Descriptions of twenty new species of Coleoptera inhabiting the United States.

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The following are a few remarkable species of families which are so small as not to be of sufficient importance for a special essay, or else they belong to groups which, having already furnished material for synopses or monographs, are not sufficiently increased to need revision. Some new genera are proposed, the affinities of which, so far as made out, will be detailed below; the names of the families to which the genera belong are appended to each. Species indicated from the Mexican Boundary, were collected by Mr. J. H. Clark, under Col. J. D. Graham, and were kindly communicated to me by my friend Dr. S. F. Baird.

ANISOMERA *Brullé*. (Dytiscidæ.)

Palpi cylindrici, labiales articulo penultimo longiore; prosternum non compresso-carinatum, postice productum; tarsi anteriores filiformes articulo ultimo elongato, postici parce ciliati, articulis 1mo 5toque elongatis, unguiculis binis æqualibus mobilibus.

Having several specimens of a species of this interesting genus from New Mexico, I am able to complete the description of Brullé and Aubé, which were taken from a specimen deprived of its posterior feet. These organs are slender; the tibiæ are slightly ciliated internally with long hairs, and armed at the tip with two slender subequal spurs; the posterior tarsi are not longer than the tibiæ, slightly compressed and sparsely ciliated; the first joint is as long as the second and third; the 2d, 3d and 4th are nearly equal; the 5th is a little shorter than the 3d and 4th, not narrowed towards the extremity; the claws are equal and moveable. In the male, the first three joints of the anterior and middle tarsi are slightly dilated, and furnished beneath with feathery papillæ, very much as in Platynus. The posterior tibiæ of the female are scarcely ciliate.

This genus appears quite as closely allied to Agabus and Copelatus as they are to each other. The form of the thorax would indicate, however, that it must be received as a distinct genus, but the characters, on close examination, appear to be of little value; the best differences are found in the elongation of the last joint of the anterior and middle tarsi, the smaller size of the spurs of the posterior tibiæ, and the more regular form of the posterior tarsi, which are not attenuated at the apex. The middle lobe of the mentum in the species here described is broad, short, and very obsoletely situated, while the mentum of Anisomera is described as having the middle lobe slightly prominent in the middle; this character must be re-examined with other specimens, as, if it be correctly described, the present species cannot be associated with the type of the genus; the prosternum is less compressed than in Copelatus. Agabus is described as having the prosternum strongly compressed and carinate; this structure is found in A. t a n i a t u s *Aubé* and many others, but is hardly to be observed in A. s t r i a t u s *Aubé*. I would also observe that A g a b u s a n g u s t u s *Lec.* (Agassiz' Lake Sup., 213) by having the thorax much rounded before, and nearly parallel behind the middle, show a tendency towards the peculiar form seen in Anisomera.

A. c o r d a t a, supra æneo-picea, elongato-ovalis, depressa, subtilissime reticulata, thorace brevi, postice angustato, et lateribus sinuato, elytris thorace vix latioribus, postice non dilatatis; subtus nigra, ore antennis pedibusque rubro-piceis. Long ·45.

Santa Fe, New Mexico. Mr. Fendler. Varies, with black feet; the sides of the thorax are strongly rounded in front, and subsinuate behind; the base is as wide as the apex, the anterior dilatation being produced by the curvature of the sides; the anterior angles are acute, the posterior angles rectangular. The elytra are very little wider than the widest part of the thorax, regularly elongate, elliptical, with the usual series of punctures becoming irregular towards the tip.

AMPHIZOA *Lec.* (Fam. nova?)

Pedes ambulatorii, tarsi pentameri, articulo ultimo valde elongato; antennæ 11-articulatæ, filiformes, glabræ; palpi breves cylindrici; maxillæ lobo interiore arcuato acuto, exteriore biarticulato, palpiformi; prosternum postice productum, obtusum; coxæ anticæ et intermediæ parvæ, globosæ posticæ transversæ ad marginem corporis extensæ; abdomen 6-articulatum, articulis 3 primis connatis.

After repeated comparisons with genera of all the families to which this insect seems allied, it has been found impossible to place it in any of the previously established groups. A full discussion of the comparative value of the characters offered by it, would involve an examination of the fundamental principles of classification of the terrestrial and aquatic predacious beetles; the material for such a discussion is not yet available in this country, and it must therefore be postponed to a future occasion. For the present, a few observations on some heretofore neglected relations existing between those families, will be sufficient to indicate the position of Amphizoa.

A large series of pentamerous, carnivorous Coleoptera, may be characterized as having the antennæ neither clavate nor lamellate, but usually filiform, and the prothorax with distinct epimera and episterna; the anterior coxæ small, not prominent, usually globular; the trochanters always simple; the anterior segments of the abdomen connate. This series may be divided into two great groups.

I. In the first, the anterior coxæ are contained in the prosternum alone; the posterior coxæ do not extend to the margin of the body, so that the first ventral segment of the abdomen reaches the parapleuræ, and articulates with them. (The antennæ are always regular, the basal joints glabrous, the outer ones pubescent; the anterior coxæ always globular.) This group consists of the Cicindelidæ and Carabidæ.

II. In the second, the anterior coxæ are received between the pro-and mesosternum, the posterior portion of the acetabulum being composed of the latter; the posterior coxæ extend to the margin of the body, so that the connection between the parapleuræ and first ventral segment of the abdomen is entirely cut off. This group is composed of the aquatic families Haliplidæ, Dytiscidæ, and Gyrinidæ.

Recurring now to the second group, it will be found that Amphizoa agrees with it in the glabrous antennæ, and in the form of the head, labrum, maxillæ and mentum; the latter is large, deeply emarginate, with the lateral lobes rounded; in the middle of the emargination is a broad, short, blunt tooth. The ligula is large, filling the emargination of the chin, truncate at tip, and prominent along the middle and apex, so as to present a form like the letter T. The maxillæ are of the ordinary form seen in Carabidæ, but the inner lobe is not ciliated. The prosternum is not elevated, it is not lobed in front, but posteriorly is produced in an obtuse spatula-like process, fitting into the mesosternum, which is excavated through its entire length; the anterior coxæ are moderately distant, small and round. The episterna are divided by an oblique suture from the humerus to the middle coxæ. The parapleuræ are slightly triangular, not appendiculate, and entirely separated from the ventral portion of the abdomen by the posterior coxæ, which are transverse, flat externally, slightly elevated and diverging at the insertion of the leg, as in Carabidæ; the diverging lobes are obtusely rounded, but not so much elevated as to allow the freedom of motion observed in Dytiscidæ. The legs are not at all compressed; the femora and tibiæ are slender and finely scabrous, with elevated points, the terminal spurs of the tibiæ are small; the tarsi are three-fourths as long as the tibiæ, filiform, glabrous, scarcely rough or pubescent beneath; the first four joints are equal, the last joint is equal to the three preceding united; the claws are moderate, equal and simple.

It will be found in comparing these characters with those of Dytiscus, that the only important differences are in the form of the feet, and in the smaller size of the posterior coxæ. Now, although the Dytiscidæ and Haliplidæ, which are certainly closely related, agree in having natatorial feet, they differ greatly in the modification of form, those of Haliplus being much nearer the terrestrial

or ambulatorial type. The posterior coxæ also differ greatly in the two families, those of Haliplus being dilated into a broad plate, under which the posterior legs can be withdrawn. We must, therefore, conclude that the differences between Amphizoa and the two families just mentioned, are not of greater value than the differences between those two families themselves.

The other relations of this insect, from the form of the tarsi, would appear to be slightly towards Parnus. The roughness of the surface above and below is of a peculiar nature, and resembles very much what is found in certain Buprestidæ; in fact, from the general appearance of the insect, it would at first sight be supposed to have some affinity to the broad Madagascar Buprestidæ forming the genus Polybothris. Of its habits nothing is known.

I would therefore divide the group now under consideration into four families, thus:

A. Mesosternum parvum; (antennæ filiformes, oculi duo coxæ intermediæ globosæ.)

1. Pedes ambulatorii, tenues, coxæ posticæ transversæ, mediocres. AMPHIZOIDÆ.
2. Pedes subnatatorii, tenues, coxæ posticæ magnæ laminatæ. HALIPLIDÆ.
3. Pedes postici natatorii, compressi, coxæ posticæ magnæ, simplices. DYTISCIDÆ.

B. Mesosternum maximum; (antennæ breves, perfoliatæ, oculi quatuor.)

4. Pedes posteriores natatorii, valde compressi, coxæ intermediæ triangulares planæ. GYRINIDÆ.

Having now ascertained as far as practicable the position of Amphizoa, we may proceed to the specific description of the only species yet obtained.

A. insolens, atra, opaca, subvirescens, glabra, thorace scabro, canaliculato, antrorsum angustato, lateribus subserratis, ad medium subangulatis, postice subangustato, angulis posticis acutis, elytris ovalibus, substriatis, scabro-punctatis, thorace duplo latioribus. Long. ·52.

Sacramento, California, collected by Mr. J. Childs, and given me by Mr. Rathvon. Color dull black, slightly tinged with greenish, without lustre. Head irregularly rugous and punctulate, with two shallow impressions between the antennæ. Labrum covering the obtuse mandibles, slightly and broadly emarginate in front. Thorax twice as wide as the head, flat, scabrous; sides subserrate, strongly narrowed from the middle to the apex, slightly narrowed and subsinuate posteriorly; base very broadly bisinuate, posterior angles acute; disc channeled, with a shallow impression each side at the base, and a broad transverse one before the middle. Elytra broadly oval, slightly convex, nearly twice as wide as the thorax, scarcely one half longer than wide, scabrous with shallow punctures, striate with nine slightly impressed grooves, which appear coarsely and indistinctly punctured. Scutellum flat, broad, acute, at apex. Under surface of the body covered with shallow confluent punctures and wrinkles. Legs scabrous with fine elevated punctures. No sexual difference observed in five specimens examined.

STENOCOLUS *Lec.* (Atopidæ.)

Tarsi elongati tenues, unguibus simplicibus, paranychio bisetoso; caput clypeo distincto, antice membranaceo; mandibulæ apice integræ; antennæ elongatæ, serratæ, articulo 2ndo minuto; palpi maxillares breviusculi cylindrici.

This genus resembles in its characters Anchytarsus *Guérin*, but differs in having a distinct transverse suture each side between the antennæ; in the middle this suture is not obvious, but the front is slightly elevated, so that the suture appears slightly sinuous; the anterior part of the clypeus is membraneous; the labrum is transverse and rounded; the eyes are round, the prosternum projects posteriorly, and the mesosternum is concave; the tarsi are long and slender, the first four joints are very slightly pubescent beneath, and the first joint is a little elongated; the last joint is as long as the three preceding united. The claws are moderate and simple; the intermediate appendage is small and terminates in two bristles.

The Atopidæ seem by this genus and Anchytarsus to show a slight affinity towards the Parnidæ, through the anomalous genus Eurypalpus *Lec.* (Proc. Acad. Nat. Sci. 6, 41.)

S. scutellaris, elongato-oblongus, piceus, fusco pruinosus, thorace punctato, antrorsum angustato, basi bisinuato, angulis posticis acutis, elytris scabro-punctatis, scutello albo pubescente. Long. ·55—·87.

One pair, Sacramento, California, from Mr. Rathvon. Body elongate, narrowed at each end, sides parallel at the middle, piceous, covered with very short depressed, dirt-colored pubescence. Antennæ black, strongly serrate in the male, slightly serrate in the female. Thorax nearly three times as wide as the head, nearly twice as wide as long, strongly narrowed in front, sides at the middle almost angulated, then slightly concave to the posterior angles, which are acute; base bisinuate; surface finely punctured, broadly concave along the margin behind the middle, and broadly transversely impressed at the base. Scutellum round, covered with dense white hair. Elytra scabrous with shallow punctures, spaces between the punctures finely punctulate; the elevated lines, which may be traced in allied genera, are slightly visible. Body beneath more densely pruinose with short cinereous hair.

The other species of this family known to inhabit the United States are:

1. Anchytarsus bicolor. *Atopa bicolor!* Mels. Proc. Acad. Nat. Sci. 2, 221. *Anchytarsus ater* Guérin Icon. Anim. Artic., No. 15, (Jan. 1849.) Pennsylvania, S. S. Haldeman.

2. Odontonyx ornata Guérin, loc. cit. No. 14. *Atopa ornata!* Mels. Pr. Acad. Nat. Sci. 2, 220. Pennsylvania, not rare.

3. Dascillus melanophthalmus Guérin, loc. cit. No. 13, p. 6. I have not seen this species, but learn from my father that it occurs in Georgia. Atopa fusca *Mels.* (Proc. Acad. 2, 221) is, as Guérin has already observed, a Ptilodactyla, and therefore cannot be placed in this family.

The singular genus Zenoa *Say* (Bost. Journ. Nat. Hist. 1, 153,) differs from the genera above cited, by its immarginate thorax, prominent mandibles, subpectinate antennæ, and elongate densely hairy paranychia; these characters approximate it to Sandalus (female); from the Rhipiceridæ, however, it differs in having the anterior coxæ more deeply imbedded between the pro- and mesosternum, and also in the absence of lobes on the under surface of the tarsi; in the Atopidæ we know already that the latter is a valuable character, and there appears to me no good reason why the two families, Atopidæ and Rhipiceridæ should not be merged together. The synonymy of the only species of Zenoa known to me is:

Z. picea *Lec.* Journ. Acad. Nat. Sci., New Ser. 1, 89. *Melasis picea* Beauvois, Ins. 7, tab. 7, fig. 1. *Sandalus (Zenoa) brunneus* Say, Bost. Journ. Nat. Hist. 1, 152. *Zenoa vulnerata* Lec. loc. cit.

Middle and Western States: the last synonym belongs to a variety with the thorax partly red.

Cerophytum is usually placed in the vicinity of these genera, and has been bandied about between Eucnemides, Rhipiceridæ and Cebrionidæ; it must, however, belong to the latter family. The great development of the trochanters entirely separates the femora from the coxæ; the same structure is to be found in Cebrio bicolor, although the trochanters are not so long; the indistinct labrum and globular anterior coxæ also place it with Cebrio, while the whole form of the head, as well as the general appearance, would separate it from the Eucnemides, which, as I have already observed,* should be considered as a group of Elateridæ. The small mandibles and lobed tarsi are certainly very different from those of Cebrio, but we know that the latter character is merely of generic value in both Elateridæ and Atopidæ. The description of Haldeman is incorrect as regards the posterior feet, in which the *coxæ* are said to be very

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ong, while in reality the *trochanter* is meant. The bibliography of our species s as follows:

C. p u l s a t o r Hald. Proc. Acad. Nat. Sci. 3, 348. *Chorea pulsator* Hald. bid. 3, 150.

For the typical female I am indebted to the liberality of Mr. Haldeman; and or a fine male, found in Ohio, to Dr. Schaum.

Chauliognathus *Hentz.*

1. C. d i s c u s, luteus antennis pedibus pectoreque medio nigris, thorace elliptico longiusculo, lateribus reflexis. Long. ·6.

Several specimens, from the Mexican Boundary, Prof. Baird; collected by Mr. Clark, under Col. J. D. Graham. Body elongate, parallel, very finely pubescent, luteous yellow; antennæ black, 3d joint nearly equal to the 4th; head elongate, palpi and mandibles black; occiput sometimes fuscous; thorax nearly twice as wide as the head, longer than wide, apex very much rounded, slightly reflexed, base less rounded, margined, sides strongly reflexed, disc scarcely uneven, shining, sometimes with a black spot on the little protuberance each side of the middle; elytra opaque, coarsely punctured with two faint elevated lines; sometimes each is marked with a black dot at the posterior third. Beneath luteous, middle of the pectus and feet black; trochanters testaceous; anal segment of the male fuscous.

2. C. s c u t e l l a r i s, elongatus, niger thorace luteo maculis 2 nigris confluentibus notato, apice rotundato, lateribus reflexo, elytris luteis macula communi scutellari posticaque utrinque nigris, abdomine luteo. Long. ·48.

Several males from the same locality as the preceding. Body slender, black, finely pubescent; head moderately elongated, third joint of the antennæ one-half as long as the 4th; thorax a little longer than wide, rounded at the apex, reflexed at the sides, margined and slightly sinuate at base, disc uneven, without lustre, yellow, with two large confluent black spots. Elytra without lustre, coarsely punctured, yellow, with a large common triangular spot at the base, and another elongate one on each behind the middle, black. Abdomen yellow.

Collops *Erichson.*

C. b a l t e a t u s, niger, breviter nigro-pilosellus, brevissime argenteo pubescens, capite antice, thoracis subtiliter punctulati limbo loto, antennarumque basi rufis, elytris punctatissimis rufis basi maculaque postica maxima cyaneis. Long. ·31.

Two specimens from Tampico (Mexico), Lieut. H. Haldeman; and one from the Mexican Boundary, collected by Mr. Clark. This is the largest species I have seen. Head black, front mouth and base of antennæ rufous. Thorax very finely punctured, one half wider than long, rounded, rufous, with a large hexagonal black spot, which is a little emarginate before and behind. Elytra wider than the thorax, very densely punctured, rufous with four blue spots, which are so large that only a narrow sutural lateral and apical margin and a transverse band before the middle remain reddish yellow. Beneath black, with the antepectus, and margins of the abdominal segments testaceous. Feet black; knees obsoletely rufous.

The outer joints of the antennæ of the male are dark colored, though not black as in the female.

Clerus *Geoffr.*

C. S p i n o l æ, niger, pilosus, elytris convexiusculis, rugose punctulatis, coccineis macula humerali fasciaque ad trientem secundum nigris, abdomine sanguineo. Long. ·38—·52.

Several specimens from the Mexican Boundary. Body black, hairy. Head finely but not densely punctured, first joint of antennæ red beneath. Thorax wider than the head, punctulate, moderately convex, broadly and deeply impressed anteriorly. Elytra more than one half wider than the head, moderately convex, densely rugosely punctulate, pubescent with fine yellow hairs, with a

ew black bristles intermixed; color bright scarlet, with a black humeral spot, nd a black band at the second third of their length, which almost reaches the ide and the suture, leaving only the extreme bead of the margins red. Beneath lack, abdomen sanguineous.

The posterior band of the elytra is sometimes narrow and more widely interupted at the suture; the elytra are sometimes orange-colored, rather than carlet.

This very beautiful species is dedicated to the Marquis Max. de Spinola, uthor of the finely illustrated "Essai Monographique sur les Clérites."

TOSTEGOPTERA *Blanchard.*

T. cribrosa, brevis, inflata, purpureo-picea, supra glabra (?), thorace varioloso, antice medio paulo deplanato, elytris subreticulatis, longitudinaliter obsolete sulcatis. Long. ·65.

Two females from the Mexican Boundary, collected as above. The genus was founded by M. Milne-Edwards in the "Catalogue de la Collection Entomologique du Museum d'Histoire Naturelle de Paris," p. 149, upon *Melolontha lanceolata* Say, (Journ. Acad. Nat. Sc. 3, 242), with which this species agrees in form and structure, but differs remarkably by the coarse sculpture of the upper surface, and by the absence of all pubescence or scaly appendages. The latter may have been removed by the alcohol in which the specimens were preserved, but on very careful examination no trace of them could be found. The body beneath is shining, sparsely and finely punctured, with a short hair proceeding from each puncture.

(A male seen in the Smithsonian Institution at Washington, differed in having the body more regularly oval, less convex, and not inflated posteriorly.)

CREMASTOCHILUS *Knoch.*

1. C. Schaumii, ater, opacus, breviter setosus, thorace confertim punctato, lateribus rotundato, angulis anticis foveatis, posticis acutis subelevatis, elytris punctis ellipticis minus profundis, mento modice concavo, postice subacuto. Long. ·6.

San Diego and Sta Isabel, California. Black, almost without lustre. Head finely scabrous; mentum shallow, moderately concave, rounded in front, obliquely narrowed behind, so as to be slightly angulated posteriorly. Thorax one half wider than long, narrowed in front, rounded on the sides; disc tolerably densely, not deeply punctured, with short bristles from the punctures; anterior angles foveate internally, posterior angles acute, scarcely elevated; base bisinuate, faintly impressed each side. Elytra flattened, not uneven, sparsely punctured with large elliptical shallow foveæ, from which proceed short bristles.

This species is larger than C. canaliculatus *Kirby*, and is very different in the form of the mentum and thorax, and in the less distinct punctuation of the head. There is not a trace of emargination at the posterior part of the mentum; the anterior angles of the thorax appear to be more deeply foveate in the male than in the female. The excellent labors of Dr. Schaum in the present tribe are well known to every entomologist.

2. C. Knochii, ater, subnitidus, glaber, thorace parce varioloso canaliculato, lateribus rotundatis, angulis anticis foveatis, posticis elevatis nitidis, basi utrinque impresso, elytris inæqualibus, punctis ellipticis minus profundis, mento modice concavo, postice acuto. Long. ·45.

Missouri Territory. Black, with but little lustre. Head densely punctured, mentum shallow, moderately concave, rounded in front, obliquely narrowed behind, so as to form an angle posteriorly. Thorax almost one half wider than long, channelled, narrowed in front, rounded on the sides; disc sparsely punctured, punctures large and shallow; anterior angles with a small fovea, posterior acute, shining, moderately elevated, base scarcely sinuate, with a broad moderately deep impression each side. Elytra flattened, with indications of two broad grooves on each side; surface somewhat irregular, impressed with

large shallow elliptical punctures. This and the preceding seem related to C. mexicanus *Schaum* (Germ. Zeitschr. 3, 256; Am. Ent. Fr. 2d ser. 2, pl. 11, fig. 8), but the posterior angles are not tuberculate.

Two specimens of this species were found by me on the Arkansas River, near the Rocky Mountains; one of them is now in the collection of Dr. Schaum. Descriptions of this and the next species were furnished by me four years ago to Mr. Westwood, for an anticipated monograph of Cremastochilus, which, however, although quoted in Schaum's Catalogue of Cetoniæ, appears not to have been published; and therefore considering them as interesting additions to our fauna, I take the present opportunity of making them known.

3. C. nitens, nigro-castaneus, nitidus, breviter setosus, thorace parce varioloso, antrorsum valde angustato, basi subito constricto, angulis posticis auriculatis, anticis foveatis, elytris inæqualibus sat dense punctatis, mento valde concavo, rhomboideo. Long. .43.

Missouri Territory. Brownish black, shining. Head strongly scabrous; mentum deeply concave, subrhomboidal, anteriorly broadly rounded, lateral and posterior angles distinct. Thorax one half wider than long, strongly narrowed in front, rounded on the sides, very strongly constricted near the base, so that the base is not wider than the apex; surface sparsely and deeply punctured with very short yellow bristles proceeding from the punctures; anterior angles not acute, deeply foveate, posterior angles forming a round shining tubercle separated by a deep cut from the body of the thorax; base very much depressed smooth. Elytra deep red towards the middle, flattened, slightly uneven, covered with moderately close rounded shallow punctures, from which proceed short yellow hairs.

These three species seem to belong to Burmeister's genus Psilocnemis, by the form of the lower lip, but as there is not a complete resemblance among them in this respect, I follow Schaum's example in merging the two genera together.

Among our previously described Cremastochilus, may also be observed considerable difference in the form of the lower lip. That organ is only slightly emarginate posteriorly in C. variolosus, while it is deeply cleft in C. Harrisii canaliculatus and castaneæ. C. junior (Westw.), quoted in Schaum's Catalogue of Lamellicornia melitophila, is unknown to me, nor have I in my collection any specimens from the Atlantic States which cannot be referred to the four species just mentioned.

C. politus Schaum (*Psilocnemis leucostica* Burm.) is considered as North American on the authoritory of a single specimen communicated by Mr. Gory to Burmeister. The fact that the Wsstern species above described agree in the absence of the emargination of the lower lip, induces me to believe that the species in question is really Mexican. The distinction of locality in regard to North America is very frequently not attended to with sufficient care by European Naturalists, who possibly have a prophetic eye towards the extension of the republic; which event, however desirable for the increase of our fauna cannot alter the preordained laws of distribution of species.

ALLOBOCNEMIS *Lec.* (Nitidulariæ, Peltides.)

Oculi duo laterales prominuli; antennæ 11-articulatæ, articulis tribus ultimis maioribus, distantibus; frons concava, apice emarginata: tibiæ posteriores muticæ; anticæ extus serratæ, spina apicali uncata.

I have merely given the characters to distinguish this curious genus from the genera described by Erichson (Germ. Zeitschr. 5, 445, &c.); the only two allied to it by the form of the eyes are Egolia and Acalantha, from which it is very distinct by having three enlarged antennal joints. Its form is nearly that of Nemosoma, but its greater size renders its appearance very singular. The pectus and tibiæ are very hairy; the two posterior pairs of tibiæ not spinous with two terminal spurs, of which one is so small as to be indistinct; the anterior tibiæ are slightly compressed, the outer margin serrate, with small distant teeth, of which the lowest is most distinct; the apex is obliquely trun

cate; the terminal spur is tolerably large and curved. The tarsi are filiform, the first joint very small, inferior, the 2d equal to the rest united. The antennæ are slender and not much longer than the head; the first joint is a little longer than the 4th, the 3d is a little shorter than the 2d, which is about one half as long as the first; the 4th—8th are nearly equal, and cylindrical; the 9th and 10th triangular, a little longer than wide; the 11th oval, about equal to the 10th; these last three are compressed, and about twice as wide as those which precede.

A. Stoutii, nigro-picea, capite magno, scabro, fronte concava, thorace punctulato trapezoideo, postice angustato, antice vage impresso, elytris cylindricis, subtiliter rugosis. Long. ·83.

San Francisco, California, given me by my friend Dr. A. B. Stout, to whom I take pleasure in dedicating it. Body dull black; head large, obtuse, covered with coarse granulations, with a few erect black hairs: front deeply concave: mandibles thick and prominent, apex acute. Thorax narrower than the head, with the eyes not wider than long, truncate at base and apex, narrowed behind, sides almost straight, deflexed sides scabrous, with erect black hairs; disc finely punctulate, broadly transversely impressed before the middle; with a very obsolete longitudinal line extending from base to apex. Elytra as wide as the head and eyes, elongate, cylindrical, finely punctulate and rugous, with small confluent wrinkles, which are less dense and more distinct towards the base. Scutellum very small, impressed. Beneath finely and densely punctulate, pectus covered with long yellow hair.

Dendrachus *Serv.*

D. geminatus, piceus, nitidus, thorace valde transverso, antice non angustato, parce punctulato, lateribus quadrispinoso, spina antica minore, elytris lævigatis, margine angustiore reflexo. Long. 2·9.

This very large species was collected by Dr. Henry, U. S. A., at Albuquerque, New Mexico, and kindly sent to me. It is easily distinguished from all the other species, by having in addition to the three usual large spines, a smaller one formed by the anterior angle being produced outwards. The elytra are entirely smooth, except at the base, where a few indistinct rugæ are visible; the lateral reflexed margin is much narrower than in the other species; the suture presents scarcely a trace of the spine at the apex; the abdomen is smooth, the pectus is covered with short yellow hair. The antennæ (of the female) are scarcely half as long as the body, slender, with the three first joints polished and sparsely punctured; the third joint is feebly sulcate longitudinally. The legs are precisely as in the other species.

Callichroma *Latr.*

C. plicatum, viridi-æneum, sericeum, thorace inæquali transversim plicato, abdomine rufo, antennis pedibusque nigris, femoribus rufis apice nigris. Long. 1·25.

Mexican Boundary, collected by Mr. Clark; another specimen found in Texas by Lieut. Haldeman. In size and form exactly resembles C. splendidum *Lec.*, but differs very much in the sculpture of the thorax and uniform green color of the upper surface.

Eburia *Serv.*

E. mutica, picea, fusco pubescens, thorace subcylindrico, lateribus paulo rotundatis, ad medium vix spinosis, tuberculis 4 atris nitidis ante medium ornato (exterioribus in latere sitis), elytris sat dense punctatis, callo basali exteriore, posticoque interiore minoribus, apice truncatis. Long. ·67—·85.

This interesting species was first found by Lieut. Haldeman at Tampico, and I have recently obtained a specimen collected at New Braunfels in Texas, by Mr. Lindheimer. The thorax is scarcely longer than wide, and slightly rounded on the sides; the lateral spine is represented by a mere elevated point; the disc is sparsely punctured, but the hair obscures the punctures; before the middle there are two shining black tubercles, and on each side, nearer the ante-

rior angle is another similar tubercle. The elytra are coarsely punctured, slightly truncate, but not armed at tip; they have each four small polished lines associated by pairs, but not united, the outer basal one is very small; the inner one of the posterior pair, which is placed about the middle, is smaller than the outer.

PHYSOCNEMUM *Hald.*

P. amethystinum, nigrum, thorace transverso, lateribus valde rotundatis, basi brevissime tubulato, disco confluenter punctato, irregulariter calloso, elytris læte violaceis, nitidis, confertim punctatis, femoribus non clavatis. Long. ·75.

This species has a general resemblance in appearance to P. Proteus, but differs from all the species known to me in having the anterior as well as the posterior thighs simple; the thorax is narrowed in front, rounded on the sides, suddenly narrowed towards the base, which is slightly tubulate; the sides are very densely and confluently punctured, the disc less densely so, with three indistinct smooth longitudinal elevations. The elytra are shining violet blue, finely and densely punctured, the punctures becoming larger and less dense towards the base.

One specimen was found at Sacramento, California, by Mr. J. Childs, and given me by Mr. Rathvon.

A Callidium from the same collection is very similar to the female of C. antennatum, but the thorax is more densely punctured; I can otherwise discover no difference.

CACOPLIA *Lec.*

Having, since the publication of my essay on Longicornia, obtained, through the kindness of Mr. Haldeman, the original specimen of his *Saperda pullata*, I have convinced myself that it must be referred to this genus, proposed by me in the Journal of the Academy (New Ser. 2, 149.) The following diagnoses will enable the two species at once to be distinguished:

1. C. pullata, fusco-testacea, brevissime densius sordide pubescens, thorace parce punctato, linea dorsali postica glabra, elytris thorace latioribus cylindricis parce minus distincte punctatis. Long. ·68.

Saperda pullata Hald., Trans. Am. Phil. Soc. 10, 55; Lec. Journ. Acad. Sc. 2, 163. Alabama, Haldeman. One specimen.

2. C. pruinosa, testacea, brevissime cinereo pubescens, thorace obscuriore, sat dense punctato, linea dorsali postica glabra, elytris thorace latioribus, cylindricis, distinctius parce punctatis. Long. ·47.

Lec. Journ. Acad. Nat. Sc. 2, 149.

Hebestola nebulosa‡ Haldeman, Tr. Am. Phil. Soc. 10, 54.

New York. One specimen.

MONILEMA *Say.*

1. M. armatum, elongatum, nigrum, thorace lævi, lateribus acute spinosis, apice et basi punctis marginato, elytris subrugosis, parce grosse punctatis, apice lævibus, dorso convexis, lateribus subito declivibus. Long. 1·25.

Mexican Boundary, collected as before mentioned. This species is similar to M. semipunctatum *Lec.* (Journ. Acad. Nat. Sc. 2, 2, 167,) but the form is more elongate, the thorax is smooth on the disc, and the elytra are more punctured and rugous.

2. M. crassum, breviusculum, nigrum, thorace lateribus subtuberculato, disco opaco parce punctato, margine postico punctato, elytris convexis, subrugosis minus dense variolosis, apice lævibus. Long. ·8.

With the preceding. This species is similar to M. annulatum *Say*, but is stouter in its form. The elytra are much more coarsely punctured, the punctures extend further along the epipleuræ and suture, than along the disc; the elytra are very convex, the sides descend more abruptly than in M. annulatum, but less so than in M. armatum.

There are now five species of this genus known to me; they appear to be quite limited in their distribution, and are by no means common in the locality where they occur. It is very probable that further investigation in the interior of the continent will show that the Dorcadidæ of North America are quite numerous, although thus far they exhibit a lamentable uniformity of color, which will render the determination of species somewhat difficult, without actual comparison of specimens.

NOSODERMA *Solier.*

N. porcatum, depressum, sordide, fuscum, thorace latitudine non longiore, postice angustato, valde inæquali, elytris sutura costisque 3 elevatis, intermedia utrinque abbreviata, interstitiis irregulariter biseriatim punctatis; apice tuberculatis. Long. ·57.

Sacramento, Mr. Rathvon. Bears a strong resemblance to N. obcordatum, but is darker colored, the inequalities of the thorax are smaller and more numerous, and the punctures and elevations of the elytra much more regular; the outer and inner costæ end about one sixth of the length of the elytra from the tip, in moderate dilatations; the intermediate costa commences about one fifth from the base, and ends about one fourth from the tip; near the tip on each elytron is a large rough tubercle. The under surface of the body appears black, and is more distinctly punctured than in N. obcordatum.

There are now three species of this genus known to me as inhabiting the United States, viz: N. diabolicum Lec. (Ann. Lyc. 5, 130); *N.* obcordatum Lec. (*N. inæquale* Dej. Cat.; *Boletophagus obcordatus* Kirby, Faun. Bor. Am. 236); and N. porcatum Lec., just described.

MYCTERUS *Oliv.*

M. concolor, fusco-niger, subtiliter cinereo-pubescens, capite thoraceque confertissime subtilius punctatis, elytris alutaceis minus dense subtiliter punctatis, subtus argenteo-pubescens, tibiis tarsisque vix rufescentibus. Long. ·3.

Sta Fe, New Mexico, Mr. Fendler. The antennæ are entirely black, and a little longer than the head and thorax. The following diagnosis will distinguish the previously described North American species:

M. scaber, fusco-niger, luteo-pubescens, capite thoraceque confertissime punctulatus, elytris grosse sat dense punctatis, antennis pedibusque rufo testaceis. Long. ·15—·23.

Haldeman, Pr. Acad. Nat. Sc. 1, 303.

Southern States, abundant; Pennsylvania, rare. The pubescence of the under surface is somewhat silvery; the antennæ are a little darker externally than at base.

The only other member of this group of insects yet known from our country is, Sphæriestes virescens Lec. (Agassiz' Lake Superior, 232.)