

ish testaceous, shading to brownish, with blue surface lustre. Antennæ pale palpi piceous. Head piceous, the front and labrum pale. Thorax broader than long, not narrowed in front, sides feebly arcuate, angles all distinct, disc moderately convex, with a vague ante-basal impression and sometimes a faint median line, surface indistinctly punctate and alutaceous. Elytra oblong-oval, widest at middle, surface minutely alutaceous, sparsely indistinctly punctate, a marginal series of punctures larger. Body beneath colored as above, sparsely pubescent. Length .10—.15 inch.; 2.5—4 mm.

Male.—First joint of anterior and middle tarsi distinctly dilated. Last ventral segment flattened, truncate at apex with a broad process from the middle of the apical edge and at right angles with it, this process is either obtuse or incised at apex; first ventral between the coxæ convex.

Female.—Tarsi not dilated; first ventral not convex. Last ventral truncate, leaving a small retractile segment exposed.

The variation in color has been indicated above, some specimens being a dull indigo-blue, which gradually disappears, the sides and suture retaining the color the longest. The specimens more or less testaceous are the most abundant.

Longitarsis nigripalpis Lec., founded on a rather poor specimen, is doubtless synonymous with this species.

Occurs from Pennsylvania and Virginia to Iowa and Kansas.

L. senilis Say, Journ. Acad. iv, p. 87; ed. Lec. ii, p. 228; Crotch, Proc. Acad. 1873, p. 70; Horn, Trans. Am. Ent. Soc. 1889, p. 271; *tineta* Lec., Proc. Acad. 1865, p. 206.

As the species is described sufficiently as the last named citation it will not be reproduced here.

The male has a similar last ventral to that of *fuscula*, but the process is shorter and acute.

Occurs from Pennsylvania to Illinois.

MISCELLANEOUS COLEOPTEROUS STUDIES.

BY GEO. H. HORN, M.D.

The few pages which follow contain descriptions of some new Coleoptera, which, from their exceptional nature, seem worthy of separate treatment, although all of them are rare and from remote regions.

The discovery of a new genus allied to *Schizopus* and *Dystaxia* is very interesting, as these genera form a group of Buprestidæ peculiar to the extreme southwestern regions of our fauna.

The *Dacoderus*, from Texas, has also a special interest in bringing the genus further east and rendering the locality of *D. dominicensis* less improbable, doubt having been expressed by one of my valued correspondents in France of the correctness of the locality.

GLYPTOSCELMORPHA n. g.

This name is proposed for a genus of Buprestidæ allied to *Schizopus* and *Dystaxia*, with the following characters:

Form cylindrical, slightly depressed, slightly narrowed in front, obtuse posteriorly. Head deeply inserted, front nearly vertical, clypeus slightly prolonged, broadly emarginate; labrum transverse, with rounded angles, slightly emarginate in front. Eyes moderately prominent, broadly oval, entire. Antennæ slender, scarcely at all serrate, nearly half as long as the body, first joint stout, second oval, small, third longer than first, fourth a little shorter than third, fifth equal to third, joints five to ten gradually shorter, eleventh half as long as tenth; maxillary palpi moderate in length, slightly thickened to tip, last two joints equal in length, subcylindrical. Thorax broader than long; scutellum oval, broader than long. Elytra nearly parallel, obtuse at tip; prosternum slightly narrowed between the coxæ, tip obtuse, received in an emargination of the ventral mesosternum; metasternal episternum broad, nearly twice as wide as long, slightly broader in front, epimeron small; first two vertical segments closely united with scarcely a trace of suture, these two at the sides as long as the three following segments, the third to fifth gradually decreasing in length. Legs not long, femora rather stout, tibiæ slender, with two terminal spurs; tarsi moderate in length, shorter than the tibiæ, the first three joints with a short lobe, the fourth with a long, deeply divided lobe; first joint of hind tarsus about as long as the next two; claws divaricate, broadened at base, but not toothed.

The relationship of this genus with the other two forming the tribe Schizopini, may be expressed in the following manner:

Antennæ slender, nearly filiform, scarcely at all serrate.

Claws entire at tip, slightly thickened at base; last joint of antennæ nearly one-half shorter than the tenth..... **Glyptoscelimorpha.**

Claws cleft at tip; last joint of antennæ very little shorter than the tenth.

Dystaxia.

Antennæ flattened, the joints 4—10 broader than long and distinctly serrate.

Claws cleft at tip; last joint of antennæ oval, longer than the tenth.

Schizopus.

These genera all occur in southern California.

G. marmorata n. sp.—Sub-depressed, cylindrical, brassy-bronze, shining, surface irregularly marmorate with patches of short, recumbent, cinereous pubescence. Antennæ brownish testaceous, the terminal joint black; labrum yellow. Head moderately coarsely closely punctate. Thorax a little less than twice as wide at base as long, slightly narrower in front, sides nearly straight,

angles distinct, not prominent, disc regularly convex, moderately coarsely closely punctate. Elytra a little wider at base than the thorax, humeri obtuse, sides nearly parallel, gradually narrowed at apical third, conjoined apices obtuse, surface closely punctate, but less coarsely than the thorax. Body beneath darker æneous, densely and moderately coarsely punctate and densely clothed with cinereous-white recumbent pubescence. Legs yellowish testaceous. Length .30 inch.; 7.5 mm.

The male has the fifth ventral broadly emarginate, the sixth deeply triangularly incised. The hind tibiæ are slightly arcuate.

At first sight this insect would, in all probability, be mistaken for a *Glyptoscelis*; such was the impression made upon myself.

Occurs near Los Angeles, Cal. Taken by Mr. D. W. Coquillett.

AGALISSUS Dalm.

A. chamæropis n. sp.—Black, shining, elytra dull red with the suture piceous, thorax with four longitudinal lines of white pubescence. Head coarsely sparsely punctured at middle, eyes completely encircled with white recumbent pubescence, which extends along the sides of the front and crosses the edge of the clypeus. Thorax as wide as long, slightly narrowed in front, sides feebly arcuate, disc coarsely sparsely punctate, with four shallow longitudinal grooves extending from apex to base, the two inner grooves interrupted near the base, the grooves densely pitted with white recumbent pubescence; scutellum semi circular, black, glabrous. Elytra wider at base than the thorax, gradually arcuately narrowed to apex, apices rotundate-truncate, the sutural spine short, more distinct in the male, disc vaguely grooved each side of suture, surface moderately coarsely, not closely punctate, each puncture with a short, semi-erect cinereous hair, color dull red, the suture gradually more widely piceous from the base, then more rapidly narrowing at the apical third. Body beneath black, shining, sparsely punctate; propleuræ, sides of metasternum, outer edge of met-episterna and a triangular spot at the sides of each ventral segment with white pubescence. Legs black, sparsely pubescent. Length .76—.85 inch.; 19—21.5 mm.

In the male the antennæ reach the middle of the body, in the female shorter, otherwise, excepting the slightly more slender form of the male, there is no marked sexual difference.

In this species the sides of the elytra behind the humeri are as deeply emarginate as in *gratus*. The differences between the genera *Agalissus* and *Zagymnus* seem to be measurably reduced by the discovery of this species. The front is less oblique than in the former as typified by *gratus*, and not quite vertical as in *Zagymnus*. The apices of the elytra more nearly approach in form the latter genus. The only remaining character seems to be that in *Agalissus* the form of body is narrowed behind, while in *Zagymnus* it is nearly parallel.

Collected at Biscayne, Fla., by Mr. E. A. Schwarz on *Chamærops palmetto*.

DACODERUS Lec.

This genus now contains three species which may be distinguished in the following manner:

Eyes situated at the hind angles of the head; head and thorax longitudinally striate.

Disc of elytra flat, with the suture slightly elevated, relatively coarsely and closely punctate.....**striaticeps.**

Eyes in front of the hind angles of the head; elytra not flattened on the disc.

Head and thorax longitudinally striate; elytra not distinctly punctate.

laevipennis.

Head not striate, occiput coarsely sparsely punctate, thorax in front with few punctures**dominicensis.**

D. laevipennis n. sp.—Elongate, chestnut-brown, shining. Head quadrate, distinctly prolonged behind the eyes and abruptly narrowing, front deeply concave, the excavation deeply prolonged on the epistoma, occiput rather deeply striate. Thorax one-third longer than wide, much narrowed at apex, sides anteriorly strongly arcuate, thence parallel to base interrupted at middle by an oval, smooth tubercle, disc deeply excavated at middle, the excavation prolonged less deeply to the base, surface deeply striate at middle in front, punctate at sides, posteriorly sparsely punctate. Elytra elongate oval, nearly three times as long as wide, disc not flattened, a few obsolete punctures at base, a few sparsely placed short hairs, subsutural stria fine. Body beneath nearly smooth, the abdomen sparsely obsoletely punctate, a group of coarse, closely placed punctures in front of the anterior coxæ. Legs sparsely punctate. Length .18 inch.; 4.5 mm.

The essential differences between this and the two previously described species are given in the table. Others, however, exist which have some importance. In *striaticeps* the thoracic depression is not prolonged to the base, in *dominicensis* it is prolonged as a triangular depression; in the present species as a deep groove with parallel sides entirely to the base. The entire prosternum and flanks are coarsely closely punctate in *striaticeps*, the middle of the prosternum alone in *dominicensis*, while there is but a small group of punctures in the present species. It is possible in the two older species to pass a hair from the excavation at the middle of the thorax under the oval tubercle and out at the side, but in the present species there is a complete, or nearly so, closure of that passage,

In examining *dominicensis* at the present time a small brush of hair was observed at the middle of the front femur on the underside; a specimen of *striaticeps* has the same character. This is probably sexual, as the specimens are of the slenderest of the forms.

The present species was given me by Mr. A. Bolter, and was collected in Texas.

MICROSCHATIA Sol.

From the time certain specimens collected in the Peninsula of California were referred to *M. punctata* Sol. there has been doubt as to the correctness of the identification, although the figure given by Solier represents our specimens more nearly than *punctata*; both species have a depression at the middle of the base of the thorax not shown in the figure. Having, through the kindness of Mr. Champion, examined a true *punctata*, the following notes have been prepared to show the relationship of the species:

Thorax narrower at base than at middle, the hind angles not overlapping the humeri.

Propleuræ quite smooth; met-episterna distinctly longer than wide.

Prosternum broad, the apex broad and truncate; epipleuræ not well defined. **punctata.**

Prosternum rather narrow, the apex acutely oval; epipleuræ well defined.

Championi.

Propleuræ sparsely coarsely punctate; met-episterna nearly one-half longer than wide.

Prosternum broad, very obtuse at apex; epipleuræ well defined.....**polita.**

Propleuræ coarsely granulate; met-episterna nearly as wide as long.

Prosternum moderately wide, apex oval, and sometimes subacute; epipleuræ well defined**inæqualis.**

Thorax widest at base, or very little narrower than at middle, the hind angles slightly prolonged over the humeri.

Propleuræ sparsely granulate; met-episterna very little longer than wide.

Prosternum moderately broad, the apex obtusely oval or subtruncate; epipleuræ well defined.....**morata.**

Propleuræ punctate; met-episterna slightly longer than wide.

Prosternum moderately broad, apex truncate; epipleuræ well defined.

sulcipennis.

Propleuræ smooth; met-episterna a little longer than wide.

Prosternum broad and truncate, the apex slightly impressed at middle; epipleuræ not well defined.....**robusta.**

M. punctata Sol., Ann. Fr. v, p. 475, pl. 11, fig. 22.—In this species the sides of the thorax are regularly arcuate without sinuation, the hind angles distinct, but not prominent; the disc is coarsely sparsely and irregularly punctate, and with a depression at middle of the base. The elytral sculpture consists of coarse punctures arranged in irregular rows, the intervals elevated forming a reticulation, in some varieties there is a tendency in the disc to become subcostate, in which case the general sculpture somewhat approaches that of *Asida sordida*. The prosternum is coarsely cribrately punctured at the sides, broad between the coxæ, the apex broadly truncate. The met-episterna are scarcely longer than wide; epipleuræ not distinctly limited. Length .60 inch.; 15 mm.

The specimens examined are from Zimapan, State of Hidalgo, Mexico.

M. Championi n. sp.; *punctata* ‡ Horn., Rev. Teneb. Trans. Am. Philos. Soc. xiv, 1870, p. 282.—Oblong, of the same general outline as *Asida sordida*, but less convex, black, shining. Thorax broader than long, narrowest at apex, sides arcuate, with a slight sinuation near the hind angles, these latter acute, not

prolonged over the humeri, margins slightly explanate and coarsely roughly sculptured, base narrower than the middle, disc convex, quite smooth, a moderately strong impression at middle of base, surface sparsely indistinctly punctate anteriorly. Elytra gradually wider two-thirds to apex, then rapidly narrowed, humeri acute, surface with coarse not closely placed punctures arranged from the suture in eight quite regular series, but at the sides quite confused, at apex smooth: prosternum coarsely deeply and closely punctate, the apex acutely oval; propleuræ smooth. Abdomen coarsely, deeply, sparsely punctate near the base; met-episterna longer than wide, smooth; epipleuræ well marked in their entire length. Length .62—.80 inch.; 15.5—20 mm.

The figure given by Solier of *M. punctata* is a better representation of this new species than of that for which it was intended.

It gives me great pleasure to give to this insect the name of one who has so ably exposed the heteromorous fauna of Mexico and Central America, Mr. G. C. Champion, of London.

Three specimens were collected by the late W. M. Gabb during a journey in the Peninsula of California. The precise locality was not recorded.

M. polita n. sp.—Of the same general form as *inæqualis*, but more slender and elongate, piceous black, shining with but few punctures or irregularities above. Head sparsely coarsely punctate, subopaque. Thorax about a third wider than long, sides strongly arcuate, base narrower than at middle, disc convex, a basal depression opposite the scutellum, surface very shining and sparsely punctate, at sides a little more punctate and opaque. Elytra smooth, very sparsely punctate, disc with very vague traces of sulci; epipleuræ well defined; prosternum rather wide, obtuse at tip, coarsely granulate, propleuræ opaque, sparsely punctate; met-episterna fully a half longer than wide. Abdomen shining, sparsely punctate. Legs muricate. Length .60 inch.; 15 mm.

Readily known by its slender form and polished surface.

One specimen kindly loaned by Mr. Chas. Dury, of Cincinnati, collected in Arizona.

M. inæqualis Lec., Ann. Lyc. v, p. 129; Lac., Gen. pl. 51, fig. 5; *puncticollis* Lec., loc. cit.—The sides of the thorax are here more arcuate, the hind angles well marked, not prominent, disc convex, closely covered with acute granules, the middle of base depressed; the elytral sculpture consists of intricate elevations with punctate intervals, sometimes there is a vague tendency to form costæ. The entire underside of the prothorax is covered with coarse shining granules, the prosternum moderately wide, the tip oval, sometimes subacute; the met-episterna are nearly as wide as long and granulate; epipleuræ well defined in their entire extent. Length .54—.65 inch.; 13.5—16.5 mm.

Occurs in the southern parts of California, San Diego and eastward.

M. morata Horn, Trans. Am. Ent. Soc. vii, 1878, p. 56.—Oval, narrower in front, opaque. Head vaguely and not closely punctate, each puncture with an elongate pale scale. Thorax one-half wider at base than long, narrower at apex, sides feebly arcuate, hind angles prolonged slightly over the humeri, disc convex, without median basal depression, surface moderately closely punctate, each puncture with a scale. Elytra widest behind the middle, convex, the disc with three

feebly defined, short costæ, united by anastomosing lines without distinct punctures in the intervals; propleuræ opaque, sparsely granulate; prosternum coarsely sparsely punctured with semi-erect hairs, the apex oval or subtruncate; epipleuræ well defined. Abdomen coarsely not densely punctate. Length .48--.66 inch.; 12--17 mm.

In some specimens received since the description of the unique, the thoracic punctuation is somewhat irregular, so that there is a tendency to form four smooth spaces, the two anterior spots being closer than the posterior.

Occurs in Grant County, N. Mex., and in Arizona.

M. sulcipennis Lec., Journ. Acad. iv, 1858. p. 18; Horn, Trans. Amer. Philos. Soc. xiv, 1870, p. 282, pl. xv, fig. 18.

The specimen described by Dr. LeConte still remains unique. In addition to the characters given by him the prosternum will be found moderately wide and obtuse at tip and with the propleuræ punctate. The epipleuræ are well defined; met-episterna a little longer than wide. Abdomen finely, evenly and not densely punctate. Length .60 inch.; 15 mm.

Llano Estacado, Texas.

M. robusta n. sp.—Oval, slightly oblong, dull black, with slight luteous indumentum; labrum with an acute, moderately deep notch. Head sparsely obsolete punctate, each puncture with a small yellow scale. Thorax one-half wider than long, sides regularly arcuate, hind angles acute, prolonged backward over the humeri, base a very little narrower than the middle of the thorax, disc coarsely moderately closely and evenly punctate, each puncture with a small scale. Elytra very little wider behind the humeri, disc vaguely bicostate, the intervals with intricate elevations; prosternum very coarsely, sparsely punctured, the apex broadly truncate and slightly impressed; propleuræ smooth; met-episterna sparsely punctate, longer than wide; epipleuræ not well defined, except near the base. Abdomen coarsely sparsely punctate, intervals scabrous. Length .56 inch.; 14 mm.

This species resembles a *Branchus* more closely in form than the preceding species; it connects the latter very well with the next species.

It is to be regretted that this species was not found by me in time to have it form a part of the Biologia series, but as the genus is here considered collectively, it has been thought advisable to name it.

Collected by Dr. E. W. Palmer, in Coahuila, Mex.

The following synonymy has been observed:

Usechus nucleatus Cas., Ann. N. Y. Acad. Sc. v, 1890, p. 176, is scarcely a variety of *lacerta*.

Asida angustula Cas., loc. cit. p. 370, is a male of *muricatula*.

A. (Pelecyphorus) connivens Lec., New Species, 1866, p. 110, is the male of *bifurca* Lec., as shown by additional specimens from Lower California.

Typical specimens of the above species have been examined.

ÆGIALITES Mann.

The first appearance of this name is in the Dejean Catalogue, 1837, p. 131, where it is placed among the Scydmaenidæ. The next notice of the name occurs in Bull. Mosc. 1845, i, p. 33, in the following manner:

Elosoma? californica M. Noire et luisante, les élytres sont striées par sillons, tronquées à l' extrémité et un peu dehiscentes. Les antennes sont comme chez les Scydmaenus. Serait-ce peut être l' *Aegialites debilis?*

The genus *Elosoma* has never been described. *Aegialites* was first quite fully described by Mannerheim, Bull. Mosc. 1853, iii, p. 180, and the species *debilis*. Mannerheim remarks: "I have examined three specimens; one indicated as from California in the cabinet of Motschulsky, another taken at Sitkha by Fred. Sahlberg, and a third collected by Holmberg at Woskresensk bay, peninsula Kenai."

If we can accept the statement of Mannerheim, it is evident that both he and Motschulsky had the same species before them, and that, bad as the description is, *californicus* will, by Mannerheim's admission, have priority over *debilis*.

Recently a species has been collected in California by Mr. Chas. Fuchs differing materially from *debilis*, and in a manner which could hardly have escaped the notice of Mannerheim.

Head and thorax comparatively smooth, the punctures indistinct and sparsely placed; elytra "striato-subsulcate" without distinct punctures; underside of body nearly smooth.....**californicus.**

Head and thorax coarsely, moderately deeply and rather closely punctate; elytra vaguely subsulcate and with rows of moderately coarse punctures; underside of body coarsely punctate, but sparsely.....**Fuchsii.**

Æ. Fuchsii n. sp.—Oblong, piceous, surface with distinct bluish green lustre. Head moderately closely punctate. Thorax a little wider than long, slightly narrower at apex than at base, widest in front of middle, sides slightly arcuate, disc moderately convex, rather coarsely and moderately closely punctate, median line finely impressed posteriorly. Elytra oval, wider behind, vaguely substriate with coarse punctures moderately closely placed. Body beneath and legs piceous, sides of body and abdomen sparsely punctate. Length .10 inch. ♀; 2.5 mm.; male a little smaller.

In *californicus* the hind tibiæ are quite abruptly bent near the apex, in the present species feebly so. The two species differ considerably in size, *californicus* being nearly twice as long.

Occurs in California, Mendocino County; collected by Mr. Chas. Fuchs, to whom I owe the pair in my cabinet.

MECROSCAPHA Lec.

M. arctica n. sp.—Oval, convex, a little more acute posteriorly, not twice as long as broad, ferruginous brown, somewhat shining, sparsely clothed with recumbent brown hairs. Head sparsely indistinctly punctate. Thorax sparsely, but regularly punctate, punctures finer in front. Elytra a little more coarsely punctured than the thorax, the punctures sparse and a little more distant near the apex, each having a short hair; scutellum entirely invisible. Body beneath a little paler than above, sparsely pubescent, sparsely punctate, the punctures of the abdomen finer and closer than on the metasternum; mesosternum, as seen between the coxæ, cordiform. Length .09 inch.; 2.25 mm.

This species is larger, more oval and convex than in *clavicornis*, as well as different in color, the latter being piceous. In *arctica* the punctuation is far more distinct, both above and beneath. The following are the essential differences between the species:

Scutellum visible, base of thorax sinuate each side; mesosternum between the coxæ narrow; last joint of maxillary palpi oval, obliquely truncate, longer than wide; eyes moderately coarsely granulate.....**clavicornis**.

Scutellum invisible, base of thorax regularly arcuate; mesosternum between the coxæ cordiform; last joint of maxillary palpi oval, squarely truncate, about as wide as long; eyes very coarsely granulate.....**arctica**.

These characters might be considered generic, but for the present the two species are but associated under one name. Should it be thought advisable to separate the two the name *Crioscapa* may be used for *arctica*.

In the original description of *Microscapha*, Dr. LeConte states that the frontal suture is distinct, but on examination no suture is visible in either of the above species.

Of *arctica*, two specimens were captured at Fort Wrangel, Alaska, by Mr. Wickham, who has kindly presented me with one of them.

EXPLANATION OF PLATE I.

- Fig. 1.—Elytral markings *Galerucella americana*.
 “ 2.— “ “ *sexvittata*.
 “ 3.— “ “ *integra*.
 “ 4.— “ “ *notulata*.
 “ 5.— “ “ *notata*.
 “ 6.— “ “ *xanthomelæna*.
 “ 7.—Middle tibiæ ♂ and ♀ of *Phyllethrus*.
 “ 8.—Antennæ ♂ and ♀ of *P. gentilis*.
 “ 9.—Antennæ ♂ and ♀ of *P. dorsalis*.
 “ 10.—Last ventral segments ♂ and ♀ of *Galerucella cavicollis*.
 “ 11.—Last ventral segments ♂ and ♀ of *Galerucella americana*.
 “ 12.—Outline of *Androlyperus fulvus* ♂.
 “ 13.—Ventral segments of the same.
 “ 14.—Elytral markings *Diabrotica connexa*.
 “ 15.— “ “ *picticornis*.
 “ 16.— “ *Malacosoma vittipenne*.
 “ 17.— “ *Triarius trivittatus*.
 “ 18.—Head and thorax *Dacoderus striaticeps*.
 “ 19.— “ “ *lævipennis*.
 “ 20.— “ “ *dominicensis*.

