex in apical half, together broadly rounded behind: basal tubercles feeble; disk dull and with dense deep and polygonally crowded punctures in basal half, except at the humeri, feebly rugulose but shining behind, with a single transverse raised ivory band before the middle and interrupted at the suture. *Legs* moderate; femora strongly swollen beyond the middle and again narrow at apex; tarsi short. Length 4.25 mm.; width 1.25 mm.

Texas.

The vestiture is very sparse, consisting of some long erect pale hairs on the prothorax, a few longer near the base of the elytra, and numerous short erect pale ashy hairs on the posterior declivity. This species is stouter than *reichei* and may be known immediately by the spinose antennæ. It is not at all closely allied to *spinicornis* Chev. In *reichei* the pronotal punctures are confined similarly to a large discal patch, but the interspaces are finely rugose; the prothorax in that species is narrower and much less strongly and abruptly narrowed toward base.

LEPTURA Linn.

L. gaurotoides n. sp. —Broad, nearly as in *Gaurotes*, moderately convex, dull, the elytra feebly shining; body, legs and antennæ intense black throughout; pubescence short, dark and inconspicuous. *Head* moderately finely, extremely densely punctate; eyes rather large, the emargination small but deep; antennæ very short, filiform but stout, with the joints compactly joined, one-half as long as the body, without trace of sensitive patches, first joint longer than the next two combined, third twice as long as wide, longer than the fourth but shorter than the fifth, tenth less than twice as long as wide, eleventh a little shorter than the two preceding together, gradually and acutely pointed from near the middle. *Prothorax* transverse, one-half wider than long, more than three-fourths wider than the head, the sides angulate and slightly prominent at apical third, where the width is slightly less than at base; sides broadly sinuate in basal two-thirds, rapidly convergent from the lateral angles to the apex, which is truncate and one-half as wide as the base; basal angles only very slightly prominent laterally; disk scarcely visibly and widely impressed transversely near the base, just perceptibly flattened along the middle, convex, rather coarsely, extremely densely punctate, the punctures circular and deep. *Scutellum* a little wider than long, the apex broadly and transversely truncate. *Elytra* three-fourths longer than wide, at the humeri one-third wider than the prothorax; sides convergent from the

evenly rounded humeri to the apex, each elytron evenly and strongly rounded at apex, without trace of truncature, slightly dehiscent at the suture toward tip; disk strongly, evenly, rather closely but not densely punctate. *Legs* slender, moderate in length, the first joint of the hind tarsi a little longer than the next two, not at all finely pubescent beneath. Length 9.5 mm.; width 4.4 mm.

Utah (southwestern).

This very distinct species may be placed at present near *instabilis*, which it resembles in general form and in the outline of the prothorax. The truncate scutellum is however a feature which differentiates it widely from that and nearly every other form; in *dolorosa* the scutellum is truncate, but otherwise that species is not at all allied. *Gaurotoides* is only distantly related to *brevicornis*.

PTYCHODES Serv.

The two species of this tropical genus which cross the southern border of the United States may be known by the following characters:—

Pronotum and elytra with three crenate vittæ, the sutural vitta extending to about apical fourth or fifth and irregular in outline; antennæ longer, the third joint more than twice as long as the fourth; anterior legs of the male greatly elongate, the femur about two-thirds as long as the elytra.

trilineatus Linn.

Pronotum without trace of the median white vitta, the sutural vitta of the elytra confined to basal fifth, where it abruptly and completely terminates; antennæ shorter, the third joint rather less than twice as long as the fourth; anterior legs of the male less elongate, the femur not more than one-half as long as the elytra. *Head* deeply, narrowly furrowed between the antennæ, the latter twice as long as the body, slender, the third joint gradually thicker and strongly rugose toward base, eleventh distinctly shorter than the third, very slender, the appendage nearly as long as the basal part and just visibly arcuate. Prothorax scarcely as long as wide, coarsely, transversely plicate. Elytra two and one-half times as long as wide, the lateral vitta equal and continuous from the eyes nearly to the apex; disk sparsely punctate, strongly so toward base, clothed rather densely with short gray hairs, also with scattered spots of reddish-ochreous pubescence of similar structure. Length 23.0 mm.; width 5.8 mm. Arizona.

abbreviatus n. sp.

The spots of dense ochreous pubescence are much more conspicuous than in *trilineatus* (= *vittatus* Fab.) and are less lineate in arrangement; the elytral punctures are stronger, and the sutural spines are only one-half as long. A single male example.

APPENDIX.**I.**

As the present paper was passing through the press I received an important set of western Aleocharini from Mr. Wickham, of which the two following species deserve notice at the present time.

MYRMOBIOTA n. gen.

Head well inserted, subparallel at the sides, not constricted, the eyes rather small, at distinctly more than their own length from the base; infralateral carina strong, entire. Antennæ thick, the basal joint but slightly longer and thicker than the second, each one-half longer than wide; third slightly shorter than the second, only very feebly obconical, a little longer than wide; fourth slightly wider than long; four to ten evenly and gradually but rapidly increasing in width, obconical and perfoliate, the tenth nearly twice as wide as long; eleventh short, conoidal, a little longer than wide, not as long as the two preceding. Maxillary palpi slender; third joint longer than the second, almost cylindrical; fourth feebly oblique, rather small. Mentum transverse, trapezoidal, with a thin translucent apical extension. Ligula with a short thick parallel process which is broadly rounded at apex; labial palpi three-jointed, the joints distinct, rapidly decreasing in thickness. Prothorax narrowed at base, the hypomera broad, entire and horizontal. Elytra ample. Abdomen rapidly narrowed from base to apex, the first two tergites broadly impressed at base; third a little longer than the fourth and much shorter than the fifth. Anterior coxæ large and elongate, the intermediate narrowly separated, the mesosternal process long, gradually finely acuminate, extending nearly to their summits, with its apex free and superposed upon the apex of the short triangular metasternal process. Metasternum moderate, the side-pieces gradually wider behind, the epimera obliquely truncate posteriorly, the obliquely pointed apex extending behind the elytra. Legs slender, moderate in length.

clothed with short coarse pubescence; tarsi distinctly 5-5-5-jointed, the posterior only slightly more than one-half as long as the tibiae, with the first joint a little longer than the second and equal to the fifth; claws small.

This genus is allied closely to *Homœusa*, but differs altogether in the form of the prothorax, in the less inflexed hypomera, shorter and stouter process of the ligula, triangular process of the metasternum, this being transverse and not entering the intercoxal space in *Homœusa*, in its more posteriorly prominent met-epimera, much shorter basal joint of the hind tarsi and longer fourth ventral segment.

M. crassicornis n. sp.—Rather narrowly fusiform, convex, moderately shining, minutely reticulate, the abdomen more finely and densely so and quite dull; color rufo-testaceous throughout; integuments rather coarsely and strongly punctate, the pronotum very densely so, the abdomen much more sparsely; pubescence short, decumbent and rather inconspicuous, the abdomen with longer erect hairs toward apex. *Head* transversely orbicular, convex, the front subimpunctate and polished, two-thirds as wide as the prothorax; antennæ very distant at base, somewhat short, but slightly longer than the head and prothorax, very strongly incrassate, finely pubescent and with moderately long erect setæ. *Prothorax* two-thirds wider than long, widest at the middle where the sides are broadly and obtusely angulate, thence convergent and straight to base and apex, the latter broadly arcuate and much narrower than the base which is broadly arcuate, becoming straight near the basal angles, the latter slightly obtuse, not rounded and not at all prominent; apical deflexed, obtusely rounded; disk strongly convex, feebly, somewhat obliquely impressed toward the sides and broadly, very feebly so along the median line. *Elytra* equal in width to the base of the prothorax, about as long as the latter; sides straight and parallel; humeri concealed; disk perceptibly and transversely convex. *Abdomen* as long as the anterior parts, at base just visibly narrower than the elytra, at the apex of the fifth segment one-half as wide as the latter; sides straight; border moderate; surface transversely convex, becoming subtubulate toward tip. Length 2.3 mm.; width 0.65 mm.

Iowa (Iowa City).

I have not seen any specimens of the ant with which this species occurs. The pubescence of the under surface of the abdomen is long and bristling. A single specimen, probably female.

MYRMECOCHARA Kraatz.

As remarked by Mr. Schwarz, it is beyond doubt that this genus—which is also related to *Homœusa*—is myrmecophilous and not

termitophilous. The following species occurs with a small slender yellow ant, apparently of the genus *Solenopsis*:—

M. crinita n. sp.—Fusiform, convex, somewhat shining, pale yellowish-testaceous throughout, the pubescence long, suberect, rather dense and very conspicuous, with long sparse setæ bristling along the sides of the body; punctuation fine, somewhat close but not at all conspicuous. *Head* transverse, three-fourths as wide as the prothorax, the eyes rather small and coarsely faceted, obliquely oval, at their own length from the base; infra-lateral carina feeble but distinct; antennæ slender, quite distinctly longer than the head and prothorax, just visibly incrassate, the second joint longer than the third, the latter longer than wide, four to ten subsimilar, rather compactly joined, small, only slightly wider than long, eleventh very long, compressed, gradually pointed, nearly as long as the four preceding combined. *Prothorax* twice as wide as long, the sides convergent and very feebly arcuate from base to apex, the latter transversely truncate, narrower than the base which is strongly and evenly arcuate throughout; angles slightly rounded, the anterior scarcely at all deflexed; hypomera strongly inflexed and invisible from the side. *Elytra* a little shorter and narrower than the prothorax, strongly transverse; sides feebly divergent from base to apex, the latter transverse; humeri completely concealed. *Abdomen* conical, at base slightly narrower than the elytra; first three tergites subequal and much shorter than either the fourth, fifth or sixth. *Legs* slender; tarsi short, evidently 5-5-5-jointed, the first joint of the posterior slightly longer than the second. Length 1.3 mm.; width 0.4 mm.

Colorado (Cañon City).

This species differs from *pictipennis* in coloration and several other characters, but is apparently closely allied, if not identical, with the form hitherto known from the District of Columbia.

Among other species, the material referred to includes in addition a specimen of *Orypoda nigriceps* from Iowa City, Iowa, and one of *Microdonia occipitalis* from Walnut, Arizona. In the latter the broad feeble impression near each side of the depressed pronotum is strongly developed, proving that it is a normal character and not produced by shrinkage of the exoskeleton; analogous lateral impressions of the pronotum are well developed in *Ecitophila omnivora* of Wasmann, which may be somewhat related to *Microdonia*.

There is also a specimen of *Amblopusa brevipes* from Victoria, Vancouver, which is pale flavate throughout, doubtless immature; it is just possible that there may be a minute basal node ankylosed to the very elongate first joint of the labial palpi, but it is not clearly discernible without dissection. *Actocharis* of Fauvel, is closely allied to *Amblopusa* and belongs to the same group, the labial palpi being 2-jointed; but the joints are equal in length, with the

first much stouter than the second and clothed with stiff sparse setae throughout, this being a very remarkable feature.

II.

ADDITIONAL NOTES AND SYNONYMY.

Plinodes cristatus Csy. (Col. Not. II, p. 323) should be referred to the genus *Trichodesma*; it is much stouter than the eastern species.

Coniontellus subglaber Csy. (l. c., p. 389), should be united with *obesus* Lec.

Eleodes tarsalis Csy. (l. c., p. 399), is without doubt the species intended by Mannerheim as *quadricollis*; the female is frequently altogether devoid of the series of coarse punctures, and the original type of *tarsalis* has a singular bilaterally symmetric deformity of the posterior tarsi. I have before me a large series. The single specimen referred to *quadricollis* (l. c., p. 395), is either a closely allied species with coarser pronotal sculpture, or a simple aberration. *Estriatus* is a widely distinct species, also represented by a large series.

Argoporis nitida Csy. (l. c., p. 405), has been erroneously referred by Mr. Champion (Biol. Cent.-Amer., Coleop., IV, i. p. 518), to *rufipes* Chmp. A male of the latter species kindly sent me by the author, shows that *rufipes* is a stouter and much duller species, with smaller punctures of the elytral series, and differs greatly in the structure of the anterior legs in the male. In the male of *rufipes* the anterior femora are stouter, with a much less developed internal subbasal dentiform lamina, and the corresponding tibiae have only five or six widely spaced granuliform serrules internally, while in *nitida* the internal cariniform elevation of the femur is very pronounced, and the tibiae are finely and closely serrulate within throughout the length; the last joint of the anterior tarsi in *nitida* is relatively longer, nearly equalling the three preceding combined.

The reference made (Col. Not. III, p. 21, footnote), to a single mandibular tooth in *Ergates neomexicanus* is not exactly correct, as I find by prying the mandibles further apart; the basal tooth is however more feeble than in *spiculatus*. The proper status of *neomexicanus* is probably that of a well-marked variety of *spiculatus*. All the specimens which I have seen have large pallid blotches on the elytra; whatever may be the cause of these blotches, they are completely wanting in my two specimens of *spiculatus*.

Epitragodes (l. c., p. 54), is closely allied to *Schœnicus* but differs in the stouter body, less prominent eyes, securiform fourth palpal joint and prominent prosternal process with vertical posterior wall; in *Schœnicus* the last palpal joint is more slender and triangular, rounded at apex with the inner side but slightly shorter than the outer, and the prosternal process is longitudinally convex and gradually declivous behind.

Hymenorus obesus Csy. (l. c., p. 93), is not distinct from *pilosus* Melsh. In *difficilis* (l. c., p. 94), the measurements are somewhat in error, the true dimensions of the type being about 6.0 by 2.5 mm.; the third antennal joint, also, is more than two-thirds as long as the fourth. Of *Mycetochara megalops* I have recently received a fine example taken in New York. The species of *Andrimus* defined under that genus, are distinct in my opinion; only two of them are known to the authors of certain recent hints to the contrary, and even they appear to have been misunderstood.

Thysanocnemis horridula Csy. (Col. Not. IV, p. 426), cannot be maintained as distinct from *foxini* Lec.; the locality label on the type of *horridula* is probably erroneous.

The name *Otidoccephalus myrmecodes* Chev., was assumed by me (l. c., p. 435), under a wrong impression. The reference given by Dr. Horn, "*myrmecodes* || Chev.," conveys the idea that Chevrolat described independently a species under the preoccupied name *myrmecodes*, and, under such circumstances, this name would of course stand when the original *myrmecodes* fell into synonymy. The truth, however, as I subsequently discovered—it did not occur to me to investigate further at the time,—is that Chevrolat described what he considered to be *myrmecodes* Say, and the reference should have been "*myrmecodes* Chev. nec Say," which has quite a different meaning. The true name of the species is therefore:—

O. chevrolati Horn—Proc. Am. Phil. Soc., XIII, p. 450; *myrmecodes* Chev. nec Say: Ann. Ent. Soc. Fr., 1832, p. 445; Casey: Ann. N. Y. Acad. Sci., VI, p. 435.

Specimens of *Tyloderma contusa* Csy. (l. c., p. 452), recently received, show that the humeri are generally nearly as widely exposed as in *foveolata*, and that the integuments beneath the pubescent patches of the elytra are rufescent; there are also a few hairs near the scutellum. The species would consequently be plainly allied to *variegata*, if it were not for the very coarse deep foveæ of the pronotum and elytra, which suggest an affinity with *foveolata*.

In *Centrinus acuminatus* and *globifer* (l. c., pp. 464, 591), the tooth referred to as belonging to the trochanters, really projects from the femora very near the trochanters.

Centrinus nubecula Csy. (l. c., p. 594), must be regarded as a large female of *capillatus*, and *Centrinopus helvinus* (p. 602), is to be placed in synonymy with *alternatus*, the latter being the name of the species. A series recently sent to me plainly unites these two forms, the latter of which was founded upon a specimen standing at one of the extremes, both in size and ornamentation, of a very variable species. In *Calandrinus insignis* the elytra are relatively shorter and paler than in *granaicollis*, the striae coarser, the intervals narrower and subequal, each with a single line of punctures, the four lateral spots of white scales well defined with scarcely any scattered pale scales.

The species which I regarded as the *Centrinus canus* of LeConte, because of its extended distribution under that name, proves to be quite different, and this will account for the apparent discrepancy in the original description.¹ The true *canus* is the form, a specimen of which was compared, on page 646, with *Limnobaris longula*. It is allied rather closely to *longula*, but is a larger and broader species. The description of LeConte will probably prove sufficient for its recognition, and is from a female type, the beak in that sex being rather slender, smooth, polished, subimpunctate except near the base and as long as the head and prothorax; in my male specimen the beak is shorter thicker and coarsely sculptured, as described on the page referred to. The species is therefore to be placed immediately after *Limnobaris longula* with the following references:—

Limnobaris cana Lec.—Proc. Am. Phil. Soc., XV, p. 421 (*Centrinus*); *longula* var. Casey: Ann. N. Y. Acad. Sci., VI, p. 646.

There is a large series of this species in the cabinet of Mr. Ulke.

The form identified by me as *canus* and placed in the genus *Nicentrus*, must receive another name as follows:—

Nicentrus grossulus n. n.—*N. canus* Csy. neo Lec.: Ann. N. Y. Acad. Sci., VI, p. 614.

The series in my cabinet now consists of eight specimens, varying in length from 4 to 5 mm., but otherwise quite homogeneous. The vestiture is generally more yellowish than whitish.

¹ This is the only species not described from the original type or a specimen carefully compared therewith.

It would not be far wide of the truth to say that *Centrinus* and its allied genera form one of the most difficult studies to be met with in the Coleoptera. After completing my recent revision, I went carefully over the manuscript and withdrew the descriptions of many forms, which at first seemed to represent distinct species. As seen above, however, this eliminating process was not carried quite far enough, and there may be others which must eventually disappear, but the number of these will probably be inconsiderable. I have no hesitation in stating the total number of species of Barini within our limits to be about 300. In my cabinet there are at present nearly 600 species from Brazil, and the number inhabiting that country cannot be far short of 1500. For the world at large 4000 species would be a conservative estimate.

The three following species, recently submitted to me for examination by Mr. Uike, are sufficiently interesting to be made known on the present occasion.

***Stethobaris cicatricosa* n. sp.**—Oblong-oval, convex, subglabrous, highly polished, black, the entire elytra bright red, the scutellum black; legs and antennæ black, with a piceous tinge. *Head* finely, sparsely punctate; beak short, thick, feebly arcuate, much shorter than the prothorax, finely punctate, the punctures coarser and denser at the sides; antennæ inserted at the middle, funicle short, stout, cylindrical, the basal joint stouter and as long as the next three, two to seven equal, short, strongly transverse and closely coarctate, club moderate, oval, nearly as long as the preceding six joints. *Prothorax* one-half wider than long, the sides feebly convergent and broadly arcuate from the base to apical fourth, then abruptly and strongly constricted, the apex conically subtubulate; base more than twice as wide as the apex, very feebly bisinuate; disk strongly but sparsely punctate, the punctures distinctly isolated beneath at the sides; median impunctate line imperfect. *Scutellum* small, subquadrate, glabrous, impressed. *Elytra* distinctly wider than the prothorax and about twice as long, the humeral callus but moderately developed; sides less than usually convergent, the apex very broadly rounded; striæ coarse, very deep, with the edges obtuse, not at all crenate but finely, strongly punctate along the bottom, the eighth represented only by a series of remote punctures from the humeri to a little behind the middle, then abruptly assuming the form of a deep narrow cleft to apical sixth, the cleft-like portion margined on both sides by a broader, deep, abruptly defined and setose fossa, the combination giving the appearance of a longitudinal scar; intervals nearly flat, two or three times as wide as the striæ, minutely, sparsely punctate, the punctures in single uneven series, more confused on the second and fifth. Under surface sparsely setose, strongly punctured, the abdomen rather sparsely so. Tarsal claws small, slender, free and divergent. Length 3.5 mm.; width 1.9 mm.

Texas.

The type of this remarkable species is apparently unique. The prosternum is rather broadly and deeply sulcate. In my recently published table of the genus it may be placed immediately after *corpulenta*.

EUMONONYCHA n. gen.

Body subrhomboidal, convex. Beak short, stout, feebly arcuate, slightly flattened toward apex, the epistomal lobe prominent and the mandibles small, stout, broadly decussate and deeply notched; basal transverse groove deep, abrupt and impunctate. Antennæ inserted at the middle of the sides, the scrobes obliquely descending; scape not quite attaining the eye; funicle short, the basal joint stout and as long as the next three, the second quadrate, two to seven subequal in length, increasing gradually in width, the club oval, moderate in thickness, as long as the five preceding joints, finely pubescent, with the basal joint large. Prothorax constricted. Scutellum small. Elytral striæ normal. Prosternum nearly flat, feebly emarginate at apex, with a deep transverse post-apical fovea. Anterior coxæ large, prominent, narrowly separated. Legs somewhat short and stout; femora long and parallel, unarmed; tibiæ short, very feebly enlarged and everted toward apex, not carinate externally; tarsi short, stout, the third joint small but wider than the second and deeply bilobed. Tarsal claws long, single.

The present genus is the third now known in the Barini having the tarsal claws single; they differ greatly however among themselves in all other features. The type above defined approaches *Eisonyx* more closely than any other, but differs in its normal elytral striation, non-carinate tibiæ, and very greatly in general facies and sculpture.

E. opaca n. sp.—Black, the legs, especially the intermediate and posterior, rufo-piceous; integuments very dull throughout and minutely granulate-reticulate, the pronotum more shining than the elytra; vestiture sparse and uneven, consisting on the elytra of long, very fine, closely recumbent whitish hairs, slightly coarser and more distinct in certain feebly defined spots posteriorly, and quite coarse before the humeral callus; on the pronotum widely scattered but more noticeable narrowly at the sides toward base; on the under surface very inconspicuous but more distinct at the sides of the abdomen behind; legs and tarsi much more conspicuously setose. Head and beak finely but strongly punctate, the latter densely so throughout, subequal in length to the prothorax, thick and slightly compressed. Prothorax small, subconical,

but little wider than long, the sides convergent and nearly straight to apical fourth, then constricted, the apex broadly subtubulate and a little more than one-half as wide as the base, the latter feebly oblique and nearly straight from the obsolete median lobe to the sides; disk coarsely deeply and densely punctate, the punctures tending to form longitudinal rugæ, with an entire and feebly impressed median line, and a large impunctate spot at each side near lateral fourth and behind the middle. Scutellum small, tumid, deeply seated. Elytra large, widest near basal third where they are three-fourths wider than the prothorax, fully twice as long as the latter and longer than wide; sides just visibly convergent from posterior third to the conspicuous humeral callus, convergent and feebly arcuate behind, the apex rather narrowly rounded; disk with moderately fine, very shallow, opaque striæ; intervals flat, three to four times as wide as the striæ, opaque, finely and feebly, somewhat sparsely and confusedly punctate throughout their entire extent. Under surface dull, the abdomen much more shining and minutely, sparsely punctate. Length 3.5 mm.; width 1.8 mm.

Missouri.

A single specimen.

AMERCEDES n.gen.

Body oval, stout, convex, semi-glabrous. Head and eyes normal. Beak consisting of two dissimilar elements, the basal fourth abruptly swollen and bulbiform, coarsely sculptured, the remainder almost perfectly straight, forming a very slight angle with the basal part, very slender, cylindrical, polished and almost impunctate. Mandibles short, stout, obliquely vertical in action nearly as in *Eunyssobia*, minutely tridentate. Antennæ inserted at the sides near the base at the anterior limit of the bulbous portion, the scape very short, claviform, attaining the eye; funicle long, very slender, nearly nude, the basal joint long, rather longer than the scape, slightly claviform, second extremely long, slender, almost twice as long as the first and as long as the entire remainder, three to seven subequal in length, gradually a little thicker, the seventh finely pubescent; club moderate, normal, oval, not very abrupt, finely pubescent, with the basal joint constituting about one-half of the mass. Prosternum with a broad and profound median sulcus, the anterior coxæ separated by distinctly less than their own width. Legs rather thick; femora unarmed; tibiæ finely fluted, bent outward and slightly thickened toward apex; tarsi well developed, the two basal joints small, wider than long, the third large, the lobes long and widely divergent, claw-joint very long, slender, feebly

arcuate. Ungues rather long, completely connate and without suture in rather less than basal half.

This wonderful genus is entirely without near relatives within our faunal limits. The slender beak abruptly dilated at base and subvertical mandibles remind us of *Eunyssobia*, but the dilated third tarsal joint and connate claws, deeply sulcate prosternum and general habitus of the body, depart very widely from that genus and show that it must be considered an intermediate and remarkably synthetic type.

A. subulirostris n. sp.—Oval, shining, coarsely sculptured, piceous-brown in color throughout. Head finely but strongly, rather closely punctate, scarcely visibly, broadly impressed between the eyes and with a small interocular fovea. Prothorax nearly two-thirds wider than long, the sides broadly, evenly arcuate, becoming nearly parallel in basal half, strongly convergent but very feebly constricted toward apex, the latter less than one-half as wide as the base, which is transverse and straight, with the median lobe rather narrow but strong, abrupt and rounded; disk coarsely punctate, the punctures contiguous laterally but smaller and slightly separated toward the ill-defined median impunctate line. Scutellum small, subquadrate, flat, roughly sculptured. Elytra, at the moderately developed humeral callus, distinctly wider than the prothorax, about three-fourths longer than the latter, scarcely as long as wide, broadly hemi-elliptical in outline; striae coarse, deep, finely and remotely punctate at the bottom, the intervals flat, twice as wide as the striae, extremely coarsely roughly and unevenly but not very deeply punctate, polished. Under surface densely punctate, the metasternum very coarsely so, the abdomen more finely, and with small sparsely distributed squamules throughout. Length 3.0 mm.; width 1.7 mm.

Texas.

The upper surface has a few widely scattered slender squamules toward the sides of the pronotum and along the elytral intervals, more conspicuous at the base of the second. A single specimen.

The following is interesting as being the second known species of *Madarellus* thus far discovered in the United States:—

M. cuneatus n. sp.—Strongly convex and cuneiform, highly polished, black throughout. Head finely but strongly, sparsely punctate, the transverse impression distinct and broadly angulate in profile; beak stout, evenly arcuate, gradually and feebly tapering from base to apex, rather longer than the prothorax, somewhat coarsely deeply and moderately densely punctate throughout, with a median impunctate line; antennae inserted at basal third, the scape short, scrobes deep, basal joint of the funicle elongate, club cylindro-ovoidal, subequal in length to the five or six preceding joints, densely opaque and pubescent. Prothorax large, one-half wider than long, inflated, widest

just behind the middle, abruptly, strongly constricted and tubulate at apex, the latter but slightly more than one-third as wide as the disk; sides broadly arcuate; base transverse, broadly, deeply bisinuate, the median lobe strongly, narrowly rounded; disk minutely but distinctly, remotely punctate, abruptly becoming obliquely and coarsely punctato-rugose at the sides and beneath. Scutellum small, transversely lunate. *Elytra* but slightly longer than wide, less than one-half longer than the prothorax and distinctly narrower; outline narrowly parabolic, the sides rapidly convergent; surface broadly undulated; striae fine but deep, finely but distinctly punctate, the intervals flat, three or four times as wide as the striae, each with a single series of minute distant punctures which become more visible laterally; striae coarse on the apical concave declivity, the intervals becoming there acutely prominent. Under surface strongly, closely sculptured. *Legs* stout; femora strongly punctate. Length 2.7 mm.; width 1.4 mm.

Texas (San Antonio). Mr. Wickham.

Closely allied to *undulatus*, but differing in its shorter broader and more rapidly cuneate form, more strongly punctate elytral striae and smaller size. The punctuation of the femora is less rugose than in *undulatus*. The tooth of the anterior femora is alone distinct, and the anterior tibiae are scarcely at all prominent within in the male, though bent and slightly narrowed toward base. A single specimen, apparently male.

There is a specimen from Honduras before me which very closely resembles *cuneatus*, but the anterior tibiae are more abruptly swollen or subtuberculate within at the middle.

After the revision of our Scaphidiidæ (*ante* p. 510) had been printed, I discovered by chance that Mr. Reitter had described several American species of this family in 1880 (Verhandl. Naturf. Ver. Brünn, XVIII, p. 35, *et seq.*). This paper is at present inaccessible to me, but the species are: *Scaphidium antennatum* (Texas), *Cyparium substriatum* (Alabama), *Scaphisoma impunctata* (Missouri), and *S. lævis* (Nordam.). The last two are probably allied to *obesula*, *carolinæ* and *arkansana*, and there is doubtless some synonymy involved which I shall attempt to make known at a future time.

The Californian species published by Schmidt (Ent. Nach., XVI, 1890, p. 51) under the name *Saprinus sulcatulus*, is identical with *scissus* Lec. in every character mentioned in the description. Several years ago I sent a small series of this species—which is one of the

most abundant and characteristic of the California sea-beaches—to Mr. Lewis, and it is possibly some of these specimens which have been described by Mr. Schmidt, as he mentions having received them from Mr. Lewis.

ERRATUM.

On page 506, after *Decarthron longulum*, for "Bndl." read "Lec." It is singular that this mistake should also have been made by Dr. Brendel in the recent monograph.

EXPLANATION OF PLATE I.

- Fig. 1. *Rafonus tolulæ* Lec.—apex of venter ♀.
 Fig. 2. *Sonoma isabellæ* Lec.—apex of venter ♀.
 Fig. 3. *Sonoma cavifrons* Csy.—apex of venter ♀.
 Fig. 4. *Sonoma subsimilis* Csy.—apex of venter ♂.
 Fig. 5. *Arthmius globicollis* Lec.—apex of venter ♂.
 Fig. 5a. " " —antenna ♂.
 Fig. 6. *Arthmius gracilior* Csy.—apex of venter ♂.
 Fig. 6a. " " —antenna ♂.
 Fig. 7. *Arthmius bulbifer* Csy.—apex of venter ♂.
 Fig. 7a. " " antenna ♂.
 Fig. 8. *Arthmius involutus* Csy.—apex of venter ♂.
 Fig. 8a. " " —antenna ♂.

The antennæ are all viewed upon the under surface.

- Fig. 9. *Tyrus mucronatus* Panz.—intermediate trochanter (above) and anterior femur (below) ♂.
 Fig. 10. *Tyrus corticinus* Csy.—same.
 Fig. 11. *Tyrus humeralis* Aubé—same.
 Fig. 12. *Reichenbachia wickhami* Bndl.—antenna ♂ and ♀, under surface.
 Fig. 12a. *Reichenbachia tumida* Lec.—antenna ♂ and ♀, under surface.
 Fig. 12b. *Reichenbachia complectens* Lec.—antenna ♀.
 Fig. 12c. *Reichenbachia subtilis* Lec.—antenna ♀.

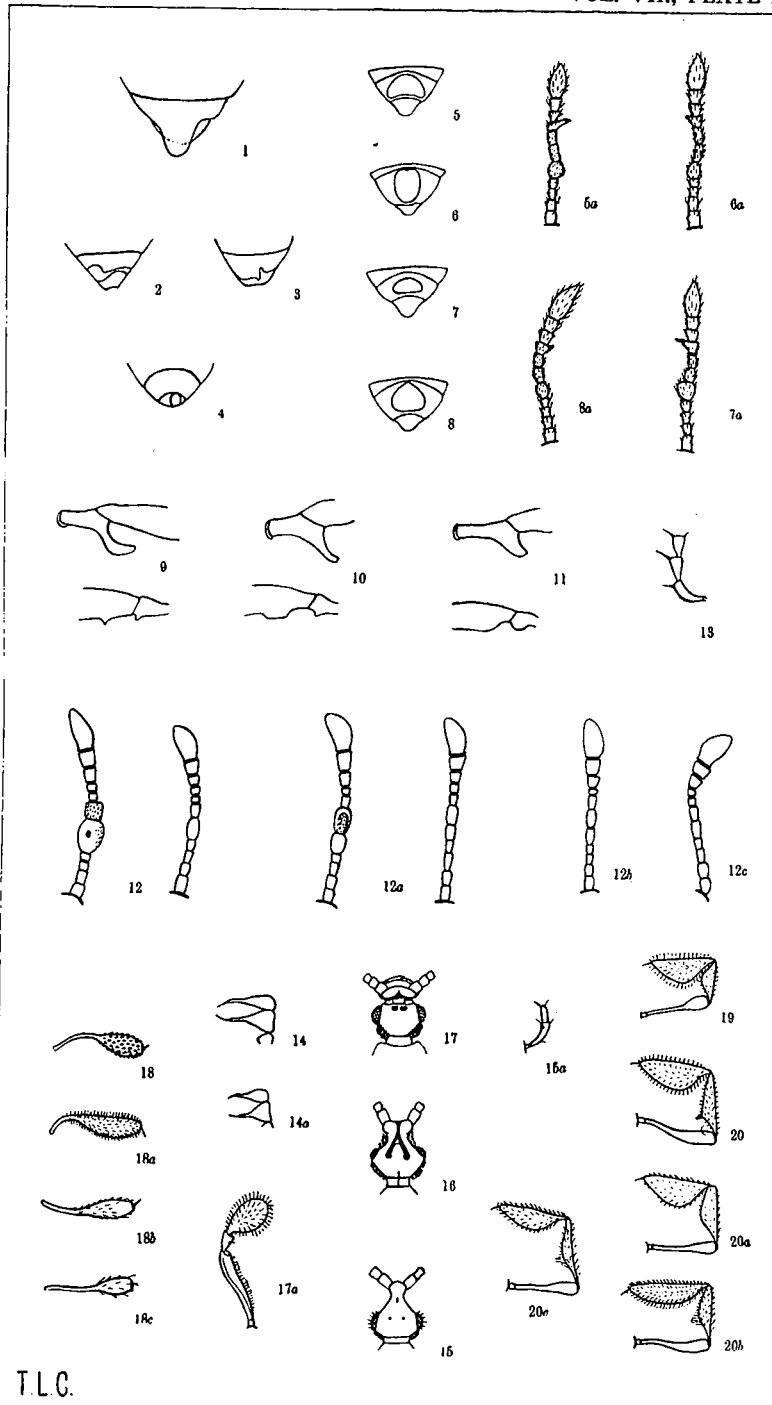
Joints 7 and 8 are drawn relatively too small; they are subequal in width to the preceding.

- Fig. 13. *Ctenis rafrayi* Csy.—maxillary palpus.
 Fig. 14. *Sognorus pulvereus* Lec.—last two joints of the maxillary palpus.

- Fig. 14a. *Sognorus abruptus* Csy.—same.
Fig. 15. *Anitra glaberula* Csy.—head.
Fig. 15a. “ “ —maxillary palpus.
Fig. 16. *Morius occidentis* Csy.—head.
Fig. 17. *Valda frontalis* Csy.—head.
Fig. 17a. “ “ —maxillary palpus.
Fig. 18. *Pselaphus bellax* Csy.—last joint of the maxillary palpus.
Fig. 18a. *Pselaphus fustifer* Csy.—same.
Fig. 18b. *Pselaphus longiclavus* Lec.—same.
Fig. 18c. *Pselaphus erichsoni* Lec.—same.
Fig. 19. *Tychus minor* Lec.—maxillary palpus.
Fig. 20. *Cylindrarotus longipalpis* Lec.—maxillary palpus.
Fig. 20a. *Cylindrarotus crinifer* Csy.—same.
Fig. 20b. *Cylindrarotus comes* Csy.—same.

The last joint should be a little more oblique and less arcuate internally toward apex.

- Fig. 20c. *Cylindrarotus*. Maxillary palpus of a doubtful form very closely allied to *comes*, and represented by a single immature specimen.



T.L.C.