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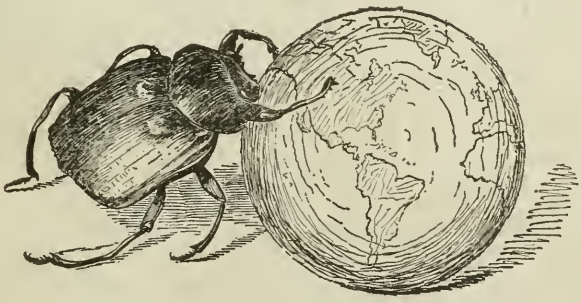

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Vol. VIII. JUNE, 1900. No. 2.

REVIEW OF THE AMERICAN CORYLOPHIDÆ, CRYPTOPHAGIDÆ, TRITOMIDÆ AND DERMESTIDÆ, WITH OTHER STUDIES.

By Thos. L. Casey.

The following pages record the results of a number of studies made at various times during the year just coming to an end, and may possibly be of some service to collectors in arranging their cabinets. The descriptions give only the salient characters of each species, and, in a genus such as the corylophid *Gronevus* for example, wherein the species mutually resemble each other very closely, can be appropriately limited to the few apparent differential characters. Further elaboration in such cases would prove to be largely repetition, and serve no really useful purpose in the present preliminary outline sketches, which are only intended to partially and imperfectly point the way.

Fort Monroe, Va., December 14, 1899.

HYDROPHILIDÆ.

Limnebius *Leach.*

The minute species composing this genus have the body elongate-oval and convex, the very small sparse punctures of the upper surface bearing each a fine decumbent hair. The labrum is transverse, with the apex sinuate at the middle. The inferior part of the eye is well developed and prominent, with the individual facets convex, but the superior part is not more convex than the frontal surface, with the facets larger and perfectly flat. The antennæ are partially received in repose in a very narrow groove between the eyes and the buccal opening, and, curving around the lower contour of the eyes, the club is

concealed within the deep depression for the eyes in the anterior part of the hypomera. The anterior coxæ are separated by a narrow prominent lamina. Hind tarsi slender, the first two joints short.

This genus was investigated by the writer some time since under the name *Limnocharis* Horn, (Bull. Cal. Acad. Sci.). The male has the sixth ventral more elongate, sometimes as long as the two preceding combined or even longer, the seventh transversely impressed at base and the elytral apices transversely rounded. In the female the sixth ventral is not longer than the preceding, the seventh smaller and simple, and the elytral apices are frequently obliquely pointed at tip. The eighth segment, heretofore noted, is the projecting part of the dorsal pygidium, and does not belong to the venter. In most of the species the male seems to be much less abundant than the female.

The American species of the genus may be defined as follows from the female throughout :—

Elytra oval in outline, the sides arcuate.....2

Elytra conical, truncate at tip, the sides straight.....7

2—Elytral apices in the female obliquely subtruncate ; pubescence rather long.....3

Elytral apices in the female rounded ; last joint of the maxillary palpi fusiform.....4

3—Piceous to black in color, the sutural angles distinctly rounded ; last joint of the maxillary palpi narrowly fusiform, pointed at tip ; pronotum obsoletely but rather coarsely micro-reticulate throughout. California [*politus* Csy.]....**piceus** *Horn*

Black, the sutural angles extremely narrowly rounded and more nearly right, the subtruncate apices slightly less oblique ; last joint of the maxillary palpi cylindric, the tip truncate; pronotum not micro-recticulate, except very feebly toward the sides ; body relatively narrower and more elongate. Texas...**angustulus** *Csy.*

4—Black or piceous-black, the seventh ventral obtusely angulate.....5

Castaneous in color, the seventh ventral longer, trapezoidal, its apex broadly arcuato-truncate 6

5—Pubescence of the upper surface long and well developed ; pronotum strongly micro-reticulate, the sides very feebly arcuate. California (coast regions).

alutaceus *Csy.*

Pubescence extremely short and inconspicuous ; pronotum very obsoletely and more coarsely micro-reticulate, the sides more arcuate ; body smaller and more slender. California (coast regions).....**congener** *Csy.*

6—Narrowly oval, moderately shining, rather coarsely micro-reticulate, the pubescence well developed but very fine ; prothorax strongly transverse, the sides convergent and feebly arcuate ; elytra scarcely one-half longer than wide, the apex unusually broadly rounded ; under surface piceous-black, the legs pale. Length 1.2 mm.; width 0.58 mm. Vermont (Bennington Co.).....**discolor,** sp. nov.

7—Pale piceo testaceous, the head and pronotum smooth, the elytra micro-reticulate ; pubescence long but sparse ; last two joints of the maxillary palpi stouter, the scutellum smaller than usual ; under surface and legs normal. Texas.

coniciventris *Csy.*

Alutaceus is the largest species, being fully 1.6 mm. in length, and *coniciventris* the smallest. The latter greatly resembles a species from South Africa, taken some years ago by the writer. *Piceus* is very abundant in the coast regions from Monterey northward, and the female described by me as *politus* does not seem to differ; it is the only species before me which is represented by both sexes. Individual examples vary but little among themselves in point of size.

STAPHYLINIDÆ.

The genus *Homœusa* of Kraatz, represents an isolated group of the subtribe Aliocharina, containing a number of genera for the most part monotypic as far as known. Those before me may be characterized as follows:—

Antennæ 11-jointed.....2

Antennæ 10-jointed.....4

2—Prothorax broadly and evenly rounded at the sides, the apical angles rounded....3

Prothorax broadly angulate at the sides at the middle, the angle rounded, the apical angles obtuse but not rounded, the base arcuate, not sensibly sinuate toward the angles, which are obtuse but not rounded; two basal tergites broadly, equally and deeply impressed in about basal half; fine elevated anterior bounding line of the metasternum strongly and narrowly arcuate anteriorly at the middle, the mesosternal process long and finely acuminate, extending to almost opposite the apices of the coxæ; infraorbital elevated line of the head feeble and obtuse; antennæ very strongly incrassate; basal joint of the hind tarsi distinctly shorter than the next two combined; [type *crassicornis* Csy.].....**Myrmobiota** *Csy.*

3—Base of the prothorax transverse and broadly bisinuate, the basal angles nearly right and not at all rounded; two basal tergites narrowly, deeply and rather abruptly impressed along the basal margin; antennæ moderately incrassate; anterior marginal line of the metasternum transverse and only just visibly and very broadly arcuate anteriorly at the middle, the mesosternal process as in *Myrmobiota;* head with the infraorbital ridge very fine, and, between it and the eye, having two additional broad feeble and parallel ridges; basal joint of the hind tarsi fully as long as the next two combined; [type *acuminata* Märk.].

Homœusa *Krtz.*

Base of the prothorax arcuate, becoming feebly sinuate near each angle, the latter slightly obtuse and distinctly, though narrowly, rounded; basal tergites not impressed at base; antennæ feebly incrassate, the last joint longer than the two preceding combined and somewhat compressed apically; mesosternal process angulate, much shorter than in the two preceding, the metasternal line obscured in the type; infraorbital ridge fine but distinct, the additional ridges of *Homœusa* wanting; basal joint of the hind tarsi distinctly shorter than the next two combined; pubescence longer and more conspicuous; [type *crinitula* Csy. infra.].

Soliusa, gen. nov.

4—Prothorax as in *Homœusa*, the base transverse and bisinuate, the angles right, not rounded and somewhat prominent, the sides arcuate and apical angles very broadly rounded; basal tergites as in *Soliusa*, not impressed at base; eyes smaller than usual, the antennæ rather strongly incrassate, the tenth joint probably formed by the fusion of two, but not relatively longer than in *Homœusa*; infraocular ridge fine but abruptly and strongly elevated, the additional ridges wanting; basal joint of the hind tarsi as long as the last and a little longer than the next two combined; pubescence moderate in length as in *Homœusa*; [type *expansa* Lec.].....**Decusa,** gen. nov.

The type of *Soliusa* may be briefly described as follows:—

Moderately stout and depressed, the head nearly three-fifths as wide as the prothorax, with the eyes slightly prominent; antennæ but little longer than the width of the body; prothorax three-fourths wider than long, equal in width to the elytra and distinctly shorter, the sides rotundato-convergent anteriorly; abdomen at base nearly as wide as the elytra, acuminate, the sides straight; fifth tergite at apex three-fifths as wide as the first; color throughout pale brown, the abdomen a little darker, the surface rather shining and quite feeble punctulate; pubescence conspicuous but subdecumbent as usual. Length, 1.75 mm.; width 0.63 mm. New York..... **crinitula,** sp. nov.

Individuals seem to be rare in all of these genera and probably have throughout a more or less complete symbiosis with ants. *Myrmobiota crassicornis* and *Decusa expansa* have both been sent to me by Mr. Wickham as having been discovered in ant-nests.

Mr. Wasmann (Tijd. v. Ent. XLI), states that *Myrmobiota* Csy. (Col. Not. V, p. 594) is identical with *Homœusa* Krtz., citing specimens collected by Mr. Wickham and forwarded to him through Mr. Schmitt. There is manifestly some mistake in identification, however, and my friend's remarks must refer to the species here described under the name *Soliusa crinitula* or to one closely allied thereto; but if the latter surmise prove to be correct, I am forced to differ in opinion concerning the status of that species, for a study of the basal tergites of the abdomen, form of the mesosternum and thoracic base, and other characters, show that *crinitula*, also, is generically distinct. In regard to *Myrmobiota*, there can be no doubt of its wide isolation from *Homœusa*, as an inspection of the small accompanying diagrams of the prothorax will abundantly demonstrate, the upper figure referring to *Myrmobiota* and the lower to *Homœusa acuminata*. That Mr. Wasmann has fallen into an error in identification, is furthermore evident at once from his statement that *crassicornis* (Wasm. nec

FIG. 1.—Prothorax of *Myrmobiota* and *Homœusa*.

Csy.) differs from *acuminata*, among other minor characters, in having finer and denser pronotal punctuation, while, as a fact, the pronotum is much more coarsely punctured in *crassicornis* Csy. than in *acuminata*.

Chitosa gen. nov.

The type of this genus is *Dinarda nigrita* Rosh., which differs from *Dinarda*, as represented by *märkeli* and *dentata*, very profoundly in antennal and tarsal structure, as well as in the entire form of the prothorax and nature of the sculpture. In *Dinarda dentata* the prothorax is broadly and evenly bisinuate at base, and the sides near the basal angles are parallel and nearly rectilinear, the antennæ cylindrical, becoming somewhat acuminate at tip, and the basal joint of the hind tarsi but little longer than the second, the first four joints in fact diminishing only just visibly and quite regularly in length. In *nigrita*, on the other hand, the base of the prothorax is arcuate, becoming emarginate at each side, and the side margin is emarginate near the basal angles; the antennæ are gradually and strongly incrassate, a form wholly foreign to *Dinarda*, and, finally, the hind tarsi are very remarkable in structure and wholly different from any I have seen elsewhere in the Aleocharini. The basal joint is thicker than the remainder, darker in color or more highly chitinized, cylindrical and longer than the next three joints combined, the latter short, gradually diminishing in length and obliquely truncate at their apices, the fifth as long as the preceding three together and more slender. These characters prove that *Chitosa* is a genus quite isolated from any other; it is however related to *Dinarda*. It occurs in Spain.

SCAPHIDIIDÆ.

This family seems to be very much better represented in America than in Europe, and a number of new forms have been discovered since my revision (Col. Not., V.).

Scaphidium *Oliv.*

The species before me seem to be five in number, *piceum* being quite evidently distinct from the maculate forms; they may be defined as follows:—

Elytra black, each with two pale subexternal spots... 2
Elytra uniform in coloration throughout, with a few discal coarse punctures in short series 4

2—Elytra without large punctures in series at any part of the disk, black, the spots small and flavate, the anterior triangular, not extending inwardly to outer third, the posterior very small, transversely oval, at outer fourth, twice as far from the apex as from the side margin. Length 4.7 mm.; width 2.6 mm. Southern New England to Indiana.....**obliteratum** *Lec.*

Elytra with coarse punctures in short series toward base and inner two-thirds, black, the spots large and generally rufescent.....3

3—Coarse punctures very few in number, the remainder of the disk with the punctures very sparse and subobsolete; posterior spot transverse and only very feebly sinuate anteriorly. Length 3.8–4.0 mm.; width 2.3 mm. Indiana, Iowa and Kansas.....**quadriguttatum** *Say*

Coarse punctures numerous and close-set in the series, the general punctuation usually more evident; posterior transverse spot strongly arcuate, its anterior margin deeply sinuate; body slightly smaller and distinctly narrower. Length, 3.8 mm.; width 2.1 mm. Colorado? (Cab. Levette).....**ornatum,** sp. nov.

4—Body deep black throughout, rather narrowly oval; impressed area of the metasternum in the male sparsely punctate, the fulvous hairs longer. Length 4.0–4.2 mm.; width 2.4–2.5 mm. Rhode Island to Indiana and Iowa.

piceum *Melsh.*

Body castaneous, more broadly oval, the metasternal area of the male larger, more closely punctured and clothed with shorter hairs; sculpture similar to that of *piceum* and *quadriguttatum*. Length 4.5 mm.; width 2.7 mm. Indiana.

amplum, sp. nov.

In *quadriguttatum* the first two, of the five joints constituting the antennal club, are equal in size and smaller than the last three; in *ornatum,* however, the seventh joint is distinctly larger than the eighth.

Cyparium *Erichs.*

The two species now known to me may be distinguished as follows:—

Broader and somewhat oblong-oval, castaneous in color, the legs paler; antennæ pale throughout. Length 3.2–3.3 mm.; width 1.9–2.0 mm. North Carolina. [*substriatum* Reit].....**flavipes** *Lec.*

Narrower and evenly oval, the body black throughout, the head rufescent and the legs rufo-piceous; antennæ pale, the 5-jointed club blackish; eyes rather less widely separated on the front; punctures of the six abbreviated elytral series much smaller. Length 3.5 mm.; width 2.0 mm. Texas (Brownsville).

ater, sp. nov.

The characters given by Reitter to distinguish *substriatum* (Verhand. Nat. Ver. Brünn, XVIII) are completely those of *flavipes*, and the name must therefore be relegated to synonymy.

Bæocera *Erichs.*

The known species of this genus have materially increased in number of late, and those in my cabinet may be arranged as follows:—

Scutellum not visible behind the basal lobe of the pronotum when the latter is normally adjusted to the base of the hind body.....2

Scutellum visible though always very minute and transverse.....9

2—Basal marginal stria of the elytra entire.....3

Basal stria either much abbreviated externally or interrupted about the middle of each elytron.....7

3—Larger species, 1½ mm. in length or more.....4

Very small species, scarcely exceeding 1 mm. in length.....6

4—Third antennal joint distinctly shorter than the fourth; punctures along the dilated posterior margin of the intermediate acetabula small or moderate in size...5

Third antennal joint fully as long as the fourth; marginal punctures very coarse; color black throughout, the elytra feebly rufescent at the apical margin and the abdomen paler toward tip; legs dark rufous; upper surface not distinctly punctate at any part. Length 1.6 mm.; width 0.9 mm. Iowa (Keokuk). **speculifer** *Csy.*

5—Body broadly oblong-oval, the third antennal joint as long as the second, black, the elytra picescent posteriorly, very obsoletely punctulate; legs dark rufous. Length 2.0–2.6 mm.; width 1.3–1.75 mm. Pennsylvania, District of Columbia, Illinois, and Iowa .....**concolor** *Fabr.*

Body narrowly oval, black throughout, the elytra rather abruptly rufous in apical sixth or seventh; legs dark rufous; elytra sparsely and very obsoletely punctulate; third antennal joint much shorter than the second. Length 1.9–2.2 mm.; width 1.2–1.25 mm. New York (Long Island), North Carolina (Asheville), and Indiana .....**congener** *Csy.*

6—More narrowly oblong-oval, black, the elytra more distinctly rufescent at apex; antennæ shorter, not as long as the width of the body. Length 1.15–1.25 mm.; width 0.7–0.75 mm. Rhode Island (Boston Neck), and Michigan **apicalis** *Lec.*

Broadly and evenly elliptical, the median line of the body very much more arcuate in profile, deep black, the elytral apices scarcely paler; antennæ relatively distinctly longer, as long as the width of the body. Length 1.1–1.15 mm.; width 0.7–0.72 mm. Texas (Columbus).....**robustula** *Csy.*

7—Marginal line of the prothorax evenly and moderately arcuate when viewed laterally; mesepimera narrower; species very small in size.....8

Marginal line, when viewed laterally, nearly straight, becoming rather abruptly and strongly bent downward through basal third; mesepimera broader and not extending quite so far toward the coxæ; metepisternal suture coarse, straight as usual; size large, the body black, the elytra feebly rufescent at tip, not distinctly punctulate; antennæ long and slender. Length 2.3–2.5 mm.; width 1.3–1.35 mm. Rhode Island (Boston Neck), Virginia and Arkansas.....**deflexa** *Csy.*

8—Body moderately convex longitudinally, the metasternum more elongate, the episternal suture not very coarse; color pale flavescent throughout, the pronotum gen-

erally shaded a little darker; basal stria of the elytra fine, disappearing completely somewhat before attaining the middle of the width. Length 1.15 mm.; width 0.68 mm. Pennsylvania (near Philadelphia).....**pallida**, sp. nov.

Body strongly convex longitudinally, smaller in size, deep black, the elytra rufescent toward tip; under surface blackish, the abdomen and legs fulvous; metepisternal suture much shorter and very coarsely excavated; basal stria of the elytra stronger and only interrupted for a short space just beyond the middle of the width. Length 0.88 mm.; width 0.62 mm. Massachusetts (Tyngsboro).

abdominalis, sp. nov.

9—Basal stria of the elytra entire; body larger, blackish throughout, the elytral apices very narrowly rufescent; antennæ moderately long and slender, bristling with rather long stiff setæ; basal lobe of the pronotum rather feeble and broadly rounded; scutellum distinct. Length 1.7 mm.; width 0.95 mm. Texas (Columbus).....**texana** *Csy.*

Basal stria of the elytra much abbreviated externally; size minute.....10

10—Basal angles of the prothorax normally acute.....11

Basal angles obtusely truncate at tip; metepisternal suture arcuate 14

11—Scutellum very short and indistinct; abdomen concolorous; metepisternal suture straight.....12

Scutellum distinct and longer than usual; body deep black throughout, the entire abdomen abruptly pale rufous; size very minute.....13

12—Metepisternal suture coarse; scutellum extremely small, short and very transverse; body very smooth and polished, rufous throughout, the pronotum piceous; antennæ moderate. Length 1.3 mm.; width 0.72 mm. Michigan.

discolor, sp. nov.

Metepisternal suture finer; scutellum less abbreviated, but little more than twice as wide as long; body rufo-piceous to blackish in color, the abdomen pale at tip. Length 1.15–1.25 mm.; width 0.65–0.7 mm. Pennsylvania (near Philadelphia) and Michigan.....**picea** *Csy.*

13—Rather narrowly oval, highly polished and impunctate; metepisternal suture feebly arcuate, fine and rather distinctly punctured; mesepimera rather small and narrow, scarcely extending more than half way to the coxæ. Length 0.95 mm.; width 0.55 mm. Rhode Island (Boston Neck).....**rubriventris**, sp. nov.

14—Rather stout, polished, black throughout above and beneath, the legs feebly rufescent. Length 0.9–1.0 mm.; width 0.58–0.68 mm. Rhode Island (Boston Neck), Massachusetts, Michigan and Texas (Austin).....**nana** *Csy.*

Nana is a very widely distributed species of minute size, and is quite aberrant in the form of the basal angles of the prothorax and in the strongly arcuate metepisternal suture, but it does not differ generically.

Scaphiomicrus, gen. nov.

The species described by LeConte under the name *Scaphisoma pusilla*, must form the type of a distinct genus because of the shorter and thicker antennæ, situated at a greater distance from the eyes,

which are notably smaller, the shorter tarsi, and especially, because of the radically different form of the post-coxal plates of the abdomen. These plates in *Scaphisoma* are very short and only developed internally, the bounding arc extending outward externally, very gradually approaching the base of the segment, while in *Scaphiomicrus* the plates are more nearly semi-elliptic, having the outer part of the bounding curve directed upon the base without change of direction toward the sides of the body, somewhat, in fact, as in the subgenus *Pullus* of the Coccinellidæ. The species are all very much more minute than in *Scaphisoma*, and those which are represented before me may be distinguished by the following characters :—

Abdominal plates almost evenly parabolic in form, the apex more broadly rounded and the outer side more arcuate and approaching the base scarcely less obliquely than the inner side ; sutural line of the elytra not flexed outward basally.....2

Abdominal plates more narrowly rounded at apex, the external branch of the bounding curve much less arcuate than the internal, and directed almost perpendicularly upon the base ; sutural line of the elytra flexed outward at base, parallel to the basal margin ; elytra blackish, gradually and broadly pale toward tip.....5

2—Elytra bicolored, black in about basal half, the remainder rufous.....3

Elytra pale throughout.....4

3—Abdominal plates extending much beyond the middle of the segment, the punctures and the reticulations of the segment almost effaced ; form rather short and stout. Length 0.8–0.95 mm.; width 0.55–0.65 mm. North Carolina (Asheville) .....**pusillus** *Lec.*

Abdominal plates not quite extending to the middle of the segment, the surface of which is distinctly reticulate and finely, sparsely punctulate ; metasternum strongly, though sparsely, punctate; body slightly larger, the elytra distinctly longer when compared with the prothorax. Length 1.1 mm.; width 0.7 mm. Rhode Island (Boston Neck).....**dimidiatus,** sp. nov.

4—Entire body and legs pale fulvo-testaceous throughout, the form more narrowly oval ; abdominal plates broadly rounded, not extending quite to the middle of the segment ; metasternal punctures minute and very feeble. Length 0.9 mm.; width 0.6 mm.; Michigan,—Mr. Schwarz.....**flavescens,** sp. nov.

5—Sutural line of the elytra extending outward along the base to inner third.....6

Sutural line extending nearly to the middle of the width ; body more minute and less oval.....7

6—Abdominal plates relatively larger, extending to the middle of the segment ; body blackish, the legs, antennæ and apical half of the abdomen pale; elytral punctures sparse but rather distinct, effaced as usual toward base. Length 0.85 mm.; width 0.57 mm. Lake Superior .....**lacustris,** sp. nov.

Abdominal plates very small, extending but little beyond basal third of the length, narrowly rounded at apex ; body in coloration and sculpture nearly similar to *lacustris*, the outline a little more broadly oval. Length 0.9 mm.; width 0.65 mm. Iowa (Keokuk).....**nugator,** sp. nov.

7—Minute in size, blackish, the elytra gradually rufescent behind the middle, sparsely, finely and very obsoletely punctate, the punctures almost effaced; legs yellow; abdominal plates well developed, extending almost to the middle. Length 0.7 mm.; width 0.47 mm. Oregon.....**exiguus,** sp. nov.

CORYLOPHIDÆ.

The Corylophidæ constitute a small family, evidently allied to the Silphidæ, as shown by antennal structure, and, like them, display great variety in external habitus; they are, however, remarkably homogeneous among themselves in sternal and abdominal structure. In *Orthoperus* a relationship with Scaphidiidæ can be observed, and there are some characters, such as the 4-jointed tarsi with the third joint small, the post-coxal plates of the Corylophini and the projecting rounded pronotum of the Parmulini—homologous with Cranophorini,—which proclaim an indubitable relationship with the Coc-

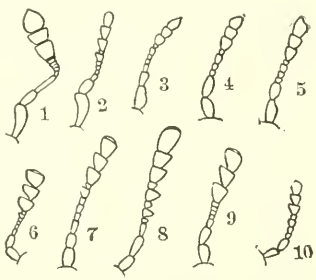

FIG. 2.—Antennæ of CORYLOPHIDÆ—1 *Bathona* (*Corylophodes* is similar, except that the third joint is shorter than the second); 2 *Gronevus* (also nearly of *Rypobius*); 3 *Sericoderus*; 4 *Orthoperus*; 5 *Eutrilia*; 6 *Molamba lunata*; 7 *Molamba obesa*; 8 *Sacium montanum*; 9 *Arthrolips nimius*; 10 *Œnigmaticum californicum*.

cinellidæ. The chief difference in tarsal structure between these two families resides, indeed, simply in the freedom of the third joint, this being generally anchylosed to the fourth in Coccinellidæ. The anterior coxæ are narrowly separated, displaying variations which serve to define tribal groups, and the cavities are broadly closed behind; the intermediate are more widely separated and the posterior mutually very remote. The scutellum is always distinct, though small, the abdomen hexamerous, the first segment being much the longest and the palpi short, stout and acuminate. The American species may be assigned to four tribes as follows: —

Prothorax widest at base.....2
Prothorax narrowed at base; body narrower and lathridiiform.....3
2—Anterior coxæ long and narrow, inclosed within deep oblique fossæ and attached more externally, the intermediate and posterior generally with distinct post-coxal plates; body rounded or oval and convex, generally glabrous; antennæ 11- or 9-jointed.....CORYLOPHINI
Anterior coxæ short, oblong; body pubescent, the pronotum covering the head, convex, the edges not explanate and the hind angles greatly produced posteriorly and acute; antennæ 10-jointed; abdomen more extensile, with the basal segment shorter than usual; post-coxal plates wanting.....SERICODERINI
Anterior coxæ larger, less deeply imbedded and globular; body more depressed, oblong or oval, pubescent, the pronotum completely concealing the head, explanate at the margin, the hind angles not produced posteriorly; antennæ 11- to 10- or possibly 9-jointed.....PARMULINI
3—Head completely exposed from above; anterior coxæ small, oval; antennæ 9-jointed; integuments sparsely and feebly pubescent.....ENIGMATICINI

All of these tribes occur on both sides of the continent, but in the first tribe the genera with 9-jointed antennæ are the only ones which have thus far appeared in the Pacific district.

CORYLOPHINI.

The species of this tribe may be readily known by their rounded or oval convex form and shining glabrous integuments. The genera may be separated as follows:—

Antennæ 11-jointed, inserted between and near the eyes, widely separated at base, the eyes larger and coarsely faceted; epipleuræ rather wide and inflexed.....2
Antennæ 9-jointed, inserted more anteriorly and more distant from the eyes, which are smaller and less coarsely faceted; basal joint shorter; epipleuræ extremely narrow or subobsolete, not at all inflexed; labrum broadly rounded; prothorax emarginate at apex, the head in great part exposed; post-coxal plates very short; tarsi slender.....5
2—Head very deeply inserted within the prothorax, the anterior margin of which is evenly rounded and strongly descending; post-coxal plates large, with rounded outline, the subbasal discal line of the metepisterna very oblique; labrum rounded or subquadrate.....3
Head partially protruded and less concealed by the overhanging margin of the prothorax; post-coxal plates very short, the subbasal line of the metepisterna nearly transverse; labrum small, triangular, with the apex acuminate; tarsi dilated.....4
3—Post-coxal plates of the abdomen more strongly rounded, the external part of the bounding line directed upon the base well within the sides; third antennal joint elongate, longer than the second.....**Bathona**
Post-coxal plates of the abdomen less arcuate posteriorly, the bounding line extending to the sides of the body; third antennal joint elongate but shorter than the second.....**Corylophodes**

4—Head entirely concealed from above, the prothorax almost evenly rounded anteriorly and more descending, the margins not distinctly thickened and the hind angles acute and somewhat more posterior than the median parts of the base; maxillary palpi moderately stout, regularly acuminate.....**Gronevus**

Head partially visible from above, the prothorax sensibly sinuate at apex, the margins with a distinct thickened bead and the hind angles right; maxillary palpi very stout.....**Rypobius**

5—Anterior tibiæ flattened, the external edge acute, the axial line feebly arcuate throughout; body larger.....**Eutrilia**

Anterior tibiæ slender, inwardly bent distally; body very minute.....**Orthoperus**

I have restored the original spelling of *Rypobius*, although it may not be etymologically correct. The European *Moronillus* of Du Val is identical, having similar structure and habits.

Bathona, gen. nov.

In this genus the body is broadly oval, convex, polished and glabrous, with the edges of the pronotum subexplanate and diaphanous, and the hind angles not posteriorly produced. The tarsi are long and are compressed toward base. The species may be defined as follows:—

Body moderately convex, the sides and apex of the pronotum widely subexplanate; antennal club large.....2

Body very strongly, globularly convex, the limb of the pronotum very narrowly subexplanate; antennal club rather less developed.....3

2—Elytral punctures small and sparse but very distinct, impressed, each bearing, as usual, an excessively minute fine decumbent hair, black, the pronotum piceous-black, the edges broadly transparent and hyaline; under surface paler, the legs and antennæ rufescent. Length 1.35 mm.; width 0.9 mm. North Carolina (Asheville).....**carolinæ**, sp. nov.

Elytral punctures smaller and almost effaced; body smaller, black, the pronotal limb broadly transparent and hyaline; under surface and legs paler. Length 1.1 mm.; width 0.75 mm. Virginia (Norfolk).....**virginica**, sp. nov.

3—Impunctuate, piceous in color, the edges of the pronotum narrowly transparent and hyaline, the disk gradually darker toward the middle and base. Length 1.0 mm.; width 0.78 mm. North Carolina (Asheville).....**convexa**, sp. nov.

Smaller and with feeble but visible traces of punctuation, piceous or testaceous in color, the under surface and legs more flavate. Length 0.8 mm; width 0.7 mm. Pennsylvania (near Philadelphia).....**sphæricula**, sp. nov.

Individuals are rare, but *virginica* is represented before me by a number of examples, which exhibit no noteworthy variability.

Corylophodes *Matth.*

As in the preceding, the antennæ in this genus have five small compacted and gradually wider joints between the third and the first joint

of the club, and there is no vestige of an enlargement of the second joint before the club as there is in *Rypobius*, *Gronevus* and *Orthoperus*. The structure of the shaft differs in fact very radically, and, in this way, these genera are widely isolated. *Corylophodes* resembles *Bathona* in general structure, but, besides the characters indicated in the table, it differs in the generally more narrowly oval form of the body, shorter and less developed prothorax, finely margined along the basal lobe, and more slender and less coarctate five antennal joints immediately succeeding the third. The tarsi are nearly similar, but the anterior are feebly dilated in the male. The three species before me may be thus distinguished among themselves:—

Elytral punctures sparse but rather coarse, deeply impressed and very distinct, blackish-piceous, the limb of the pronotum broadly transparent and hyaline; legs and antennæ paler. Length 0.9 mm.; width 0.72 mm. Rhode Island, Pennsylvania and North Carolina (Asheville).....**marginicollis** *Lec.*

Elytral punctures extremely minute and subobsolete.....2

2—Form narrowly oval, rufo-piceous in color, the pronotum with broad hyaline margin as in the preceding and succeeding species. Length 0.85 mm.; width 0.65 mm. Florida.....**impunctatus,** sp. nov.

Form more broadly oval, black, the legs, trophi and antennæ pale; prothorax transverse, the basal angles obtusely blunt as usual. Length 0.8–0.9 mm.; width 0.7–0.75 mm. Texas (Brownsville).....**subtropicus**, sp. nov.

As pointed out by Mr. Matthews, the distinguishing feature of *Corylophodes* is the slender third antennal joint shorter than the second, but the author makes no allusion at all to the remarkable post-coxal plates. The genus as extended by its author in the "Monograph" is very composite, and I am unable to place the *C. schwarzi*, described therein from California.

Gronevus, gen. nov.

This and the succeeding genus differ very greatly from the two preceding, in the very short and almost obsolete post-coxal plates, the meso-coxal being even much less developed than in *Orthoperus*, but the subtransverse line at the base of the metepisterna is present as in that genus; the comparatively wide and steeply inflexed epipleuræ distinguish them at once however from *Orthoperus* and *Eutrilia*. They also differ quite radically in antennal structure, and from all others of the tribe, in the shorter and slightly dilated tarsi. In *Gronevus* the limb of the pronotum is hyaline and moderately widely subexplanate, the base not margined, and the hind angles are acute and dis-

tinctly though not abruptly produced posteriorly. The European *Peltinus* and *Corylophus* differ in having very narrow horizontal epipleuræ and more slender tibiæ.

The species are somewhat abundant but closely allied; those in my cabinet may be recognized by the following characters:—

Elytra finely and sparsely but more or less distinctly punctate.....2
Elytra impunctate.....5
2—Elytral punctures very minute throughout.....3
Elytral punctures strong, especially on the descending flanks; body smaller, more rounded, very strongly subglobularly convex, blackish, the pronotum paler, with narrow hyaline limb. Length 0.8 mm.; width 0.65 mm. Iowa.
sticticus, sp. nov.
3—Antennal club blackish; body more strongly and globularly convex, black, the pronotum slightly piceous, with narrow colorless hyaline margins; scutellum twice as wide as long, very broadly rounded. Length 0.9 mm.; width 0.7 mm. Canada (Ottawa).....**fuscicornis,** sp. nov.
Antennal club very pale, not differing in color from the shaft, body rather less convex.....4
4—Blackish, the pronotum rufo-piceous, sometimes entirely pale from immaturity; elytra but little more than twice as long as the prothorax; scutellum twice as wide as long. Length 0.8–0.9 mm.; width 0.63–0.75 mm. Massachusetts, Rhode Island, New York and New Jersey.....**truncatus** *Lec.*
Paler, piceo-testaceous, the prothorax still paler, form more elongate-oval, the elytra much more than twice as long as the prothorax; scutellum less transverse and somewhat ogival; elytral punctures still finer, almost completely effaced posteriorly; size a little larger as a rule. Length 0.95 mm.; width 0.8 mm. Iowa and Nebraska.....**hesperus,** sp. nov.
5—Blackish, the pronotum and elytral suture rufescent; elytral margin at and near the humeri more widely subexplanate than in the preceding species. Length 0.78–0.85 mm.; width 0.65–0.75 mm. Virginia (Norfolk and Fort Monroe)
lævis, sp. nov.

Individuals of the various species are much more abundant than in the two preceding genera, as is also the case in *Rypobius*.

Rypobius *Lec.*

The body in this genus is evenly oval and rather strongly convex, the pronotum evenly declivous toward the limb, which is not reflexo-explanate and not transparent or hyaline at the edges; the hind angles being right and the apex sensibly sinuate indicates a closer affinity with *Orthoperus*. The integuments are minutely reticulate, and each of the very minute sparse punctules bears a small and very fine decumbent hair. The scutellum is less than twice as wide as long and is parabolic in form. The tarsal claws are rather long, slender and arcuate, with a feeble internal dilatation at base.

The genus *Glœosoma*, of Wollaston, occurring in the Island of Madeira, which has been considered to be identical with *Rypobius*, is altogether distinct, not only in its 10-jointed antennæ and type of elytral sculpture, but in its habits and gait, the single species of *Glœosoma* taking refuge under stones and running with great velocity when disturbed—habits wholly foreign to *Rypobius*. It may however be placed near *Rypobius* in a tabular arrangement of the genera of the family. A Spanish specimen sent me by Mr. Reitter under the name *Rypobius velox*, differs from the true *Rypobius* also in the elytral epipleuræ, which are inclined upward and not at all inflexed, and also in the hind angles of the prothorax, which are acute and sensibly produced posteriorly. I am unable to count the joints of the antennæ with certainty in this example.

The two species of *Rypobius* before me may be distinguished very readily as follows:—

Base of the prothorax almost rectilinear, piceous, the prothorax and under surface paler; micro-reticulation of the upper surface very deep, the lustre somewhat alutaceous. Length 1.0–1.2 mm.; width 0.7–0.85 mm. Rhode Island, New Jersey and Virginia (near the ocean beaches).....**marinus** *Lec.*

Base of the prothorax distinctly bisinuate, blackish, the pronotum rufescent; legs, antennæ and trophi flavate, polished, the micro-reticulation of the upper surface almost completely effaced; size very much smaller. Length 0.68 mm.; width 0 5 mm. Texas (Columbus).....**minutus,** sp. nov.

In both these species the first abdominal segment is as long as the next three combined. *Minutus* must bear some resemblance to the Central American *guatemalensis* Matth., but differs in sculpture.

Eutrilia, gen. nov.

The single representative of this genus resembles a very large, broadly oval *Orthoperus*, and is evidently very closely related, being identical in the form of the prothorax and in the structure of the head, coxæ and under surface. It however differs in the form of the anterior tibiæ, as indicated in the table. and in the virtual absence of any trace of epipleuræ, these being indicated only by a slight thickening of the elytral margins due to the very minute marginal bead. The meso-coxal plate is rather well developed, but the metacoxal plate is extremely short as in *Orthoperus*. The intermediate tibiæ are slightly thickened externally just beyond the middle with arcuate outline, the posterior straight and the tarsi slender, the claws small, arcuate and very slender. The first ventral segment is as long as the next four

combined. The integuments are micro-reticulate and very finely punctate, each puncture bearing a small decumbent hair, these however being a little longer and more conspicuous than in *Rypobius*. The scutellum is well developed, with broadly parabolic outline, and the elytral suture is not at all margined. The wings are well developed, the fringing hairs very short. As in some species of *Orthoperus*, especially *scutellaris*, there is a feeble impressed longitudinal line on each elytron near outer fifth or sixth, extending from the base for a short distance :—

Oval, convex, moderately shining, brownish-testaceous in color throughout, the prothorax moderately developed, the base broadly parabolic, the sides strongly convergent, moderately arcuate and continuous in curvature with those of the elytra; punctures not distinctly visible under a hand lens of moderate power. Length 0.95 mm.; width 0.8 mm. California..... ...**bruunea,** sp. nov.

Orthoperus *Steph.*

The species of this genus are among the most minute of the Coleoptera, and may be readily recognized by their oval, moderately convex form, exposed head and 9-jointed antennæ, the fifth joint being generally notably longer and sometimes thicker than the sixth. The epipleuræ are represented by a narrow side margin of the descending flank, delimited by a fine line. The integuments of the body are more or less shining, micro-reticulate and virtually glabrous. The pronotum is very finely and feebly margined at base, the flanks not greatly descending, becoming very narrowly and feebly reflexo-explanate toward the basal angles, which are nearly right, not at all produced posteriorly and narrowly rounded. The scutellum is distinct though small and generally parabolic in shape. The species are rather numerous but closely allied among themselves as a rule ; those before me may be recognized as follows :—

Elytral suture not margined except posteriorly..... 2
Elytral suture finely margined to the scutellum..... 8
2—Elytra without trace of punctuation of any kind, the minute reticulation distinct ; body much larger than usual, evenly elliptical, glabrous, pale brown in color throughout, the metasternum impunctate and with very sparse and microscopic hairs. Length 0.82 mm.; width 0.62 mm. Colorado.....**princeps,** sp. nov.
Elytral punctures wanting but replaced by very small, sparse and V-shaped scratches ; size rather large.....3
Elytral punctures normal, being well-defined points but always very minute and sparse ; size small or very minute..... 4
3—Form somewhat oblong and narrowly oval, black throughout, the legs and antennæ rufescent ; micro-reticulation distinct ; metasternal punctures sparse but distinct.

Length 0.7 mm.; width 0.45 mm. Lake Superior, Northern Illinois and California (Siskiyou Co.).....**scutellaris** *Lec.*

Var. A—Piceous and more broadly oval with more arcuate sides, the micro-reticulation less distinct and the scratch-like punctulation more visible. New York and Ohio.....**piceus**, v. nov.

Var. B—Similar to *piceus* but with the punctules sparse and the elytra more rapidly narrowed toward tip. Washington State (Spokane)..**lucidus**, v. nov.

4—The punctures strong deep and very distinct, more especially so toward the suture and base of each elytron and toward the base of the pronotum, piceous in color, the legs luteo-flavate; form rather narrowly oval. Length 0.65 mm.; width 0.4 mm. California (Sta. Cruz Co.).....**cribratus** *Matth.*

The punctures extremely fine throughout and only visible under strong amplification; size small.....5

5—Form oblong-oval.....6

Form evenly oval with more arcuate sides.....7

6—Piceous-black, the micro-reticulations finer and stronger, giving a feebly subalutaceous lustre. Length 0.6 mm.; width 0.4 mm. New Jersey, Pennsylvania, Delaware, North Carolina and Florida.....**glaber** *Lec.*

Paler, piceous, smaller and more polished, the reticulation coarser and less visible; suture more strongly margined posteriorly. Length 0.5 mm.; width 0.35 mm. Florida (Enterprise).....**suturalis** *Lec.*

7—Reticulations feeble, the surface more highly polished, piceous in color, the eyes separated on the front by nearly three times their own width. Length 0.6 mm.; width 0.4 mm. Texas (Austin).....**texanus,** sp. nov.

Reticulations strong; body smaller and paler in color, the eyes distinctly larger, separated on the front by but little more than twice their own width; metasternum more coarsely reticulate. Length 0.5 mm.; width 0.35 mm. Illinois.

micros, sp. nov.

8—Scutellum more transverse, ogival or rounded; body more oblong-oval 9

Scutellum scarcely wider than long, triangular, the sides straight.....10

9—Reticulations feeble and finer, the surface polished; elytral punctures excessively fine and scarcely visible; color testaceo-piceous; head well developed. Length 0.65 mm.; width 0.48 mm. Arizona (Tucson) and southern California.

arizonicus, sp. nov.

Reticulations strong, the lustre somewhat alutaceous; punctures extremely fine and sparse but more visible; head smaller, the coloration darker, piceous-black. Length 0.6 mm.; width 0.4 mm. Texas (Columbus).....**alutaceus,** sp. nov.

10—Body oval, pale testaceous in color, polished, the reticulation very feeble, the punctures almost completely obsolete but simple; sutural margin strongly defined, extending unbroken by the scutellum and along the base to beyond the middle of the width; head well developed, meso-coxal plates shorter, with the bounding line more rectilinear and transverse. Length 0.55 mm.; width 0.35 mm. Bahamas (Harbor Island).....**bahamicus,** sp. nov.

Elongatus of LeConte, belongs to the Enigmaticini. The *crotchi* of Matthews I, have not seen.

SERICODERINI.

This tribe is well differentiated from the preceding in the oval pubescent body, with more extensible abdomen and absence of distinct post-coxal plates, and from the following in the non-explanate limb of the pronotum; from both it may be distinguished by the 10-jointed antennæ and shorter basal segment of the abdomen, this, in the extended condition, scarcely equaling in length the next two together. There is but a single genus.

Sericoderus *Steph.*

The species of this genus are so closely allied among themselves that it is scarcely possible to detect structural differences of any kind, and the names given below might be considered to represent subspecies of a single type form. The head is completely concealed from above and moderately deeply inserted, the pronotum broadly rounded at apex and with the hind angles acute and considerably produced posteriorly. The antennæ are slender, with the basal joint narrowly oval and inserted in shallow frontal foveæ at a slight distance from antero-internal margin of the eyes, the latter usually well developed and coarsely faceted. The frontal margin is feebly sinuato-truncate and the labrum short and broadly rounded. The tibiæ and tarsi are slender, and the elytral epipleuræ narrow, becoming strongly inflexed toward base. The following forms seem to be worthy of distinctive names:—

Species of the Atlantic and Gulf regions.....2

Species of the Pacific slope.....5

2—Elytra more strongly narrowed from base to apex.....3

Elytra feebly narrowed, the form more quadrate.....4

3—Larger, pale luteo-flavate in color, the usual nubilate subapical spot of the pronotum piceous. Length 0.9 mm.; width 0.65 mm. New York to Lake Superior .....**flavidus** *Lec.*

Smaller, the elytra generally piceous, the pronotum flavate with the subapical spot darker. Length 0.75–0.85 mm.; width 0.6–0.65 mm. Massachusetts, Pennsylvania, and North Carolina.....**obscurus** *Lec.*

4—Color pale flavate throughout, the elytra never darker, smaller in size than *flavidus* and more southern in distribution. Length 0.75 mm.; width 0.6 mm. Texas (Brownsville and Austin), Florida and Illinois.....**subtilis** *Lec.*

5—Larger, very broadly oblong, coarsely pubescent, dark rufo-testaceous, the usual subapical spot of the pronotum darker; elytra but feebly narrowed from base to apex; metasternum coarsely imbricato-reticulate but not distinctly punctured. Length 0.85 mm.; width 0.68 mm. California (Monterey).

quadratus, sp. nov.

Very small, the elytra more rapidly narrowed from the base, piceous-brown in color, the pubescence rather less coarse; metasternum distinctly punctured, especially toward the sides. Length 0.7 mm.; width 0.55 mm. California (Sonoma Co.). **debilis**, sp. nov.

When discovered, individuals are rather abundant. *Sericoderus* is said in the "Biologia" to have the antennæ 11-jointed, but these organs are quite evidently 10-jointed in our species, and the details given by Mr. Matthews for the antennæ of *S. latus* show that it should properly form a genus distinct from *Sericoderus*.

PARMULINI.

The numerous species of this tribe can be recognized at once by the oblong or oval and less convex pubescent body, more or less widely subexplanate at the lateral and apical limb of the pronotum, and the rectangular thoracic angles. The genus *Sacium* of LeConte, is said by Heyden, Reitter and Weise to be the same as *Parmulus* of Gundlach, but, as the LeContean *Sacium* is composite, I am in doubt as to which if any is the true *Parmulus* and have therefore not adopted the name for any one of our genera; it is, however, retained for the tribal designation. The three genera before me may be identified by the following characters:—

Antennæ 11-jointed; prosternum well developed in front of the coxæ, the posterior margin of the buccal opening deflexed at the middle, forming a broad inferiorly vertical liguliform process.....2

Antennæ 10-jointed; prosternum extremely short in front of the coxæ, the buccal margin not at all deflexed.....3

2—Body elongate and subparallel; antennæ more elongate, the club relatively longer, looser and more serriform, the fifth and seventh joints both enlarged; basal joint of the hind tarsi shorter, scarcely as long as the next two combined, the basal joints thicker.....**Sacium**

Body oval, with more arcuate sides; antennæ shorter, with a more slender shaft and stouter and more compact club, the seventh joint enlarged, the fifth normal; hind tarsi with the basal joint elongate and more slender, always much longer than the next two combined.....**Molamba**

3—Body oval or oblong-oval, rather more convex but nearly as in *Molamba;* antennæ moderately elongate, the club loose and well developed, the elongate third joint followed by four small subequal joints; posterior tarsi slender, with the basal joint elongate, the anterior more or less dilated at base; species generally minute.....**Arthrolips**

The epipleuræ are horizontal, moderately wide, narrowing gradually and disappearing behind the middle, the first ventral segment very long, equaling the next three or four combined.

These genera are all widely distributed over the continent, but *Sacium* has not yet been found near the Pacific coast line, although occurring in Utah; it is more northern in habitat than the other two. *Molamba* may perhaps prove to be the same as *Parmulus*, but at present I have no means of determining this.

Previous authors appear to have entirely overlooked the very conspicuous vertical ligula at the hind margin of the buccal opening in *Sacium* and *Molamba*, a character wholly wanting in *Arthrolips*.

Sacium *Lec.*

In this genus, and the next, the limb of the pronotum is broadly reflexo-explanate antero-laterally, and is scarcely at all so at the middle of the apical margin, while in *Arthrolips* the edge seems to be more narrowly and evenly reflexed throughout the external circumference. *Sacium*, as understood by Mr. Matthews in the "Monograph," is composite, and *lugubre* should have been assumed as the type. The genus includes some of the largest species of the family known to me, and the four represented in my cabinet may be thus defined in brief:—

Prothorax as long as wide or very nearly; elytral punctures and pubescence rather sparse 2

Prothorax shorter and more transverse, much wider than long in both sexes; elytral punctures and pubescence dense 4

2—Elongate, twice as long as wide or very nearly, the elytral punctures smaller and rather sparser, piceous to blackish in color, with the usual two pale patches at the apex of the pronotum. Length 1.75–2.1 mm.; width 0.9–1.0 mm. Colorado ..... **montanum,** sp. nov.

Less elongate, always distinctly less than twice as long as wide, the elytral punctures stronger and less sparse 3

3—Piceous in color to blackish, the elytral suture sometimes slightly paler. Length 1.6–1.8 mm.; width 0.85–0.9 mm. Lake Superior ..... **lugubre** *Lec.*

Deep black, the suture not paler; body a little larger and relatively broader. Length 1.7–2.0 mm.; width 1.0–1.1 mm. Utah (southwestern) ..... **nigrum,** sp. nov.

4—Body rather smaller, piceous-brown in color, the under surface and legs still paler. Length 1.65 mm.; width 0.85 mm. Lake Superior ..... **obscurum** *Lec.*

The elytra are uniform in color throughout and there is an entire absence of the paler maculation so characteristic of the two following genera.

The genus represented by *Clypeaster maderæ* Kr. (*pusillus* Woll., nec Gyll.) is radically distinct from *Sacium* in the structure of the antennæ as figured by Wollaston, and I would propose the generic name **Clypeastodes** for that species.

Molamba, gen nov.

The species are much more numerous than those of *Sacium* and are generally of smaller size, though *obesum* is as large as any representative of that genus discovered thus far. Those before me may be conveniently arranged as follows:—

Elytra uniform in coloration or devoid of distinctly defined pale maculation.....2
Elytra dark in color, with rufous or flavous maculation.....3
2—Pubescence long, distinct and rather abundant; body large, piceous, the pronotum pale anteriorly, but darker at the middle as usual; punctures fine, rather close-set; elytra distinctly longer than wide, sometimes very feebly rufescent behind the middle in a small area but not obviously so. Length 1.9 mm.; width 1.2 mm. California..... .....**obesa,** sp. nov.
Pubescence virtually wanting, each of the very minute sparse punctures having an exceedingly minute hair, only visible under high power, the surface polished; body much smaller, black, the pronotum piceous-brown, with two apical albescent areas; elytra perfectly uniform black, scarcely longer than wide, the abdomen much extended behind them in the single type. Length (to extremity of elytra), 1.0 mm.; width 0.7 mm. Texas. (Columbus).....**specularis,** sp. nov.
3—Elytra each with a small pale spot on the median line well behind the middle.....4
Elytra with a transverse pale band, sometimes failing to attain the sides or interrupted at the suture..... 6
4—The pale spot nubilate; elytra black or paler from immaturity; punctures fine and moderately close, the vestiture distinct. Length 1.3–1.6 mm.; width 0.8–0.9 mm. Colorado and Utah, one specimen not specifically distinguishable labeled "New York."..... .....**biguttata** *Lec.*
The pale spot clearly defined; size smaller.....5
5—Antennæ moderately long, nearly as in *amabilis;* punctures fine, rather sparse, the pubescence distinct; metasternum finely but distinctly punctured and with short and stiffer hairs. Length 1.1–1.3 mm.; width 0.7–0.8 mm. Massachusetts and Maryland to Iowa and Missouri.....**lunata** *Lec.*
Antennæ very short, the club moderate but as long as the entire preceding part omitting the basal joint; body almost exactly as in *lunata* but much smaller, the metasternum more minutely punctured but with longer and finer hairs. Length 0.88 mm.; width 0.6 mm. Florida (Lake Monroe).....**parvula,** sp. nov.
6—The pale band at the middle of the length consisting of a transverse discal spot on each, the elytra each with two large subconfluent basal spots also; pubescence dense and conspicuous, the color piceous; pronotum darker along the median line. Length 1.5 mm.; width 0.8 mm. Texas .....**lepida** *Lec.*
The pale band just visibly behind the middle and formed as in *lepida*, the body throughout as in that species but wholly devoid of pale spots at the elytral base; punctures minute but rather close-set. Length 1.4–1.6 mm.; width 0.8–0.85 mm. Iowa.....**ornata,** sp. nov.
The pale band much behind the middle, more conspicuous and attaining the sides of the elytra 7
7—The pale band nubilously interrupted at the suture; body nearly as in the two pre-

ceding species, the elytra indistinctly paler at or near the base subexternally; pubescence distinct and rather dense, the punctures minute. Length 1.3 mm.; width 0.8 mm. California ..... **amabilis** *Lec.*

The pale band very conspicuous, not at all interrupted at the suture; pubescence coarser and not so dense..... 8

8—Piceous-black, the pronotum pale, clouded with blackish at the middle anteriorly; elytra each with a pale spot at the humeral callus, the punctures distinct, together much longer than wide. Length 1.4–1.7 mm.; width 0.85–1.0 mm. District of Columbia..... **fasciata** *Say*

Black, the pronotum as in *fasciata*, the elytra but little longer than wide, the transverse pale band still wider and more conspicuous, wholly devoid of a subbasal pale spot, the punctures more minute and rather sparser; body shorter and stouter. Length 1.5 mm.; width 1.0 mm. Texas (Columbus) ..... **decora,** sp. nov.

The *Sacium balteatum*, of Matthews, described from North Carolina, I have not seen; it has on the elytra a straight transverse fascia behind the middle not extending to the sides, and also the apices, yellow. *Lepida* was placed in *Arthrolips* by Mr. Matthews but incorrectly.

Arthrolips *Erichs.*

This genus resembles the last in the outward habitus of the species, but these are in general much more minute and more narrowly oval or oblong-oval and perhaps a little more convex. In the structure of the anterior parts of the prosternum and of the antennæ it is radically different. The species are nearly as numerous as those of *Molamba*, and are equally widely disseminated over the more southern parts of the United States: as far as known to me they may be distinguished by the following characters:—

Elytra dark in color, with paler maculation behind the middle..... 2

Elytra unicolorous..... 6

2—Elytra each with an isolated spot which does not attain the suture; larger species 3

Elytra with a broad band crossing the suture; size very minute..... 5

3—The spot behind the middle large, oblique and more or less rounded; body piceous, the pronotum paler, becoming broadly diaphanous at apex as usual, the median line remaining dusky; elytra finely, very closely punctate, distinctly pubescent, without basal or subbasal pale marking; legs pale. Length 1.2–1.35 mm.; width 0.78–0.82 mm. Southern California..... **nimius,** sp. nov.

Var. A—Similar but stouter and more rounded at the sides, the spot less rounded and obliquely elliptical; elytra more rapidly rotundato-convergent behind and narrower at tip. Length 1.4 mm.; width 0.9 mm. California (Owens Valley) ..... **robustulus,** v. nov.

The spot transverse and crescentiform, being broadly sinuate anteriorly..... 4

4—Elytra black, minutely and not so closely punctate, the limb not paler and without a humeral pale area; pronotum not paler, except at the apical limb and very

narrowly at the sides to the base; integuments polished; under surface blackish, the legs pale. Length 1.2 mm.; width 0.75 mm. Virginia (Fort Monroe).
cinctus, sp. nov.

Elytra pale piceous-brown, the entire external limb flavescent, broadening over the humeral regions; body narrowly oblong-oval; under surface pale, the legs flavate. Length 1.0 mm.; width 0.65 mm. Florida (Tampa).....**mollinus** *Schz.*

5—Pubescence of the elytra moderately abundant and quite distinct, the hairs coarse; elytra blackish, the pale band broad, sinuate anteriorly at the suture; pronotum and legs pale. Length 0.62–0.7 mm.; width 0.42–0.48 mm. California.
scitulus *Lec.*

Pubescence almost wholly wanting, each of the very minute sparse punctures bearing an extremely minute hair only visible under high power; surface polished, the elytra piceous, the band transverse; pronotum pale, clouded with piceous at the middle of the disk. Length 0.8 mm.; width 0.45 mm. Florida (Tampa).
splendens *Schz.*

6—Elytra highly polished, without trace of reticulation.....7

Elytra minutely reticulate, the punctures minute and less visible; pubescence short but rather abundant and quite distinct; body pale luteo-flavate in color throughout, the elytra sometimes slightly darker. Length 0.7–0.8 mm.; width 0.4–0.53 mm. California and Iowa. [*Sacium californicum* Matth.].....**decolor** *Lec.*

7—Punctures small but strong and distinct throughout above, quite close-set, the pubescence moderately long and abundant, coarse and very distinct; color blackish, the pronotum paler. Length 0.95 mm.; width 0.65 mm. Massachusetts and Pennsylvania.....**misellus** *Lec.*

Punctures minute and sparse, scarcely visible except under high power, each bearing an exceedingly minute hair as in *splendens*, blackish, the pronotum paler, the apical whitish spots small and rather widely separated. Length 0.8 mm.; width 0.55 mm. Texas (Columbus).....**sparsus,** sp. nov.

There may be some closely allied species included in the material before me which is referred to *decolor*, but in any event they would be so doubtfully distinct that there could be no advantage gained in separating them; there can be little or no doubt of its identity with the *Sacium californicum*, of Matthews.

The antennæ in *Arthrolips* occasionally appear to have only nine joints, the slightly elongate third joint followed by three instead of four minute joints, but this appearance may be due simply to the difficulty in observing these organs in their natural position.

ÆNIGMATICINI.

The general habitus of the few species comprising this tribe is wholly different from that of the preceding tribes, the body being narrow and somewhat as in *Corticaria*. There has been but one genus characterized thus far:

Ænigmaticum *Matth.*

The body is parallel, moderately convex, the head entirely exposed and but slightly inclined, the eyes moderate in size, convex, with rather coarse convex facets as usual, the antennæ inserted at some distance from their antero-internal margin in angulate emarginations of the front. The prothorax is narrowed at base and truncate at base and apex, the apical angles very obtusely rounded, the basal more distinct but obtuse, the elytral suture strongly and widely margined, the line extending along the well-developed and transversely triangular scutellum nearly to outer third of each elytron. The anterior coxæ are small and distinctly, though not broadly, separated, and the prosternum is largely developed in front of them; the middle coxæ are rather narrowly, the posterior very widely, separated, the legs slender, with the tibiæ somewhat clavate and the tarsi rather slender, with the basal joints small. The basal segment of the abdomen is about as long as the next three combined. The two species known to me are minutely reticulate and subglabrous, each puncture bearing a very small but distinct cinereous hair; they may be defined as follows:—

Prothorax broadly subangulate and widest at the middle, the sides straight or very feebly sinuate thence to the basal angles; body dark castaneous, finely and sparsely but very distinctly punctate. Length 0.75–0.9 mm.; width 0.42–0.5 mm. California (San Francisco).....**californicum** *Csy.*

Prothorax almost evenly rounded at the sides, becoming much more convergent toward apex, the latter scarcely more than half as wide as the base, the disk widest behind the middle and narrowed but slightly at base; punctures sparse and very minute, those of the pronotum more visible and having the form of minute transverse arcs, enclosing each a very minute hair; color dark brown; size smaller and rather more slender in form than *californicum*. Length 0.6 mm.; width 0.25 mm. Florida..... **elongatum** *Lec.*

Elongatum was described as an *Orthoperus* by LeConte, and the type is not before me at present, but a drawing from this type made by me some years ago seems to show that the prothorax differs so greatly in outline from that of *californicum* as to indicate some divergence of a generic nature.

In the recent posthumous "Monograph of the Corylophidæ and Sphæriidæ," page 35, Mr. Matthews has fallen into a singular misapprehension, as my letter to him will undoubtedly show. My language was not by any means intended to imply that his *Ænigmaticum ptilioides* was identical with *Orthoperus elongatus*, but simply stated my conviction that the *elongatus* of LeConte is an *Ænigmaticum*. There

are many minor errors throughout this important monograph, which would doubtless have been avoided had the author lived to conduct it through the press. *Sphærius politus*, for example, on page 214, is attributed to the author as a new species, whereas it was in reality described by Dr. Horn many years ago.

CRYPTOPHAGIDÆ.

Under this name have been grouped two closely allied types of so-called Clavicornia, comprising numerous genera and species. The body is small to minute in size, oblong or oval, more or less convex and generally clothed with coarse subdecumbent pubescence, with additional longer and more erect hairs arranged serially on the elytra in many genera, similar to those of the Tritomidæ. The tarsi are pentamerous, becoming heteromerous in the males of certain genera as in certain Cucujidæ, and the anterior coxæ are oval, moderate in size, smaller and more deep-set than in Tritomidæ, becoming decidedly transverse in the Ephistemini, and having an external trochantin. It is this form of the coxæ which principally distinguishes the family from the Cucujidæ, where the anterior coxæ are still smaller, equally or still more deeply inserted and subglobular. The family is also unmistakably allied in many characters, especially evident in the Atomariinæ, to the Scydmænidæ. Among these resemblances may be mentioned the basal impressions of the pronotum, so characteristic of the Cryptophaginæ, the side margins of the latter in *Cœnoscelis*, and the recurved ventral sutures of that and some other genera, the elongate form of the trochanters, alternating long and short joints of the antennal shaft and slender pentamerous tarsi. The only serricorn character which is especially evident is the asymmetric antennal club of *Ephistemus*.

Probably the most essentially peculiar structural feature of the Cryptophagidæ, although a distinguishing character of the Silvaninæ as well, is the modification of the lateral edges of the prothorax by serratures or nodular thickenings, and the various forms assumed afford excellent subsidiary criteria for the definition of genera. Another peculiarity is the narrow and feeble dehiscence of the elytra at or very near the apex, there being but few genera, such as *Diplocœlus* and *Loberus*, in which this character virtually disappears. The eyes are rounded and convex, usually rather well developed and coarsely faceted, but somewhat variably so. The antennæ are always 11-

jointed, with a loose club which is generally 3-jointed, but sometimes purely 2-jointed, and, in one case—*Anchorius*—4-jointed, a character remindful of Tritomidæ. The anterior coxal cavities are generally widely open behind, but are completely and rather broadly closed in *Diplocœlus*, completely but less broadly in *Cryptophilus*, narrowly but almost completely in *Haplolophus*, and about half closed in *Setaria*, proving that no useful generalization in the definition of the family can be drawn from the form of the cavities. The Biphyllini, as stated by Reitter, are evidently a perfectly natural part of the present family, this being proved by general organization, tarsal structure and especially by the radiating straight lines of the first ventral segment, also occurring in *Cryptophilus*, and, in an arcuate form, in *Tomarus*.* The tribe is quite out of place in the Tritomidæ, to which it was assigned by LeConte and Horn.

The Cryptophagidæ comprise two distinct subfamilies as shown by the following characters:—†

Antennæ inserted under the acutely margined sides of the front and remotely separated at base, the palpi mutually dissimilar, the maxillary elongate and slender, with the fourth joint elongate and more or less acuminate toward the tip, the labial short, with the last joint enlarged, oval to securiform; pronotum generally bifoveolate at base.....CRYPTOPHAGINÆ

Antennæ inserted on the front and more or less approximate at base, the palpi mutually similar, short, stout and acuminate, the last joint of both small, narrow and subuliform; trochanters always narrow and elongate, bearing the femora distally; pronotum never bifoveolate at base, though generally impressed; anterior coxal cavities always widely open behind, the tarsi invariably simple and filiform; eyes always basal, the first abdominal segment never having radiating lines.....ATOMARIINÆ

In tarsal structure these two subfamilies are linked together by way of the Cryptophagini and Cænoscelini. The insertion of the antennæ in *Antherophagus* seems to suggest also a slight drift toward the Atomariinæ, but this is very feeble and more apparent than real. In the mode of antennal insertion, and especially in palpal structure, the two subfamilies are radically distinct; perhaps species may be discovered showing intermediate characters, but it is more probable that these bonds have long ago become extinct.

* These lines also occur in the subfamily Silvaninæ of the Cucujidæ.

†Names to which an asterisk is affixed apply to tribes or genera which do not occur within the limits of the American fauna as far as discovered.

CRYPTOPHAGINÆ.

The body in this subfamily is generally larger, more oblong, less convex and more pubescent than in the Atomariinæ, possessing at the same time much more variety in tarsal structure and in the form of the anterior coxal cavities. These variations are important, being always accompanied by a peculiarity of general structure and habitus, and necessitate the erection of a considerable number of distinct tribes as follows:—

Trochanters moderate in size, very obliquely attached at the side of the femoral base, the latter attaining the coxæ; anterior coxal cavities completely and broadly closed behind; first ventral segment very much shorter than the next two combined, and having two fine straight cariniform lines diverging from the inner margin of the coxal cavities; antennal grooves before the eyes narrow and deep, the buccal processes narrow; front short and without trace of clypeal sutures; eyes basal and coarsely faceted; body subdepressed, the pronotum generally with fine longitudinal raised lines at least visible toward the sides; abdominal sutures fine, broadly arcuate; tarsi pentamerous in both sexes, the fourth joint small, the third strongly and the second more feebly, lobed beneath.....BIPHYLLINI.

Trochanters very short but less obliquely joined to the femoral base throughout the width of the latter; anterior coxal cavities narrowly and partially closed behind by an inward projection of the side pieces of the prosternum; tarsi stout, pentamerous in both sexes, densely clothed beneath with coarse hairs, the fourth joint small; eyes basal or subbasal and coarsely faceted; front prolonged, more or less prominently convex above the antennæ and with a short oblique clypeal suture at each side; middle coxæ narrowly separated; pronotum never lineate, the basal foveæ minute or subobsolete; elytra with confused punctuation but becoming regularly seriato-punctate in *Leucohimatium*; basal segment of the abdomen short or moderate, never lineate, the sutures nearly straight; antennal grooves before the eyes narrow and deep in *Setaria*, obsolete in *Haplolophus* and *Leucohimatium*; antennal club 2-jointed in *Setaria*.....*SETARIINI.

Trochanters elongate, bearing the femora obliquely attached distally; middle coxæ smaller and less narrowly separated; front short before the antennæ, without trace of clypeal sutures; antennal grooves obsolete; antennal club always loosely 3-jointed.....2

2—Anterior coxal cavities completely, though not very broadly, closed behind; first ventral segment but little longer than the second and with two straight diverging cariniform lines as in Biphyllini, the tarsi pentamerous in both sexes, with the fourth joint small, the joints toward base having simple brushes of hair beneath; first joint of the posterior as long as the next two combined in *Cryptophilus*; eyes basal and coarsely faceted; pronotal foveæ very minute.....*CRYPTOPHILINI.

Anterior coxal cavities broadly and completely open behind; basal segment of the abdomen variable in length.....3

3—Tarsi pentamerous in both sexes, with the fourth joint small, the third joint strongly, and the second less strongly or obsoletely, lobed beneath, the lobes

narrow and pubescent; eyes always basal; first antennal joint relatively small; last joint of the labial palpi usually flattened, obtusely truncate or securiform; mesosternum flat or feebly concave between the coxæ; elytra with serial punctures in *Loberus*..... .....TELMATOPHILINI.

Tarsi always filiform, simple and never lobed beneath, pentamerous in the females and heteromerous in the males, the penultimate joint similar in form to the preceding; last joint of the labial palpi oval, convex, narrowly truncate at tip; abdominal sutures straight throughout the width; prosternal process acute, freely passing over the mesosternum, which is generally concave; eyes variable; elytra never margined at base and never having distinctly serial punctuation..CRYPTOPHAGINI.

The tribe Setariini is erected for three isolated European genera *Setaria*, *Haplolophus* and *Leucohimatium*, and there is no American representative known thus far. The European genus *Cryptophilus* also necessitates the creation of a distinct tribe. All the other tribes are common to the two hemispheres.

BIPHYLLINI.

This is a small tribe, comprising a relatively large number of generic types. The body is oblong-oval or elongate-oval and generally notably depressed, pubescent and with the abdominal sutures very fine. The tarsi are pentamerous in both sexes, with the fourth joint small and simple, the fifth generally much elongated and the subbasal thicker and lobed beneath. The pronotum generally has some elevated longitudinal lines at least toward the sides; the scutellum is short and transverse and the antennæ rather short, with well developed club, very widely separated at base and inserted under the sides of the front, the basal joint moderate or small in size. The last joint of the maxillary palpi is slender, that of the labial large and securiform. The truncate posterior edge of the prosternum passes freely over the surface of the mesosternum, and the first ventral segment has two straight carinæ diverging from the middle of the base and extending to the apical margin or very nearly. The posterior sutures are flexed backward at the sides to a greater or less degree. The genera before me may be defined as follows:—

Last joint of the labial palpi broadly oboval, thick and convex, with the apex broadly truncate and excavated; antennal club broad, oval, rather compact and 4-jointed, the eighth joint, however, very small, transverse and obtrapezoidal; pronotum longitudinally lineate throughout its width.....**Anchorius**

Last joint of the labial palpi broadly securiform and flattened, with the apical edge fine; pronotum only lineate toward the sides.....2

2—Antennal club 3-jointed, narrower and more loosely connected, the ninth joint sensibly smaller than the tenth, the eighth small and similar to the seventh, the last subtransversely oval and generally somewhat narrower than the tenth. [*Marginus* Lec.] ..... **Diplocœlus**

Antennal club 2-jointed, the eighth and ninth joints small and perfectly similar to the seventh, the tenth abruptly large, rectilinearly obconic in form and somewhat wider and longer than the eleventh, which is transversely suboval and obtusely pointed ..... ***Biphyllus**

In this tribe the joints of the antennal shaft are equal among themselves, showing little if any of the alternating inequality so prevalent elsewhere in the family.*

Anchorius, gen. nov.

In this genus the body is oblong-oval, rather depressed, the upper surface feebly and evenly convex. The legs are very much stouter than in *Diplocœlus*, the femora broadly oval and the antennæ still shorter. The minute dense punctulation of the under surface is devoid of larger punctures, which is not the case in either *Diplocœlus* or *Biphyllus*. There is but one species before me at present, which may be described as follows:—

Uniform dark brown throughout the upper surface, densely dull and devoid of lustre, extremely minutely and densely punctulate and minutely, densely pubescent; antennæ as long as the width of the head, the eyes large, convex and very coarsely faceted; prothorax twice as wide as long, with the sides moderately convergent from base to apex, evenly and distinctly arcuate, the apex broadly sinuate, with the angles bluntly rounded; basal angles obtuse but not obviously rounded; surface with ten fine and entire subelevated longitudinal lines, those toward the sides rather more widely spaced and somewhat more strongly elevated, the intervals feebly concave and with scattered coarser punctures; elytra one-half longer than wide, three times as long as the prothorax but not at all wider, the sides feebly arcuate, not continuous in curvature with those of the pronotum, evenly, rather strongly rounded behind; striæ composed of unimpressed series of fine punctures, the intervals feebly elevated along the middle, the crest having a single series of short coarse and somewhat paler hairs, similar to those along the crests of the

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*I follow DuVal in writing and adopting *Biphyllus* Stephens, instead of the emendation *Diphyllus* Redt. Lacordaire writes *Diphyllus*, with the statement that *Biphyllus* is inconsistent with the laws of etymology. This would be perfectly correct if generic words were subject to the laws of etymology—but they are not. They are simply pronounceable, and, first of all, constant, combinations of letters having latiniform endings. They cannot, when once established, be changed under any circumstances. They are not supposed to have a meaning—that is as an essential quality. Specific names, on the contrary, always have a meaning, and are therefore subject to the rules of etymology.

pronotal lines; under surface minutely, densely and evenly punctulate throughout, the surface somewhat shining. Length 3.3 mm.; width 1.4 mm. Arizona.
lineatus, sp. nov.

In the type, the fourth ventral segment has a small and very shallow, transversely oval erosion at the middle and near the hind margin, the fifth much longer than the fourth, unmodified on the disk, and and very evenly rounded behind. This species is allied to the Cuban *Diplocœlus costulatus* but differs in its larger size and in having ten, and not eight, longitudinal pronotal lines; it also seems to differ from the *mus* of Reitter, in the latter character.

Diplocœlus *Guér.*

The species are few in number and are widely isolated structurally among themselves, in fact constituting several subgenera; they may be outlined as follows:—

Prothorax parallel or feebly narrowing from base to apex, broadly, evenly convex, the basal angles not prominent but not at all rounded, the surface with three longitudinal elevated lines at each side, of which the inner is feeble and incomplete; eyes moderately coarsely faceted; elytra with very feebly impressed series of close-set punctures, the intervals each with a series of suberect hairs, which are short and inconspicuous,—becoming subobsolete in the European *humerosus*—brown or blackish in color, elongate-oval, feebly convex, feebly shining, minutely, closely punctured and densely pubescent, with coarse punctures interspersed on the pronotum, sterna and near the sides of the abdomen. Length 3.1 mm.; width 1.18 mm. Indiana. [**Diplocœlus,** in sp.].....**brunneus** *Lec.*

Prothorax subparallel and arcuate at the sides, finely serrulate as usual, the basal angles minutely prominent and acute, the surface convex and devoid of sublateral elevated lines except feeble traces, an arcuate excavated line at the apex and lateral fourth quite distinct; eyes very coarsely faceted; elytra pointed behind, having feebly impressed series of very coarse punctures, the intervals polished and with single series of very long erect setæ; general vestiture short and sparser, the surface strongly shining; sterna coarsely punctate, the abdomen finely, closely and evenly. Length 2.0–2.3 mm.; width 0.8–0.92 mm. Florida, Mississippi and Texas (Houston). [**Marginus** *Lec.*]..... **rudis** *Lec.*

Prothorax narrowed in front, the sides nearly straight, the hind angles prominent externally, covering the base of the elytra; surface coarsely punctured, with three elevated lines at each side, becoming subobliterated in front; elytra with series of coarse punctures, the single interstitial pubescent lines composed of short and coarser hairs. Length [3.25 mm.] Michigan. [Subgenus nov. ?]
angusticollis *Horn*

The last of these species is unknown to me, but the prominent basal angles of the prothorax seem to be foretold in *rudis*. *Brunneus* is a close derivative of the European *fagi*, but is more slender in form.

TELMATOPHILINI.

In this tribe the body is elongate-oval and convex, with slender antennæ, moderate in length and having a narrow loose 3-jointed club, with the ninth joint notably smaller than the tenth in *Telmatophilus* and *Loberus*, and subequal to the latter in *Tomarus*. The basal segment of the abdomen is only moderately elongate, and the elytral suture is margined. The pronotum has two small deep and widely separated isolated foveæ at the basal margin. The abdominal segments are perfectly mobile as in Cryptophagini, and the fourth tarsal joint is very small. The three genera differ considerably among themselves in general habitus and may be defined as follows:—

Elytra not margined at base, feebly margined along the suture, the surface pubescent and closely and irregularly punctured; prosternal process acute at tip; eyes well developed and coarsely faceted; tarsi thick and strongly lobed and pubescent beneath, the basal joint of the posterior not much longer than the second, the claws thick and strongly arcuate but not obviously dentate; abdominal sutures flexed abruptly backward at the extreme sides, the first segment as long as the next two combined or longer; pronotum having a very fine excavated line along the marginal basal bead throughout the width.....**Telmatophilus**

Elytra with a thickened basal marginal bead, along which there are several small deep foveæ in *Tomarus*, the suture finely and more or less strongly margined throughout; prosternal process truncate at tip; abdominal sutures straight throughout, the basal segment shorter; body sparsely and feebly pubescent to glabrous.....2

2—Pronotum broadly but feebly impressed at base between the foveæ, the elytra evenly striato-punctate; eyes large, convex and very coarsely faceted; tarsi thicker, strongly lobed, the basal joint of the posterior but little longer than the second, the claws dentate within at base; first abdominal segment without diverging lines; segments one to four decreasing gradually and but slightly in length. **Loberus**

Pronotum not impressed at base, the elytral punctures sparse and irregular in distribution; eyes rather small and not very coarsely faceted; tarsi very slender, feebly lobed and only on the third joint, the first joint of the posterior nearly as long as the next three combined, the claws very slender, arcuate and perfectly simple; first abdominal segment with two very widely diverging arcuate lines, homologous with the straight and less diverging lines of Biphyllini and Cryptophilini.....**Tomarus**

No representative has as yet been discovered in the Pacific coast fauna, but the tribe is much better developed in America than in Europe. *Cryptophilus*, which is placed near *Telmatophilus* by Reitter, is entirely out of place, the completely closed anterior coxal cavities betraying a greater affinity with *Diplocœlus*.

Telmatophilus *Heer.*

This genus is widely extended in range through all the palæarctic and nearctic provinces, but has not yet occurred on the Pacific coast of America. We have but one species, as follows:—

Piceous-black, rather shining, densely and deeply but finely punctured throughout above and beneath, the pubescence short, ashy, the elytra in addition with imperfect single series of slightly longer hairs; antennæ and legs rufous, the former scarcely as long as the head and prothorax; eyes convex and prominent; prothorax barely two-fifths wider than long, the sides parallel, evenly arcuate, the edges finely serrulate and single; apex broadly arcuate and as wide as the base, which is broadly bisinuate; basal angles acute, the apical obtusely rounded; disk feebly convex, finely and very densely punctate; elytra but little wider than the prothorax in the male, and less than three times as long, relatively larger in the female, obtusely rounded at tip, the humeri not exposed at base; punctures not coarser and much less dense than those of the pronotum; legs stout. Length 2.4–2.7 mm.; width 0.9–1.0 mm. Canada, Massachusetts, New York, Iowa and Colorado (Greeley).....**americanus** *Lec.*

The male is a little shorter and stouter than the female and has a deep oval pit at the apex of the fifth ventral segment, and the hind tibiæ strongly dentate externally near the base; the mesosternum is very feebly concave between the coxæ. The European *caricis*, which resembles *americanus* very closely, has a very feeble impression at the middle of the fifth ventral of the male, and the hind tibiæ of that sex are much more feebly and obtusely swollen externally near the base.

Loberus *Lec.*

This genus appears to be exclusively American and will prove to be tolerably rich in species. The resemblance to certain crepidoderid Chrysomelidæ has been alluded to by LeConte and Horn, and is sufficiently striking, the body is however narrower than in the great majority of Crepidoderæ. The broad and shallow transverse depression extends between the pronotal foveæ but is semi-independent of them. The species before me may be defined as follows:—

Basal depression of the pronotum broadly impressed and transverse, almost adjacent to the basal margin; elytral margins very narrow and equal.....2

Basal depression more deeply and acutely impressed and somewhat anteriorly arcuate, being more distant from the basal margin on the median line; elytral margins more broadly reflexo-explanate at basal third.....4

2—Punctures of the elytral series rather coarse, each bearing a moderately long and very distinct recurved silvery hair, the intervals glabrous and impunctate. Body elongate-oval, convex, polished, dark rufo-testaceous to blackish in color, the head and pronotum sparsely pubescent; antennæ testaceous, with the club

darker, extending slightly beyond the base of the prothorax, the latter very slightly narrower than the elytra in the male, more distinctly so in the female, nearly twice as wide as long, the sides parallel and feebly arcuate, abruptly sinuato-convergent near the base, the basal angles right and not blunt, the apical obtusely rounded, the base broadly bisinuate; punctures sparse and rather coarse; elytra fully three and one-half times as long as the prothorax, parallel and broadly arcuate at the sides, the apex rather narrowly rounded; humeri somewhat exposed at base; disk more or less impressed at the suture on the posterior declivity before the apex. Length 1.8–1.9 mm.; width 0.75–0.8 mm. Middle States and Rhode Island (Boston Neck).....**impressus** *Lec.*

Punctures of the elytral series each bearing an infinitesimal hair only visible under great amplification, the surface throughout polished and apparently perfectly glabrous; antennæ and prothorax similar to those of *impressus*, the elytra similarly between three and four times as long as the prothorax, narrowly rounded at apex and with somewhat basally exposed humeri.....3

3—Body dark rufous or rufo-piceous in color, the punctures of the head and prothorax fine and very sparse, the superciliary ridges fine and scarcely at all flexed inward anteriorly; elytral series scarcely at all impressed, the punctures more or less small in size. Length 1.9–2.1 mm.; width 0.78–0.8 mm. New Jersey.

subglaber, sp. nov.

Body black or blackish in color, the punctures of the head and prothorax coarse but sparse, the superciliary ridges coarse and strongly bent inward anteriorly; elytral series sensibly impressed, the punctures coarse and deep. Length 1.8 mm.; width 0.75 mm. Florida.....**imbellis,** sp. nov.

Body rufo-testaceous in color, smaller and more slender in form; superciliary ridges very fine, feeble and not flexed inward at their anterior end; punctures of the head and pronotum fine but deep and very sparse; elytral series not or scarcely at all impressed, the punctures fine but distinct. Length 1.6–1.75 mm.; width 0.65–0.7 mm. Bahamas (Egg Island) and Cuba (Bahia Honda).

insularis, sp. nov.

4—Body elongate-elliptical, rather less convex, the elytra more strongly narrowed behind from about the middle, polished, blackish-piceous in color, the elytral humeri and apical fourth testaceous; antennæ, head and prothorax nearly as in *impressus*, the latter sparsely clothed with longer pubescence, finely and rather less sparsely punctate and much less declivous toward the sides; elytra quite distinctly wider at or just before the middle than at base; slightly wider than the prothorax and nearly four times as long, subacute at apex, the humeri but slightly exposed at base, the series unimpressed, composed of rather small but distinct punctures, the intervals also with uneven series of smaller, still more widely spaced punctures, all the punctures bearing distinct subdecumbent hairs, the entire surface being sparsely pubescent. Length 2.0 mm.; width 0.9 mm. Mexico (Frontera in Tabasco). Prof. C. H. T. Townsend.

puberulus, sp. nov.

The lateral edges of the prothorax in all the species are distinctly thickened and bear a few very minute widely spaced serrules, one behind the apex being especially constant; the thickened margin is

flexed inward for a short distance at the apical angles, and, along the base, forms a margin which becomes very feeble or obsolete along the broad median lobe. The only species in which sexual characters are noticeable is *impressus*, and here the male has a very minute shallow fovea, accompanied by a tuft of loose longer hairs, at each side of the median line and near the middle of the length of abdominal segments two, three and four.

Tomarus *Lec.*

The body in this genus is smaller and relatively shorter than in *Loberus*, and has a markedly different general habitus. The lateral edges of the prothorax are very finely double, the outer edge more or less distinctly and unevenly undulated, the border flexed inward for a short distance at apex, and, at base, as far as the foveæ, where the margin becomes very fine along the basal lobe. There is a fine superciliary ridge as in *Loberus*, but the antennæ differ in having the basal joint of the club about as large as the second. I have not noticed any distinctive sexual characters in the male. The three following are the only species known to me at present :—

Body subglabrous, the head and pronotum clothed sparsely with very short subdecumbent hairs, the elytra glabrous, each with three discal and one marginal series of very widely spaced erect setæ ; sides of the prothorax very obsoletely undulated 2

Body clothed throughout with coarse, sparse, subdecumbent hairs in addition to the series of elytral setæ ; sides of the prothorax more strongly and quite distinctly undulated.....3

2—Body rather narrowly oval, convex, polished, the anterior part feebly alutaceous, flavo-testaceous to blackish throughout, the elytra broadly, suffusedly paler toward the humeri and in a transverse band interrupted at the suture, near apical third ; antennæ but little longer than the head and prothorax, the club well developed ; head and pronotum finely but strongly, rather closely punctured, the punctures finer toward the sides of the latter, which is three-fifths to two-thirds wider than long and much narrower than the elytra, with the sides parallel and arcuate and the apex very nearly as wide as the base ; elytra two and two-thirds to three times as long as the prothorax, subinflated and widest at two-fifths, gradually narrowed to the acute apex, the humeri feebly denticulate externally and obliquely exposed at base ; erect setæ, moderately long and distinct, the punctures fine and sparse, with series of rounded areolæ shining through the translucent chitin from the under surface. Length 1.25–1.6 mm.; width 0.65–0.72 mm. New York and Rhode Island to Iowa and Mississippi.....**pulchellus** *Lec.*

Body and antennæ nearly similar to the preceding, the former rather shorter and less acute behind, pale flavo-testaceous in color, the head and pronotum more alutaceous, the elytra polished and almost similarly maculate, with the erect setæ very

short, those of the discal series extremely short and almost obsolete; head and pronotum finely and feebly punctate, the latter shorter and more transverse, almost twice as wide as long, the sides similarly parallel and arcuate, the feeble punctures becoming almost completely obsolete toward the sides; elytra nearly similar to those of *pulchellus* but shorter and more obtuse, three times as long as the prothorax and distinctly wider, the punctures sparse and very fine. Length 1.2 mm.; width 0.59 mm. Arizona (Tucson).....**obsoletus,** sp. nov.

3—Body smaller, shorter and more broadly oval than in the preceding, convex, polished, dark rufous, the elytra black, pale in the basal regions and broadly at apex, except transversely at apical fourth; antennæ longer than the head and prothorax, the latter short and strongly transverse, finely and sparsely but strongly punctate, the sides parallel and arcuate; elytra short, but little longer than wide, ogival at apex, coarsely, rather closely and conspicuously punctured. Length 1.0–1.1 mm.; width 0.5–0.55 mm. Florida (Tampa)...**hirtellus** *Schz.*

A small specimen from North Carolina may possibly represent a distinct species or subspecies of *pulchellus;* it is smaller, more obtuse behind and somewhat differently colored. The strong basal margin of the elytra enclosing a series of foveæ along its posterior edge, is a marked feature of this genus and it is this which causes the minute denticulation of the elytral humeri mentioned above.

CRYPTOPHAGINI.

This tribe differs from all those which precede primarily and very radically in the structure of the tarsi, which, instead of being shorter and stout, frequently lobed beneath, with the fourth joint very small and pentamerous in both sexes, are here more or less slender and filiform, never lobed beneath, with the fourth joint similar to the preceding and pentamerous in the females and heteromerous in the males, as in the Cænoscelini of the next subfamily. From the Telmatophilini they differ besides, as a rule, in a coarser and denser sculpture and vestiture, stouter antennæ, with less loosely connected club and less coarsely faceted eyes than in *Telmatophilus* and *Loberus*. The first segment of the abdomen is usually more elongate, being subequal to the next two combined, and never has diverging lines; the sutures are straight throughout the width, differing in this respect from *Cænoscelis*. The genera are rather numerous, those before me being readily recognizable by the following characters:—

Eyes ante-basal, small, rather finely faceted and not prominent; frontal margin deeply emarginate and impressed at the middle, especially in the male, the front not at all prolonged beyond the antennæ, the basal joint of the latter large and globular, the second similar to the third and following, the club rather feebly de-

fined in the male but parallel and loosely 3-jointed as usual; pronotum not impressed but finely, strongly margined at base, the foveæ minute and almost completely obsolete, the sides even, with a rather thick margin, which becomes gradually very thick at the apical angles but continuously so, the apical callus not posteriorly delimited or truncated—as it is in *Cryptophagus*; elytral suture margined except toward base; mesosternum rather more concave between the coxæ than usual, the tibiæ compressed and somewhat triangular, the tarsi and claws slender as usual. [Subtribe ANTHEROPHAGI].....**Antherophagus**

Eyes basal, convex, prominent and more or less coarsely faceted; tibiæ slender.....2

2—Front declivous and concave between the antennæ, the edge not beaded over the insertion of the latter.....3

Front declivous but evenly, longitudinally convex anteriorly, the edge sharply angulate but not beaded over the antennæ, the frontal margin with a broadly, posteriorly angulate smooth space, probably homologous with the emargination of *Antherophagus*; antennæ moderate, the club loosely 3-jointed, with the last joint obliquely and obtusely narrowed from near the base, the first joint small and globular; prothorax with a broad flat marginal bead at base, before which the surface throughout is feebly impressed, the foveæ wholly obsolete; sides with a thickened nodal point at the apical angles but otherwise perfectly even, the nodal points projecting anteriorly, the apex broadly emarginate between them as in *Emphylus*; punctures fine and irregular, the pubescence short, coarse and closely decumbent; subsutural lines of the elytra not extending to the base; mesosternum not at all impressed between the coxæ. [Subtribe SPANIOPHÆNI.]

***Spaniophænus**

Front flat and not more declivous anteriorly; antennal club normal and 3-jointed, its first joint not differing in form from the second though frequently smaller in size; body strongly punctured and rather coarsely pubescent. [Subtribe CRYPTOPHAGI]...4

3—Antennæ stout, almost similar to those of *Antherophagus* but with the second joint wider than the third, the 3-jointed club narrow and feebly delimited, and with its basal joint smaller than the second though similar in form; prothorax not impressed at base, the sides even, with a fine acute edge, the apical angles broadly, obliquely truncate and prominent but only slightly thickened, the apex broadly sinuate bethem, the basal foveæ and transverse impression obsolete; elytral suture margined toward tip; body subglabrous and strongly alutaceous, very finely, feebly and moderately closely punctured. [Subtribe EMPHYLI].....**Emphylus**

Antennæ slender, the basal joint elongate-oval, not very thick, the second still narrower, elongate, broader than three to eight, which are very slender and elongate, the club narrow, loosely 3-jointed, gradually formed, the ninth joint being slender elongate and obconical, altogether dissimilar in form to the tenth and unique in the family; prothorax very feebly impressed transversely at base between the large but feeble foveiform depressions, the sides broadly and feebly triundulate, the edge thickened but not very prominent at the undulations, which are at the apex and near apical and basal third, the apical angles not modified, the apex broadly arcuate from side to side; elytral suture margined, very obsoletely so toward base; body coarsely sculptured and pubescent, nearly as in Cryptophagi. [Subtribe PARAMECOSOMÆ].....***Paramecosoma**

4—Prothorax triundulate at the sides—at the apex and near apical and basal third,—the undulations similar among themselves, the apical angles not more thickened; elytral suture feebly margined toward tip.

Body short, broadly oval and convex, with long herissate vestiture, the prothorax finely bifoveate at base, the foveæ connected by a fine deep transverse impression, the disk also having a fine cariniform line at each side at some distance from the side margin and parallel thereto; lateral undulations moderate in development, rounded and finely serrate; eyes very small and extremely prominent.....**Crosimus**

Body elongate and less convex, clothed with denser, shorter and more decumbent pubescence as in *Cryptophagus*, the prothorax without a sublateral line, having two small basal foveæ connected by a very feeble and broadly impressed line, the lateral undulations simple but very prominent and dentiform; eyes as in *Cryptophagus*.....**Salebius**

Prothorax with thickened and obliquely truncate apical angles, the edge even, excepting a minute acute tooth at about the middle and sometimes minute serrulations thence to the basal angles, the basal foveæ very small and feeble, connected by a fine feeble impression along the basal margin, the apex truncate or feebly bisinuate; elytral suture only margined posteriorly. [Subgen. Mnionomus Woll.] **Cryptophagus**

Prothorax with thickened and obliquely truncate apical angles, the edges thence evenly, feebly arcuate, slightly converging and evenly, finely serrulate to the base, the basal foveæ distinct and mutually connected by a larger deep basal impression; elytral and other characters nearly as in *Cryptophagus*.....***Micrambe**

Prothorax not thickened at the apical angles or undulated at the lateral edges, the latter perfectly even from apex to base and serrulate; elytral suture margined very nearly to the scutellum

Body oval, convex, coarsely sculptured and pubescent, the prothorax with two small but deep basal foveæ connected by a very deep and conspicuous groove; serrulation of the lateral edges more or less coarse and distinct. **Henoticus**

Body oblong, parallel and strongly depressed, finely, more closely sculptured and pubescent, the prothorax with two very small but distinct basal foveæ, the connecting impression or groove wholly obsolete; lateral edges very minutely serrulate.....**Pteryngium**

The definition of *Emphylus* is taken from the Europern *glaber*, and, as I have not seen the American representative—*americanus* Lec., of the catalogue,—the genus will not be further dwelt upon; its affinity with *Antherophagus* is much more pronounced than with *Cryptophagus*, and the sinuation of the thoracic apex—due to the prominence of the apical angles—which has been hitherto advanced as a differential character, is one of the least important.

Antherophagus *Latr.*

This is one of the most isolated genera of the family and contains

by far the largest species, *Haplolophus* being the only other which approaches it in this respect. The emargination of the clypeus, very deep in the male but feeble in the female, is apparently a unique character in the family, and the antennæ are peculiarly thick and compact in the male, though bearing some resemblance to those of *Emphylus*; the female antennæ are much shorter, more slender and with relatively larger club. The eyes are almost without parallel in the family in their position upon the side of the head and in their relatively slight convexity, the convexity and prominence of these organs being one of the most characteristic features of the family. The body is oblong, rather convex, very finely, densely punctate and clothed, often densely, with very short subappressed pubescence. The elytra in some of the paler forms clearly show the regular series of areolæ on their under surface, shining through the diaphanous chitin and perhaps of significance in indicating that the family may be derived from seriately punctate archetypes; at present these series of areolæ are not connected in any way with the punctuation of the surface, which is altogether irregular, but there are frequently very feebly impressed superficial lines which appear on the exposed surface above them. The species are few in number and those in my cabinet may be thus characterized:—

Body large, more broadly oblong, densely clothed with pubescence which nearly conceals the surface, the eyes smaller, the mandibles more prominent; tibiæ rapidly enlarged from base to apex; basal angles of the prothorax more or less obtuse...2

Body smaller, the sides of the prothorax parallel and straight, the basal angles right and not at all blunt; body smaller, the eyes moderately large, rather more convex and less finely faceted, the mandibles smaller and less prominent, the pubescence quite sparse, not at all concealing the surface; tibiæ but feebly enlarged from base to apex.....3

2—Body broadly oblong, testaceous throughout, the antennæ of the male except at base and apex, and the tibiæ toward base, blackish; antennæ of the male thick, almost as long as the head and prothorax, the second joint much shorter than the third though equal in width; prothorax distinctly less than twice as wide as long, parallel and almost straight at the sides, but slightly rounding and convergent at apex and base, the punctures fine and dense; elytra not wider than the prothorax, a third longer than wide, obtuse at apex, very densely and finely punctate. Length 4.1–4.5 mm.; width 1.7–1.9 mm. New York to Minnesota.

ochraceus *Melsh.*

Body less broadly oblong and slightly smaller, equally densely but still more minutely punctate and densely clothed with short cinereous pubescence, pale flavo-testaceous, the tibiæ and antennæ colored as in *ochraceus*, the latter thick in the male and much shorter than the head and prothorax, the second joint equal in length

and width to the third; prothorax shorter, scarcely visibly less than twice as wide as long, the sides parallel and evenly, distinctly arcuate; elytra two-fifths longer than wide, not wider than the prothorax and less obtusely rounded at apex. Length 3.2–4.25 mm.; width 1.2–1.7 mm. Utah (southwestern)—Mr. Weidt.

pallidivestis, sp. nov.

3—Body narrowly oblong-oval, pale rufo-testaceous throughout, the antennæ and legs concolorous, polished, the elytra slightly alutaceous; antennæ moderate in the female; prothorax less than twice as wide as long, parallel and straight at the sides, finely but deeply, not very densely punctate; elytra subangularly dilated at two-fifths and wider than the prothorax, the base equal to that of the latter, the apex obtusely rounded; punctures very fine, feeble and rather sparse. Length 3.3 mm.; width 1.35 mm. Wisconsin (Bayfield)—Mr. Wickham

convexulus *Lec.*

The stout mandibles are bifid at tip, and the antennæ are inserted within very small foveæ on the vertical sides at a great distance from the eyes; they differ very obviously in the sexes, as indicated above. *Suturalis* of Mäklin, I have not seen.

Crosimus, gen. nov.

In the general structure of the body this genus is allied to *Salebius*, and especially in possessing three lateral projections at each side of the prothorax, and in the same positions, but here the nodes are not thickened and take the form of broadly rounded and rather feeble undulations of the edge, the salients being spiculato-serrulate. It differs greatly from *Salebius* or *Cryptophagus* in the short stout, very convex and oval form of the body, long hirsute sparse vestiture, in having the elytral punctures arranged in uneven unimpressed double series, in having a fine raised line near each side of the pronotum extending from base to apex, and in the more longitudinally convex prosternum, the process being elevated far above the coxæ from an under view, the process more strongly margined at the sides; the antennæ, oral organs and legs are throughout as in *Cryptophagus*. The basal foveæ of the pronotum are connected by a very deep channel along the basal margin, which is never interrupted at the middle by a carina, and the callous discal spots of *Cryptophagus* appear to be obsolete. The tarsi are very slender and as long as in *Salebius*. The eyes are unusually small, absolutely basal and extremely convex, not very coarsely faceted. The two species before me may be described as follows:—

Body more narrowly oval, polished, black, the legs and antennæ testaceous, the elytra bright rufous, black at the apex, at the middle of the flanks and transversely behind the base near the suture; pubescence moderately long and sparse; prothorax

about two-thirds wider than long, the sides in general form nearly straight and strongly convergent from base to apex, continuing the sides of the elytra; punctures fine but deep and not very close-set, the surface shining; submarginal line rather feeble; elytra oval, before the middle much wider than the prothorax, scarcely three times as long as the latter, the punctures fine and sparse, the double series ill-defined. Length 1.6 mm.; width 0.78 mm. New York.

obesulus, sp. nov.

Body throughout in form and coloration as in *obesulus*, but a little stouter, the prothorax nearly four-fifths wider than long, with the sides feebly convergent, nearly straight in general form but not continuing the sides of the elytra, the surface less finely, very deeply and very closely punctate, the submarginal line parallel to the edge fine but strong; elytra nearly as in *obesulus* but more broadly oval and with more prominent humeral callus, the punctures larger and less sparse, the pubescence longer, more abundant and with very long erect subserial hairs in addition. Length 1.7 mm.; width 0.85 mm. Iowa (Iowa City)—Mr. Wickham.

hirtus, sp. nov.

These species are mutually very closely allied but appear to be distinct. The genus is probably confined to the Atlantic regions of the continent.

Salebius, gen. nov.

This genus, with *Crosimus*, is distinguished from *Cryptophagus* by having three subequal obtusely dentiform nodal points along each side of the prothorax—at the apex and near apical and basal fourth of the length, instead of a single nodal point, with a submedian spicule as in that genus. The node at the apical angles in *Salebius* is merely thickened, convex and more or less pubescent, but the two posterior often have a deep puncture at the middle of the summit analogous to the central puncture of the flattened apical node so prevalent in *Cryptophagus*. The tarsi are long and slender and nearly all the other anatomical structures are similar to those of *Cryptophagus*, except that only the anterior two of the pronotal callous spots are visible, and the impression along the basal margin is feebler, with the median carina always distinct. The five species in my cabinet may be recognized as follows:—

Punctures very fine but deep as usual, those of the pronotum very dense; body dark piceous, blackish beneath, the antennæ and legs castaneous; pubescence short, even, decumbent and rather abundant, more distinct on the pronotum along the sides and median line; prothorax parallel and slightly rounded at the sides, not more than one-half wider than long; elytra two-thirds longer than wide, only slightly wider than the prothorax and fully three times as long, the punctures fine and rather close-set; hind tarsi nearly as long as the tibiæ (♀). Length 2.4 mm.; width 0.9 mm. Queen Charlotte Islands (Massett)—Mr. Keen.

6 dentatus, sp. nov.

Punctures strong and moderately coarse more or less close-set on the pronotum.....2

2—Tarsi moderately elongate, the posterior distinctly shorter than the tibiæ in both sexes.....3

Tarsi more elongate, the posterior as long as the tibiæ.....5

3—Eyes rather large and well developed, more than half as long as the head; body much stouter, dark rufo-testaceous throughout, the vestiture much longer though sparse; prothorax relatively small, three-fifths wider than long, parallel and nearly straight at the sides, the teeth very large, subacute and conspicuous; elytra large, parallel, evenly rounded behind, three-fifths longer than wide, fully a fourth wider than the prothorax and much more than three times as long, the punctures coarse and not very close-set (♀). Length 2.6 mm.; width 1.1 mm. California.....**minax,** sp. nov.

Eyes smaller but not more prominent, scarcely half as long as the head; body darker in coloration, the pubescence much shorter.....4

4—Body oblong-oval, moderately slender, shining, blackish-piceous in color, the legs paler; pubescence moderately short, coarse, somewhat abundant and distinct; prothorax rather strongly transverse, about two-thirds wider than long, strongly, densely punctate, parallel and broadly arcuate at the sides, the teeth well developed but less so than in *minax;* elytra elongate, two-thirds longer than wide, only slightly wider than the prothorax and more than three times as long, quite coarsely, but not very densely, punctate (♂). The female is larger but virtually similar in every way, the prothorax not relatively much smaller. Length 1.9–2.5 mm.; width 0.75–0.9 mm. California (Siskiyou and Sta. Cruz Cos.).

lictor, sp. nov.

Body nearly similar in form and coloration but less elongate, the prothorax large, much less transverse, barely one-half wider than long, the vestiture much shorter and inconspicuous, the sides parallel and evenly arcuate, the teeth pronounced; elytra shorter, three-fifths longer than wide, slightly wider than the prothorax and two and three-fourths times as long, the punctures decidedly less coarse and rather more close-set, the pubescence much shorter, even, decumbent and not very close (♂). Length 2.0 mm.; width 0.8 mm. California (Lake Tahoe).

montanus, sp. nov.

5—Body narrowly oval, rather depressed, shining, pale rufo-ferruginous throughout, almost similar in the sexes, the female larger; eyes rather small, not quite half as long as the head, the antennæ moderate as usual; prothorax parallel and broadly arcuate at the sides, but little more than one-half wider than long, the teeth strongly developed and serriform; elytra three-fifths to two-thirds longer than wide, relatively a little broader in the female, rather coarsely, but not very densely, punctate, rather arcuate at the sides and narrowly rounded behind, slightly (♂) or distinctly (♀) wider than the prothorax and three times as long,—or slightly more in the female, the pubescence short, even, rather sparse and suberect. Length 1.75–2.3 mm.; width 0.7–0.85 mm. California (southern)—Mr. Fall.....**tarsalis,** sp. nov.

The species are sufficiently numerous and individually abundant on the Pacific coast, to which region the genus appears to be confined. I place here provisionally the Sitkan *Cryptophagus 8-dentatus* of

Mäklin, who states that the prothorax is quadridentate at each side; this would not apply to the *6-dentatus*, described above, unless the author included the basal angles and these are in no respect dentiform in the latter species.

Cryptophagus *Hbst.*

This is a large genus, including some of the larger and more conspicuous species of the family; they are easily separable among themselves but rather difficult to classify in a satisfactory manner. The body is oblong-oval, convex, strongly punctured and always coarsely, distinctly, though not densely, pubescent, the elytra having in addition some longer hairs, which are frequently very conspicuous and always subserial in arrangement, although the punctuation may, and usually does, exhibit no trace of series. The antennæ are moderate in length, thick, with the club abrupt, parallel and loosely 3-jointed. The prothorax is wider than long, subparallel anteriorly and narrowed toward base from about the middle, where there is a more or less distinct acute and reflexed marginal tooth, and the apical angles are thickened and obliquely truncate, the oval truncature sublateral, polished, generally flat or rarely concave and foveate at the middle; the lateral edges between the submedian denticle and the well-defined and sometimes subprominent basal angles is generally obsoletely serrulate; the disk is deeply, though finely, bifoveate at the base, the foveæ connected by a fine groove following the basal margin and often subinterrupted at the middle by a fine longitudinal carina. There are also quite generally visible two small impunctate and feebly callus-like spots at each side near lateral third. The maxillary palpi are well developed, the last joint elongate and gradually, somewhat obliquely and obtusely acuminate, the last joint of the labial moderately stout, oval and truncate at tip, the mentum large, transverse, the basal parts concave and punctured and separated from the deflexed apical parts by a strong, transversely arcuate carina, which is prolonged anteriorly on the median line to the extreme apex. The anterior coxæ are obliquely oval, rather large and deep-set, and the intercoxal process is prolonged posteriorly, with its free tip ogivally acuminate and dorsally margined. The mesosternum is broadly and feebly concave. The tarsi are slender, and the abdominal segments two to four decrease gradually in length, the first longer, generally exceeding the next two combined, the fifth about as long as the second and rounded in both

sexes, the sutures transverse, perfectly free and virtually straight throughout. The elytra have sometimes—as in *plenus*—a smooth callous discal spot near the apex of each, which may be homologous with the smooth polished mirror-like sexual spots of the melyrid genus *Eurelymis*. Sexual differences in the form of the body are occasionally very pronounced, the male being shorter and stouter than the female, with relatively broader prothorax and shorter elytra.

The species before me may be tentatively characterized in the following manner:—

Lateral spicule of the prothorax situated at or near the middle of the length; front not constricted between the antennæ; species general in distribution.....2

Lateral spicule situated far behind the middle, the sides just posterior to them frequently arcuately prominent; front narrowed by the very large antennal foveæ. Pacific coast.....32

2—Sides of the prothorax broadly and conspicuously angulate at about the middle, the spicule at the apex thereby rendered more prominent and separated from the truncature of the anterior angles by a pronounced sinus.....3

Sides of the prothorax in the form of a continuous and generally evenly arcuate curve, from the truncature of the apical angles to the base, the submedian spicule abruptly projecting from the limb and frequently extremely small.....15

3—Eyes large, generally one-half as long as the head or more; elytra finely and rather closely punctured.....4

Eyes smaller but more strongly convex, always much less than one-half as long as the head.....6

4—Nodes of the thoracic angles very prominent and posteriorly unciform, the prothorax much wider anteriorly than at the middle, rather finely but deeply, densely punctate, the discal callous spots obsolete; elytra elongate, between three and four times as long as the prothorax. Length 1.9–2.5 mm.; width, 0.75–0.9 mm. Europe, Siberia and Northern America.....**acutangulus** *Gyll.*

Nodes moderate in development, acute but not unciform posteriorly, the prothorax equally wide anteriorly and at the middle.....5

5—Pubescence long, coarse and very conspicuous, the serial hairs of the elytra distinct; elytra distinctly more than three times as long as the prothorax. Length 2.2–2.5 mm.; width 0.9–1.0 mm. Europe and Northern America.
cellaris *Scop.*

Pubescence short and more decumbent, less coarse and very much less conspicuous, the serial hairs subobsolete; pronotum finely but deeply, only moderately densely punctate, the callous spots feeble; elytra more oval and less elongate, about three times as long as the prothorax. Length 1.9–2.1 mm.; width 0.8–0.85 mm. California.....**debilis** *Lec.*

6—Elytral punctures fine, the pubescence very short, inconspicuous and decumbent, the subserial hairs subobsolete or very short, the pronotal callous spots obsolete or scarcely traceable; nodes of the thoracic angles sharply truncated, the prothorax as wide at the middle as at the apex.....7

Elytral punctures more or less coarse and much less close-set, frequently quite sparse, the surface strongly shining throughout; pronotal callous spots generally conspicuous 8

7—Elytral punctures moderately close-set, the surface strongly shining; prothorax evenly convex, rather strongly and closely punctate, the nodes of the apical angles moderately prominent, much shorter than the sinus separating them from the median denticles; antennal club moderately broad; elytra two-thirds-longer than wide Length 2.1 mm.; width 0.8 mm. Alaska..... **bidentatus** *Mäkl.*

Elytral punctures extremely dense, the entire surface rather dull in lustre; prothorax less convex and more uneven, two-thirds wider than long, the truncated nodes large and more prominent, though not unciform behind, and but little shorter than the sinus between them and the denticles; elytra more than three times as long as the prothorax and a little wider, three-fourths longer than wide; antennal club well developed and rather broad. Length 2.3 mm.; width 0.88 mm. Colorado..... **confertus,** sp. nov.

8—Truncate node of the thoracic angles very large, though only moderately prominent, distinctly longer than the sinus separating it from the median spicules, the truncature elliptical, flat and sharply defined, the prothorax equally wide at apex —that is between the posterior angles of the truncatures—and at the middle, the median tooth short and broad, unciform posteriorly, the punctures rather coarse, deep as usual and only moderately close-set, the callous spots rather distinct, especially in the male; elytra much larger in the female than in the male, not wider than the prothorax in the latter; pubescence rather long but sparse, the subserial hairs long, suberect and conspicuous. Length 2.3–2.7 mm.; width 0.9–1.15 mm. New Jersey..... **nodifer,** sp. nov.

Truncate node of the thoracic angles rather small, always much shorter than the sinus separating it from the denticles, the truncature narrow, convex and very acute posteriorly..... 9

9—Elytra rather oblong-oval, more elongate and less strongly rounded at the sides, never more than slightly wider than the prothorax..... 10

Elytra oval, relatively more convex, more narrowly rounded behind and always very much wider than the prothorax..... 14

10—Node of the thoracic angles very small and not acute or angulate posteriorly from a vertical viewpoint; body pale ferruginous throughout; prothorax rather finely but deeply, only moderately closely punctate, a little narrower at apex than at the middle, the callous spots large and conspicuous, though not much elevated; elytra only moderately coarsely and rather sparsely punctate; pubescence long, coarse and conspicuous throughout, pale ochreo-cinereous in color (♀). Length 2.3 mm.; width 1.0 mm. Indiana?..... **parvinoda,** sp. nov.

Node of the thoracic angles better developed, with the posterior extremity very acutely prominent and unciform from a vertical point of view, the prothorax subequally wide at the middle and apex..... 11

11—Pubescence moderately long and suberect, sparse..... 12

Pubescence short and more closely decumbent, even, the longer hairs subobsolete.... 13

12—Body blackish-piceous in color, the pronotum rather paler and the elytra dark testaceous; pronotum evenly convex, rather coarsely and closely punctured, the callous spots very distinct, rather small and scarcely elevated; elytra about two-

thirds longer than wide, broadly rounded behind, coarsely and unusually sparsely punctate (♀). Length 2.45 mm.; width 1.00. Pennsylvania (Westmoreland Co.).....**infuscatus,** sp. nov.

Body nearly as in *infuscatus* but smaller and rather less elongate, pale rufo-ferruginous in color throughout, the elytra rather more strongly narrowed and less broadly rounded behind, similarly sculptured but with the antennal club shorter and relatively broader and more compact (♀). Length 2.25 mm.; width 0.9 mm. District of Columbia.....**plectrum,** sp. nov.

13—Body parallel, rufo-ferruginous throughout, the prothorax large, three-fifths wider than long, fully as wide as the elytra, strongly, moderately densely punctured, the callous spots small but very conspicuous and distinctly elevated; elytra three fifths longer than wide, rather abruptly and very obtusely rounded behind, the punctures coarse and rather sparse, but much closer and rather more perforate than in the two preceding species (♂). Length 2.4 mm.; width 0.95 mm. New York—Mr. H. H. Smith.....**cicatricosus,** sp. nov.

14—Prothorax as wide at the apex as at the middle; body pale flavo-testaceous in color throughout, the pubescence long, erect and hispid, very conspicuous though unusually sparse; prothorax small, transverse, strongly, but not very coarsely or closely, punctured, the callous spots all very distinct; elytra oval, just before the middle nearly two-fifths wider than the prothorax, the punctures very coarse, deep and sparse, but, as usual, small or obsolete toward apex, each with an elongate callous median space near the tip (♀). Length 1.9 mm.; width 0.8 mm. North Carolina.....**politus,** sp. nov.

Prothorax much narrower at the apex than at the middle; body broadly oval, strongly convex, highly polished, dark piceo-rufous in color throughout, the pubescence moderately long, sparse, coarse and ashy; pronotum evenly convex, not very densely punctate, the callous spots small and subobsolete; elytra inflated, scarcely one-half longer than wide, quite pointed at apex, the punctures very coarse, sparse and conspicuous toward the base and sides (♀). Length 1.85 mm.; width 0.8 mm. Lake Superior.....**difficilis,** sp. nov. (*Lec.* MS)

15—Truncature of the anterior thoracic angles forming a broadly oval, sharply defined, flat or feebly concave disk, having a large subcentral foveiform puncture, and from a vertical viewpoint, oblique and perfectly rectilinear.....16

Truncature irregular, narrow, sometimes nearly flat but generally more or less convex.....25

16—Elytral pubescence semi-erect, the longer subserial hairs distinct and more or less bristling.....17

Elytral pubescence short, decumbent and even, the longer subserial hairs almost or completely obsolete.....22

17—Species of the Atlantic coast; eyes small and strongly convex.....18

Species of the Pacific coast, the eyes still smaller, extremely convex and subparabolic in outline from above.....21

18—Body very short and stout, not more than twice as long as wide, oblong, convex, blackish-piceous in color, the head, pronotum, antennæ and legs dark testaceous; prothorax large, very nearly as wide as the elytra, three-fifths wider than long, strongly and densely punctate, uneven, the callous elevations distinct; angular truncatures sensibly shorter than the distance thence to the spicules; elytra very

short and obtusely rounded, less than one-half longer than wide, about two and one-half times as long as the prothorax, coarsely and rather closely punctate; pubescence rather long, suberect, coarse and bristling but not dense; antennal club moderate in development; each elytron has a large embosed rounded impunctate spot near the apex at inner two-fifths (♂). Length 2.0 mm.; width 1.0 mm. Florida..... **plenus**, sp. nov

Body more elongate, more than twice as long as wide, more or less pale ferruginous in color throughout.....19

19—Subserial setæ of the elytra very long and conspicuous; body large, coarsely punctured, the elytra not very closely and sometimes subserially; sexual differences very marked, the male stout, with the antennæ very thick, the elytra one-half longer than wide, but little wider than the prothorax and barely three times as long, the female much narrower and more elongate, with thinner antennæ and smaller prothorax, having rather more prominent but otherwise similar angular nodes, the elytra three-fourths longer than wide, much more than three times as long as the prothorax and distinctly wider, the punctures somewhat more sparse and more inclined to serial arrangement; callous spots of the pronotum small but obvious; angular truncatures large but barely as long as the distance thence to the spicules. Length 2.6–2.7 mm.; width 1.1–1.2 mm. North Carolina. (Asheville).....**amputatus**, sp. nov.

Subserial setæ only moderately distinct; body much smaller; angular nodes of the prothorax well developed but not prominent, the callous spots small but distinct; antennal club broad and well developed.....20

20—Body parallel, dark rufo-ferruginous in color, the pubescence rather abundant and conspicuous though only moderately long; prothorax scarcely narrower than the elytra in the male, distinctly narrower in the female, strongly and closely punctured, the angular nodes large and conspicuous, as long as the distance thence to the spicules, or even longer in the male; elytra, in the latter sex, one-half longer than wide, less than three times as long as the prothorax, coarsely and closely punctured, in the female decidedly more elongate, more than three times as long as the prothorax and less closely though equally coarsely, punctured; a feebly eroded adventitious second, line parallel to the posterior subsutural stria, is sometimes evident. Length 2.0–2.2 mm.; width 0.85 mm. South Carolina to Illinois; [*crinitus* Zimm.].....**croceus** *Zimm.*

Body more oval and rather more convex, pale flavo-ferruginous throughout; prothorax smaller and more rounded at the sides than in *croceus*, the angular lobes much smaller, distinctly shorter than the distance thence to the spicules, the punctures strong and rather close-set, the posterior callous spots more obvious than the anterior; elytra three-fifths longer than wide, rather strongly rounded at tip, about three times as long as the prothorax, the punctures only moderately coarse, deep, decidedly close-set and inclined to subserial arrangement, the pubescence shorter and less conspicuous than in *croceus* (♂). Length 1.9 mm.; width 0.75 mm. Pennsylvania (Westmoreland Co.).....**laticlavus**, sp. nov.

21—Antennal club broader, with its basal joint scarcely smaller than the second as usual; body rather small, oblong, dark testaceous in color, the pubescence moderately long and sparse; prothorax very nearly as wide as the elytra, strongly transverse, three-fourths wider than long, strongly and closely punctured, the

callous spots feeble, the angular nodes well developed and as long as the interval thence to the spicules, which are very minute; elytra two-thirds longer than wide, more than three times as long as the prothorax, rather finely but deeply, not very closely punctate (♀). Length 2.0 mm.; width 0.88 mm. California (near San Francisco) ..... **inscitus,** sp. nov.

Antennal club narrow, with its basal joint distinctly smaller than the second; body small, oblong, compact and convex, shining, dark rufo-testaceous in color, the vestiture rather long and abundant, suberect and distinct; prothorax large, about as wide as the elytra, strongly, very closely and deeply punctato cribrate, nearly even, the posterior of the callous spots alone distinct; sides parallel, very feebly narrowed at base, the angular nodes well developed and as long as the adjacent sinus, the spicules strong and distinct; elytra about three-fifths longer than wide and two and three-fourths times as long as the prothorax, not very coarsely, but deeply and quite closely, punctate (♂). Length 1.8 mm.; width 0.78 mm. California (Mokelumne Hill, Calaveras Co.)—Dr. Blaisdell.

cribricollis, sp. nov.

22—Body normally convex, pale ferruginous in color throughout, the nodes of the thoracic angles well developed but not prominent and not unguiculate behind..23

Body sensibly depressed, blackish in color, the legs piceous, the head and pronotum rufo-piceous; thoracic nodes smaller but much more prominent, strongly acute and unciform behind 24

23—Body oblong-oval, rather stout, the antennal club moderately wide, with the middle joint just visibly the widest, the pubescence very short and even, somewhat sparse; eyes rather large and not very convex; prothorax well developed, the angular nodes moderate in size, not more than a fifth of the total length and very much shorter than the distance thence to the spicules, which are small but distinct, the sides between them and the nodes broadly sinuate; punctures close-set, the anterior callous spots small but abruptly elevated and very distinct, the posterior almost obsolete; elytra large, distinctly wider than the prothorax and more than three times as long, the punctures moderately coarse and somewhat close-set (♀). The male is shorter, with more finely and densely punctate prothorax and elytra. Length 2.0–2.4 mm.; width 0.88–1.0 mm. California (Sta. Cruz Co.)..... ....**brevipilis,** sp. nov.

Body nearly similar in form and color but with the eyes rather smaller and more convex, the thoracic lobes larger, about a fourth of the total length and but little shorter than the sides thence to the spicules, which portion is straight, the callous spots less distinct; elytra unusually finely and quite closely punctured; pubescence rather longer than in *brevipilis* but nearly even and decumbent (♀). Length 2.25 mm.; width 0.9 mm. California (exact locality not recorded).

lepidus, sp. nov.

24—Broadly oblong-oval, feebly shining, the antennal club moderate and the eyes quite small and strongly convex; prothorax relatively rather small but not very transverse, about three-fifths wider than long, unusually finely and very densely punctate, the callous spots very small and inconspicuous, the sides parallel, arcuately narrowing toward base, the spicules broad and truncate, unciform behind, the angular lobes rather small but very prominent, obliquely, rectilinearly truncate from above; elytra large, black, evenly rounded behind, nearly a fourth wider

than the prothorax and three and one-half times as long, rather finely but strongly, only moderately closely punctate, the pubescence very short, decumbent, even and sparse, with scarcely a trace of longer subserial hairs (♀). Length 2.6 mm.; width 1.0 mm. Lake Superior.—A male specimen from Siskiyou Co., California, is attached for the present and may belong to this species, as the differences presented are all in directions shown by other series to be sexual in origin.....**depressulus,** sp. nov.

25—Nodes of the thoracic angles small but very prominent, forming a narrow uneven convex surface sharply pointed behind; body rather narrow, elongate, moderately convex, black, the head and pronotum slightly piceous, the antennæ and legs rufo-piceous; pubescence rather sparse, coarse, suberect, the subserial bristles long and distinct; eyes small, the antennal club moderate; prothorax not very transverse, one-half to three-fifths wider than long, not very coarsely but deeply and densely punctate, the callous spots subobsolete; median denticle short but rather broad, acute posteriorly, the sides thence moderately convergent and broadly arcuate to the base, the width across the denticles slightly greater than at the apical nodes; elytra elongate-oval, slightly wider than the prothorax and more than three times as long, the punctures moderately coarse, deep and not very close-set (♀). Length 2.3 mm.; width 0.83 mm. Utah (southwestern) and Colorado.....**porrectus,** sp. nov.

Nodes of the thoracic angles not notably prominent.....26

26—Antennæ long, rather stout and unusually developed, about half as long as the body, the club moderate; eyes moderate; body quite short and stout, oblong-oval, pale rufo-ferruginous in color throughout, the pubescence conspicuously long, coarse, suberect and bristling, rather abundant and subeven; prothorax large, as wide as the elytra, three-fourths wider than long, evenly convex, coarsely, but not very closely, punctured, the callous spots subobsolete; nodes large, almost as long as the distance thence to the acute denticles, narrow and shining sublaterally; elytra one-half longer than wide, between two and three times as long as the prothorax, coarsely but not very closely and in part subserially, punctate, very minutely so toward apex (♂). Length 1.8 mm.; width 0.8 mm. Michigan.....**antennatus,** sp. nov.

Antennæ much shorter, always much less than half as long as the body.....27

27—Eyes very small and strongly convex, scarcely a third as long as the head; body large, rather stout, elongate-oval, pale flavo-testaceous in color throughout, the pubescence only moderately long but suberect, very abundant and conspicuous, the subserial hairs but little longer and not very distinct; antennal club moderate; prothorax well developed, two-thirds to three-fourths wider than long, evenly convex, finely, deeply and closely punctured, the callous spots subobsolete, the sides parallel and evenly rounded from base to apex, the spicules very minute, the nodes well developed but narrow, polished, with a small central puncture; elytra elongate-oval, rather narrowly rounded behind, two-thirds longer than wide, obviously wider than the prothorax, the punctures fine and unusually close-set; male and female almost completely similar in form throughout, the former very slightly less stout. Length 2.6–2.9 mm.; width 1.05–1.2 mm. Pennsylvania (Westmoreland Co.)—Mr. Schmitt.....**valens,** sp. nov.

Eyes moderate in size and relatively less prominent, nearly half as long as the head..28

28—Nodes of the apical angles well developed and longitudinally convex, but little shorter than the distance thence to the spicules; antennal club unusually long and narrow, the last joint longer than wide; body rather large, narrowly elongate-oval, rather dark rufo-testaceous throughout, the pubescence somewhat short and moderately abundant but with the subserial setæ quite long and obvious; prothorax moderately transverse, densely and deeply punctured, the callous spots small but rather distinct, the lateral spicules small; elytra unusually elongate, rather acutely ogival at apex, distinctly less elongate in the male, quite coarsely and deeply but not very closely punctured. Length 2.6–2.8 mm.; width 1.05 mm. Utah (southwestern)—Mr. Weidt.....**histricus,** sp. nov.

Nodes of the apical angles small, very much shorter than the distance separating them from the spicules.....29

29—Pubescence moderate in length and subdecumbent, the punctuation rather fine; body oblong, shining, dark testaceous throughout; prothorax well developed, moderately transverse, but little narrower than the elytra, the apical nodes extremely small, feeble, very oblique, narrow and convex sublaterally, with a minute posterior spicule; submedian spicule very minute, slightly behind the middle and separated from the nodes by between two and three times the length of the latter, punctures small but deep, moderately close-set, the callous spots small and rather feeble but distinct; elytra oval, rather obtusely rounded at tip, three-fifths longer than wide, the punctures rather fine but deep and not very close-set (♀). Length 2.2 mm.; width 0.9 mm. Indiana; [Carolina—Zimm.]

fungicola *Zimm.*

Pubescence long and bristling, the body coarsely punctured. Sonoran regions.....30

30—Lateral spicules of the prothorax distinct and moderately large, the sides behind them thickened and laterally subprominent half the distance to the base, then sinuate to the angles; body rather stout, oval, convex, polished, piceous in color, the elytra blackish, nubilously paler at apex; prothorax moderately transverse, very coarsely, closely punctate, uneven, the callous spots large, conspicuous and unusually approximate longitudinally; apical nodes very oblique, spiculate behind; elytra oval, distinctly arcuate at the sides, moderately obtuse at apex, scarcely more than one-half longer than wide, and, at the middle, slightly wider than the prothorax, the punctures very coarse, deep and somewhat sparse, as usual very small toward tip (♀). Length 2.1 mm.; width 0.9 mm. Arizona (Tucson).....**discedens,** sp. nov.

Lateral spicules extremely minute and sometimes apparently obsolete, the sides behind them arcuately converging, sometimes sinuate very near the angles, in which case the latter are acutely prominent.....31

31—Narrowly oblong-oval, testaceous, the elytra frequently infuscate; prothorax rather short and transverse and slightly narrower than the elytra in both sexes, the punctures moderately coarse, deep and somewhat close-set, the callous spots large and normally placed, the lateral edges rather widely reflexed; sides strongly convergent behind the middle; elytra more than three times as long as the prothorax in the female, much shorter in the male, rather narrowly obtuse behind, very coarsely, but only moderately closely, punctate. Length 1.9–2.0 mm.; width 0.78 mm. Utah (southwestern)—Mr. Weidt.

fumidulus, sp. nov.

Rather broadly oblong-oval, flavo-testaceous throughout, otherwise similar to the preceding, except that the punctures are less coarse and more close-set, the sides of the pronotum more narrowly reflexed and the lateral spicules still more minute and frequently almost invisible; elytra broader and more broadly rounded behind (♀). Length 2.0 mm.; width 0.88 mm. California (southern); [*pilosus, hirtulus* Lec.]..... **lecontei** *Harold*

32—Tarsi moderate in length, the posterior distinctly shorter than the tibiæ in both sexes 33

Tarsi more elongate, the posterior fully as long as the tibiæ in the male and but little shorter in the female; body oblong-oval, convex, shining, dark rufo-testaceous in color throughout; pubescence short, even, decumbent, yellowish, and not very dense; antennæ slender, the club moderate, the second and third joints both elongate and longer than the first, which is subglobular; eyes moderate; prothorax well developed, one-half (♂) to three-fifths (♀) wider than long, nearly as wide as the elytra in both sexes, the nodes elongate-oval, flat and centrally punctate, the spicules small, the sides behind them prominently rounded and convergent; punctures moderately coarse, deep and dense, the callous spots visible; elytra nearly similar in the sexes, about three-fifths longer than wide, the punctures moderately coarse and not very close-set. Length 1.9–2.3 mm.; width 0.75–0.85 mm. Queen Charlotte Islands (Massett)—Mr. Keen..... **hebes,** sp. nov.

33—Body similar to that of *hebes* in form, sculpture and vestiture but smaller, with the prothorax more transverse and the antennæ less elongate and relatively stouter, the third joint obviously shorter and more slender than the second; elytra three-fifths (♂) to two-thirds (♀) longer than wide, three times as long as the prothorax in the latter sex but much shorter relatively in the male, but little wider than the prothorax in either sex. Length 1.7–2.2 mm.; width 0.72–0.82 mm. California (Coast regions from Humboldt to San Diego).. **lyraticollis,** sp. nov.

Body nearly similar to the two preceding in general form, but differing in the finer and closer punctures of the elytra, and, from *lyraticollis,* in the more slender and somewhat more elongate antennæ, the club rather narrow, loose and parallel as usual; prothorax only moderately transverse, less so than in *lyraticollis* but otherwise nearly similar, the callous spots large and very distinct; elytra large, much wider than the prothorax and distinctly less than three times as long, one-half longer than wide (♀). Length 2.25 mm.; width 0.95 mm. California (Mendocino Co.)..... **otiosus,** sp. nov.

I have been unable to identify the *4-dentatus* of Mannerheim, from the Island of Sitka, or the Alaskan *tuberculosus, punctatissimus* and *4-hamatus* of Mäklin. The last named must be very closely allied to *depressulus,* of the table, but differs somewhat in coloration, and especially in its much smaller size. I fail to identify the European *lapponicus* among our species, and the *nodulangulus* of Zimmerman, is also unrepresented in my cabinet. The *8-dentatus* of Mäklin, is a *Salebius* without much doubt, and the *californicus* of Mannerheim, belongs to the genus *Henoticus. Humeralis* of Kirby, was placed in *Triphyllus*

by LeConte, but in reality forms the type of a new Melandryid genus, which will be described further on in the present paper, and the *concolor* of the same author, I have been unable to trace.

Henoticus *Thoms.*

The general structure of the body, prosternum, legs and tarsi, trophi and antennæ are here almost precisely as in *Cryptophagus*, but the converging sides of the front above the antennæ are finely reflexo-marginate, and the structure of the sides of the prothorax wholly different, there being no trace of thickened nodal point, apical or otherwise; the edge is regularly spiculato-serrulate throughout, except for a short distance near the basal angles; it also differs in having the fine subsutural line entire or subentire. The deep groove near the basal margin of the pronotum connecting the conspicuous basal foveæ is similar to that of *Crosimus* and without trace of medial interrupting carina. The elytral punctures are arranged wholly without order, the pubescence short and the pronotum without trace of callous spots. The species known thus far are two in number, and are both very abundant in individuals; they may be outlined as follows:—

Black or blackish in color throughout when mature, the legs and antennæ paler, polished, oblong, convex and moderately stout in form, the pubescence short, very sparse, even and reclined; eyes well developed though scarcely half as long as the head; prothorax moderately transverse, the sides very nearly parallel, broadly and evenly arcuate, the serratures even and moderately developed, some eight to ten in number; punctures not coarse but deep, moderately close-set, the surface rather convex; elytra oblong, distinctly wider than the prothorax and three times as long or a little less, obtusely rounded behind, the punctures coarse and decidedly sparse. Length 1.7–2.1 mm.; width 0.65–0.85 mm. Entire northern America, Siberia and northern Europe. [*Paramecosoma denticulata* Lec.]

serratus *Gyll.*

Pale testaceous in color throughout, shining, the pubescence not quite so short, rather abundant and suberect, bristling with slightly longer hairs toward the sides; eyes small and extremely convex; prothorax strongly transverse, distinctly widest slightly before the base, the sides thence rather strongly convergent and straight and provided with some eight very strong, acute and equal serratures to the apex; surface feebly convex, more finely, rather closely punctate, evidently impressed near the lateral margins toward apex; elytra but little wider than the base of the prothorax and three times as long or more, very finely, though not very coarsely, punctate. Length 1.75–2.1 mm.; width 0.78–0.9 mm. California (San Francisco to Monterey).....**californicus** *Mann.*

The latter of these was assigned to *Cryptophagus* by its author. The *Paramecosoma inconspicua* Lec., i. litt., is unknown to me, but is probably founded upon a very small example of *serratus*.

Pteryngium *Reitt.*

Among the close allies of *Cryptophagus*, the two species of this genus may be instantly recognized by the rather narrow, strongly depressed and planulate body, with parallel sides, finely, densely punctured surface, short pubescence and entire subsutural lines. In this last feature, as well as the evenly arcuate and minutely, evenly serrulate sides of the prothorax, they resemble *Henoticus*, but differ in the depressed body and in the very minute basal foveæ of the pronotum, connected by a very fine and feeble basal groove, which is finely interrupted at the middle. In the structure of the legs, prosternum, trophi and antennæ they perfectly resemble *Cryptophagus*, but differ from that genus, as well as *Henoticus*, in the somewhat shorter and thicker tarsi, and especially in the much more elongate basal segment of the abdomen, this being as long as the next three combined; the sutures are free and perfectly straight throughout, as usual in the tribe. The frontal margin above the antennæ is very obsoletely and indistinctly margined. The species may be thus characterized:—

Body parallel, depressed, rather feebly shining, pale rufo-ferruginous throughout, the pubescence short, even, subdecumbent and rather abundant; eyes moderate in size and prominence, not very coarsely faceted, the antennæ scarcely as long as the head and prothorax, notably stout, the club parallel and broad, its first two joints equal and very strongly transverse, joints one to three rapidly decreasing in size; prothorax about one-half wider than long, the sides parallel, evenly, distinctly arcuate from base to apex and minutely, evenly serrulate, the apex broadly arcuate, the punctures fine but deep and very close-set; elytra but little more than one-half longer than wide, about equal in width to the prothorax and two and one-half times as long, parallel, obtusely rounded behind, finely but deeply, very closely punctate. Length 1.8 mm.; width 0.72 mm. Lake Superior and Europe.....**crenatum** *Gyll.*

Body similar in general form and coloration but smaller, narrower and more shining, the antennæ distinctly less stout, with the club less robust; prothorax similar in form but a little more transverse, finely, strongly punctured but only moderately closely, the surface more shining; elytra similar in general form but more elongate, scarcely wider than the prothorax but almost three times as long, the punctures fine, strong and rather close-set but much less dense than in *crenatum*, and, as in that species, having the surface broadly, transversely impressed at some distance behind the base, but here the impression bears traces of longitudinal striiform lines, which are wanting in *crenatum*; the pubescence, also, is still shorter, sparser and less evident throughout. Length 1.65 mm.; width 0.6 mm. Queen Charlotte Islands (Massett)—Mr. Keen.....**malacum**, sp. nov.

These two species are each represented before me by a single example in which the hind tarsi are 4-jointed. It is presumable, of

course, that the female has these tarsi 5 jointed. In each case the three basal joints are short, stout and equal and together scarcely longer than the last.

ATOMARIINÆ.

The genera of this subfamily may be readily recognized by the palpal structure and position of the antennæ, these organs being inserted upon the front and more or less approximate at base, the foveæ being either small and exposed or deep cavities, separated above by a short angular extension of the upper surface, and particularly developed in *Cænoscelis* and *Sternodea*. The tarsi are always slender and filiform, as in the Cryptophagini, of the preceding subfamily, and, as in that case, there is frequently a feeble thickening of the anterior in the males. The body is much smaller as a rule than in the Cryptophaginæ, and may be either narrow and parallel, as in *Agathengis*, or oval and more convex, as in the great majority of genera. The subfamily may be resolved into the four following rather widely differentiated tribes:—

Prosternal process free, the tip passing over the flat or feebly concave surface of the mesosternum; antennæ free, the grooves before the eyes wholly obsolete, the club loosely 3-jointed; basal segment of the abdomen not modified behind the coxæ except in *Tisactia*.....2

Prosternal process broader and flatter, generally prominent, forming a continuous surface with the mesosternum, its tip broadly arcuate and received closely within a corresponding depression at the apex of the mesosternum; body more compact, the prothorax more closely fitted to the elytra; buccal processes obsolete; elytra never margined at base; tarsi pentamerous 3

2—Prosternal process prolonged and acute at tip, the mesosternum concave; prothorax with a double lateral margin; tarsi pentamerous in the female and heteromerous in the male; first abdominal segment well developed, longer than the next two combined, the sutures bent strongly backward for a short distance at the sides; antennal cavities large, narrowly separated; buccal processes long and prominent, the eyes very coarsely faceted; body elongate, only moderately convex, generally coarsely sculptured and sparsely pubescent.. .....CÆNOSCELINI

Prosternal process shorter and truncate, the mesosternal surface generally flat; prothorax with a fine single lateral edge; tarsi pentamerous in both sexes; abdominal sutures straight throughout the width; antennal cavities small and superficial, the buccal processes extremely short and inconspicuous, the eyes much less coarsely faceted; body variable in form, sculpture and vestiture..... .....ATOMARIINI

3—Antennæ free, the club 2-jointed in *Sternodea*, the cavities very large and deep, contiguous; first ventral segment as long as the next three combined, without post-coxal plates, the sutures broadly, feebly reflexed toward the sides; prosternum extremely prominent along the middle, with acute lateral margins extending to the anterior margin; tibiæ feebly claviform; scutellum well developed and transverse; anterior coxæ almost rounded .....*STERNODEINI

Antennæ variable, the club loosely 3-jointed, the foveæ small, more widely separated on the front and superficial; eyes somewhat less coarsely faceted; basal segments of the abdomen relatively rather shorter and generally with a short and broadly arcuate post-coxal plate, the sutures straight throughout; prosternum broader and less prominent, the acute lateral margins not extending to the anterior margin; tibiæ slender, the scutellum very small; anterior coxæ transverse, the intermediate very widely separated; body broadly oval, convex and generally glabrous ..... EPHISTEMINI

The Sternodeini are peculiar to the palæarctic provinces, but the other tribes are well represented in America, the Ephistemini, however, by no means so extensively as in Europe.

CÆNOSCELINI.

This tribe is composed at present of the single genus *Cænoscelis*, which is very well developed in the northern parts of America, and, to a less degree, apparently, in the palæarctic region; its species are the largest and most conspicuous of the subfamily, and compare very closely in this respect with *Cryptophagus*, but the body is narrower and more elongate as a rule.

Cænoscelis *Thoms.*

This is one of the best defined and more isolated genera of the family, distinguished by the elongate, strongly punctured and pubescent body, with double lateral margin and broadly impressed basal parts of the pronotum, convex, coarsely faceted and sparsely setulose eyes and well developed stout antennæ, with the basal joint unusually large and obconical, the second and third diminishing in size and four to eight still narrower and alternately shorter and longer, as usual in the Atomariinæ; the basal joint of the club is small, the last two well developed. The tarsi are very slender and the posterior are 5-jointed in the female and 4-jointed in the male, there being otherwise but little sexual disparity; the male is usually rather narrower, with relatively larger, and occasionally somewhat less transverse, prothorax. The prosternal process is narrower, the tip prolonged, free, concave toward tip and acuminate, the mesosternum being appreciably concave. The abdominal sutures differ greatly from the usual type and are strongly reflexed for a short distance at the sides, especially posteriorly. The American species appear to be far more numerous than the European as described thus far, and those before me may be outlined as follows:—

Body ferruginous in color throughout.....2
Body piceous-brown to black in color; pronotum broadly impressed at base, parallel and evenly distinctly arcuate at the sides.....9
2—Prothorax less transverse, never so much as one-half wider than long; body narrow and much elongated.....3
Prothorax one-half or more wider than long, the body stouter and more oval in form..8
3—Prothorax strongly arcuate at the sides, the pronotal punctures fine and close-set, the subbasal impression medial only.....4
Prothorax feebly arcuate at the sides, the punctures coarse though generally close-set, the subbasal impression arcuate, deep and extending almost from side to side...5
4—Antennæ stout; the club robust and densely clothed with fine gray down-like pubescence, the joints increasing in size from the base and forming a gradual transition to the shaft; prothorax one-third wider than long, convex, the basal impression median and feeble, the sides evenly rounded, more convergent anteriorly, so that the apex is notably narrower than the base, the double margin narrow and feeble, not much more distinct toward base; elytra oval, two-thirds longer than wide, nearly two-fifths wider than the prothorax; body elongate-oval in form, the pubescence distinct, fine and sparse on the elytra, with the irregular series of longer hairs characterizing the genus. Length 1.8 mm.; width 0.7 mm. Alaska (Kenai).....**ferruginea** *Sahlb.*
Antennæ much less stout, the club similar in structure but narrower; body narrower, more parallel and more depressed, the pubescence finer and rather denser, the prothorax one-third wider than long, less rounded at the sides, the apex not narrower than the base, the lateral margin and basal impression similar, the latter a little stronger; elytra a third or fourth wider than the prothorax, three-fourths longer than wide, closely and finely punctate. Length 1.7–1.75 mm.; width 0.55–0.65 mm. Colorado—Mr. Schmitt.....**ochreosa,** sp. nov.
5—Elytra finely and rather sparsely punctured.....6
Elytra strongly and more closely punctured; body smaller, elongate-oval.....7
6—Body narrow and parallel, the elytra very feebly arcuate at the sides, fully four-fifths longer than wide and only slightly wider than the prothorax, the latter quadrate, but very slightly wider than long, the sides parallel, and evenly, feebly arcuate throughout, the apex scarcely narrower than the base, with prominent angles, the double edge slightly inflexed and notably wider toward base; antennæ moderate in length, the three basal joints well developed, the first as wide as the club, which is unusually narrow, sixth and eighth joints very small and subglobular, notably narrower than the fifth, seventh and ninth, the latter scarcely larger than the seventh, the club virtually 2-jointed (♂). Length 2.0 mm.; width 0.75 mm. Colorado.....**paralella,** sp. nov.
Body similar in size, sculpture and color, but less parallel, the elytra not quite so elongate and more rounded at the sides, fully two-fifths wider than the prothorax, which is otherwise similar to that of *parallela*, but more distinctly wider than long, with the parallel sides a little more arcuate; antennæ similar but not so thick toward base, the first joint not so thick as the virtually 2-jointed club (♂). Length 2.1 mm.; width 0.8 mm. Locality not recorded.
angusticollis, sp. nov.

7—Antennæ stout, the three decreasing basal joints moderate in development, four to eight globular and moniliform, ninth distinctly larger, obviously transverse, the club rather stout and notably wider than the first joint; prothorax one-third wider than long, the sides very slightly converging from base to apex, evenly and feebly arcuate, the apex quite distinctly narrower than the base; elytra fully three-fourths longer than wide, only slightly wider than the prothorax, the pubescence fine and short (♀). Length 1.8 mm.; width 0.63 mm. California (Siskiyou Co.).....**shastanica,** sp. nov.

Antennæ more slender and rather longer, more than two-fifths as long as the body, relatively a little more thickened toward base, the first joint but little narrower than the last two, the ninth joint not wider than long, the club very small; prothorax more transverse, two-fifths wider than long, the sides parallel and very feebly arcuate, the apex scarcely narrower than the base, the double side margin more inflexed and wider toward base than in the preceding; elytra relatively much wider and more oval, two-thirds longer than wide, nearly two-fifths wider than the prothorax, the pubescence rather coarser and sparser (♀). Length 1.7–1.8 mm.; width 0.65–07 mm. New York and Pennsylvania.

macilenta, sp. nov.

8—Basal joint of the antennæ unusually developed, one-half as long as the width of the head and subequal in width to the last two joints, eight to ten, increasing gradually in width, the ninth larger than usual when compared with the tenth, the latter only moderately transverse; prothorax one-half wider than long, the sides subparallel, evenly and rather strongly arcuate, the disk broadly impressed at base, as usual, and coarsely, deeply and closely punctured; elytra oval, narrowed and strongly rounded behind, strongly, but somewhat sparsely, subseriately punctate, much wider than the prothorax, the pubescence sparse and rather coarse, but subeven and not long. Length 2.2–2.25 mm.; width 0.8–0.83 mm. New York.....**basalis,** sp. nov.

Basal joint of the antennæ normally developed, much less than one-half as long as the width of the head, the club moderate; body smaller in size, the pronotum quite coarsely, deeply and closely punctate, as usual, three-fifths to two-thirds wider than long, parallel and strongly, evenly rounded at the sides; elytra about two-thirds longer than wide, oval, slightly narrowed behind, quite distinctly wider than the prothorax, rather coarsely, deeply but unusually sparsely, irregularly punctured, the pubescence rather long and coarse but sparse. Length 1.5–1.8 mm.; width 0.65–0.78 mm. South Carolina and Kentucky....**testacea,** *Zimm.*

9—Body larger, the antennæ more elongate, with joints four, six and eight longer than wide.....10

Body small or moderate and relatively stouter, the antennæ shorter, with the fourth, sixth and eighth joints not longer than wide; pronotum coarsely, deeply and more or less closely punctured, the elytra also strongly and more or less sparsely so.....12

10—Elytra inflated at the middle, fully two-fifths wider than the prothorax; body elongate-oval, rather convex, rufo-piceous, the elytra blackish; pubescence coarse, moderately long, sparse as usual; antennæ moderately slender, distinctly less than one-half as long as the body, the club moderate, scarcely wider than the first joint, the ninth joint intermediate in width between the eighth and tenth,

the latter two-fifths wider than long; prothorax two-fifths wider than long, rather strongly and closely punctured; elytra three-fifths longer than wide, evenly oval, a little more than three times as long as the prothorax, rather finely but deeply, moderately closely and irregularly punctate (♀). Length 2.0 mm.; width 0.85 mm. North Carolina.....**ovipennis,** sp. nov.

Elytra not inflated and but little wider than the prothorax in either sex.....11

11—Antennæ slender, about half as long as the body, the basal joint moderately developed and not as long as the next two combined, the third unusually elongate, the club rather narrow though wider than the basal joint, the ninth not at all wider than long but intermediate in width between the eighth and tenth, the latter only slightly transverse; prothorax scarcely two-fifths wider than long, closely and moderately coarsely punctured; elytra about three times as long as the prothorax, rather finely but strongly, moderately closely, subseriately punctured, the vestiture as usual (♂). Length 2.25 mm.; width 0.85 mm. Kentucky.....**macra,** sp. nov.

Antennæ stout, not quite half as long as the body, the basal joint unusually developed, stout, fully as long as the next two combined, the third joint not unusually elongate and shorter than the second, the club rather stouter, the ninth joint slightly wider than long and the tenth more transverse; prothorax shorter, more than one-half wider than long, strongly, but rather less densely, punctured; elytra more than three times as long as the prothorax, rather finely but strongly, quite sparsely and irregularly punctured, the pubescence rather shorter and less coarse, a fifth wider than the prothorax in the male and a fourth in the female (♂ ♀). Length 1.8–2.1 mm.; width 0.75–0.82 mm. Pennsylvania (Westmoreland Co.)—Mr. Schmitt.....**elongata,** sp. nov.

12—Antennæ stout, the first joint rather well developed and subequal in length to the next two combined, the club moderate; prothorax rather short and transverse, strongly rounded at the sides, three-fifths wider than long; elytra slightly wider than the prothorax, elongate-oval in form, fully three-fourths longer than wide, the punctures rather sparse and moderately coarse; body blackish-piceous in color (♀). Length 1.65–1.9 mm.; width 0.65–0.78 mm. (♂ ♀). Pennsylvania (Westmoreland Co.)—Mr. Schmitt.....**obscura,** sp. nov.

Antennæ and prothorax throughout nearly as in *obscura*, the body stouter in the female, the male slender, rufo-piceous in color, the elytra scarcely two-thirds longer than wide, more rapidly narrowed behind and relatively more narrowly rounded at tip, the punctures coarser and more conspicuous though equally sparse and likewise irregularly disposed (♀). Length 1.8–2.0 mm.; width 0.75–0.88 mm. (♂ ♀). Kentucky.....**subfuscata,** sp. nov.

Obscura is represented by a large series displaying but little variability, and four others of those described above are also present before me in numbers sufficient to demonstrate the constancy of most of the differential characters stated in the table; the number of apparently valid species is however unexpected, and, as a rule, they are remarkable similar to each other in general habitus, which causes the taxonomic study of them to be unusually difficult and beset with doubt. *Testacea*

of Zimmermann, is omitted from the Henshaw list. The *cryptophaga* of Rietter, I have been unable to identify.

ATOMARIINI.

The Atomariini constitute by far the larger part of the subfamily, and comprise several genera in America. The body is much smaller throughout than in the preceding tribe and seldom or never surpasses 2 mm. in length. The genera before me may be briefly defined as follows :—

Elytra not margined at base ; body always pubescent, the antennæ separated at base by a third of the width of the head or less.....2

Elytra margined at base ; antennæ separated at base by nearly half the entire width of the head, though purely frontal as usual ; body minute in size and virtually glabrous.....3

2—Body elongate and parallel in form, less convex, the prothorax angulate and foveate at the lateral edges far behind the middle ; antennæ very approximate at base, with the basal joint obconical and feebly arcuate ; first ventral segment behind the coxæ not as long as the next two combined ; prosternal process narrow. **Agathengis**

Body oval, more convex, the prothorax rounded or angulate at or before the middle, and generally having the minute fovea, in the edge at the point of angulation, less developed than in *Agathengis ;* antennæ less approximate at base, the basal joint shorter and oblong ; first ventral segment behind the coxæ as long as the next two, the posterior segments shorter ; prosternal process generally narrow and not prominent but becoming broader and more prominent in certain aberrent European forms, such as *cephennioides*.....**Atomaria**

3—Body oblong-oval, strongly convex, the prothorax rounded at the sides from above and not angulate, the edge minutely beaded and not foveate ; first ventral as long as the next three combined, with a short feeble plate behind the inner part of the coxæ, becoming obsolete externally and gradually confounded with the coxal margin, the posterior segments short ; prosternal process very wide, with acute lateral edges not attaining the apical margin, nearly as in *Ephistemus*...**Tisactia**

The last of these genera is evidently a transition toward the Ephistemini in some respects, but the scutellum is broadly oval as in the others, the body more loosely connected and the prosternal process evidently free and broadly, arcuately obtuse at tip. The basal margin of the elytra will isolate it at once from any other member of the subfamily known to me, causing it to bear somewhat the same relationship to the others, in that respect, as *Tomarus*, does in the Cryptophaginæ.

Agathengis *Gozis.*

This aggregate of species, usually treated as a subgenus of *Atomaria*, satisfies the ordinary definition of a genus in having several constant

and purely characteristic structural characters, and is therefore valid. It differs from *Atomaria* in the characters stated in the table, and the habital differences are such that it is seldom a matter of doubt as to the proper genus at the first glance. The body is elongate, generally quite slender and subparallel, convex and subuniformly, sparsely clothed with short and subdecumbent hairs, which become gradually still shorter in a sutural region near the elytral apex. The antennæ and eyes are moderately developed, the former generally rather stout, with more pronounced club than in *Atomaria*, and the joints of the shaft also very conspicuously alternating in length; the eyes are never very prominent and are not very coarsely faceted. The species are numerous in North America, relatively more so, apparently, than in Europe, where they are greatly outnumbered by *Atomaria*. Although easily separable by sight as a rule, they are even more homogeneous in adherence to a fixed type form than in *Atomaria*, and consequently form a difficult study for the taxonomist, as the differences are nearly all comparative. They seem to be quite local in distribution, judging from the material at hand excepting *crassula* which is common to the Atlantic and Rocky Mountain regions, and therefore fall very satisfactorily into primary geographic subdivisions as follows: —

Species of the Appalachian regions and Great Lakes.....2
Species of the Rocky Mountain system.....6
Species of the Pacific Coast regions.....15

2—Pronotum impressed at basal only in median half, the basal bead bordered by coarse punctures, especially pronounced within the impression, the latter with clearly defined lateral limits; body small, elongate-oval, convex, polished, piceous, the elytra somewhat paler, the legs and antennæ flavo-testaceous; pubescence short and very sparse; prothorax slightly transverse, the sides broadly arcuate and feebly converging from basal fourth, narrowed at base, the punctures notably sparse and rather coarse; elytra about three-fifths longer than wide, somewhat prominently rounded and subinflated at the middle, then rapidly narrowed, the punctures sparse, strong and moderately coarse. Length 1.25–1.35 mm.; width 0.5–0.55 mm. Michigan..... **subnitens,** sp. nov.

Pronotum more or less distinctly impressed along the basal margin throughout the width 3

3—Elytra variegated in color, red, a small post-scutellar transverse spot on the suture, a large entire fascia behind the middle, fainter toward the suture, and the apex, black, remainder deep black, the legs and antennæ testaceous; body small, elongate-oval, strongly convex, highly polished; antennæ well developed, half as long as the body; prothorax feebly transverse, nearly as in *subnitens*, finely but deeply, very sparsely punctate, the basal impression stronger toward the middle; elytra feebly though subprominently inflated at the middle, then rapidly narrowed to

the apex, which is narrowly rounded, one-half longer than wide, coarsely, very sparsely punctate, the pubescence short and sparse, but coarse and distinct; prosternum distinctly carinate along the middle of the intercoxal portion. Length 1.4 mm.; width 0.55 mm. Pennsylvania..... **carinula,** sp. nov.

Elytra virtually uniform in coloration; prosternum not, or only very feebly, carinulate along the middle; elytral punctures fine and more or less close-set.....4

4—Antennæ more elongate, fully half as long as the body in the male, the basal joint relatively longer and subequal to the next three combined; body small, narrow, parallel and less convex, the sides very feebly arcuate, piceous in color, the elytra paler and brownish-testaceous, generally still paler near, but not at, the apex, the pubescence very short but abundant; prothorax moderately transverse, subparallel, the sides distinctly and evenly arcuate from base to apex, the punctures fine and close set; elytra about two-thirds longer than wide, but little wider than the prothorax, not inflated at the middle, somewhat narrowly and parabolically rounded behind, finely and closely punctate. Length 1.25–1.5 mm.; width 0.5–0.6 mm. Massachusetts to Lake Superior and Iowa.....**pumilio,** sp. nov.

Antennæ less developed, much less than half as long as the body, the basal joint subequal in length to the next two combined; body more convex.....5

5—Body parallel and feebly arcuate at the sides, the prothorax well developed, black in color, the elytra piceous, the legs and antennæ piceo-testaceous; pubescence short, moderately abundant but inconspicuous; prothorax a third to two-fifths wider than long, the sides just visibly convergent and broadly, evenly arcuate from the broadly rounded and margined basal angles to the apex, the punctures fine but deep and only moderately close-set; elytra elongate, three-fourths longer than wide, the sides rather more arcuate near the middle, moderately narrowed behind, at the middle a fourth to nearly a third wider than the prothorax, the punctures fine and moderately sparse; hypomera scarcely at all punctured. Length 1.78–2.0 mm.; width 0.72–0.76 mm. Michigan and Pennsylvania ..**patens,** sp. nov.

Body decidedly obese, with relatively much smaller prothorax, similar in coloration, the pubescence still shorter and quite close; prothorax nearly one-half wider than long, the sides feebly converging from the rounded basal angles to the apex and very slightly sinuate just behind the middle, the punctures fine and close; elytra shorter, three-fifths longer than wide, nearly one-half wider than the prothorax, widest at or somewhat behind the middle but without trace of inflation, rather narrowly rounded behind, the punctures fine, only moderately close-set but rather less sparse than in *patens;* hypomera thickly punctured except at base. Length 1.65 mm.; width 0.75 mm. Pennsylvania (Westmoreland Co.) and North Carolina (Asheville)—the single specimen from the latter locality being wholly pale flavo-testaceous, probably from immaturity—and Colorado.

crassula, sp. nov.

6—Body dark in color, or with the head and prothorax darker than the elytra 7

Body rufo-testaceous in color throughout.....11

7—Pronotum impressed along the basal margin in about median half only, the hind angles slightly more than right but exceedingly well marked and not blunt.....8

Pronotum impressed from side to side along the basal margin, the hind angles blunt, rounded or very obtuse.....9

8—Body regularly elongate-oval and strongly convex, black, the legs and elytra rufo-piceous; antennæ dark testaceous, the club unusually stout and deep black; pubescence short and not dense; basal joint of the antennæ unusually large and stout but of the usual form; prothorax barely two-fifths wider than long, the sides distinctly converging, broadly and almost evenly arcuate from base to apex and almost continuous with those of the elytra, the punctures fine and moderately close; elytra oval, two-thirds longer than wide, sensibly widest and feebly inflated before the middle, arcuately narrowed thence to the apex, which is rather narrowly rounded, the punctures very fine and quite sparse. Length 1.7 mm.; width 0.7 mm. Colorado.....**capitata,** sp. nov.

Body oblong, parallel and subdepressed, much larger, moderately shining, dark rufo-piceous throughout, the legs and antennæ but little paler; pubescence short but coarse and sparse, even as usual; antennæ moderate, the first two joints of the club transverse; prothorax unusually developed, parallel, but little wider than long, the sides feebly, almost evenly arcuate from base to apex; punctures fine but strong, moderately close, the basal impression very fine and shallow along the middle of the basal margin, elsewhere obsolete; elytra three-fourths longer than wide, but little wider than the prothorax, the sides broadly, feebly arcuate, gradually arcuato-convergent from about the middle, the apex somewhat broadly rounded; punctures very fine and relatively sparse, somewhat disposed to linear arrangement. Length 1.9 mm.; width 0.72 mm. Colorado—Mr. Schmitt.

quadricollis, sp. nov.

9—Sides of the prothorax distinctly sinuate behind the middle and prominent at basal third or fourth, the body, legs and antennæ pale piceo-testaceous in color, the head and pronotum darker piceous; pubescence very short and somewhat abundant; antennæ rather slender, the club moderate, sometimes dusky, its first two joints but slightly transverse; prothorax two-fifths or more wider than long, the sides arcuate and strongly converging at apex and base, the former slightly narrower, the punctures fine but strong and rather close-set; elytra oblong, two-thirds longer than wide, distinctly wider than the prothorax, narrowing gradually behind the middle (♂), or in apical two-fifths (♀), rather obtusely rounded at apex, the punctures fine but rather close. Length 1.7–1.85 mm; width 0.7–0.8 mm. Colorado.....**constricta,** sp. nov.

Sides of the prothorax not or very obsoletely sinuate behind the middle; the body smaller and black throughout.....10

10—Antennal club shorter and broader, its first two joints strongly transverse; legs and antennæ rufo-piceous, the club of the latter blackish; pubescence moderately abundant and short but coarse and distinct; prothorax less than one-half wider than long, narrowing slightly only very near the base, the sides obviously converging, broadly and evenly arcuate thence to the apex; disk unusually tumid at the middle near the base and just before the impressed margin, the punctures rather fine but deep, close-set and conspicuous; elytra rather elongate, distinctly wider than the prothorax, parallel anteriorly, gradually narrowed behind the middle, moderately obtuse at tip, the punctures only moderately fine, deep, close-set and distinct. Length 1.65 mm.; width 0.65 mm. Colorado.

tenebrosa, sp. nov.

Antennal club larger, narrow, not darker in color, its first two joints not transverse; body shorter, the legs and antennæ testaceous; prothorax strongly transverse, more than one-half wider than long, strongly narrowed in basal third or fourth, where the sides are very slightly prominent, thence feebly converging and broadly arcuate to the apex; disk not tumid in the middle subbasally, the basal impression very feeble throughout, the punctures fine and moderately close; elytra short, parallel, gradually rounding behind, about three-fifths longer than wide, rather distinctly wider than the prothorax, the punctures very fine and rather close, the pubescence very short but somewhat abundant. Length 1.45–1.55 mm.; width 0.65 mm. Colorado ..... **coloradensis,** sp. nov.

11—Pronotum broadly, or deeply and very obviously, impressed at base 12

Pronotum not impressed at base, or only with an extremely fine line extending along the basal bead; pubescence extremely short and moderately dense, the punctures fine; sides of the prothorax without trace of sinus behind the middle..14

12—Sides of the prothorax distinctly sinuate for a short distance behind the middle and prominently rounded at basal third or fourth; body elongate-oval, moderately convex, pale rufo-testaceous throughout, the elytra more flavate, polished, the pubescence very short, sparse and inconspicuous; antennæ moderate, about two-fifths as long as the body, with the club moderate, the first two joints moderately transverse (♂), or very short, stouter, with the club joints more transverse(♀); prothorax moderately transverse, strongly narrowed behind the lateral prominences, the apex not distinctly narrower than the base; disk finely, strongly somewhat closely punctate, the basal impression confined to median half of the width; elytra two-thirds longer than wide, gradually parabolically rounded toward apex, but little wider than the prothorax in either sex, the punctures fine but strong and rather sparse, sometimes inclined to serial arrangement. Length 1.6–1.9 mm.; width 0.65–0.75 mm. Idaho (Cœur d'Alène).

stricticollis, sp. nov.

Sides of the prothorax without an obvious post-median sinus, rather strongly converging and broadly, almost evenly and strongly arcuate from base to apex; antennæ moderate in length, rather slender, the club not stout; integuments shining....13

13—Body narrowly oval, dark rufo-testaceous in color throughout; prothorax but slightly transverse, strongly, evenly convex, finely but strongly, sparsely punctate, the basal impression wide and strong, coarsely punctate and confined to the median regions; elytra three-fifths longer than wide, the sides parallel and evenly arcuate, slightly, though obviously, wider than the prothorax, rather narrowly rounded behind, finely and sparsely punctate, the pubescences sparse, moderately long and coarse and distinct. Length 1.3–1.6 mm.; width 0.55–0.65 mm. Colorado ..... **lucida,** sp. nov.

Body more broadly oval, equally convex, pale flavo-testaceous throughout; prothorax nearly one-half wider than long, evenly convex, finely and very sparsely punctate, the basal impression broader and more feeble than in *lucida* and stronger in median half or more, subobliterated toward the sides; elytra short, not more than one-half longer than wide, but little wider than the prothorax, narrowed behind from about the middle, the apex moderately obtuse; punctures very fine and sparse, the pubescence short, very sparse and inconspicuous. Length 1.5 mm.; width 0.68 mm. Arizona? ..... **luculenta,** sp. nov.

14—Antennæ thick, moderate in length, the club unusually broad, with its first two joints distinctly transverse; body very elongate and moderately convex; prothorax moderately transverse, less than one-half wider than long, the sides distinctly converging and almost evenly, moderately arcuate from base to apex, the latter distinctly narrower than the base; disk feebly but almost evenly convex, finely but strongly, rather closely punctured, with a more or less distinct impunctate median line; elytra oblong, parallel, elongate, fully three-fourths longer than wide, only slightly wider than the prothorax, rather obtusely rounded in apical third, finely but distinctly, rather closely punctured. Length 1.7–1.8 mm.; width 0.62–0.65 mm. New Mexico (Coolidge) and Colorado.....**forticornis**, sp. nov.

Antennæ slender, the club narrow, with its first two joints but little wider than long, moderate in length; body smaller and less elongate but similar in coloration and general characters to *forticornis*; prothorax rather strongly transverse, fully one-half wider than long, otherwise similar to *forticornis* but still more closely and more finely punctured; elytra three-fifths to two-thirds longer than wide, scarcely wider than the prothorax (♂) or distinctly so (♀), the punctures fine but strong and very close-set, the pubescence very short but coarse. Length 1.5 mm.; width 0.55 mm. Arizona (Williams)—Mr. Wickham.....**macer**, sp. nov.

15—Pronotum distinctly impressed at base, the impression abruptly limited to about median half of the width, the surface before the impression never tumid at the middle.....16

Pronotum distinctly impressed but more broadly and indefinitely, the impression extending from side to side.....17

Pronotum not impressed at base, other than the fine line rendered apparent by the fine basal bead.....24

16—Body very elongate-oval, narrow, rather convex, polished, pale flavo-testaceous throughout, the pubescence very short, sparse and inconspicuous; antennæ rather short and thick, the club broader than usual, short, with its first two joints strongly transverse; prothorax not quite one half wider than long, the sides prominent near basal third, strongly convergent thence to the base, and, feebly, nearly to the apex, where they are rounded; punctures fine, but strong and rather sparse; elytra parallel, elongate, moderately obtuse at apex, slightly wider than the prothorax, very finely and quite sparsely punctate, the punctures strongly tending to serial arrangement. Length 1.75 mm.; width 0.7 mm. California (Sonoma Co.).....**ochronitens**, sp. nov.

Body much smaller, elongate-oval and narrow, less shining and rather less convex, dark rufo-testaceous throughout; antennæ moderately developed, more slender, the club narrow, with its two basal joints but feebly transverse; pubescence very short, moderately sparse; prothorax moderately transverse, the sides distinctly sinuate just behind the middle, but not very prominent behind the sinus, thence converging strongly to the base, converging and rounded at apex, the latter but little narrower than the base; disk rather depressed, quite strongly and closely punctate, the basal impression strong; elytra rather less elongate, about two-thirds longer than wide, slightly wider than the prothorax, gradually rather obtusely rounded behind, the punctures strong and moderately close-set, not tending to linear arrangement. Length 1.5 mm.; width 0.65 mm. California (Siskiyou Co.).....**undulata**, sp. nov.

17—Pronotum evenly convex, not at all tumid at the middle before the basal impression, the surface sloping steeply to the impression, which is very fine; body narrowly oblong-oval, rather strongly convex, shining, black, the elytra feebly piceseent, the legs and antennæ dark rufo-testaceous; pubescence short but coarse and rather abundant; antennæ slender and rather more than half as long as the body, the basal joint well developed and nearly as long as the next three combined, the club rather small and narrow, with its two basal joints but slightly transverse; prothorax slightly transverse, evenly and strongly convex, fully as wide as the elytra, the sides subparallel, broadly, feebly arcuate, more convergent at base and apex, the latter but little the narrower; punctures only moderately coarse but strong and somewhat close-set; elytra barely three-fifths longer than wide, obtusely rounded behind, parallel, convex, the punctures strong, close-set and distinctly sublinear in arrangement. Length 1.4 mm.; width 0.6 mm. California (Lake Co.).....**melas**, sp. nov.

Pronotum more or less feebly, though perceptibly, tumid at the middle before the basal impression; body never entirely black.....18

18—Elytral punctures conspicuously coarse and well separated.....19

Elytral punctures not very coarse, though always strong, and very distinct, generally less sparse.....21

19—Sides of the prothorax with a broadly rounded feeble sinus just behind the middle, a little more rounded but scarcely prominent near basal fourth, becoming apparently even and broadly arcuate throughout in *puella*.....20

Sides of the prothorax strongly converging and broadly arcuate from basal fourth to apex with a very short feeble rounded sinus just before the slight prominence at basal fourth, from which point to the base they are strongly convergent; body oblong-oval, moderately stout and convex, shining, black, the elytra, legs and antennæ piceo-rufous; pubescence very short and moderately abundant; antennæ well developed, the club rather stout, with its two basal joints strongly transverse, prothorax fully one-half wider than long, the apex very much narrower than the base, the punctures not very coarse but deep and only moderately close; elytra scarcely more than one-half longer than wide, fully a fourth wider than the prothorax, parallel, obtusely rounded in apical two-fifths, the punctures quite coarse and moderately close-set. Length 1.3 mm.; width 0.55 mm. California (Siskiyou Co.).....**soror**, sp. nov.

20—Body moderately stout, elongate-oval and convex, shining, blackish, the elytra, legs and antennæ testaceous; pubescence short and sparse; antennæ rather long and slender, nearly half as long as the body, the club moderately wide, rather long and loose, its two basal joints transversely obtrapezoidal, the eighth joint subquadrate and but slightly narrower than the seventh; prothorax well developed and transverse, fully two-fifths wider than long, narrowed only slightly in basal fourth, the apex but little narrower than the base; surface almost evenly convex, finely but strongly, somewhat closely punctate; elytra parallel and broadly arcuate at the sides, obtusely rounded at apex, three-fifths longer than wide and but little wider than the prothorax, the punctures coarse and moderately sparse. Length 1.65 mm.; width 0.7 mm. California (Humboldt Co.).

cribripennis, sp. nov.

Body smaller and narrower, the elytra parallel and only very slightly arcuate at the sides, similar in coloration and vestiture to *cribripennis*, the antennæ shorter, distinctly less than half as long as the body, the club shorter, more compact and unusually broad, its two basal joints strongly transverse, the eighth joint very small and much narrower than the seventh; prothorax narrower and less transverse, a third wider than long, otherwise similar, except that the sides are perceptibly convergent and the apex distinctly, although not greatly, narrower than the base; elytra two-thirds longer than wide, obtusely rounded behind, distinctly wider than the prothorax, the punctures coarse and sparse, becoming gradually fine and rather close posteriorly. Length 1.28–1.55 mm.; width 0.45–0.6 mm. California (Monterey)..... **dispersa**, sp. nov.

Body still smaller and narrower, piceous, the elytra pale testaceous, with a large piceous cloud on the suture behind the middle; antennæ slender, fully half as long as the body, the club rather small and narrow, its two basal joints moderately transverse, the eighth joint but little narrower than the seventh; prothorax moderately transverse, nearly as in *cribripennus* but more arcuate at the sides and with the punctures very sparse; elytra three-fifths longer than wide, parallel and broadly, distinctly arcuate at the sides, obtuse at apex, only very slight wider than the prothorax, the punctures coarse and quite sparse, notably less close-set than in either of the preceding. Length 1.1 mm.; width 0.48 mm. California. **puella**, sp. nov.

21—Antennæ moderately developed, rather stout, dark testaceous, the club rather broad and shorter, its two basal joints moderately, though very distinctly, transverse; body narrowly oblong-oval, rather strongly convex, polished, blackish-castaneous, the elytra slightly paler and more rufescent toward base; pubescence short, sparse and inconspicuous; prothorax moderately developed, a little less than one-half wider than long, the sides feebly convergent and broadly, almost evenly, arcuate from base to apex, with a short and scarcely visible sinus just behind the middle; surface strongly, almost evenly, convex, rather strongly, conspicuously and somewhat closely punctate, the basal impression quite finely and feebly impressed; elytra nearly three-fourths longer than wide, parallel and very feebly arcuate at the sides, broadly and obtusely rounded at apex, distinctly wider than the prothorax and about three times as long, the punctures rather fine but very deep, perforate and distinct, not very close-set and clearly inclined to serial arrangement. Length 1.45 mm.; width 0.58 mm. California (Sonoma Co.)..... **castanea**, sp. nov.

Antennæ rather slender, the club longer and narrow, with its first two joints not, or but very slightly, transverse.....22

22—Antennæ only moderate in length, distinctly less than half as long as the body, the latter rather stout, oblong-oval, moderately convex, the pronotum rather less shining than the elytra, black, the legs piceous, the elytra and antennæ paler and piceo-testaceous; pubescence very short and sparse; prothorax one-half wider than long, almost fully as wide as the elytra, very slightly narrowed at apex and abruptly and distinctly so near the base, the median tumidity before the basal impression very obvious; punctures not coarse but deep, perforate and close-set; elytra three-fifths longer than wide, parallel and nearly straight at the sides, parabolically obtuse in apical two-fifths, the punctures rather fine but deep, im-

pressed, moderately close and not very distinctly inclined to serial arrangement. Length 1.7 mm. ; width 0.7 mm. Alaska (Kenai).....**vespertina** *Mäkl.*

Antennæ more slender and almost half as long as the body ; pubescence short and inconspicuous though rather abundant.....23

23—Body piceous, the elytra paler and piceo-testaceous, the antennæ testaceous, with the club slightly dusky ; prothorax small, but little more than a third wider than long, the sides distinctly, but obtusely, prominent at basal third, thence strongly arcuate and convergent to the base, very feebly and indefinitely sinuate before the prominence, and thence feebly convergent and broadly arcuate to the apex, which is subequal in width to the base ; surface broadly convex, finely but strongly, densely punctate ; elytra rather short and broad, parallel, somewhat narrowly parabolic behind from slightly behind the middle, three-fifths longer than wide and nearly a third wider than the prothorax, the punctures rather fine but strong, subimpressed, only moderately close and arranged wholly without trace of order. Length 1.5 mm. ; width 0.63 mm. California (Siskiyou Co.). **parvicollis,** sp. nov.

Body similar in coloration to the preceding but somewhat more narrowly oblong-oval ; prothorax more transverse, two-fifths wider than long, the sides nearly similar but scarcely at all prominent at basal third, the punctures less distinct and much less close-set, the basal impression finer and feebler ; elytra rather shorter, but little more than one-half longer than wide, very obtusely rounded behind, parallel at the sides and less arcuate and only about a fourth wider than the prothorax, the punctures similar but very close-set and arranged in conspicuously even, very close-set rows almost throughout. Length 1.4 mm. ; width 0.6 mm. California (Siskiyou Co.) .....**parvicollis**(♂)?

24—Antennæ rather short, scarcely two-fifths as long as the body, the club somewhat robust, with its two basal joints distinctly, though not strongly, transverse ; body oblong-elongate and parallel, piceous, the elytra and antennæ slightly paler and testaceous ; pubescence very short and rather abundant ; prothorax two-fifths wider than long, parallel, feebly sinuate at the middle point of the sides, obtusely prominent behind the sinus and thence narrowed to the base, the punctures strong and close-set ; elytra oblong, obtusely parabolic behind, three-fourths longer than wide, distinctly, though not greatly, wider than the prothorax, the punctures rather fine but strong and close-set, irregular in arrangement. Length 1.8 mm.; width 0.75 mm. California (Siskiyou Co.).....**subrecta,** sp. nov.

Antennæ slender, the club narrow, with the two basal joints not notably transverse..25

25—Elytra much more than one-half longer than wide and but very slightly wider than the prothorax, the body narrow and elongate-oval.....26

Elytra short and broad, about one-half longer than wide and fully two-fifths wider than the prothorax, the latter relatively very small.....27

26—Body black, the elytra and antennæ pale rufo-testaceous, the pubescence short and sparse ; prothorax shorter, two-fifths wider than long, distinctly and rather acutely prominent at the sides near basal third, narrowed gradually thence to the apex, which is slightly narrower than the base, with a small and almost imperceptible sinus just before the prominence, the punctures fine but strong and only moderately close-set ; elytra two-thirds longer than wide, evenly rounded in apical two-fifths, parallel toward base, the punctures moderately fine, strongly

impressed and somewhat close-set. Length 1.3–1.65 mm.; width 0.55–0.6 mm. California (Siskiyou Co.).....**nigricollis**, sp. nov.

Body piceous, the elytra and antennæ slightly paler and rufous, the pubescence short but rather abundant; prothorax well developed, scarcely more than a third wider than long, parallel and broadly, feebly sinuate at the middle of the sides, arcuately and equally narrowed at apex and base, the surface rather strongly convex, only moderately finely, deeply and very closely perforato-punctate; elytra well developed, fully three-fourths longer than wide, parabolically rounding in apical two-fifths, parallel and almost straight thence to the base, the punctures rather fine but deep, close-set and arranged without order. Length 1.6–1.9 mm.; width 0.6–0.72 mm. California.....**longipennis**, sp. nov.

27.—Body evenly dark rufo-testaceous throughout, moderately convex and shining, the pubescence very short but somewhat abundant; antennæ moderate; prothorax nearly one-half wider than long, the sides conspicuously and rather narrowly prominent at basal third, thence strongly converging to the base and more gradually so and nearly straight to the apex, which is not distinctly narrower than the base; disk more convexo-declivous near the basal margin than in the three preceding species but not properly impressed, the punctures fine and rather enevenly close-set, becoming very minute and sparse broadly along the middle; elytra short and broad, the punctures very fine but distinct and moderately close-set, altogether irregular in arrangement. Length 1.4 mm.; width 0.68 mm. California.....**subdentata**, sp. nov.

Ochronitens quite strongly resembles *stricticollis*, but differs in the more slender form of the body and in the very much more minute and sparse punctuation. The species described under the name *parvicollis* is represented by a unique, as is also the form with seriately punctured elytra which I have surmised to be its male; more material is necessary to decide this rather puzzling point, as the difference in elytral sculpture is certainly very marked. I have, however, noticed at times a slight sexual difference in density and arrangement of punctures elsewhere in the family. *Fuscicollis* of Mannerheim, and *planulata* of Mäklin, I have not seen, the latter is described as oblong, depressed, fusco-testaceous, finely and densely punctate with the legs and elytra rufo-testaceous.

Atomaria *Steph.*

The species of this genus are less numerous in America than *Agathengis*, and for the most part present a rather monotonous appearance. The body is generally oblong-oval and convex, shining and sparsely clothed with short subdecumbent hairs. The antennæ are usually slender, moderate in length, with the basal joint short and oblong or more developed internally toward base than externally; the joints

of the funicle are alternately shorter and longer as usual in the tribe, but they are somewhat more widely separated at base than in *Agathengis*; the first two joints of the club are generally about as long as wide or longer, and seldom at all transverse. The eyes are larger and more coarsely faceted as a rule than in *Agathengis*. The prothorax is narrowed anteriorly and generally more or less distinctly angulate at the middle—not nearer the base as in *Agathengis*—and the marginal fovea at the point of angulation is not so marked a character as it is in that genus; the edge is finely beaded and frequently feebly crenulate from the angulation to the base; the disk is evenly convex, becoming broadly concave along the very finely margined or simple transverse base. The prosternal process is narrow, but in certain species, such as the European *turgida* and *cephennioides*, becomes wider, more prominent and more strongly margined along the sides—a divergence in the direction of the remarkable genus *Sternodea*. There seem to be, in fact, several quite well defined subgenera among the species of the European fauna having for types such forms as *turgida*, with medially lobed thoracic base, stout antennæ and broader and more prominent prosternal process, *cephennioides*, with large and broadly truncate prothorax, broad prosternal process, stout antennæ and very small eyes, and *unifasciata*, which is perfectly congeneric with our species and might be regarded as *Atomaria* proper.

The elytra are finely, irregularly punctured, frequently subinflated before the middle, truncate at base and slightly impressed within the humeral callus. The abdominal sutures are straight, the first segment as long as the next two combined and the fourth shorter than the second or third. The legs and tarsi are slender.

The species before me may be identified as follows:—

Elytra conspicuously ornamented or bicolored, the lines of demarcation more or less well defined.....2

Elytra unicolorous or nubilously darker toward base.....7

2—Elytra pale, a dark fascia just before the middle extending from side to side.....3

Elytra black or blackish, the apical third or fourth abruptly, and the basal regions nubilously pale.....4

Elytra black, abruptly pale in apical two-fifths to half, the base not paler, excepting, rarely, the humeral callus.....5

3—Suboval, strongly convex, piceous, the antennæ, legs and elytra pale luteo-flavate, the latter each with a large, broadly oval oblique blackish spot from basal third at the sides, the two mutually tangent on the suture at the middle; antennæ slender, half as long as the body; prothorax strongly, longitudinally convex in profile, moderately transverse, strongly rounded at the sides and narrowed per-

ceptibly more at apex than at base, the basal impression deep and rather narrow, the punctures minute and sparse; elytra widest before the middle, narrowly rounded at apex, distinctly wider than the prothorax and but two and one-half times as long, the punctures very fine but subperforate and sparse. Length 1.4–1.5 mm.; width 0.65–0.7 mm. Vermont and Rhode Island to Iowa and Colorado.....**ephippiata** *Zimm.*

Var. A—Similar to *ephippiata* in form and size but more narrowly elongate-oval and with the antennæ shorter, the elytral spots broadly uniting on the suture, and with the elytral punctures quite coarse, deeply impressed and apparently denser. Washington State (Spokane Falls)...**hesperica,** v. nov.

Suboblong-oval, convex, much smaller in size, pale and rufo-testaceous throughout, the head blackish, each elytron with a narrower oblique black band from basal third externally to the suture at the middle, and spreading longitudinally on the flanks; antennæ moderate, less than half as long as the body, the prothorax moderately transverse, but little narrower at apex than at base, broadly rounded at the sides and more closely punctulate than in *ephippiata*, the basal impression confined to median two thirds of the width; elytra nearly similar to the preceding in form but only very slightly wider than the prothorax and much more closely, though equally finely, punctate. Length 1.1–1.22 mm.; width 0.52–0.58 mm. California to Washington State (Spokane Falls).....**lætula** *Lec.*

4—Elongate-oval, convex, shining, rufo testaceous throughout, the under surface generally piceous, the elytra shaded with blackish from near the base to apical third or fourth; antennæ slender, half as long as the body, a little shorter in the female; prothorax moderately transverse, rather strongly narrowed from base to apex, the sides broadly and feebly subangulate at the middle, the base broadly, feebly arcuate; basal impressions strong, extending almost to the sides, gradually evanescent laterally; disk only moderately convex longitudinally, the punctures strong, moderately coarse and well separated; elytra at least three times as long as the prothorax and distinctly wider, very much so in the female, more declivous toward apex in profile, the sides parallel and almost evenly arcuate; apex rather obtusely rounded; punctures fine but distinct, moderately sparse. Length 1.4–1.6 mm.; width 0.65–0.72 mm. California (Los Angeles to Monterey) **nubipennis,** sp. nov.

5—Species of the Pacific coast regions. Body somewhat broadly oval, strongly convex, polished, black throughout, the antennæ and legs testaceous; elytra pale in apical two-fifths to half, the margin of the pale area broadly and posteriorly angulate; pubescence ashy and distinct; antennæ slender, nearly half as long as the body, shorter in the female; prothorax moderately transverse, both this and the elytra strongly arcuate in profile as in *ephippiata*, the apex distinctly narrower than the base, the sides broadly subangulate at the middle, the basal impression strong, not extending beyond lateral fourth or fifth, the punctures fine but deep and quite close-set; elytra much wider than the prothorax and not quite three times as long, the sides almost evenly arcuate from the humeri to the sutural angles, but little wider before the middle than at base, the apex ogival; punctures very fine but strong and perforate, quite close-set. Length 1.3–1.4 mm.; width 0.68–0.72 mm. California (Monterey to Humboldt Bay) and Nevada (Reno).....**postpallens,** sp. nov.

Species of the Atlantic slope.....6

6—Rather narrowly oval, strongly convex, polished, dark rufo-testaceous throughout, the sterna of the hind body and basal half of the elytra black, the pale apex more advanced on the suture; pubescence very sparse; antennæ slender, not quite half as long as the body; prothorax not more than three-fifths wider than long, subangularly inflated at the middle, the apex but little narrower than the base, the basal impression rather feeble and medial; disk strongly, longitudinally convex in profile, the punctures small and very sparse; elytra two and one-half times as long as the prothorax and distinctly wider, the sides evenly, strongly arcuate, the apex rather acute, punctures fine and very sparse. Length 1.35 mm.; width 0.63 mm. District of Columbia.....**distincta,** sp. nov.

More broadly oval, strongly convex, nearly similar in coloration to the preceding but paler testaceous, the elytra black in basal half, less on the suture; antennæ slender and half as long as the body; prothorax shorter and more transverse, three-fourths wider than long, the sides strongly arcuate, the apex but little narrower than the base, similarly feebly impressed at base, the punctures fine and distinctly less sparse; elytra distinctly wider than the prothorax and about three times as long, subangularly inflated and widest at basal two-fifths, the apex acutely rounded; punctures fine and rather sparse but much less so than in *distincta*, the pubescence similarly very short. Length 1.4 mm.; width 0.7 mm. Iowa (Independence).....**divisa,** sp. nov.

7—Second antennal joint subequal in length to the third, both elongate; base of the prothorax transverse and rectilinear or very feebly arcuate.....8

Second antennal joint much longer and generally thicker than the third, frequently as long as the third and fourth combined; base of the prothorax variable, sometimes distinctly lobed in the middle.....16

8—Base of the prothorax, at the middle, finely beaded and frequently abruptly though feebly elevated.....9

Base of the prothorax reflexed but not beaded at the middle of the base. Body piceous, the elytra paler, sometimes wholly pale, rather stout, oval, strongly convex, highly polished and very sparsely clothed with short recurved pubescence; head subimpunctate, the eyes rather small; antennæ slender, a little less than half as long as the body; prothorax scarcely two-thirds wider than long, widest and broadly angulate at the sides just before the middle, the apex very much narrower than the base; surface strongly convex, minutely and very sparsely punctate, the basal impression broadly concave and gradually evanescent laterally; elytra at base slightly wider than the base of the prothorax, widest, but not inflated, before the middle, where they are a third wider than the prothorax, not quite three times as long as the latter, oval, rather pointed behind, strongly but very sparsely impresso-punctate. Length 1.6–1.75 mm.; width 0.72–0.88 mm. New Jersey.....**gilvipennis,** sp. nov.

9—Body oval in form and strongly convex.....10

Body oblong or oblong-oval in form and subparallel at the sides.....15

10—Juxtahumeral impressions at the base of the elytra very large and conspicuous, though shallow. Body short and very stout, dark rufo-piceous in color throughout; legs and antennæ pale, the latter moderately slender and nearly half as long as the body; prothorax well developed, strongly convex, fully three-fourths

wider than long, widest and broadly angulate at the sides at the middle, the apex much narrower than the base; punctures fine but deep and perforate, separated by two or three times their diameters, with a narrow impunctate median line not attaining the base, the basal impression well developed, the basal bead very feeble and flat; elytra subinflated and widest at two-fifths, where they are a fourth wider than the prothorax, about three times as long as the latter, the humeri narrowly exposed at base, the apex narrowly rounded; punctures very small but perforate and moderately close-set. Length 1.45 mm.; width 0.75 mm. Canada (Ottawa).....**saginata,** sp. nov.

Juxtahumeral impressions very small and feeble.....11

11—Prothorax rather rounded than angulate at the sides at or before the middle.....12

Prothorax conspicuously, though broadly, angulate at the sides at or slightly before the middle, where it is much wider than at base, the sides rapidly convergent from the angle to the apex and straight or broadly sinuate; elytral humeri distinctly exposed at base.....13

12—Prothorax relatively long and narrow, scarcely three-fourths as wide as the elytra and but little wider at the submedian dilatation than at base, very strongly narrowed at apex, the latter much narrower than the base; body elongate-oval, shining, testaceous throughout, the antennæ distinctly less than half as long as the body in the female; prothorax strongly convex, finely but deeply and closely perforato-punctate, the basal impression deep and narrowly impressed; elytra distinctly wider at two-fifths than at base, where they are scarcely wider than the base of the prothorax, two and two-thirds times as long as the latter, acutely rounded at tip, the punctures fine but distinct, rather impressed and moderately close-set, at least three times as sparse as those of the prothorax. Length 1.6 mm.; width 0.78 mm. District of Columbia.....**ochracea** *Zimm.*

Var. A—Similar in color but with the head and prothorax slightly piceous, the latter equally distinctly and very closely punctate, the punctures separated by only their own diameters, and, as usual, coarser toward the sides and basal angles; basal impression much feebler and less acutely impressed; elytra strongly and rather sparsely impresso-punctate; body more narrowly oval. Length 1.65 mm.; width 0.75 mm. Lake Superior.....**lacustris,** v. nov.

Var. B—Body nearly similar in form but slightly smaller and more rapidly attenuate at the extremities, blackish-piceous to dark testaceous in color, polished, the pronotum finely and rather sparsely punctate, the basal impression much feebler and more broadly impressed than in *ochracea;* elytra minutely and rather feebly, moderately sparsely punctate, the punctures but little more widely separated than those of the pronotum. Length 1.2–1.5 mm.; width 0.58–0.75 mm. Mountains of Pennsylvania (Westmoreland Co.).

pennsylvanica, v. nov.

Prothorax shorter and decidedly more transverse, two-thirds to three-fourths wider than long, much narrower at base than at the median inflation, at least four-fifths as wide as the elytra, distinctly, though less markedly, narrower at apex than at base, strongly convex, finely and rather sparsely punctate, the basal impression rather deep and acutely impressed; elytra shorter and less obviously narrower at base than at the feeble inflation two-fifths from the base, the humeri more widely exposed at base, less than three times as long as the prothorax and narrowly

rounded at tip, the punctures fine but rather strongly impressed, moderately sparse and slightly more widely separated than those of the pronotum; antennæ slender, half as long as the body in the male, a little shorter in the female; body piceo-testaceous in color, shining. Length 1.25–1.45 mm.; width 0.63–0.75 mm. Canada (Ottawa) ... .**curtula,** sp. nov.

Var. A—Similar but less stout and much smaller, piceous in color, the legs and antennæ pale luteo-flavate, the latter slender, fully half as long as the body; eyes slightly larger, convex and well developed; pubescence finer and a little closer; prothorax similar in form, deeply and rather acutely impressed at base, very finely and moderately closely punctate; elytra very finely, feebly, rather inconspicuously and moderately closely punctate, otherwise nearly similar. Length 1.2 mm.; width 0.6 mm. Iowa.....**pumilio,** v. nov.

13—Prothorax small, at its widest part not quite as wide as the base of the elytra, the latter less than three times as long as the prothorax. Body rather broadly oval, moderately convex, polished, pale ferruginous in color throughout, the antennæ slender, not quite half as long as the body in the male, shorter and a little stouter in the female; prothorax nearly two-thirds wider than long, angulate at the middle, the sides thence to the base distinctly convergent, feebly arcuate and minutely serrulate, more strongly convergent and feebly sinuate to the apical angles, which are somewhat prominent, the apex distinctly narrower than the base; disk finely but deeply, moderately closely punctate, the impression along the base rather deep; elytra about one-half longer than wide, subinflated at two-fifths and nearly a third wider than the prothorax, acute at tip, finely but strongly and somewhat sparsely impresso-punctate, the punctures at least twice as sparse as those of the pronotum. Length 1.4–1.6 mm.; width 0.7–0.75 mm. New York—Mr. H. H. Smith..... **gonodera,** sp. nov.

Prothorax small, nearly as in the preceding but with the converging sides anteriorly not sinuate and the apical angles not so acute. Body similar but shorter and more convex, black or blackish in color, the legs and antennæ dark testaceous; surface polished; antennæ slender, moderate in length; pronotum similarly punctured and impressed; elytra a little shorter and relatively broader, strongly rounded at the sides, acute at apex, more finely and sparsely punctate. Length 1.5 mm.; width 0.73 mm. Delaware to Florida..... ....**riparia,** sp. nov.

Prothorax more developed, at its widest part fully as wide as the base of the elytra, the latter fully three times as long as the prothorax.....14

14—Oval, moderately convex, subalutaceous in lustre, piceous, the elytra slightly paler; legs and antennæ pale; eyes rather well developed, convex; antennæ moderately slender, with the club rather stout, distinctly less than half as long as the body in the female; prothorax nearly four-fifths wider than long, the sides prominently inflated before the middle, thence converging and arcuate to the base and strongly convergent and feebly sinuate to the apex, the latter not more than three-fourths as wide as the base; punctures small but deep and distinct, notably dense, the basal impression strong; elytra fully three times as long as the prothorax, widest, inflated and a fourth wider than the prothorax at two-fifths, rapidly narrowed thence to the acutely rounded apex; punctures fine, moderately close-set, twice as sparse as those of the prothorax. Length 1.6 mm.; width 0.72 mm. (♀) Rhode Island (Boston Neck).....**subalutacea,** sp. nov.

Oval, rather more convex, shining, black, the antennæ and legs dark testaceous; antennæ slender, less than half as long as the body in the female; prothorax more than three-fourths wider than long, somewhat obtusely angulate and inflated at the middle, the sides thence straight and moderately convergent to the base and strongly so and straight to the apex; punctures fine and somewhat sparse, the impression deep; elytra nearly as in the preceding but more than a fourth wider than the prothorax, the punctures very fine and quite sparse—though but slightly sparser than those of the pronotum. Length 1.5 mm.; width 0.7 mm. (♀). Colorado.....**incerta,** sp. nov.

15—Body oblong, parallel, only moderately convex, polished, piceous, the entire elytra and legs pale flavo-testaceous, antennæ pale with the club infuscate, somewhat slender and slightly less than half as long as the body; prothorax small, much narrower at any part than the base of the elytra, angularly inflated slightly before the middle, the sides nearly straight and converging to base and apex, the latter quite distinctly narrower than the base; disk convex, two-thirds wider than long, finely, rather sparsely punctate, the basal impression strong, extending evanescently to the very obtuse basal angles; elytra oblong, parallel and almost straight at the sides, broadly rounded at apex, more than three times as long as the prothorax and about a third wider, the humeri widely exposed at base, rather coarsely but not densely impresso-punctate and somewhat rugose by oblique illumination. Length 1.55 mm.; width 0.72 mm. Colorado.

brevicollis, sp. nov.

Body oblong, the elytra feebly inflated, polished, black or blackish, the elytra very dark piceo-testaceous throughout; antennæ and legs dark testaceous, the former slender and nearly half as long as the body; prothorax large, three-fifths wider than long, fully as wide at base as the closely fitting base of the elytra and nearly as wide as at the very feeble subangular dilatation slightly behind apical third, the apex slightly narrower than the base; disk convex, finely and quite sparsely punctate, the basal impression moderate; elytra parallel and broadly arcuate at the sides, widest and distinctly wider than the prothorax at the middle, not more than two and one-half times as long as the latter, rapidly narrowed behind the middle and acutely rounded at tip, the punctures rather coarsely impressed, moderately close-set, not materially sparser than those of the pronotum. Length 1.4 mm.; width 0.65 mm. Alaska.....**aleutica,** sp. nov.

16—Prothorax subangularly dilated at, or a little before, the middle, narrowed toward base and still more strongly toward apex, the elytral humeri exposed at base.....17

Prothorax, viewed vertically, rounded at the sides from the base, more strongly narrowed toward apex and widest perceptibly behind the middle.....18

Prothorax, viewed vertically, parallel at the sides from the base to or beyond the middle, then strongly narrowed to the apex.....19

17—Body, legs and antennæ uniform pale ochreo-testaceous throughout, the latter rather short and stout, but little longer than the head and prothorax, the eyes moderate; surface shining, the pubescence short, fine, ashy and rather abundant; prothorax four-fifths wider than long, not quite as wide as the base of the elytra, the sides broadly angulate at apical two-fifths, the apex distinctly narrower than the base, the basal impression rather feeble; punctures very fine and

quite close-set; elytra oblong, feebly arcuate at the sides, obtusely rounded at apex, barely three times as long as the prothorax and about a fourth wider, the punctures very fine and moderately close-set. Length 1.5 mm.; width 0.75 mm. Colorado.....**oblongula,** sp. nov.

Body deep black throughout, the legs and antennæ piceo-testaceous; surface polished, the pubescence short and inconspicuous; antennæ moderately slender, distinctly longer than the head and prothorax, the latter convex, two-thirds wider than long and fully as wide as the base of the elytra, dilated and strongly rounded laterally just before the middle, the converging sides thence nearly straight to the base and apex, the latter but little narrower than the base, the basal impression moderate, extending throughout the width but feeble at the sides, the punctures fine but deep and strong and not very close-set; elytra short, oblong, two and one-half times as long as the prothorax and barely a fifth wider, parallel and broadly arcuate at the sides and obtusely rounded at apex, rather strongly and moderately closely impresso-punctate. Length 1.3 mm.; width 0.6 mm. Iowa. **crypta,** sp. nov.

Body very small, parallel, pale testaceous, the elytra gradually shaded blackish toward base; integuments shining; antennæ slender, nearly half as long as the body; prothorax short and strongly transverse, about as wide as the elytra, angulato-dilated at the middle, the apex distinctly narrower than the base; punctures minute and moderately dense, the basal impression rather acutely impressed; elytra parallel, feebly arcuate at the sides, obtusely rounded at tip, three times as long as the prothorax in the female but obviously shorter in the male, the punctures very fine and moderately close-set. Length 0.88–1.05 mm.; width 0.35–0.48 mm. Europe and Northeastern America.....**pusilla** *Schönh.*

18—Body oblong-suboval, parallel, convex, polished, blackish in color, the elytra gradually pale posteriorly and the humeral callus also slightly paler; legs and antennæ testaceous; the latter moderately slender, nearly half as long as the body, the club rather thick; prothorax moderately transverse, rounded on the sides, more strongly toward base, from above, but broadly subangulate at the middle when viewed sublaterally, the punctures fine and moderately close-set, the apex but little narrower than the base, the basal impression distinct; elytra parallel, broadly arcuate at the sides, but little wider at the middle than at base and only slightly wider than the prothorax, nearly three times as long as the latter, moderately obtuse at tip, the humeri evidently exposed at base; punctures fine but strong and distinct, scarcely sparser than those of the prothorax. Length 1.2 mm.; width 0.5 mm. California ..... **fallax,** sp. nov.

19—Species of the Atlantic regions. Body oval, rapidily attenuate at the extremities and very convex, shining, black or piceous-black, the legs and antennæ testaceous, the latter notably stout, nearly half as long as the body in the male; prothorax small, less transverse than usual, three-fifths wider than long, the sides strongly converging anteriorly, the apex only two-thirds as wide as the base, the latter with a feeble but distinct arcuate lobe in median third; punctures rather strong and close-set, the impression somewhat feeble; elytra oval, subinflated, and, at two-fifths, very much wider than at base and a third wider than the prothorax, the base of the latter scarcely at all narrower than the base of the elytra, the humeri not exposed at base; apex narrowly rounded, the punctures fine but

distinct, rather sparse, two or three times sparser than those of the pronotum. Length 1.22–1.4 mm.; width 0.6–0.73 mm. Canada, New York, Pennsylvania, and Iowa.....**ovalis,** sp. nov.

Species of the Pacific coast and Alaska.....20

20—Larger species, oblong-oval in form, rather stout, convex, polished, black, the entire elytra bright testaceous; legs piceous; the antennæ pale, with the club rather stout; prothorax but little more than one-half wider than long, subangularly rounded at the sides slightly before the middle, then strongly narrowed to the apex, finely, rather sparsely punctate, as wide at base as the base of the elytra, the latter parallel and broadly arcuate at the sides, rather narrowly rounded at apex, finely but strongly, rather sparsely impresso-punctate. Length 1.6 mm.; width 0.78 mm. Alaska (Kodiak Island).....**fulvipennis** *Mann.*

Small species, shining, rather narrow and elongate-oval in form.....21

21—Black, the elytra picescent, the legs paler; antennæ testaceous, moderately stout, two-fifth as long as the body; prothorax short, three-fourths wider than long, very slightly narrower than the base of the elytra, the sides parallel almost to apical third, then strongly convergent to the apex, the punctures strong, deep and close-set, dense toward the sides, the basal impression moderate, not attaining the sides; elytra parallel and broadly arcuate at the sides, rather obtuse at apex, fully three times as long as the prothorax, finely and rather sparsely punctate, the punctures much less close than those of the pronotum. Length 1.25 mm.; width 0.6 mm. California (Mendocino Co.).....**inepta,** sp. nov.

Black, the elytra suffusedly paler toward tip, frequently pale ferruginous throughout, the antennæ pale, rather stout, two-fifths as long as the body; prothorax rather small, three-fifths wider than long, slightly narrower than the base of the elytra, the sides parallel for three-fifths the length, then moderately converging to the apex, the punctures very fine and rather close-set, not materially denser laterally, the impression rather fine and moderately deep; elytra parallel, broadly arcuate at the sides, somewhat obtuse at apex, widest at the middle, not quite three times as long as the prothorax and fully a fourth wider, the punctures fine but strong and moderately close-set. Length 1.2 mm.; width 0.55 mm. California (Hoopa Valley, Humboldt Co.).....**nanula,** sp. nov.

The species in the neighborhood of *ochracea* form a very difficult study, and my treatment of them above must be regarded as provisional. *Fallax* bears some resemblance to *nanula*, but the antennæ are more approximate in insertion upon the front, being separated by a third of the total width in the latter. *Kamtschatica* Mots., is quoted by Mannerheim as occurring in Alaska, but I hav not seen it: it is ovate, black, with the elytral humeri and apex testaceous and the prothorax arcuately dilated at the middle. The species *lepidula* of Mäklin, from Sitka, is also unknown to me; it is described as oval, slightly convex, shining, testaceous, with the prothorax slightly rounded at the sides and deeply, the elytra finely, punctate, and the antennæ not approximate at base; it must be an unusually large

species, as its length is given "1 line," and it is said to be extremely rare.

Tisactia, gen. nov.

Although bearing a certain general resemblance to *Atomaria*, this genus is really profoundly different in several structural characters, and it may be readily recognized by the marginal bead at the base of the elytra; it also differs in having the pronotum perfectly even and unimpressed at base, in its widely separated frontal antennæ and in its broad prosternal process, margined at each side by an acute cariniform edge. The head is rather deeply inserted, the eyes well developed and rather coarsely faceted but not very convex, and the clypeus, which is slightly prolonged and expanded before the antennæ, is separated from the front by an impressed straight suture extending between the antennal foveæ. The antennæ are nearly as in *Atomaria*, the first joint relatively still smaller but subsimilar in form, and the club parallel, loosely 3-jointed and well developed. The legs and tarsi are slender, the latter filiform, moderately short and pentamerous, the mesosternum moderately wide and unimpressed between the coxæ, and the deep-set anterior coxæ are oblique and much more transverse than in *Atomaria* approaching *Ephistemus* in this respect, the cavities sharply angulate externally. The scutellum is moderate in size and transversely oval. The single species is the following:—

Body oblong-oval, very convex, black or blackish, the legs and antennæ paler, testaceous, the club of the latter blackish, apparently glabrous, each puncture, however, with an excessively minute hair; punctures throughout very fine and sparse, not denser on the prothorax, which is moderately transverse, very convex and deep on the flanks, the base distinctly wider than the apex, transverse, finely beaded and feebly lobed at the scutellum; sides broadly arcuate from above, the lateral edges finely but acutely reflexo-beaded and nearly straight from a sublateral viewpoint; elytra slightly longer than wide, ogival at tip, widest and distinctly wider than the prothorax slightly before the middle, the base equal to the base of the latter, the humeri not at all exposed at base, the sides arcuate, the suture not margined, minutely dehiscent at apex as usual. Length 0.9 mm.; width 0.55 mm. Indiana ..... **subglabra**, sp. nov.

Two specimens are before me, one much damaged.

EPHISTEMINI.

This is one of the more highly specialized tribes of the family, composed of very minute, broadly oval and convex glabrous species, feebly represented in the nearctic, but moderately abundant in the

palæarctic provinces. It is distinguished from the other tribes of the Atomariinæ, excepting the Sternodeini, by the structure of the pro- and mesosterna, and in the close juncture of the prothorax with the hind body, and, in the extremely specialized *Ephistemus*, also by a form of anterior coxa, antennal club, antennal clefts of the prosternum and form of scutellum which are wholly foreign to the rest of the family. The post-coxal plates of the first ventral segment, though feebly developed, should also be alluded to as an important distinguishing character. In the general structure of the body, legs, palpi and tarsi it is however a perfectly normal member of the subfamily Atomariinæ. The elytra are never margined at base, the pronotum is always unimpressed, and the deeply seated anterior coxæ are transverse and subcylindrical and attached near the sides of the body, the cavities acutely angulate externally. The species before me may be assigned to the two following widely differentiated genera:—

Antennæ free, the club more slender and bilaterally symmetric, the grooves before the eyes and prosternal clefts wholly obsolete; scutellum transversely oval as in Atomariini; prothorax more transversely truncate at base, feebly arcuate at the middle .... * **Curelius**

Antennæ partially received in repose within narrow deep grooves before the eyes and in a broad shallow cleft and excavation between the prosternum and hypomera, the club rather more developed, parallel, loose and asymmetric, the joints being more developed on the inner side; scutellum still more minute, cordate, pointed behind and as long as wide or longer; prothorax broadly angulate at base.

Ephistemus

These genera are related to the Atomariini through the singularly synthetic genus *Tisactia* described above, which has the unimpressed pronotum, broad, flat and laterally margined prosternal process, antennal insertion and sensible, though somewhat differently formed, post-coxal plates of the Ephistemini, the loosely connected body and prothorax and free prosternal process of the Atomariini, and a strongly margined elytral base, which very exceptional character is foreign to both but existent to a well-developed degree in *Tomarus* of the Cryptophaginæ.

Curelius, gen. nov.

This genus is founded upon the *Ephistemus dilutus* of Reitter, and *exiguus* of Erichson, and, as far as known to me, is exclusively European. Although abundantly distinct from *Ephistemus*, it does not seem to have been recognized thus far by Reitter and other European authors.

Ephistemus *Steph.*

In this genus, as in the preceding, the body is evenly oval and rather pointed behind, the sides of the elytra and prothorax being perfectly continuous and without a reëntrant angle at the contiguous bases. The surface is virtually glabrous, having only a few extremely minute hairs visible under high amplification, and is feebly and sparsely sculptured. Our single representative is the following :—

Oval, convex, polished, black or piceous-black the elytra gradually rufo-testaceous posteriorly almost in apical half, the legs and antennæ paler ; surface impunctate ; prothorax moderately transverse, the sides convergent and rather strongly, almost evenly arcuate ; elytra rather less than three times as long as the prothorax and about a third to nearly half wider, widest at two-fifths, the sides strongly, almost evenly arcuate, converging behind, the tip narrowly rounded. Length 1.1 mm. ; width 0.72 mm. New York, New Jersey, Pennsylvania and Indiana.

apicalis *Lec.*

Almost perfectly resembles the European *dimidiatus*, but rather stouter and much larger ; the latter species seems to be distinct from *globulus*, with which it is united as a variety in the European catalogue of Heyden, Reitter and Weise.*

TRITOMIDÆ.

MYCETOPHAGIDÆ *Auct.*

It matters but little what name is used to designate a genus, and consequently perhaps, a family, provided it be the oldest properly published name, and that there be unanimity of opinion in regard to the points at issue. The Geoffroyian name *Tritoma* has been adopted in the most complete European catalogue, presumably after proper investigation, for the familiar *Mycetophagus*, and, as arbitrary dissent from this decision would only tend to perpetuate ambiguity in the fundaments of nomenclature, I am ready to take any course which

* The following is a new species from the European fauna, recently received from Mr. Reitter :

Narrowly oval, polished, blackish throughout, the elytra obscurely rufescent, blackish toward base, the legs and antennæ pale, extremely minutely, feebly and sparsely punctate; prothorax rather short and strongly transverse, the sides converging and arcuate as usual ; elytra relatively long, rather more than three times as long as the prothorax but only about a fourth to a third wider, subinflated between a third and two-fifths from the base and narrowly rounded at tip. Length 0.95 mm. ; width 0.6 mm. Russia (Caucasus) ..... **reitteri**, sp. nov.

Distinguishable at once from *globulus* or *dimidiatus* by its narrower and less ovate form, the elytra in the species referred to being from two-fifths to a half wider than the prothorax.

may tend to bring about permanent agreement, assuming that it is never too late to correct a mistake, however repugnant it may be to our spirit of conservatism. The name *Triplax* is therefore to be re-established in the Erotylidæ.

The present family is taken up for investigation at this time, primarily to draw attention to the inharmonious and composite scope which has been given to it hitherto by our systematists. Of the genera which have been included within its limits by LeConte and Horn, *Diplocœlus* and *Biphyllus* are assigned by Heyden, Reitter and Wise to the Cryptophagidæ, which disposition of them is eminently appropriate. *Hypocoprus* forms a subfamily of Cucujidæ near the Monotominæ, and is also to be removed.

Again, as an important fact because affecting both the European and American scope of the family, it should be stated that *Berginus* is in no wise allied to the Tritomidæ, but belongs near *Lyctus*, in fact only distinguishable from that genus by the obliquely truncate maxillary palpi.*

Finally, but by no means least, it is to be remarked that the European *Triphyllus* does not occur in America, the species assigned by LeConte and Horn to that genus forming in reality two purely heteromerous genera in the vicinity of the malandryid *Tetratoma*. The Tetratomini are distinguished from other Malandryidæ by the 3- or 4-jointed antennal club, and will be alluded to in more detail near the close of the present paper.

The present family is evidently closely related to the Trixagidæ

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* The following is an interesting new species of *Berginus* :—

Very slender, convex, blackish, the under surface, legs and antennæ paler; head and pronotum coarsely and closely punctured, the elytra with approximate series of similar coarse and close-set but well-defined punctures, each puncture throughout bearing a very small recurved squamiform hair; prothorax as long as wide, slightly narrower than the elytra and a little wider than the head, the sides arcuate and parallel; eyes small and prominent; antennæ slender, the two basal joints larger and the club 2-jointed; under surface coarsely, sparsely punctured, except the last four segments of the abdomen which are finely and longitudinally strigato-punctate, the first segment as long as the next three combined; legs short, the femora stout, the tibiæ and tarsi slender. Length 0.9–1.2 mm.; width 0.32–0.42 mm. Bahama Island (Eleuthera)—Mr. Wickham.

bahamicus, sp. nov.

Differs from *pumilus* in its smaller size, more slender form, evenly seriato-punctate elytra, even pronotum and general habitus. I have taken *pumilus* in abundance at San Diego, California; it has an almost entire longitudinal impression at each side of the pronotum, which exists in the European *tamarisci* only as a minute basal impression, and in *bahamicus* is wholly wanting; it was described from Pennsylvania, but perhaps this may be an error.

(Byturidæ) and Dermestidæ, and is quite out of position in the catalogue of Heyden, Reitter and Weise. Its general characters have been sufficiently presented by LeConte and Horn and need not be repeated at the present time. The tarsi are filiform and 4-jointed and the anterior in at least the first subfamily, are 3-jointed, more or less dilated and pubescent beneath in the males;* the basal joint is generally elongated. The anterior coxæ are large, obliquely ovoidal and prominently convex in the first subfamily but smaller in the second, narrowly separated, with the cavities widely open or closed. The ornamentation of the elytra in many species is remindful of the Attagenini, but the eyes are coarsely faceted—in marked contrast to the Dermestidæ. The Trixagidæ are intermediate between the two families in this respect.

The Tritomidæ of America consist of two subfamilies which differ greatly from each other in general habitus, and are sufficiently defined by the following characters:—

Anterior coxæ large and convexo-prominent, the cavities widely open behind; bases of the prothorax and elytra equal in width, the scutellum well developed; sides of the prothorax defined by a thin acute edge; hind coxæ narrowly separated. TRITOMINÆ.

Anterior coxæ small and more deep-set, oblong-oval, the cavities broadly closed behind; base of the prothorax much narrower than that of the elytra, its lateral edges obtuse and not acutely defined; scutellum small; hind coxæ rather widely separated.....MYRMECHIXENINÆ.

The latter of these is represented by a single isolated genus common to Europe and America.

TRITOMINÆ.

The body is oblong-oval, convex or moderately depressed and always clothed with coarse and sparse pubescence. The four American genera before me may be separated by the following primary characters:—

Basal angles of the prothorax well defined.....2
Basal angles broadly rounded; body very minute.....5
2—Epipleuræ horizontal and flat.....3
Epipleuræ concave and rapidly descending externally.....4
3—Eyes transverse, sinuate anteriorly.....**Tritoma**
Eyes more rounded, not sinuate.....**Typhæa**

*The anterior tarsi are said to be 4-jointed in both sexes in the Myrmechixeninæ, but my four examples seem to be females and I cannot, therefore, confirm this.

4—Eyes nearly as in *Tritoma*; body much smaller and more oval.....**Litargus**
5—Epipleuræ flat and horizontal, not extending much behind the middle.
Thrimolus

All of these genera are common to the Atlantic and Pacific districts, except the last, which has been taken thus far only in Texas.

Tritoma *Groff.*

Mycetophagus Hellw.

The species are oblong-oval in form, moderately convex and clothed rather sparsely with short stiff reclined pubescence, the elytra generally ornamented with a pale design upon a darker ground; they are moderately numerous and the American forms may be defined as follows:—

Antennæ gradually incrassate toward tip, the outer joints sometimes feebly subserriform, the prothorax widest at base, with the sides more or less strongly convergent and broadly arcuate thence to the apex, the two subbasal foveæ deep and distinct; body broadly oblong-oval. [**Tritoma,** in sp.].....2
Antennæ with a very feebly differentiated subparallel 5-jointed club; prothorax but little wider at base than at apex, more or less serrulate at the sides, much wider near the middle, the sides strongly arcuate, the subbasal pits deep and distinct; body narrowly elongate-oval, the elytral intervals each with a series of semi-erect hairs. [**Ilendus,** sg. nov.].....8
Antennæ with a feeble parallel 4-jointed club; body shorter and moderately broadly oblong-oval, the prothorax with the sides but feebly converging from the base and broadly arcuate, the subbasal pits distinct. [**Parilendus,** sg. nov.].....11
Antennæ with a 3-jointed club; body rather broadly oblong-elongate, the prothorax widest before the base, with the subbasal pits feeble or obsolete. [**Gratusus** sg. nov.].....12
2—Last joint of the antennæ elongate, distinctly longer than the two preceding combined; punctures rather coarse, not dense; elytra blackish, with a large reddish-yellow design involving the suture from fifth to three-fourths, extending obliquely to the humeri, and, transversely at its posterior limit, nearly to the side margin, the apices also yellow. Length 4.5–5.7 mm.; width 2.2–2.6 mm. New York, Indiana and North Carolina.....**punctata** *Say*
Last joint of the antennæ shorter, never longer than the two preceding combined; body smaller in size.....3
3—Elytral striæ impressed, strongly punctured and distinct almost throughout. Atlantic regions.....4
Elytral striæ scarcely at all impressed, very finely punctured and almost completely obliterated behind the middle. Pacific coast.....7
4—Pale design of the elytra somewhat as in *punctata*, involving the suture from basal fifth or sixth to slightly behind the middle, extending obliquely to the humeri, near which there is a projection from each side of the ramus, extending obliquely outward also at its posterior limit to the middle of the width and with

a subdisconnected transverse lateral spot more posterior, the apex also maculate. Length 2.8–4.0 mm. ; width 1.4–1.8 mm. New York, North Carolina, Indiana, Lake Superior and Montana ; [*bimaculata* Melsh.] .....**flexuosa** *Say*

Pale design of the elytra never involving any part of the suture.....5

5—Side edges of the prothorax finely serrulate, the punctures not very dense, unequal as usual, moderately coarse toward the sides, which are narrowly explanate ; elytra blackish-piceous, each with seven pale spots, one, quadrate, at the humeri, one smaller, rounded, at inner third and basal fifth, one small rounded, at inner fourth just behind the middle, one elongate, near the median line at four-sevenths, one very small, subattached to the last at outer and basal third, one transverse, near the margin at three-fifths and one rather large, involving the apex. Length 3.6 mm. ; width 1.7 mm. Virginia.....**serrulata,** sp. nov.

Side edges of the prothorax even, not at all serrulate, the sides more or less narrowly explanate ; abdomen finely and closely punctate.....6

6—Body more elongate-oval, larger and more convex ; elytra each with a large subquadrate humeral pale spot not involving the callus, another, large and slightly elongate-oval, very near the suture at basal sixth and narrowly connected with the humeral, a narrow irregular spot near the center, extending along and scarcely broader than the sixth interval from three-sevenths to slightly behind the middle and then obliquely extending internally nearly to the suture at four-sevenths, two submarginal spots, the anterior minute at two-fifths, the posterior larger and transverse at three-fifths and a moderate subapical spot. Length 4.2–4.3 mm. ; width 1.9 mm. New York.....**picta,** sp. nov.

Body oblong-oval, rather depressed, black, the prothorax scarcely paler and more transverse than in *picta ;* elytra of the male each with two large coalescent subbasal pale spots in oblique line and one, smaller, sublateral at one-fourth from the base and frequently obsolete, also an oblique irregular fascia at or near apical third, sometimes obsolete or existing as two minute pale spots, and, finally, a large subapical spot ; in the female the inner of the two subbasal spots is wholly obsolete, only the humeral and subapical remaining, or, sometimes, with the two minute pale spots in oblique line near apical third in addition. Length 3.7–4.2 mm. ; width 1.75–1.9 mm. Indiana and North Carolina.

subdepressa, sp. nov.

7—Body oblong-elongate, rather depressed and shining, the punctures finer than usual ; elytra blackish, each with a large oblique subbasal spot, from the humeri nearly to the suture at basal fourth, and a smaller transverse spot at apical fourth, not attaining the suture or margin ; subapical pale spot wholly obsolete. Length 3.4–4.2 mm. ; width 1.65–1.8 mm. Washington State to California.

californica *Horn*

8—Elytra more than twice as long as wide ; abdomen sparsely punctured ; pronotum coarsely, sparsely and equally punctate.....9

Elytra not more than twice as long as wide, the abdomen more closely punctured ; pronotum less coarsely, more densely and somewhat unequally punctate.....10

9—Body black or piceous-black throughout above, the under surface, legs and antennæ testaceous, the latter becoming blackish in outer half ; elytra maculate with pale spots, of which two on each, elongate-oval, disposed in oblique line near the base and one transverse, discal and anteriorly angulate at apical third or fourth,

are most conspicuous, a small elongate spot, just before the middle and near the side margin, is also generally evident; striæ strongly punctured, feebly impressed and distinct very nearly to the tip. Length 4.3 mm.; width 1.45 mm. Texas.
melsheimeri *Lec.*

Body nearly similar in form and sculpture but rather less slender, the under surface and legs more dusky-testaceous, the antennæ blackish throughout, except near the base, distinctly longer than in *melsheimeri* and almost two-fifths as long as the body in the male, the elytra black throughout, without trace of paler spots; intromittent organ of the male very slender and nearly straight. Length 4.6 mm.; width 1.6 mm. Indiana; [Georgia—LeConte].....**obscura** *Lec.*

10—Body very narrow, piceous or blackish, the elytra with numerous small flavo-testaceous spots, the striæ rather distinctly impressed but somewhat finely punctured and obliterated well before the tip; under surface, legs and antennæ pale, the latter dusky distally as usual. Length 3.4 mm.; width 1.3 mm. Indiana.
pluripunctata *Lec.*

Body distinctly broader but almost similarly sculptured, the prothorax less transverse, relatively narrower at apex and somewhat more coarsely punctured; elytra evenly piceous-black throughout, without trace of paler maculation; under surface, legs and antennæ pale testaceous. Length 3.75 mm.; width 1.6 mm. North Carolina (Asheville).....**pini** *Zieg.*

11—Body oblong-oval, rather strongly convex, the sides very feebly arcuate; antennæ testaceous throughout, short and rather thick, not as long as the head and prothorax, the latter dark piceous-brown, three-fourths wider than long, the sides very feebly convergent from base to apex and very slightly arcuate; disk convex, coarsely, densely and unequally punctured throughout, the edges minutely serrulate; elytra dark, finely, densely punctulate, the striæ feebly impressed, finely punctate and obliterated toward tip, each with a suffused humeral pale spot and another, transverse and discal, near three-fifths; each interval with a single series of suberect hairs; abdomen finely and densely punctate. Length 2.9–3.5 mm.; width 1.3–1.5 mm. Massachusetts, New York, Indiana, Iowa and Nebraska.
bipustulata *Melsh.*

Body oval, piceous, sparsely pubescent; elytra densely punctulate, with a feebly striate arrangement at the middle near the base, maculate with large yellow spots somewhat as in *flexuosa*. Length [4.5 mm.]. Colorado .....**confusa** *Horn*

12—Subbasal impressions of the pronotum distinct but in the form of short narrow canaliculations, the punctures moderately coarse, deep, not very dense, equal and evenly distributed throughout, the sides broadly, evenly arcuate, very feebly convergent, the apical angles broadly rounded; disk widest behind the middle; elytra piceous, with pale humeral, post-humeral and post-median maculation, the striæ scarcely at all impressed, rather finely and not conspicuously punctured and obliterated toward tip, the pubescence short and even; abdomen finely, densely punctate. Length 4.3–4.8 mm.; width 1.7–1.9 mm. California (Truckee and Lake Tahoe).....**pluriguttata** *Lec.*

Subbasal impressions small and feeble but rounded and foveiform.....13

Subbasal impressions wholly obsolete.....14

13—Elytra immaculate, except some very minute widely scattered pale spots which are clothed with paler pubescence, of which there is on each one at base at each

side of the scutellum, one at outer fourth and one-sixth from the base, two at inner fourth in line with the basal spot at two-sevenths and one-half from the base, and one, transverse, near the margin at three-fifths; body oblong-oval, piceous-black throughout, the prothorax a little less than twice as wide as long, with the sides feebly convergent and feebly arcuate, only slightly wider behind the middle than at base, the punctures rather fine, close-set and unequal, with coarse punctures intermingled toward the sides; elytral striæ feebly impressed but strongly punctured, distinct nearly to the extreme apex; abdomen finely but not densely punctate; legs blackish, the tarsi paler. Length 5.0 mm.; width 2.1 mm. British Columbia..... **notatula**, sp. nov.

Elytra with very narrow sinuous bands of grayish pubescence at basal third and behind the middle, and also an apical spot, the posterior band bifurcating near the middle of each elytron, sending one branch forward the other backward to the side margin; body otherwise nearly similar to *notatula*. Length [5.0 mm.]. New Hampshire (White Mts.)..... .....**tenuifasciata** *Horn*

14—Body moderately stout, oval, strongly convex, piceous-black, the legs and antennæ paler; prothorax distinctly less than twice as wide as long, the sides strongly convergent throughout, but very feebly arcuate, obsoletely serrulate, obliquely convergent near the base to the basal angles, which are very obtuse; disk convex, very coarsely, almost equally punctate, not densely toward the middle but closely laterally; elytra sparsely pubescent, with impressed entire striæ of coarse deep punctures, each with an irregular pale oblique subbasal fascia from the humeri nearly to the suture, another, oblique in contrary sense, at three-fifths and not attaining the suture and an oval, margino-median and a subapical spot. Length 4.5 mm.; width 2.0 mm. Virginia..... ...**obsoleta** *Melsh.*

Confusa and *tennifasciata* I have not seen, and the characters are drawn from the descriptions. *Plurigutta* is a very aberrant species, with the 3-jointed club very much feebler than in the others of that section and with a very complex male intromittent organ, consisting of a gradually narrowed thin basal piece, arcuate in plane, with an apical appendage curved sharply in contrary sense, and having two posteriorly diverging, rapidly and finely acuminate basal alæ and a terminal asymmetric button.

Typhæa *Curtis.*

Closely related to *Tritoma* and distinguished by the much smaller size of the body and the form of the eyes. The single species seems to be cosmopolitan:—

Narrowly oblong-oval, moderately convex, pale flavo-testaceous throughout, the elytra rarely piceous; antennæ with a 3-jointed club, distinctly shorter than the head and prothorax, the latter about twice as wide as long, with the apex but little narrower than the base and the sides arcuate, the punctures fine, subequal and rather close-set; elytra finely punctate, with unimpressed series of fine punctures

becoming obliterated toward tip, the pubescence short, moderately dense; each strial interval with a single series of suberect hairs. Length 2.25–2.7 mm.; width 0.85–1.15 mm. Vermont to Washington State, Florida and Texas

fumata *Linn.*

The single specimen with dark elytra is from Palm Beach, Florida, and seems to have the prothorax slightly less transverse and the antennal club a little thicker: additional material may ultimately prove it to represent a variety or closely related species.

Litargus *Erichs.*

This genus differs profoundly from the two preceding in the form of the epipleuræ, but the eyes are nearly as in *Tritoma* and the antennæ have a loose 3-jointed club as in *Typhæa*. The ornamentation of the elytra is similar to that of *Tritoma*, and the body is very small in size. The species are rather less numerous than in *Tritoma* and may, as far as discovered, be separated by the following characters:—

Elytra with the pubescence short and sparse but stiff, pale in color and arranged throughout in even approximate series, piceous to blackish in color, each with a large transversely oval discal spot near basal and apical fourth, the posterior approaching more closely to the suture; punctures sparse throughout, the body rather broadly oval, convex and shining, the pronotum not impressed at base but with the basal sinuation at each side of the middle distinct; last antennal joint short, rounded, the labrum small; epistomal suture wholly obsolete. Length 1.7–2.0 mm.; width 0.85–1.2 mm. Rhode Island to Texas and Lake Superior. [**Tilargus,** sg nov.].....**4-spilotus** *Lec.*

Elytra with the pubescence in general confusedly arranged.....2

2—Elytra with fine dark pubescence, closely punctulate and with widely separated single series of longer semi-erect and paler hairs, each with a small subbasal spot at three-fifths from the suture, a larger triangular subsutural spot at two-sevenths and an obliquely oval subsutural spot at five-sevenths, the pale spots clothed also with pale hairs; pronotum finely, not very densely punctate, the punctures simple and not asperate, feebly biimpressed at base; body elongate-oval and depressed; last antennal joint short, narrowly rounded at tip; labrum large and very transverse. [**Litargus** in sp.; type *connexus*]. Length 2.2 mm.; width 1.1 mm. Illinois and Kansas.....**6-punctatus** *Say*

Var A—Similar but with the rows of erect paler hairs only evident toward the sides of the elytra, the basal spot more oblique, the anterior subsutural smaller, rounded and more distant from the suture, the elytra relatively less elongate, the spots subobsolete occasionally. Length 1.8–2.2 mm.; width 0.9–1.2 mm. New Jersey and Indiana.....**obsolescens,** v. nov.

Elytra without widely separated series of pale hairs.....3

3—Epipleuræ strongly concave and deeply descending, the epistoma trapezoidal as usual.....4

Epipleuræ much narrower, almost flat and but slightly descending externally; epistoma rounded, the suture fine but rather more distinct; punctures granulato-asperate; last antennal joint short and transverse, somewhat obliquely but broadly rounded at tip; pronotum not at all impressed at base and with the sinuations very feeble. [**Paralitargus,** sg. nov.].....7

4 – Last antennal joint elongate, the tip obliquely and rectilinearly truncate; pronotal punctures simple. [**Alitargus,** sg. nov.].....5

Last antennal joint short and very broadly, subobliquely arcuato-truncate at apex; pronotal punctures minute, slightly elevated and subannulate. [**Litargĕllus,** sg. nov.].....6

5—Rather narrowly oval, moderately convex, shining, piceous or darker, finely, rather closely punctate, the pronotum with two feeble subbasal impressions, the basal sinuations small but evident; elytra with humeral, post-scutellar, subsutural and transverse post-median paler maculation and also with a very feeble paler spot at the side margin at two-sevenths, the paler spots clothed with paler pubescence. Length 1.75–1.9 mm; width 0.9–1.0 mm. Texas to California (Los Angeles). **balteatus** *Lec.*

Var A—Similar but larger, more elongate-oval and more depressed, the body generally darker, the subbasal impressions of the pronotum feebler and less linear, the elytra similarly maculate. Length 2.2–2.4 mm., width 1.0–1.15 mm. California (San Francisco).....**transversus** *Lec.*

6—Body oval and strongly convex, shining, the punctures sparse, the pubescence fine and rather sparse, closely decumbent and even; prothorax about two and one-half times as wide as long, the sides strongly converging from base to apex and moderately arcuate, flavo-testaceous, sometimes transversely clouded with piceous in the central part; elytra flavo-testaceous, each with three incomplete narrow piceous fasciæ, the two posterior anteriorly arcuate, the subbasal less obvious. Length 1.5–1.75 mm.; width 0.73–0.83 mm. New York and Pennsylvania to New Mexico (Las Cruces).....**nebulosus** *Lec.*

7—Elytra with the post-median pale fascia transverse, or, to a slight degree, posteriorly oblique toward the suture. Body narrowly oblong-oval, rather convex, not coarsely but strongly, somewhat closely and asperately punctate, blackish throughout above, the elytra each with an oblique pale spot from the humeri nearly to the suture at two-sevenths and a more or less narrow fascia at four-sevenths, which is virtually entire. Length 1.6–1.9 mm.; width 0.7–1.0 mm. Rhode Island and Illinois to Florida (Palm Beach).....**didesmus** *Say*

Elytra with the posterior pale area median and anteriorly oblique toward the suture. Body narrowly oval and convex, not densely but strongly, evenly and asperately punctate, the pubescence shorter and sparser but coarse and rather pale in color; integuments piceous above, the elytra each with an oblique subbasal pale spot nearly as in *didesmus* and also having an equally broad and conspicuous pale spot extending from the sides, just behind the middle, almost to the suture well before the middle and near the apex of the subbasal spot. Length 1.6 mm.; width 0.78 mm. Dakota—Mr. Wickham.....**asperulus,** sp. nov.

In *6-punctatus* and its varieties the epistoma of the male is clothed densely with an extremely fine short pale pubescence, which is want-

ing in the female, and the labrum is larger than in any other species, extending to the extreme limits of the epistomal truncature. *Infulatus* of LeConte, I have not seen; it is said by Horn to be a synonym of *balteatus*.

Thrimolus, gen. nov.

This genus is composed of a single exceedingly minute species, differing radically from those which precede in the broadly rounded basal angles of the prothorax. The body is oblong-oval, moderately convex, clothed rather sparsely with coarse and moderately long reclined hairs, with other longer erect setæ serially bristling from the elytral flanks. The head is large, transverse and well developed, the eyes moderately large, basal, not very prominent, somewhat transversely oval, entire and much less coarsely faceted than usual; the clypeus is rather short and broad, with the suture transversely rectilinear, not impressed and very feeble. Antennæ moderate in length, 11-jointed, with a compactly cylindric stout and 3-jointed club, the joints six to eight gradually increasing in width and decreasing in length, the latter as wide as the base of the club. Prothorax broadly arcuate and very finely beaded at base. Scutellum well developed, broadly subtriangular or parabolic. Anterior coxæ large, obliquely suboval, very convex and narrowly separated. Basal segment of the abdomen as long as the next two combined; two to four relatively shorter than usual and gradually diminishing somewhat in length, the hind coxæ very narrowly separated. Legs slender, coarsely, sparsely herissate with moderately long hairs, the tarsi extremely slender, filiform, much shorter than the tibiæ, with the basal joint but little longer than the second, normally 4-jointed throughout, the claws small and very slender; tibial spurs small and much less developed than usual.

The antennæ are bilaterally symmetric, shorter and more compact than in *Typhæa* and the elytral punctures are altogether irregular in distribution. The type may be briefly defined as follows:—

Body dark luteo-testaceous in color throughout, the legs and antennæ still paler, the club of the latter very feebly infuscate, shining; head and pronotum subimpunctate, the latter short and strongly transverse, more than twice as wide as long, the sides converging, broadly arcuate and subcontinuous with those of the elytra, the disk wholly devoid of basal foveæ or impression; elytra oblong-oval, rather convex, slightly longer than wide, broadly and obtusely rounded conjointly at tip, much wider than the prothorax and more than three times as long, the sides broadly arcuate; punctures very fine, sparse and subasperate; under surface shining, sparsely clothed with coarse inclined hairs. Length 0.78 mm.; width 0.45 mm. Texas..... **minutus**, sp. nov.

The single example before me is so frail that I am unable to dismount it to better observe the structure of the mouth, the trophi however appear to be in perfect homology with the rest of the family.

MYRMECHIXENINÆ.

This subfamily is evidently assigned properly to the Tritomidæ by LeConte and Horn, although the facies departs conspicuously by reason of the small prothorax and wide elytra, the latter rather sparsely clothed with an even decumbent vestiture, finer and less conspicuous than in Tritominæ. The single genus is as follows:—

Myrmechixenus *Chev.*

Our single species occurs throughout the more southern parts of the United States, from the Atlantic to the Pacific, and may possibly be identical with some European form; it may be briefly defined as follows:—

Body narrowly oblong, convex, rather shining though finely, deeply and very closely punctured throughout, reddish-brown in color, the legs and antennæ paler; head subtriangular, the eyes well-developed, moderately convex, coarsely faceted as usual; antennæ moderate, the club loosely 5-jointed, joints six to eight increasing gradually in width; prothorax distinctly wider than the head, slightly transverse, widest near apical third, the sides parallel, rounded, the base and apex equal and feebly arcuate; elytra between two and three times as long as the prothorax and about two-fifths wider, the humeri exposed at base; sides parallel and broadly arcuate, the apex obtusely rounded; abdominal segments convex, gradually and but slightly decreasing in length, as usual in the Tritomidæ, the last partly exposed dorsally. Length 1.7–1.8 mm.; width 0.75–0.78 mm..... .....**latridioides** *Crotch*

This species does not appear to be very common; the specimens in my cabinet are from South Carolina, El Paso, Texas, and Riverside, California, the latter sent to me by Mr. H. C. Fall. The basal joint of the hind tarsi is much elongated, as in normal members of the family, which is an additional reason for believing that it is correctly placed in the Tritomidæ.

DERMESTIDÆ.

The Dermestidæ are a small family of clavicorn beetles, which, in their notably varied structural characters, seem to constitute one of the old synthetic types of Coleoptera, having some philogenetic relationship with both the Geodephaga and Serricornia. They have the anterior coxal cavities open behind, the tarsi simple and 5-jointed,

the claws unmodified, the sternal side pieces very wide and the hind coxæ lamellate and transversely excavated. The antennæ are extremely varied in structure and may or may not be received within protecting pits or excavations, and the legs may be free or strongly retractile. In considering the depression for the protection of the antennæ, a distinction should be drawn between a large and vaguely limited concavity of the hypomera—or inflexed side of the prothorax—as in *Dermestes*, and a closely circumscribed and sharply defined pit; the former characterizes most of the genera in some form, and becomes a true protective fossa in a few genera, but the latter only occurs in *Anthrenus*.

The genus *Trixagus* (*Byturus* Lat.), is evidently allied to the Dermestidæ, but differs in so many radical characters, such as the closed anterior acetabula, lobed tarsi, dentate claws, narrow sternal side pieces and structure of the mesosternum, that the position assigned it by Reitter as a distinct family is probably as satisfactory as any, and I have therefore not considered it in the following revision. As thus restricted, the American Dermestidæ may be assigned to five distinct tribes characterized as follows:—

Head without ocellus; anterior coxæ large, contiguous, the prosternum not visible between them, the mesosternum between the coxæ moderately wide, ogival and not sulcate; antennæ 11-jointed, with a 3-jointed club, similar in the sexes and not received within sharply circumscribed pits; hypomera concave anteriorly; epipleuræ strongly defined, wide and inflexed toward base; body clothed with short hairs ..... DERMESTINI

Head with a single ocellus 2

2—Prosternum visible between the coxæ; metacoxal lamina not extending to the sides of the body. 3

Prosternum not visible between the coxæ; metacoxal lamina extending to the sides of the body 5

3—Metacoxal plate extending laterally half way across the parapleuræ; prosternal process impinging upon the exposed surface of the mesosternum between the coxæ; epipleuræ well developed toward base; legs in great part free; body clothed with short hairs ..... ATTAGENINI

Metacoxal plate only extending laterally to and abutting against—squarely in Trinodini, obliquely in Anthrenini—the inner boundary of the parapleuræ 4

4—Epipleuræ subobsolete; lateral margin of the prothorax entire as usual; antennal club received within deep fossæ at the apical thoracic angles; body compact, clothed with decumbent scales, the legs all very closely retractile; coxæ large; scutellum very minute ..... ANTHRENINI

Epipleuræ narrow but strongly delimited and inflexed toward base; lateral thoracic margins obliterated at apex; legs and antennæ perfectly free, excepting, as usual,

the hind femora; coxæ small; body clothed with long sparse erect coarse and bristling hairs; scutellum large ....TRINODINI

5—Anterior coxæ contiguous at apex over the prosternum, which has the form of a transverse pointed plate; antennæ 11 jointed, the club 3-jointed, not received within abruptly excavated pits, the hypomera biconcave; legs very closely retractile; body glabrous, the epipleuræ distinct toward base; scutellum well developed. ORPHILINI

Except the small and isolated tribe Trinodini, which is confined to the Atlantic and Sonoran regions, all of these groups are very general in distribution.

DERMESTINI.

The genus *Dermestes* differs so greatly from the other types of the family in the absence of the very characteristic vertexal ocellus and contiguous anterior coxæ, that it is necessary to regard it as a distinct tribe. The metacoxal lamina is narrow, extending only to the parapleuræ, and is notably elongate internally, the tibiæ seriate with short stout spinules and the tarsi rather stout, with the basal joint shorter than the second, generally very markedly so, but sometimes only slightly as in *lardarius*.

Dermestes *Linn.*

The species of *Dermestes* are rather numerous and are the largest of the family. They can be readily classified by the form of the inner marginal suture of the abdomen toward base, and by the form and vestiture of the prothorax, as follows:—

Inner lateral suture of the first abdominal segment inflexed at base to the outer limit of the hind coxæ, becoming deeply excavated at the basal margin 2

Inner lateral suture straight, not inflexed basally and distant at base from the outer limit of the coxæ; pronotum not deeply declivous laterally, the margin visible throughout from above 10

2—Pronotum clothed densely throughout with variegated black and fulvous pubescence, except in *medialis*, the flanks deeply declivous; male with the third and fourth segments foveolate at the middle.....3

Pronotum clothed with dense cinerous pubescence laterally, leaving a large triangular or parabolic discal area sparsely clothed with almost uniform pubescence, the flanks rather deeply declivous.....7

Pronotum somewhat sparsely or inconspicuously and quite uniformly pubescent throughout, the flanks less declivous, the lateral margin visible from above throughout the length; third and fourth ventrals foveolate in the male.....9

3—Pronotum having, as a marked feature of the vestiture, three widely separated points of pale pubescence arranged transversely at about the middle of the length.....4

Pronotum without the three points of paler pubescence.....6

4—Large species, 10 mm. or more in length; vestiture cinereous to ochreous, the pale points of the pronotum cinereous, sometimes ochreous and less distinct; elytra with a large oblong area of dense pubescence at each side, extending two-fifths, and elsewhere marmorate with black and cinereous or ochreous hairs; ventral segments each with the usual lateral dark spot, that of the basal segment very large; median foveæ of the male very small. Length 10.0–12.5 mm.; width 3.9–5.3 mm. Texas to California.....**marmoratus** *Say*

Smaller species, always distinctly less than 10 mm. in length.....5

5—Pronotal punctures fine and more distinctly separated; body moderately large, the elytra marmorate with cinereous and black, usually subtransversely, and with certain parts of the surface uniformly clothed with the pale hairs, the abdomen densely clothed with whitish pubescence, with black lateral spots; ventral foveolæ of the male much larger than in *marmoratus*. Area of uniform pale pubescence subquadrate, extending from near the base to basal third and from the side margin nearly to the middle. Length 7.5–8.4 mm.; width 3.5–3.75 mm. Atlantic Coast from Canada to Florida (Palm Beach); [*nubilus* Say, *dissector* Kby., and *murinus* Lec. nec Linn.].....**caninus** *Germ.*

Var. A—Area of pale pubescence extending from near the base scarcely to basal third, but prolonged transversely to or near the suture. Length 7.0–8.3 mm.; width 3.0–3.75 mm. Pacific Coast.....**mannerheimi** *Lec.*

Var. B—Area of pale pubescence extending entirely across the elytra and prolonged to about apical third. Length 6.5–8.0 mm.; width 3.2–3.7 mm. Iowa (Keokuk) to Florida; [*nubilus* Lec. nec Say]...**nubipennis,** v. nov.

Var. C—Area of pale pubescence extending at the lateral margin from the base for two-fifths and dilated internally subbasally nearly to the middle, the entire sutural region also clothed with a very large preponderance of pale hairs. Length 8.3 mm.; width 3.65 mm. Texas (Galveston).

compactus, v. nov.

Pronotal punctures quite coarse and more close-set; body very small in size, the elytra clothed to the tip with dense cinerous pubescence, with a few small black spots, especially at base; ventral pubescence much less dense, especially toward tip. Length 5.0 mm.; width 2.2 mm. Oregon.....**rattus** *Lec.*

Pronotal punctures coarse, deep and narrowly separated; body small in size, elongate-oval and strongly convex, deep black throughout, the pronotum clothed rather sparsely and almost uniformly with dusky pubescence, with three small widely separated spots of pale pubescence arranged transversely; scutellum transverse, densely clothed with coarse pale yellowish hairs; elytra rather coarsely and quite closely punctured and clothed uniformly throughout with short blackish inconspicuous hairs; abdomen densely clothed with white pubescence only in the middle third of the two basal segments, elsewhere more sparsely clothed with a mixture of white and fuscous hairs; femora annulated. Length 5.6 mm.; width 2.4 mm. California.....**medialis,** sp. nov.

6—Elytra transversely marmorate with black and cinereous pubescence, the pale hairs generally forming a condensed transverse fascia behind the base, the portion thence to the basal margin having some fulvous hairs intermingled; body larger and more broadly oval. Length 6.8–7.5 mm.; width 3.0–3.5 mm. Wyoming to New Mexico (Fort Wingate).....**fasciatus** *Lec.*

Elytra finely and more uniformly variegated with black, cinereous and fulvous hairs throughout; body narrowly and evenly ellipsoidal, rather small in size. Length 5.0–6.7 mm.; width 2.35–3.0 mm. Idaho (Cœur d'Alène), Nevada (Reno) and California (San Francisco and Monterey).....**talpinus** *Mann.*

7—Elytra black, rufo-piceous toward the humeri, where there is a small post-humeral area of fulvous pubescence, elsewhere marmorate subtransversely with black and cinereous pubescence; body rather small and stout, the abdomen very densely clothed with white hairs, the black marginal spots very small; male with the third and fourth segments foveolate. Length 6.5–6.9 mm.; width 2.9–3.25 mm. Arizona; [*mucoreus* Lec.].....**carnivorus** *Fabr.*

Elytra uniform in color and uniformly clothed with a mixture of black and paler hairs; fourth ventral alone foveolate in the male, at least in *vulpinus*..... 8

8—Elytra piceous, uniformly and rather sparsely clothed with a mixture of black and fulvo-cinereous hairs in almost equal proportions, dense whitish pubescence toward the sides of the pronotum not maculate at base; body elongate. Length 5.8–8.9 mm.; width 2.4–3.6 mm. Indiana, Florida, California and Guadalupe Island..... ....**vulpinus** *Fabr.*

Elytra black, sparsely clothed with black hairs, among which longer yellowish-cinereous hairs are uniformly but sparsely intermingled; densely pubescent lateral area of the pronotum with a small rounded dark spot at base; body stouter and more oval. Length 7.5–8.5 mm.; width 3.5–3.75 mm. New Jersey, Virginia (Fort Monroe) and Iowa (Keokuk).....**frischi** *Kug.*

9—Pubescence throughout above and on the abdomen uniform and yellowish-cinereous, somewhat sparse, not concealing the sculpture, the abdomen without trace of quasi-denuded dark spots at any part; body very elongate, subparallel, the pronotum with two pronounced basal impressions and the elytra with feebly impressed longitudinal lines extending almost to the base. Length 8.9 mm.; width width 3.6 mm. Indiana.....**elongatus** *Lec.*

Pubescence, thoracic impressions and elytral lines as in *elongatus*, the vestiture of the abdomen even less conspicuous and dark fulvous in color, with two marginal and two discal series of rounded subdenuded spots, the two male foveolæ small; legs not annulated; body shorter and less parallelo-subcylindric than in *elongatus*. Length 7.5 mm.; width 3.3 mm. Florida (Key West).....**cadaverinus** *Fabr.*

10—Elytra densely cinereo-pubescent in basal two-fifths or more, each with three small nigro-pubescent points in transverse posteriorly arcuate series at or near basal fourth; male with two ventral foveolæ.....11

Elytra black, pale and fulvo-pubescent at base for a short distance, not maculate; male with two ventral foveolæ.....12

Elytra piceous, uniform in color and vestiture throughout; male with a single ventral foveola on the fourth segment as in *vulpinus*..... 13

11—Pronotum closely punctured throughout and uniformly clothed with blackish hairs, with small clusters of yellowish-cinereous hairs interspersed; basal pubescent area of the elytra not extending to the middle and sharply delimited, the hairs of the remainder being entirely black. Length 6.8–7.7 mm.; width 2.75–3.4 mm. United States and Europe.....**lardarius** *Linn.*

Pronotum finely and sparsely punctured toward the middle, clothed uniformly throughout with longer fulvo-cinereous pubescence, the elytra rufo-piceous throughout,

the densely pubescent basal area extending well beyond the middle and not sharply defined, the pubescence of the remaining parts being in large part similar in color but sparser. Length 5.7–7.4 mm.; width 2.5–3.2 mm. Vancouver Island and New Mexico (Fort Wingate).....**signatus** *Lec.*

12—Body oblong-oval, more depressed than usual, pale rufo-ferruginous throughout above and beneath and clothed with rather sparse fulvous pubescence, the elytra black, except at the basal margin and along the sides to basal fourth or more, the black parts clothed uniformly with inconspicuous blackish pubescence; abdomen without quasi-denuded spots. Length 6.3 mm.; width 3.0 mm. Illinois.
pulcher *Lec.*

13—Narrow and convex; body and legs throughout uniform dark piceous-brown in color, the pronotum rather finely, not very densely punctate, deeply and narrowly bisinuate at base, broadly biimpressed at the basal margin, with rounded hind angles, the vestiture uniform throughout and consisting largely of fulvo-cinereous hairs; elytra clothed rather sparsely with dark pubescence, with fulvo-cinereous hairs sparsely and uniformly interspersed throughout; pubescence of the under surface denser and uniformly flavo-cinereous, the abdomen without quasi-denuded spots. Length 6.7 mm.; width 2.7 mm. Texas (El Paso).
angustus, sp. nov.

Sobrinus of LeConte, I have been unable to identify amidst the material accessible to me. *Rattus* and *signatus* are by no means varietal forms, but perfectly valid and very interesting species; *mannerheimi* seems, however, to be a variety of the very widely distributed *caninus*; it is wholly different from *marmoratus*, as I have previously pointed out (Bull. Bk. Ent. Soc.). The identity of *mucoreus* and *carnivorus* rests upon the authority of the Hanshaw List. Say described his *nubilus* from Florida and Pennsylvania, and the characters given coincide entirely with those of *caninus* and not with the more pubescent form named *nubipennis* above.

ATTAGENINI.

This is the largest tribe of the family, and contains a considerable number of genera having the legs more or less free throughout. The laminate portion of the hind coxæ extends about half way across the end of the parapleuræ; the epipleuræ are distinct and generally strongly defined toward base, and the prosternal process is visible, though generally narrow, between the coxæ, its free tip resting in an apical pit of the mesosternum which is frequently prolonged to the apex of the latter as a well-defined sulcus or fossa. The antennæ are of varied structure, and the antennal fossa may be traced in successive stages of development through the genera in an instructive and interesting manner. In the first four or possibly five genera of the tribe,

the hypomera are merely flat or concave, without trace of an enclosed antennal fossa, but in *Trogoderma* the fossa appears in one of its primitive stages, and may be conceived to be the result of retractility of the anterior femora. The crural fossæ are deep and defined anteriorly by a strongly elevated acute cariniform line, extending obliquely to the hind angles of the prothorax, and forming the posterior boundary of the hypomeral concavity. To suggest that this latter concavity has not been evolved primarily as a shelter for the antennæ as in *Anthrenus*, for example, it may be observed that it is equally large and well formed in both sexes, although the antennæ differ sexually to a great degree, and it is only in the male that it is in any way completely utilized or compactly filled by that organ; in the female, where the antennæ are comparatively very feebly developed, these organs lie in repose along the bottom of the concavity, which is much too large to form a secure shelter. In *Trogoderma* the fossa occupies the entire length of the prothorax, but in *Cryptorhopalum* while having a general form which undoubtedly betrays a development from that of *Trogoderma*, it has become smaller and forms a secure shelter for the antennæ, these having become similar in the sexes and assuming a form so radically different from those of *Trogoderma* that it is difficult to trace any philogenetic relationship, and in *Thaumatoglossa*, the modification is carried still further, the two closely connected club-joints of *Cryptorhopalum* becoming a single very large joint. *Acolpus* appears to be a very satisfactory intermediate between the non-fossate genera and *Trogoderma*, and it is possible that more careful observation may there show the antennal fossa in a still more incipient stage of formation. The American genera may be defined as follows:—

Basal joint of the hind tarsi very short, much shorter than the second; antennal fossa not defined; legs free, the hind femora retractile as usual.....2

Basal joint elongate, generally but little shorter than the next two combined; antennæ 11-jointed in both sexes.....3

2—Antennæ 11-jointed in both sexes, the two basal joints of the male club short and transverse, the last greatly elongated; mesosternum between the coxæ longer than wide, not sulcate, the anterior coxæ narrowly separated; metacoxal lamina greatly elongated internally.....**Attagenus**

Antennæ 10-jointed in the male, 11-jointed in the female, the two basal joints of the male club much elongated and the last joint relatively much less so; mesosternum between the coxæ very narrow and elongate, not sulcate, the prosternal process extremely narrow; metacoxal lamina as in *Attagenus*, the epipleuræ less inflexed and less strongly defined; body with denser and more variegated pubescence.....**Novelsis**

Antennæ 9-jointed in both sexes, the club oval, compact and dilated in the male, with its two basal joints very short and transverse; mesosternum between the coxæ rather narrow, divided longitudinally throughout by a narrow shallow sulcus; anterior coxæ narrowly separated; hypomera feebly concave anteriorly; metacoxal lamina short, gradually and very slightly longer internally; epipleuræ narrow but distinct.....**Dearthrus**

3—Hypomera indefinitely concave as usual, without antennal fossa.....4

Hypomera with a deep concavity which is well defined internally by acute edges...5

4—Antennal club 3-jointed in both sexes, formed nearly as in *Attagenus* but with the last joint less elongate in the males; mesosternum between the coxæ moderately narrow, divided throughout by a very shallow longitudinal impression and deeply emarginated behind by the tip of the metasternal process; anterior coxæ rather narrowly separated; epipleuræ strongly defined; metacoxal lamina scarcely at all longer internally.....**Perimegatoma**

Antennal club of the male 6-jointed and serriform, nearly as in *Trogoderma*; hypomera concave; metacoxal plates only attaining the parapleuræ; mesosternum as in *Trogoderma* [Jayne].....**Acolpus**

5—Antennæ stout, claviform and usually serrate in the male, with the subbasal joint small, generally very small and with a narrow 4-jointed club in the female; mesosternum very short and wide between the coxæ and completely divided longitudinally by a deep broad sulcus; anterior coxæ rather narrowly separated; metacoxal lamina short, gradually, feebly and rectilinearly longer internally, as in *Dearthrus*; epipleuræ rather feebly inflexed and not coarsely delimited; anterior femora retractile, the crural cavities separated from the antennal fossæ by a thin cariniform interval.....**Trogoderma**

Antennæ with a large oval and compactly 2-jointed club, securely and closely fitting in repose within deep fossæ, which are separated by a flat interval from the crural cavities in both sexes; mesosternum as in *Trogoderma*, the anterior coxæ more widely separated; epipleuræ feebly inflexed, rather well defined; metacoxal lamina short, with its hind margin transverse.....**Cryptorhopalum**

Antennæ with a male club consisting of a single very large subsecuriform joint, closely fitting in repose within hypomeral fossæ; remaining characters nearly as in *Cryptorhopalum*; [*Axinocerus* Jayne].....**Thaumatoglossa**

If the metacoxal plates only attain the parapleuræ in *Acolpus*, as stated by Jayne, this genus forms a remarkable exception to the entire tribe, and I strongly suspect that the author is mistaken. Neither this genus nor *Thaumatoglossa* is represented before me at present, and I am therefore unable to consider them below. The species are all pubescent, generally with nubilous variation in density, usually elongate or oblong-oval in form and of less compact build than in the Anthrenini or Orphilini, but similar in this respect to the Dermestini and Trinodini.

Attagenus *Latr.*

The prosternal process is wider between the coxæ than in *Novelsis*, though still very narrow, and the species are larger, stouter, more oblong and almost uniformly clothed with rather sparse dark and inconspicuous pubescence. The species are somewhat numerous but closely allied among themselves, those forms which are apparently worthy of distinctive names may be defined as follows :—

Elytra deep black throughout, the head and pronotum concolorous.. 2
Elytra rufous to piceous-black in color, the anterior parts frequently darker than the elytra..... 4
2—Elytra each with a small spot of white pubescence at the middle of the length and at inner fourth of the width ; pronotum with three small and widely separated areas of pale pubescence at base ; third joint of the male antennal club black, as long as the entire remainder of the antenna and rather more than four times as long as the two basal joints of the club combined. Length 4.0 mm.; width 2.0 mm. Rhode Island.....**pellio** *Linn.*
Elytra without paler pubescence at any part ; pronotum without pale hairs at the base.....3
3—Pronotum coarsely and closely punctate, without subbasal impressions ; antennæ of the male nearly as in *pellio* ; pubescence fulvo-piceous in color. Length 3.3–4.0 mm.; width 1.6–1.9 mm. Indiana and California ; [*megatoma* Fabr.].
piceus *Oliv.*
Pronotum very finely and less closely punctured, with three widely separated subbasal impressions ; body more broadly oblong-oval, shining ; legs piceous, the tarsi ferruginous, pubescence blackish ; last joint of the female club more than one-half longer than the two preceding combined ; male not observed. Length 3.8 mm.; width 2.0 mm. Idaho (Cœur d'Alène).....**schæfferi** *Herbst*
4—Pronotum not impressed, or clothed with paler pubescence along the basal sinuations..... 5
Pronotum feebly impressed along the broadly rounded basal sinuations, the impressed margin clothed with finer and pale pubescence,.....9
5—Entire upper surface dark piceous-brown to piceous-black in color ; pronotum with a feeble subbasal impression before the scutellum.....6
Elytra bright red, sometimes narrowly infuscate along the suture, the head and pronotum black and much more closely punctured, the ante-scutellar impression not visible.....8
6—Last joint of the male antennal club black, about as long as the entire preceding part of the antenna, which is testaceous, and slightly more than three times as long as the two preceding joints combined ; body moderately stout, oblong-oval, legs ferruginous throughout. Length ♂ 3.2, ♀ 3.7 mm.; width ♂ 1.7, ♀ 1.85 mm. Pennsylvania.....**extricatus**, sp. nov.
Last joint of the male antenna much shorter than the entire preceding part.....7
7—Male club stout, the last joint two and one-half times as long as the two preceding combined ; prothorax of the male fully twice as wide as long. Length ♂ 3.25, ♀ 3.4–3.7 mm.; width ♂ 1.6, ♀ 1.65–1.85 mm. New York, District of Columbia and Virginia (Norfolk).....**deficiens**, sp. nov.

Male club relatively still shorter, the last joint but slightly more than twice as long as the two preceding combined; prothorax less transverse and less strongly and densely punctured, not quite twice as wide as long, the male narrower and the female larger than in *deficiens*. Length ♂ 2.8–3.1, ♀ 3.8–4.5 mm.; width ♂ 1.4–1.65, ♀ 2.0–2.4 mm. Iowa (Keokuk) and Nebraska; [*spurcus* Lec., *floricola* and *obscurus* Mels., i. litt.].....**cylindricornis** *Say*

8—Body narrowly oval or oblong-oval, the head and pronotum strongly and moderately closely punctured, the elytra unusually sparsely and much less coarsely so; hypomera but feebly concave; last joint of the male antennæ black, longer than the entire preceding part and four times as long as the two preceding joints combined; female club black; under surface piceous, the legs ferruginous throughout. Length ♂ 2.9, ♀ 3.6–4.1 mm.; width ♂ 1.35, ♀ 1.7–2.1 mm. California to Utah.....**rufipennis** *Lec.*

9—Head and pronotum generally blackish-piceous, the elytra rufous, the entire body sometimes testaceous; hypomera deeply concave; punctures moderately dense, those of the pronotum finer than the elytral; male club very elongate and slender, the last joint contorted distally, longer than the entire preceding parts. Length ♂ 3.2, ♀ 4.9 mm.; width ♂ 1.65, ♀ 2.4 mm. Iowa (Keokuk); [*dichrous* Lec.].....**bicolor** *G. & H.*

Head and pronotum blackish, the elytra somewhat, but not very noticeably, paler piceo-rufous; in body and antennæ nearly similar to *bicolor*, the former obviously narrower and relatively more elongate-oval. Length ♂ 2.9–3.4, ♀ 4.4 mm.; width ♂ 1.4–1.7, ♀ 2.1 mm. Nebraska to Utah.....**elongatulus,** sp. nov.

As may be inferred from the detailed measurements given in the table, the female is generally very much larger than the male, but in *extricatus* and *deficiens* there is greater equality in this respect, judging from the material accessible to me. The discriminative work hitherto bestowed upon this comparatively monotonous, and consequently less interesting, genus, has been very superficial, and detailed study of the male antennæ reveals a variety of structure too great apparently to be the result of fortuitous variation; some of the names proposed by LeConte must therefore be restored to specific weight; *rufipennis* is, in fact, quite isolated as a species—more so than *pellio* when compared with *piceus* for example. The diagrams given in the accompanying cut will serve to show some of the variations in the club of the male antennæ, and, although some variability in an organ so over-developed is to be expected, it will be probably granted that such extreme variations,

FIG. 3.

1, Antennal club of *Attagenus extricatus* ♂; 2, same of *A. cylindricornis;* 3 same of *A. deficiens;* 4, same of *A. elongatulus;* 5, antenna of *Dearthrus longulus.*

especially when accompanied by differences in the form, color and sculpture of the body, must, until further evidence, be held to have specific weight.

Novelsis, gen. nov.

This genus is comparatively local, occurring only in the Sonoran provinces, and is distinguishable at once from *Attagenus* by the structure of the antennal club and hypomera and the 10-jointed male antenna as well as by the complex vestiture. The few species before me may be identified as follows :—

Hypomera nearly horizontal, not concave and with the outer edge rather obtuse and not at all descending; mesosternum very narrow between the coxæ. [**Novelsis,** in sp.] 2

Hypomera concave and strongly descending, the outer edge very acute; mesosternum wider between the coxæ. [**Paranovelsis,** sg. nov.] 6

2—Elytra without distinct paler pubescent maculation behind the middle 3

Elytra with transverse paler pubescent spots or bands in apical half 5

3—Elytra with the suture, external margin in basal two-fifths, and an oblique line connecting the latter with the pale sutural line at basal third or less, pale testaceous and clothed with coarser fulvo-cinereous hairs, the remainder blackish and clothed with shorter blackish pubescence; head and pronotum blackish, the basal margin of the latter testaceous; last joint of the male antennal club much longer than the preceding. Length 3.2 mm.; width 1.5 mm. Arizona.... **horni** *Jayne*

Elytra piceous to testaceous in color and almost uniform throughout, the pubescence dense and less variegated, a condensed oblique spot near basal third generally more or less distinct 4

4—Subbasal spot of condensed cinereous pubescence posteriorly angulate at inner third or fourth of the width; body stouter; sides of the prothorax strongly convergent and distinctly arcuate. Length 2.7–3.4 mm.; width 1.55–1.75 mm. Arizona. **byturoides,** sp. n. (Cr. MS)

Subbasal spot straight and oblique, frequently suffused and indistinct; body narrower and much smaller in size, the prothorax less narrowed at apex, the sides very broadly and feebly arcuate from base to apex; last joint of the male antenna three times as long as wide and distinctly shorter than the two preceding combined. Length 2.4–2.65 mm.; width 1.15–1.35 mm. Utah (southwestern)—Mr. Weidt. **uteana,** sp. nov.

5—Body narrow and elongate-oval, convex, piceous-black above and beneath, the legs testaceous; pubescence very dense, rather short, subdecumbent, the longer semi-erect hairs not conspicuous, uniform, brownish-cinereous on the pronotum and pale areas of the elytra, of which there is, on each, a large transverse basal spot, an oblique fascia between basal third and fourth, separated from the spot by a short transverse darker interval, a narrow and irregularly sinuous transverse band near apical third, and a straight transverse fascia very near the apex prolonged to the apical angles along the suture; male antennal club extremely long, the last joint nearly as long as the two preceding combined and as long as the

width of the head. Length 3.25 mm.; width 1.65 mm. Arizona (Riverside)—Mr. Wickham ..... **picta,** sp. nov.

6—Body much broader, oblong-oval, more sparsely pubescent, the sub-erect hairs longer, abundant and conspicuous; elytra piceous, variegated with paler and with three transverse fasciæ of pale hairs, the second usually divided into two spots on each elytron, and the third broadly interrupted at the suture, also with a spot of paler pubescence at each side of the scutellum. Length 3.4 mm.; width 1.8 mm. Arizona ..... **varicolor** *Jayne*

Perplexa of Jayne, I have not seen, but it is evidently allied to *byturoides*, differing in the relatively shorter last joint of the antennal club. *Byturoides* was considered by Dr. Jayne as the female of *horni*, but this is not the case, as I have both male and female of that species as well as the allied *utcana*.

Novelsis differs from *Lanorus* in antennal and hypomeral structure, and from *Telopes* in the structure and armature of the legs in addition.

Dearthrus *Lec.*

This genus is allied to *Attagenus* but differs in having the mesosternum completely divided by a narrow shallow sulcus, in the 9-jointed antennæ and in the shorter, less inwardly postero-extended metacoxal lamina. The single species may be defined as follows from the male:—

Narrowly oblong-oval, moderately convex, piceous-black in color; prothorax twice as wide as long, strongly narrowed from base to apex, with the sides evenly and feebly arcuate, the base broadly and feebly lobed, feebly oblique and sinuate laterally, the surface rather strongly but not densely punctate, with a fine excavated median line not attaining base or apex; elytra three-fourths longer than wide, rather strongly but not very closely punctured; under surface black, the legs rufo-piceous; pubescence throughout dark in color, uniform, short and not conspicuous; antennæ as figured under *Attagenus*. Length 2.4 mm.; width 1.15 mm. Indiana..... **longulus** *Lec.*

Apparently rare; I have before me only a single specimen in rather poor state of preservation.

Perimegatoma *Horn.*

In this exclusively western genus, which belongs to an important section of the Attagenini differing from those above considered in the elongate basal joint of the tarsi, the antennal club is 3-jointed, with its two basal joints transverse and the last elongate, though to a less degree than in *Attagenus*. The prosternum is strongly deflexed at tip to form a protection to the mouth in repose, as in most of the other

genera of the family, the process between the coxæ moderately narrow, the mesosternum narrow and divided throughout by a relatively wide parallel sulcus. The hypomera are moderately and indefinitely concave, and the metacoxal lamina short. *Belfragei*, which is assigned to the genus by Jayne, undoubtedly forms the type of a distinct genus because of the 5-jointed antennal club; it is therefore not considered in the following table, which comprises all the species known to me: —

Last joint of the male antennal club short, scarcely one-half longer than the two preceding combined.....2

Last joint much longer, nearly twice as long as the two preceding; body narrower...9

2—Last joint conical, pointed at apex.....3

Last joint ovo-conoidal, rounded at apex.....8

3—Body in great part black or piceous-black in color.....4

Body wholly rufo-ferruginous, stout.....7

4—Pubescence rather persistent; zig-zag testaceous bands at basal third and apical fourth very narrow and frequently indistinct.....5

Pubescence readily denuded, the rufous bands very wide, the anterior broadly interrupted at the suture.....6

5—Vestiture rather fine, largely black, the suberect bristle-like hairs rather inconspicuous; elytral punctures close-set; body moderately stout. Length 3.5–4.6 mm.; width 1.65–2.1 mm. California (San Francisco to Calaveras). **jaynei**, sp. nov.

Vestiture much coarser, the sub-erect bristles conspicuous, the hairs sparser, largely fulvous and whitish, the darker much less numerous; body less stout and more elongate, the elytral punctures sparse. Length 4.0 mm.; width 1.9 mm. Guadalupe Island.....**guadalupensis**, sp. nov.

6—Black areas of the elytra clothed with nearly uniform short blackish pubescence, the rufous bands with sparse uniform fulvous hairs; body broad, feebly convex, oblong, the elytral punctures rather fine and sparse. Length ♂ 3.9, ♀ 6.0 mm.; width ♂ 1.7, ♀ 2.8 mm. California.....**ampla** sp. nov.

7—Oblong-oval, convex, the vestiture short but abundant, much variegated, in great part fulvous and white, the suberect black bristles distinct, the white hairs generally forming a distinct cluster at basal and inner third and three detached spots at apical fourth in the zig-zag paler band. Length 4.7 mm.; width 2.2 mm. California.....**variegata** *Horn*

8—Body rather narrowly oblong-oval, moderately convex, black, the elytra rufous along the lateral edges and rufo-piceous in two narrow obscurely evident bands at the usual positions, the vestiture persistent, nearly as in *jaynei*, but with the whitish hairs more abundantly interspersed. Length 3.4 mm.; width 1.5 mm. Nevada (Reno).....**nevadica**, sp. nov.

9—Body black, the elytra with the usual two rufous bands clothed with paler, denser and more persistent pubescence, the latter elsewhere readily denuded, the anterior pale areas more impressed than usual; punctures of the elytra fine but deep, perforate as usual and somewhat sparse; prothorax about twice as wide as long in the male. Length 3.6 mm.; width 1.5 mm. Utah (southwestern)—Mr. Weidt.....**impressa**, sp. nov.

Body black, more depressed, the elytra more strongly and closely punctured, without distinct rufous areas, almost evenly clothed with subdecumbent fulvous pubescence, with very narrow and scarcely noticeable zig-zag bands of more cinereous hairs in the usual positions; prothorax of the male more transverse, more than twice as wide as long; under surface black, the legs and antennæ piceous-black. Length 3.65 mm.; width 1.5 mm. Wyoming (Laramie)...**monticola,** sp. nov.

Cylindrica of Kirby (Saskatchewan), and *angularis* Mann., (Alaska), are not known to me at present, the former is said to be distinguished by its uniform elytral vestiture and was assigned by Kirby to *Attagenus;* it was considered to be the same as *piceus* by Gemminger and Harold, but is probably different, as it is said by the author to resemble a *Cryptophagus*. The *Attagenus angularis* of Mannerheim, seems by the description to be uniformly pubescent, except toward the hind angles of the prothorax, where the hairs become whitish and condensed; it cannot be the same as *jaynei*, of the above list, which latter was considered to be *cylindrica*, var. C, by Horn. The *falsa* of Horn, is evidently a rare and local species, entirely unknown to me, having the male antennal club slightly longer than the funicle, with its first joint "extremely short"—language which will not apply to any other species known to me—and the last joint more than twice as long as the two preceding together and pointed at tip; it occurs at and near Sta. Barbara, California.

The pronotum throughout the genus is coarsely and very closely punctured, and there are generally two small and very shallow subbasal fovea at outer fourth, in which the punctures become still more crowded and coalescent. The species are difficult to identify, as there is a strong mutual resemblance throughout. *Ampla*, however, is a very striking species, differing enormously in the relative size of the sexes; the females are the largest by far of the entire genus. Generally the divergence of the sexes in this respect is not quite so noticeable as in *Attagenus*, although the paucity of material before me will not allow of definite statement in this regard.

Trogoderma *Latr.*

In this genus the body is oblong-oval, less elongate than in *Perimegatoma* but almost similarly clothed with variegated pubescence. The species described by Dr. Jayne under the name *Trogoderma simplex*, seems to have a somewhat unusual construction of the side pieces of the prosternum, and it should therefore form the type of a distinct genus; it is unknown to me.

The antennæ are of a different type of structure from that prevailing elsewhere in the tribe, the club being 6- to 8-jointed and generally loose and serriform in the males, and 4-jointed and regular in the females. The prosternum is not so strongly deflexed at apex as in *Perimegatoma*, and the process between the coxæ is wider, the mesosternum between the coxæ very much wider, transverse and divided throughout by a broad deep sulcus.

Dr. Jayne was mistaken in his diagnosis of the species of the *sternalis* group in two important particulars. The mesosternum is as completely and widely divided by the median sulcus as in the others, but the metasternal process is rather more arcuate, and the broad flat marginal bead usually extends along the apex throughout the width; this misled the author in determining the true anterior limit of the metasternum. The author also failed to observe the true structure of the male antennæ, the very minute third joint giving rise to the appearance of a 10-jointed condition, which is alluded to as a general fusion of the tenth and eleventh joints in the male (Proc. Am. Phil. Soc., XX, p. 363).

The species are quite numerous and those before me may be thus briefly characterized:—

Eyes entire, the inner frontal margin not sinuate; antennæ serrate in the male 2

Eyes sinuato-emarginate at about the middle of their inner frontal edge; male antennæ compact, not serrate, the third and fourth joints subequal and transverse; pronotum minutely, sparsely punctate, becoming strongly and more densely so toward the sides..... 14

2—Male antennæ with the third and fourth joints equal in size.....3

Male antennæ having the third joint minute and very much smaller than the fourth..10

3—Body more elongate in form, the elytra nearly one-half longer than wide.....4

Body stout and broadly oblong-oval, the elytra one-fourth longer than wide or even less..... 9

4—Submedian testaceous band of the elytra crossing the suture at the middle of the length; species small and inhabiting the Eastern and Gulf States.....5

Submedian testaceous band crossing well behind the middle of the length; species much larger and inhabiting the Pacific States..... 8

5—Pronotum strongly and rather closely punctate, especially toward the sides; pubescence persistent..... 6

Pronotum very minutely and sparsely punctate throughout, the pubescence readily denuded..... 7

6—Elytra black, with the usual pattern of fine irregular rufescent bands clothed with paler hairs; vestiture of the pronotum much variegated. Length 3.0 mm.; width 1.65 mm. Iowa (Keokuk); [*pusilla* Lec.].....**ornata** *Say*

Elytra and pronotum almost similarly colored, and with the variegated pubescence

nearly similar but finer, the subapical irregular band emitting a fine spur anteriorly at inner two-fifths; body narrower; club of the male antennæ beginning with the fourth joint. Length 2.9 mm.; width 1.45 mm. Texas. **serriger,** sp. nov.

7—Body nearly similar in ornamentation and color to the preceding, the basal lobe of the pronotum not so distinctly marked with white pubescence; serrate antennal club of the male beginning with the sixth joint. Length 1.6–2.7 mm.; width 0.8–1.3 mm. Massachusetts, New York (Long Island) and Virginia (Norfolk). **tarsalis** *Melsh.*

8—Body large, elongate-oval, black, the elytra with irregular anastomosing bands of testaceous nearly as in the preceding, the pale vestiture of the rufous areas rather long and fulvous, that of the black areas short, dark and inconspicuous; pronotal punctures fine and sparse, those of the elytra coarser but sparse; legs ferruginous throughout. Length 4.0 mm.; width 2.0 mm. California. **pollens,** sp. nov.

9—Epipleuræ of the elytra flat; body stout, black, the elytra variegated with paler areas which are clothed with paler pubescence, nearly as in the preceding species; pronotum in the female not quite twice as wide as long, rather strongly but sparsely and evenly punctured throughout, the sides moderately convergent. Length 2.7 mm.; width 1.6 mm. Texas..... **complex,** sp. nov.

Epipleuræ deeply concave; body in coloration and sculpture nearly as in *complex*, the pale areas of the elytra larger and more suffused and the variegated vestiture shorter; pronotum in the female much more transverse, more than twice as wide as long, the sides very strongly converging from base to apex; legs pale, the femora black. Length 3.2 mm.; width 1.78 mm. California (Shasta Co.) **variipes,** sp. nov.

10—Pronotum minutely punctate, the punctures simple and perforate. Pacific Coast..... 11

Pronotum strongly and closely punctate, the punctures simple and perforate. Atlantic and Sonoran..... 12

Pronotum strongly but sparsely punctate, the punctures rugose. Sonoran..... 13

11—Body black, the elytra with broken transverse pale bands clothed with the usual paler pubescence, the sutural portions of the submedian band far in advance of, and detached from, the lateral portion; prothorax of the male with the median lobe of the base rather broadly rounded, the sides evenly convergent and broadly, almost evenly arcuate from base to apex. Length 2.4 mm.; width 1.2 mm. California..... **sternalis** *Jayne*

Body as in the preceding, the submedian band of the elytra finer, almost continuous, the sutural crossing but little more advanced than the lateral part; basal lobe of the prothorax smaller, more narrowly rounded and more abruptly formed, the sides strongly rounded basally, becoming thence much more strongly convergent and almost straight to the apex in the male, the base somewhat wider than the base of the elytra; size very small. Length 1.8 mm.; width 1.0 mm. California (Los Angeles.)..... **simulans,** sp. nov.

12—Body black, with variegated white and fulvous bands nearly as in *sternalis*, the sutural part of the submedian band far in advance of the lateral angulation and detached from it; prothorax at base equal in width to the elytra, very strongly transverse, in the male distinctly more than twice as wide as long, the sides very

strongly convergent toward apex, more rounded toward base. Length 2.65 mm.; width 1.4 mm. Virginia [Fort Monroe].....**virginica**, sp. nov.

Body black and with variegated pubescence nearly as in the preceding species, the submedian band of the elytra almost continuous, transverse, the sutural part not much in advance of the lateral, forming a broad even arc in more than inner half of each elytron; prothorax of the male much less transverse, scarcely twice as wide as long, the sides less convergent and more even in curvature; size much smaller. Length 2.2 mm.; width 1.18 mm. Texas [El Paso].

oblongula, sp. nov.

13—Body black, with variegated white and fulvous elytral bands nearly as in *virginica*, except a distinct sutural rhombus included within the subapical band, which is wanting in that species, the submedian band much broken; prothorax at base not quite as wide as the elytra in the female, the punctures deep, well separated and strongly annulo-rugose, much less than twice as wide as long; elytral punctures rather strong but twice as sparse as in *virginica*, the pubescence very much sparser than in that species or *oblongula*. Length 2.5 mm.; width 1.3 mm. Arizona.

aspericollis, sp. nov.

14—Form very short and broad, oblong, the elytra in both sexes scarcely a fourth longer than wide.....15

Form narrower and more elongate in both sexes, the pattern of elytral ornamentation obsolete or partially so.....16

15—Elytra black, with narrow anastomosing paler bands nearly as in *ornata*, which are clothed sparsely with whitish hairs, the subapical transverse band enclosing a transverse rhombus on the suture; elytral punctures sparse and rather fine; prothorax of the female twice as wide as long, the sides evenly and moderately arcuate. Length 2.9 mm.; width 1.7 mm. Pennsylvania; [*pallipes* Zieg.].

inclusa *Lec.*

Elytra as in the preceding, with the pale anastomosing markings broader and clothed in great part with fulvous pubescence, the punctures somewhat stronger and slightly less sparse, the subapical band not forming a distinct sutural rhombus; hairs of the pronotum sparse, suberect and black, becoming paler laterally toward base; prothorax of the male more than twice as wide as long. Length 2.3 mm.; width 1.35 mm. California (San Francisco).....**brevis**, sp. nov.

16—Elytra parallel and feebly arcuate at the sides, rounded and narrowed only at the apex, black, with a narrow testaceous bisinuate band clothed with paler pubescence near the base, and a few small spots of pale pubescence posteriorly, notably one on each at the suture at the middle, and at the side slightly behind the middle of the length, and one at the middle of the width at apical fourth. Length 2.4 mm.; width 1.28 mm. Indiana?—Cab. Levette.

obsolescens, sp. nov.

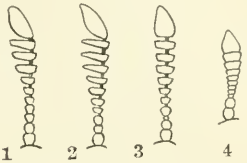
Elytra narrowed slightly from the rather pronounced humeral swelling to the rounded apex; body pale testaceous throughout, the head and pronotum slightly piceous; pubescence sparse and not at all varied, pale in color; surface of the elytra rugose, sparsely punctate. Length 1.9 mm.; width 0.9 mm. Arizona.

advena, sp. nov.

Unlike nearly all the other genera of Dermestidæ, the present seems

to be very rare in individuals, and it is seldom that more than a single one it taken at any one time; most of the species, which appear however to be abundantly distinct among themselves, are therefore represented at present by unique types. *Perimegatoma* resembles it in this respect to some extent. The pale coloration of *advena* may be due to immaturity, at least partially. In the adjoining diagram the antenna of *advena*, which is representative of that entire section of the genus, is drawn in a contracted state, but the insect has the power to separate the joints slightly, when they are seen to be deeply concave at their apices; they are mutually attached by short stipes or pedicels as in the others, but differ in being virtually symmetrical and not eccentric. These antennal differences, although marked, are not indicative of subgeneric groups, as the general structure of the under surface, and particularly of the hypomera, is indentical throughout.

FIG. 4.



1 Antenna of *Trogoderma tarsalis* ♂, 2 same *T. serriger*. 3 same of *T. oblongula*, 4 same of *T. advena*.

Cryptorhopalum *Guér.*

The body in this genus, which is the most extensive of the American Dermestidæ, becomes more oval and compact than in any other of the present tribe, but in anatomical structure it is evidently homologous with *Trogoderma*. The species are small to quite minute in size, of sober color and generally uniformly clothed with short dark pubescence, which, in some forms, becomes slightly variegated as in most of the other genera. The species before me are the following:—

Pubescence of the elytra variegated.....2
Pubescence uniform throughout.....9
2—Elytra with irregular or interrupted transverse bands of dense paler pubescence...3
Elytra without transversely fasciate pubescence, but with a spot of dense pale and coarser hairs near the apex of each; last ventral of the female unmodified.....8
3—Last ventral segment of the female with two small, widely separated and rounded discal erosions; elytra not paler posteriorly.....4
Last ventral of female with two small, rounded, flat and entirely unexcavated scar-like spots; elytra paler in apical third.....7
4—Pubescence of the pronotum dusky, sparse and inconspicuous but becoming pale and conspicuous toward the sides and on the basal lobe.....5
Pubescence of the pronotum uniform or nearly so, coarse, denser, pale and conspicuous throughout.....6

5—Pale pubescent bands of the elytra at basal and apical third entire, the anterior irregular, the posterior narrowly interrupted at the middle; body narrowly oval, more or less pale piceo-testaceous in color, finely punctate, the pronotum minutely and sparsely; tarsi very slender, the posterior as long as the tibiæ in the female and distinctly longer in the male; antennal club of the latter stout, not twice as long as wide, the second joint slightly shorter than the first. Length 1.9–2.25 mm.; width 1.1–1.3 mm. California (Sta. Barbara).....**filitarse,** sp. nov.

Pale pubescent bands subentire but composed of short, sparse hairs and mutually separated by a distance equal to that of the anterior band from the base; body castaneous, sparsely punctured; legs testaceous, the femora picescent; posterior tarsi slightly shorter than the tibiæ; antennal club of the female rather small, stout, one-half longer than wide, with the second joint distinctly longer than the first—a reversal of the general rule. Length 2.15 mm.; width 1.3 mm. New Mexico (Fort Wingate—Dr. Shufeldt).....**reversum,** sp. nov.

Pale pubescent bands broken up into small sparse spots, a spot also behind the humeri and another near the apical angle of each elytron; body much larger, elongate-oval, darker in color, castaneous, the punctures a little coarser and rather more close-set than in *filitarse;* hind tarsi nearly similar. Length 2.5–2.65 mm.; width 1.4–1.55 mm. Arizona (Cañon of the Colorado River)—Dr. T. Mitchell Prudden.....**pruddeni,** sp. nov.

6—Elytra feebly narrowed posteriorly from the humeral callus, the pale pubescent bands cinereous and almost entire, separated mutually by a distance which is equal to that of the anterior band from the basal margin; apical spot of pale pubescence concolorous or nearly so, the spots and bands rather poorly defined, and with the pubescence largely cinereous toward base throughout the width, joining the first band at the suture; hind tarsi quite distinctly shorter than the tibiæ in the female. Length 2.65 mm.; width 1.6 mm. Arizona.....**balteatum** *Lec.*

Elytra rapidly narrowed behind from the humeral callus, the apex more narrowly rounded, body smaller, convex, and relatively stouter, castaneous in color, the bands of coarser pale yellowish-cinereous pubescence narrower, subentire and better defined, the two mutually much more distant than the first from the base, the apical spot fulvous in color; basal regions with a large proportion of pale hairs; hind tarsi very slightly in the male, distinctly in the female, shorter than the tibiæ; male antennal club stout, not twice as long as wide, the second joint a little shorter than the first, the cavities extending to basal third. Length 1.9–2.25 mm.; width 1.2–1.4 mm. Texas (Brownsville)—Mr. Wickham.
festivum, sp. nov.

7—Body oval, blackish, the elytra rufous in apical third or more, with subhumeral annulus and two transverse bands of short, rather sparse pale hairs; pronotum with pale hairs toward the sides and basal lobe; joints of male antennal club subequal, the second but slightly shorter than the first, nearly similar, but a little smaller, in the female; tarsi slender and elongate. Length 1.8–2.5 mm.; width 1.2–1.5 mm. Missouri, Kansas and Texas.....**hemorrhoidale** *Lec.*

8—Rather broadly suboblong-oval, black, the elytra gradually and suffusedly rufescent toward tip, the pubescence short, dark, sparse and inconspicuous, becoming pale and distinct, though sparse, toward the sides and basal lobe of the pronotum and toward the sides, and more densely, near the apices, of the elytra; pronotal lobe

rather broadly, rectilinearly truncate; legs testaceous, the femora blackish, except toward tip, the hind tarsi shorter than the tibiæ; male antennal club extending three-fifths of the thoracic length, with the second joint three-fifths as long as the first, in the female smaller, with the second joint slightly shorter than the first Length 2.0–2.8 mm.; width 1.23–1.8 mm. Oregon, California (Humboldt to San Diego) and Nevada (Reno).....**apicale** *Mann.*

9 – Body broadly oval, the thoracic lobe broadly truncate; joints of the antennal club very unequal.....10

Body more or less narrowly oval, the thoracic lobe much narrower.....11

10—Body deep black throughout, the elytral punctures sparse and coarse, the pubescence sparse, fine, blackish in color, uniformly distributed and very inconspicuous; antennal club of the male slender, two and one-half times as long as wide, extending to basal third, its second joint relatively very short, much less than half as long as the first, the latter twice as long as wide, of the female much smaller, extending to the middle, the second joint much shorter than the first. Length 2.1–2.8 mm.; width 1.4–1.8 mm. Arizona...**dorcatomoides**, sp. nov.

Body piceous-brown in color, the elytra coarsely and less sparsely punctured, the pubescence uniform, more abundant, short, coarse, fulvo-cinereous in color and distinct; male club not extending quite to basal third, the second joint more than half as long as the first, the latter not twice as long as wide. Length 2.5–2.7 mm.; width 1.6–1.7 mm. Texas (Austin).....**obesulum**, sp. nov.

11—Thoracic punctures sparse, at least toward the middle.....12

Thoracic punctures rather close-set throughout.....16

12—Elytra coarsely, though rather sparsely, punctate. Sonoran and Pacific regions.....13

Elytra very finely and rather less sparsely punctate. Atlantic regions.....15

13—Pubescence of the elytra longer, coarse, yellowish-cinereous and distinct; body very small, somewhat narrowly oblong-oval, black or piceous-black; male antennal club extending beyond basal third, elongate-oval in form, relatively large, more than twice as long as wide, the second joint three-fifths as long as the first, the latter much longer than all the preceding portion together, the funicle very short, not as long as the two globular basal joints combined. Length 1.65 mm.; width 1.0 mm. Arizona.....**granum**, sp. nov.

Pubescence short, fine, dark in color and less conspicuous.....14

14—Body deep black in color, the elytral pubescence blackish and not at all fulvous; joints of the antennal club in the female less unequal, the second four-fifths as long as the first. Length 2.3 mm.; width 1.3 mm. Arizona...**anthrax**, sp. nov.

Body piceous-black, polished, sparsely punctured and unusually sparsely pubescent, the hairs fulvo-piceous in color and more distinct; joints of the antennal club in the female very unequal, the second about two-thirds as long as the first, the latter longer than the entire funicle; legs ferruginous. Length 2.0–2.6 mm.; width 1.25–1.6 mm. California (Lake and Sonoma Cos.).....**affine**, sp. nov.

15—Narrowly oblong-oval, black or piceous-black, shining, the pubescence very short, dark in color and inconspicuous; antennal club pale as usual, large and evenly oval, in the male not twice as long as wide, the second joint very much shorter and narrower than the first. Length 1.73 mm.; width 1.0 mm. Georgia.

ruficorne *Lec.*

16—Pubescence coarse, pale, ashy-cinereous and distinct, rather sparse but denser toward the sides of the prothorax; elytra coarsely, rather sparsely punctured; male antennal club more than twice as long as wide, the joints very unequal, the second scarcely more than one-half as long as the first but only a little narrower, the first as long as the entire preceding parts, the funicle fully as long as the two basal joints combined; club of the female much smaller but with the joints unequal. Length 1.65–2.2 mm.; width 0.9–1.28 mm. Arizona (Benson).
fusculum *Lec.*

Pubescence dark fulvo- or piceo-cinereous and less distinct.....17

17—Pronotal punctures moderately close-set but very fine, not dense and very inconspicuous. Sonoran regions.....18

Pronotal punctures small but strong, dense and very distinct. California coast regions.....19

18—Pubescence fulvo-cinereous, coarser and distinct, moderately dense; body oval, black or piceous-black, less elongate; sides of the male pronotum strongly convergent and almost evenly arcuate throughout; antennal club rather dark brownish-ferruginous in color, narrowly oval and two and one-half times as long as wide in the male, with the second joint three-fourths as long as the first; hind tarsi distinctly shorter than the tibiæ. Length 1.9–2.25 mm.; width 1.1–1.3 mm. Texas (Brownsville).....**modestum,** sp. nov.

Pubescence finer, piceous and much less distinct; body black, narrower, more parallel; sides of the pronotum in the male strongly convergent anteriorly, subangularly rounded behind the middle and thence parallel and straight to the base, the edges more widely subexplanate; antennal club black or blackish, nearly similar in form in the male but with the joints less unequal, the second four-fifths as long as the first. Length 1.7–1.8 mm.; width 1.05–1.15 mm. Texas and Utah (southwestern).....**fusciclave,** sp. nov.

Pubescence blackish, nearly as in the preceding but much denser; body black, stouter, the elytra coarsely and unusually closely punctured; legs ferruginous, the femora piceous; antennal club pale rufo-testaceous the joints only slightly unequal in the female; hind tarsi about as long as the tibiæ in the latter sex. Length 2.0 mm.; width 1.25 mm. Arizona.....**pumilum,** sp. nov.

19—Body narrowly oblong-oval, black, the elytra more closely punctured, the pubescence blackish, fine, rather dense but short and very inconspicuous; antennal club black or blackish, extending to basal fourth or fifth in the male, elongate-oval, with the second joint nearly four-fifths as long as the first; legs piceous, the hind tarsi slightly shorter than the tibiæ, notably so in the female. Length 2.4 mm.; width 1.3 mm. California (Humboldt to Sta Barbara); [*nigricorne* Lec.].....**triste** *Lec.*

There are a few other apparent species indicated by inadequate or poorly preserved material, and the genus is evidently a large one. In striking contrast to *Trogoderma*, individuals are abundant when discovered, and most of the species are represented by good series. The species *fusculum* of LeConte, which is entirely valid, is said by Dr. Jayne to inhabit the Atlantic regions; it is however Sonoran, and was

not correctly identified, and *triste* is not an Atlantic, but a Pacific, species. One female of *apicale* in my cabinet has the two joints of the antennal club equal in length : as it is not in very good condition, I cannot state whether it differs specifically. The remarks made by Dr. Jayne in regard to the female of *balteatum* are erroneous, as the antennal cavity is normal in form. The same author gives "California" as the locality of *ruficorne*, whereas it is confined in reality to the southern Atlantic States. *Picicorne*, described by LeConte from the southern Atlantic regions, is unknown to me, but is probably a valid species.

ANTHRENINI.

The distinguishing characters of this tribe are the compact body, very retractile legs and the deep and acutely defined fossæ for the antennal club. The tarsi are short and rather slender, the basal joint of the posterior distinctly shorter than the second, the next three subequal or progressively decreasing slightly in length. The mouth parts are completely protected in repose by the deflexed prosternum. The antennæ vary in the number of joints, but these divergencies do not indicate more than subgenera, as the structure otherwise is quite homogeneous. There is but one genus :—

Anthrenus *Geoff.*

The eyes may be sinuato-emarginate within or entire as in *Trogoderma*, and are finely faceted as usual. The prosternal process is rather narrow, impinging upon the transverse, deeply sulcate mesosternum, also as in that genus. The species are moderately numerous, and number among them some of the most destructive enemies of dried insects preserved in cabinets ; those before me may be easily identified as follows :—

Eyes emarginate ; antennæ 11-jointed, the club broadly oboviform and composed of three closely connate joints of which the two basal are strongly transverse and much shorter than the last ; body clothed with broad scales. [**Anthrenus** in sp.] 2

Eyes entire 6

2—Pronotum having a large well-defined lateral spot of pale scales not inclosing a darker spot 3

Pronotum with a large pale lateral spot, as above, but inclosing a small darker spot at nearly its central point. Pacific Coast 4

Pronotum clothed throughout with a mixture of white and brown scales. Sonoran regions 5

3—Elytra having the suture clothed throughout with whitish or rufescent scales, the vitta dilated laterally near base and apex and at the middle, also with a transverse area of pale scales just behind the middle and seldom attaining the sutural area, a subbasal and subapical marginal pale area and a basal ring at each side of the scutellum. Length 2.7–3.6 mm.; width 1.75–2.25 mm. New Jersey and Europe ..... **scrophulariæ** *Linn.*

Elytra similar but with a large uniform area of white scales extending from fourth to three-fifths from the base, and from the margin to inner third or fourth. Length 2.3–3.4 mm.; width 1.5–2.25 mm. Texas..... **thoracicus** *Melsh.*

4—Elytra clothed with black scales, with clearly limited areas clothed with whitish scales nearly as in *scrophulariæ*, but with the sutural vitta generally interrupted at apical third and the transverse marginal spot behind the middle rarely extending beyond the median line, the oblique marginal fascia at basal third or fourth sometimes enlarged internally and forming with the basal sutural white regions a large irregular white spot covering a third of the entire area; pale scales of the elytra always white. Length 2.3–3.0 mm.; width 1.5–2.0 mm. California (Sta. Cruz and Lake Cos.)..... **occidens,** sp. nov.

Var. A—Similar to *occidens* but more narrowly oblong-oval, the scales of the subbasal sutural area yellow and not white; enclosed black spot within the lateral pale area of the pronotum very near the inner edge of the latter. Length 2.8 mm.; width 1.85 mm. Nevado (Reno)..... **nevadicus,** v. nov.

Var. B—Similar to *occidens*, except that the large subbasal area on the suture is clothed with dark fulvo-ferruginous scales, and the enclosed thoracic spots are composed of fulvous, and not black, scales, the formation nearly as in *lepidus* and its varieties. Length 2 5 mm.; width 1.7 mm. California ..... **pictus,** v. nov.

Elytra variegated nearly as in the preceding but with a sprinkling of brown scales; enclosed dark spot within the lateral white areas of the pronotum never black as in *occidens* but clothed with fulvous-brown scales; body smaller and less dilated. Length 2.25–2.5 mm.; width 1.6–1.7 mm. California (San Diego) **lepidus** *Lec.*

Var. A—Body similar in form to the preceding, the pronotum less transverse, densely clothed throughout above with ochreo-fulvous scales, replacing the black scales of *occidens;* black scales wholly wanting at any part. Length 2.7 mm.; width 1.75 mm. California..... **obtectus,** v. nov.

Var. B—Similar to *lepidus* but with the scales of the paler areas more suffused and dispersed, the body more broadly oval, the prothorax larger, with the sides less convergent; antennæ longer, the club broader. Length 2.4–2.7 width 1.6–1.8 mm. California (Lake Co.)..... **suffusus,** v. nov.

Var. C—Similar to *lepidus* but smaller and still narrower, the scales of the elytra black and fulvous, confusedly intermingled, with some feeble whitish sutural and external areas remindful of *lepidus*. Length 2.15 mm.; width 1.4 mm. California (San Diego)—Mr. Dunn..... **conspersus,** v. nov.

5—Broadly and evenly elliptical, convex, blackish-piceous, the legs paler; antennæ moderate, ferruginous throughout; upper surface clothed with relatively very large white and brown scales, confusedly mottled on the pronotum and elytra, but with the white scales forming two tolerably distinct suboblique fasciæ on the

latter behind the middle; on the under surface white throughout. Length 1.8–1.95 mm; width 1.15–1.25 mm. Texas (El Paso).....**parvus**, sp. nov.

6—antennæ 11-jointed, the club subparallel, consisting of three connate joints, the two basal slightly transverse; scales elongate. [**Nathrenus**, sg. nov.].....7

Antennæ 8-jointed, the club consisting of two closely connected joints. [**Florilinus**]..8

Antennæ 5-jointed, the club consisting of a single very elongate claviform joint. [**Helocerus**] 10

7—Oblong-oval, moderately convex, black, clothed with yellow, black and white scales, largely black on the median parts of the pronotum, the basal lobe always with whitish scales, the elytra with a transverse zig-zag pattern of pale scales, largely white bordered with yellow in two fasciæ. Length 1.8–2.8 mm.; width 1.25–1.75 mm. Europe and Eastern United States; [*varius* Fabr.]

verbasci *Linn.*

Var A—Similar but more narrowly oblong-oval, the yellow scales still narrower, more elongate and more dispersed over the entire surface, the pattern of *verbasci* scarcely traceable and the scales more isolated among themselves. Length 2.2 mm.; width 1.3 mm. Virginia (Norfolk).....**pistor**, v. nov.

Var B—Nearly similar to *verbasci* but larger and more broadly oblong, the yellow scales entirely covering the pronotum, the elytral pattern nearly similar but with the yellow scales more dispersed, the white patches similar in position but larger. Length 2.8–3.0 mm.; width 1.8–2.15 mm. Indiana .....**vorax**, v. nov.

Var C—Almost similar to *vorax* but very much smaller, the yellow scales densely clothing the entire surface, except where replaced by the equally dense white scales in patches similar in position to those of *verbasci*; form more broadly rounded than in the European *nebulosus*; scales broader than in *verbasci*. Length 1.7–2.2 mm.; width 1.15–1.6 mm. Iowa (Keokuk).

destructor *Melsh.*

Var D—Similar to *verbasci* but larger and more broadly oblong-oval, the zigzag pattern of the elytra equally well marked but with the post-median fascia more sharply anteriorly angulate near the suture, the surface when denuded showing feebly impressed longitudinal lines. Length 3.0 mm.; width 2.2 mm. Central America.....**substriatus**, v. nov.

8—Basal joint of the antennal club subquadrate, the second nearly twice as long as wide; body piceous, rather sparsely clothed with scales which are less decumbent, elongate and with oval cross-section and concave apices, the pale scales less numerous than the darker ones and irregularly disposed, the dark scales apparently flatter and more decumbent; elytral punctures fine but rather deep, moderately sparse. Length 2.9 mm.; width 1.75 mm. Europe.

museorum *Linn.*

Basal joint much smaller, transversely obtrapezoidal, the second relatively shorter and but little longer than wide apparently in both sexes; scales less elongate, flatter, more decumbent and triangular, the punctures very shallow. America.....9

9—Antennal funicle moderately stout, the third joint about one-half as thick as the second; pale scales of the elytra strewn without order toward base but forming two somewhat evident transverse fasciæ behind the middle, the scales all broadly triangular and coarsely strigose; body castaneous in color, evenly and not very

broadly oval in form and strongly convex, much smaller than *muscorum*. Length 2.2 mm.; width 1.3 mm. Pennsylvania and Indiana..**castaneæ** *Melsh.*

Var A—Similar in color, form and size to *castaneæ* but with the scales more narrowly triangular, less coarsely strigose, the paler sparsely dispersed but forming a tolerably evident ring on each at base, very sparse behind the middle, though arranged in two more evident transverse areas nearly as in *castaneæ* but more widely separated. Length 2.25 mm.; width 1.35 mm. North Carolina (Asheville) .....**carolinæ**, v. nov.

Var B—Similar in color to the preceding, the elytra a little paler; form much more narrowly oblong-oval, the surface more rugulose and alutaceous; pale scales as in *carolinæ* but much more abundant than in either of the preceding, scattered without order in basal half but with a large lateral condensation at basal third or fourth, the two transverse fasciæ behind the middle more evident. Length 1.9 mm.; width 1.2 mm. Texas.....**angustulus**, v. nov.

Antennæ funicle very slender, the third and fourth joints scarcely a third as wide as the second; pale scales of the elytra very few in number and sparsely interspersed among the darker ones, more noticeably abundant at basal third or fourth, just behind the middle and near the apex; body shorter and more broadly rounded than in the preceding, castaneous in color, the tibiæ and tarsi testaceous; surface shining between the very minute sparse punctules. Length 2.0 mm.; width 1.4 mm. New York..... .....**rotundulus**, sp. nov.

10—Body oval and convex, nearly as in *castaneæ* in color, form and vestiture, the pale scales of the elytra forming on each a transverse fascia at basal fourth, curving forward internally to the scutellum, and forming two less evident transverse fasciæ behind the middle. Length 1.9–2.5 mm.; width 1.2–1.4 mm. Europe; [*claviger* Er.]..... .....**fuscus** *Latr.*

A form which I have not seen was described by LeConte, from New York, under the name *flavipes;* this was supposed by Jayne to be the same as the European *albidus* of Brullé, and may have been founded upon an introduced individual of that species, which in my opinion is distinct from *scrophulariæ*, although inscribed as a variety in the catalogues; *signatus* and *proteus* appear to be identical and to form a variety of *albidus*, but *senex* may be another distinct species. The two European species *muscorum* and *fuscus* are introduced above into the table, although I have never seen any examples taken in this country. Those mentioned by Jayne may have been adventitious importations. From the illustrations given of the antennæ, however, it is probable that Dr. Jayne did not have the true *muscorum* before him at all, but mistook the much smaller *castaneæ* for it; *muscorum* might therefore be stricken from the American lists. *Verbasci* and its varieties constitute the chief destructive element of entomological collections in temperate climates, but I have never known of any such habits in *scrophulariæ* or allied species.

TRINODINI.

This tribe includes at present but two very anomalous minute species, differing radically in sternal structure but perfectly homologous otherwise, and inhabiting the palæarctic and nearctic regions respectively. They represent two distinct genera as follows:—

Anterior coxæ narrowly separated, the process feebly carinate, free and received at tip within a deep anterior excavation in the broad mesosternum; tarsi shorter, the first joint of the posterior but little longer than the second. Europe ..... ***Trinodes**

Anterior coxæ more widely separated, the intercoxal process flat, non-carinate and extending beneath the anterior margin of the still broader mesosternum, which is free, arcuate and feebly deflexed; prosternum more deflexed at apex, the tarsi longer with the basal joint more elongate. Eastern America ..... **Apsectus**

In both these genera the hypomera are flat, becoming broadly, feebly impressed posteriorly, the antennæ long, with very slender shaft, received in repose within a narrow groove beneath the eyes, extending posteriorly for a short distance along the suture separating the prosternum from its hypomera, the club 3-jointed, with the two basal joints small, the third large and oblong-oval. The legs are slender and free, the posterior retractile, the hind coxal plate very short, but little longer internally and extending only to the wide parapleuræ, which are in a single piece.

Apsectus *Lec.*

The single species seems to be rare, though rather widely distributed; its general characters are as follows:—

Oval, convex, piceous-black, polished, sparsely clothed with long erect and bristling fulvo-piceous hairs, each of which completely fills at base a very minute punctule, which, consequently, only become distinctly visible on the removal of the bristles; prothorax transverse, closely fitted to the elytra and lobed as usual at base, the lateral edges entirely devoid of acute margin anteriorly but with an acute and narrowly reflexed margin in basal two-thirds, the surface with a fine deep groove in outer third, closely paralleling the basal margin; scutellum large, flat, equilatero-triangular; elytra wider than the prothorax and more than three times as long, evenly and conjointly rounded behind; under surface sparsely and very minutely punctulate, the pubescence shorter; legs and antennæ testaceous throughout, the large terminal joint of the latter blackish. Length 1.5 mm.; width 0.9 mm. Texas (Austin) ..... **hispidus** *Melsh.*

The ocellus is unusually small and feeble in *Apsectus* but is much more distinct in *Trinodes*. I have seen specimens, either of *hispidus* or a species closely allied, collected by Mr. Schwarz in Arizona, but probably in the higher regions.

ORPHILINI.

This tribe is quite as anomalous as the Trinodini, and differs from any other in having the metacoxal plate well developed, almost equal in length throughout the width and extending to the sides of the body. The head rests in repose upon the vertical pointed plate forming the prosternum between the coxæ, and the body is glabrous. The legs and head are strongly retractile, the mesosternum transverse and even between the coxæ and the epipleuræ well defined. We have a single genus which is also palæarctic in range:—

Orphilus *Er.*

The body is compact, oblong-oval in form, moderately convex, the elytra impressed along the suture except at base and with rather prominent humeral callus, the prothorax at base as wide as the elytra, to which it is closely fitted, the base broadly lobed in the middle. The scutellum is well developed and ogival in form. The tarsi are slender, glabrous, much shorter than the tibiæ and the two basal joints of the posterior are subequal and each rather shorter than the third or fourth, which also are subequal, the fifth about as long as the first three together. The antennæ are 11-jointed, with a broadly oval compact club composed of three transverse free joints, and the eyes are emarginated by the short post-antennal sides of the front. The species are rather closely allied among themselves, and those represented in my cabinet may be distinguished as follows:—

Integuments deep black, without metallic lustre.....2

Integuments black, with bright steel-blue reflection.....4

2—Elytra finely and sparsely punctured throughout, the punctures toward base separated by at least twice their own diameters; pronotum finely and sparsely punctured throughout; integument highly polished. Length 3.2 mm.; width 1.8 mm. Arizona (Cañon of the Colorado River)—Dr. Prudden. **æqualis,** sp. nov.

Elytra coarsely punctate toward base, where the punctures are separated by their own diameters or less.....3

3—Punctures of the elytra toward base smaller, always clearly separated, those of the pronotum fine but rather close-set. Length 2.8–3.5 mm.; width 1.6–2.1 mm. California to Colorado..... **subnitidus** *Lec.*

Punctures of the basal regions coarser and usually densely crowded so as to become more or less distorted in form; pronotal punctures larger and stronger but relatively scarcely so close-set; body distinctly smaller in size. Length 2.3–2.8 mm.; width 1.28–1.7 mm. Lake Superior to Georgia..... **ater** *Erichs.*

4—Nearly similar in form to *ater*, the elytral punctures not so coarse or deep toward base and widely isolated among themselves, the pronotal punctures very fine and not close-set. Length 2.8–2.9 mm.; width 1.7 mm. Idaho (Cœur d'Alène). **chalybeus,** sp. nov.

Individuals of the various species appear to be abundant, and the genus, both in number of species and relative abundance, is much better represented in America than in Europe. *Niger* of Rossi, (= *glabratus* Fabr.), is the only European species, and its occurrence in this country has not been confirmed.

CIOIDÆ.

Maphoca, gen. nov.

The genus based upon the following characters may be placed for the present near *Plesiocis*. The body is narrow, parallel and moderately convex. Head well developed, wider than long, only moderately inclined, the eyes slightly behind the middle, remote from the base, moderate or rather small, entire, convex, relatively rather coarsely faceted, the facets individually strongly convex; front broadly and evenly arcuate from eye to eye, with a small transversely oval inclosed clypeus defined by a very feeble suture, the labrum small, rounded. Antennæ inserted under the sides of the front immediately before the eyes, short, 9-jointed, with a moderately developed loose parallel 2-jointed club, the two basal joints enlarged; three to six forming a slender shaft; third as long as the next two combined; four to six small, moniliform, the seventh transverse and wider. Maxillary palpi well developed, the last joint large, oval, slightly longer than wide, narrowly truncate at tip, the labial very minute; buccal opening small, the mentum very minute, longer than wide. Antennal grooves before the eyes rather distinct, the buccal processes almost obsolete; mandibles short and stout, bifid at tip. Prothorax widest toward apex, the disk even throughout and slightly convex; prosternum long before the coxæ, broadly truncate, the intercoxal process narrow. Elytra completely enclosing the abdomen, striato-punctate. Scutellum small, transversely oval or broadly angulate behind. Abdomen with five perfectly mobile segments, the sutures straight throughout, the first segment unmodified, as long as the next two combined; two to four decreasing scarcely visibly in length, the fifth scarcely longer than the fourth and rounded. Anterior coxæ small, very deep-set, transverse, the cavities narrowly open behind and angulate externally; intermediate and posterior narrowly separated, the latter extending nearly to the sides of the body, the met-episterna extremely narrow. Mesosternum even, transversely convex, the metasternum large. Legs

rather short, slender, the femora but slightly dilated, the tarsi much shorter than the tibiæ, 4-jointed, the three basal joints small, the first with a brush of long hairs beneath, the fourth long and notably stout, the claws well developed, divaricate, slender, simple and arcuate. Epipleuræ extending almost to the sutural angles but narrow throughout, scarcely at all dilated but horizontal toward base, inflexed behind the middle.

The extremely minute species having the assemblage of characters given above is one of those aberrent forms continually occurring among the serricorn Clavicornia. It may be described as follows:—

Body narrow and parallel, testaceous, the elytra blackish and the under surface piceous, the legs and antennæ pale; surface rather shining; head nearly three-fourths as wide as the prothorax, the antennæ as long as the width of the head; prothorax about a fourth wider than long, the sides rather prominently rounded at apical fourth, thence feebly convergent and straight or broadly, feebly sinuate nearly to the basal angles, which are somewhat obtuse; apex broadly arcuate, equal in width to the base, which is even and subtruncate; disk feebly convex, declivous at the sides, very minutely and feebly margined at base, minutely and rather sparsely punctate, each puncture with an extremely minute hair; elytra nearly twice as long as wide, scarcely visibly wider than the prothorax, rather obtusely rounded at tip, the sides parallel and almost straight, the humeral angles right and well defined; disk with even feebly impressed series of small punctures, the intervals each with a series of extremely minute punctures, each of which bears a very short, stiff erect hair. Length 1.05 mm.; width 0.35 mm. California (Mokelumne Hill, Calveras Co.)—Dr. F. E. Blaisdell.....**blaisdelli,** sp. nov.

No notes concerning the habits of this species have come to me, but probably they do not differ from those of other members of the family.

MELANDRYIDÆ.

TETRATOMINI.

The definition of this tribe must be enlarged to include all those Melandryids, with simple claws, which have the outer three or four antennal joints abruptly dilated to form a strongly developed loose and parallel club. The genera may be defined as follows:—

Last four joints of the antennæ dilated; eyes well developed, emarginate anteriorly; pronotal foveæ distinct..... 2

Last three joints abruptly and strongly dilated, forming a loose club; eyes emarginate or sinuate anteriorly, generally less developed; abdominal sutures moderately fine; edges of the prothorax subeven.....4

2—Pronotal margins not reflexed at the sides; basal segment of the abdomen about as long as the next two combined; joints of the antennal club pedunculate, the seventh not much dilated.....**Tetratoma**

Pronotal margins rather broadly concave and reflexed, the edge unevenly undulato-crenulate 3

3—Basal segment of the abdomen as long as the next two combined, the sutures very coarse. ....**Abstrulia**

Basal segment but little longer than the second, one to five decreasing gradually in length, the sutures rather fine .....**Incolia**

4—Eyes rather well-developed; pronotum broadly reflexo-explanate at the sides, transversely truncate and scarcely perceptibly bisinuate at base, the foveæ obsolete; abdominal segments decreasing uniformly and slowly in length, the first scarcely visibly longer than the second.....**Eupisenus**

Eyes smaller, very short and strongly transverse; prothorax not at all explanate at the sides, the base broadly, arcuately lobed at the middle, the foveæ distinct though not very well developed; first abdominal segment as long as the next two combined; body much shorter and more convex.....**Pisenus**

The last two of these genera were mutually confounded by LeConte and Horn, and both considered identical with the European tritomid genus *Triphyllus*. *Pisenus* resembles the latter considerably in form, and the noting of the 4-jointed hind tarsi, antennæ and pronotal foveæ no doubt led the distinguished authors astray; an inspection of the anterior and intermediate tarsi, which are 5-jointed, would have enabled them to avoid the error.

Tetratoma *Fabr.*

This holarctic genus contains several species in the European fauna, and the two following American species seem to be perfectly congeneric, as far as can be judged by the descriptions: —

Elongate-oval, strongly convex, rufo-testaceous, the head and antennæ black, the elytra steel-blue; body above polished, glabrous, except that each puncture encloses an infinitesimal hair; antennæ well developed, nearly two-fifths as long as the body, the club as long as the entire preceding portion, the joints quadrate or oblong, the last a little longer and pointed and all pedunculate at base; prothorax transverse, as wide at base as the base of the elytra, narrowed moderately from base to apex, the latter scarcely at all sinuate, with the angles broadly rounded, the base very broadly and feebly lobed at the middle and finely margined throughout like the sides, the latter broadly and very feebly irregular or subundulate; basal angles obtuse but not in the least blunt or rounded; punctures rather coarse and sparse, the basal foveæ distinct, deep and punctiform; scutellum moderately transverse, cordiform, finely punctured; elytra three-fifths longer than wide, a little more than three times as long as the prothorax, rather wider behind the middle than at base, thence rapidly, arcuately narrowed to the subogival apex; humeral callus obtusely prominent; punctures coarsely impressed and sparse; under surface more finely but rather sparsely punctate and sensibly pubescent; basal joint of the hind tarsi about as long as the last. Length 4.7–5.8 mm.; width 2.1–2.65 mm. Northern Atlantic regions.....**truncorum** *Lec.*

Elongate-oval, convex, finely and sparsely pubescent, shining, piceous with a reddish tinge; legs and base of the antennæ yellowish-brown; head more finely punctured; prothorax and elytra equally punctured, the former transverse, narrower in front, rounded at the sides which are narrowly margined, the base margined like the sides and with a large puncture half way between the middle and the basal angle, the latter obtuse and rounded. Length 4.0 mm. Colorado (Veta Pass)..... **concolor** *Lec.*

The latter of these species I have not seen, but, from the originally published characters reproduced above, it would seem to be provisionally attachable to the true *Tetratoma:* the principal differences appear to reside in the pubescence and in the rounded basal angles of the prothorax.

Abstrulia, gen. nov.

The species of this genus differ greatly from *truncorum* in general habitus and in the structure of the sides and base of the prothorax. The irregularly crenulate sides of the latter are prominent just before the middle and at basal third or fourth, and the disk is concave along the basal margin, with the foveæ larger, deep and more impressed or less punctiform, the scutellum smaller and more nearly subquadrate, and the elytra are dark in color with a complex maculation of pale spots, the punctures coarse, impressed and sparse. The surface is sparsely but distinctly pubescent, and the basal joint of the hind tarsi is, as a rule, obviously shorter than the last. The species are mutually closely allied, and the three before me may be thus defined from the male:—

Basal joint of the hind tarsi very much shorter than the last..... 2

Basal joint scarcely visibly shorter than the last.....3

2—Oblong-oval, convex, polished, pale piceous-brown in color, the legs and antennæ concolorous, the elytra blackish with pale flavous and sharply defined intricate markings, the pale areas together somewhat exceeding the dark, and having as a prominent feature a subsutural obverted C-shaped mark on each extending near the suture to apical two-fifths; antennæ scarcely as long as the head and prothorax, the club distinctly shorter than the stem, cylindric, rather compact, the joints wider than long, the last a little longer than wide and conically pointed, the seventh joint transverse and forming a gradual passage to the club, third as long as the next two combined; prothorax short, nearly twice as wide as long, the base and apex equal in width, the latter transverse, narrowly and feebly sinuate at each side, the middle broadly arcuate and as advanced as the very broadly rounded angles, the base broadly, feebly lobed at the middle, the angles very obtuse but not rounded; punctures coarse and rather sparse, but not as coarse or sparse as those of the elytra, the pubescence distinct; elytra three and a half times as long as the prothorax and equal in width, two-thirds longer than wide, parabolic behind, parallel at the sides; basal angles obtuse, the cal-

lus feeble; under surface finely and more closely punctured. Length 3.5 mm.; width 1.7 mm. New York.....**tessellata** *Melsh.*

Oblong-oval, more convex, polished, black, the antennæ piceous toward base, the legs dark testaceous, the elytral pale markings rufo-testaceous and together not occupying as much area as the black ground, the subsutural pale spot not extending behind the middle and not forming an obverted C-shaped macula; antennæ nearly as in *tessellata* but black and stouter, the third joint very much shorter than the next two combined; prothorax much more convex, distinctly less than twice as wide as long, the sides broadly arcuate, converging anteriorly, the prominence before the middle almost obsolete; apex much narrower than the base and broadly sinuate; punctures moderately coarse and sparse; elytra nearly similar in form and sculpture, as wide as the prothorax but only three times as long; under surface finely, sparsely punctate. Length 3.0 mm.; width 1.45 mm. Pennsylvania.....**variegata,** sp. nov.

3—Body throughout nearly as in *tessellata* but black, the antennæ concolorous, the periphery of the pronotum rather paler, the legs piceo-testaceous, the elytral pale maculation nearly similar but less extended, much less in area than the black ground, the subsutural C-shaped marks before the middle much shorter and not extending distinctly behind the middle; antennæ nearly similar in structure but stouter, and with the third joint very much shorter than the next two combined; prothorax and elytra nearly similar in form, the former a little narrower at apex, with the apical angles somewhat more advanced and much less broadly rounded, the pubescence longer and more conspicuous; lateral prominence before the middle equally conspicuous and much more so than in *variegata*. Length 2.9 mm.; width 1.4 mm. Indiana.—Cab. Levette.....**maculata,** sp. nov.

In *tessellata* the male has a large and very abruptly limited deep oval excavation, slightly wider than long, occupying almost median third of the fifth ventral, and extending from the apex almost to the base, the bottom of the excavation polished, impunctate and glabrous, with a very few piliferous punctures posteriorly; in *maculata* it is equally deep and abrupt but smaller, occupying about median fourth and is more distinctly pubescent posteriorly; in *variegata* it is as large as in *tessellata* or larger, but very much more shallow.

Incolia, gen. nov.

In this genus the body is much more elongate and less convex than in either of the preceding, and differs greatly in abdominal structure and somewhat in its finer sculpture; in the form and structure of the antennæ and prothorax it is nearly similar to *Abstrulia*. The single species may be described as follows from the unique type, which appears to be a female:—

Body elongate, parallel, feebly convex, polished, blackish, the antennæ toward base, legs, limb of the pronotum and an indefinite oblique elytral streak, extending for

a short distance from the elytral humeri, dark testaceous; pubescence short, inclined, very sparse and rather inconspicuous; head rather small, not half as wide as the prothorax, the antennæ rather stout, nearly as long as the head and prothorax, the third joint as long as the next two combined, the seventh wider than the sixth, transverse, forming a broader support for the club, which is fully as long as the stem, cylindrical, the joints transverse and rather closely connected, the last oval and pointed; joints of the club much more than twice as thick as three to six; prothorax short, about twice as wide as long, the sides broadly arcuate and coarsely, feebly and irregularly crenulate throughout, more convergent anteriorly, the apex slightly narrower than the base and transversely, rectilinearly truncate; base feebly and arcuately lobed in rather more than median half, the foveæ very large and impressed; side margins broadly reflexo-explanate, less widely so anteriorly, the basal angles very obtuse but not rounded, the apical obtusely rounded and not at all advanced; disk not concave along the base, but finely impressed within the basal bead, finely, sparsely punctate, the punctures gradually becoming closer and coarser toward the sides; scutellum slightly transverse, broadly angulate behind, minutely punctate; elytra much elongated, about twice as long as wide and four times as long as the prothorax, just visibly wider at three-fifths than at base and thence rapidly narrowed to the strongly rounded apex; humeral callus decidedly pronounced and elongate, gradually disappearing at some distance from the base; punctures impressed, rather sparse, moderately coarse, gradually becoming very fine posteriorly; sterna strongly, rather closely but not very coarsely, punctured, the abdomen minutely and rather densely so, especially toward the sides; tarsi slender, the first joint of the posterior as long as the last two combined. Length 3.8 mm.; width 1.6 mm. Indiana? ....**longipennis,** sp. nov.

The locality is reasonably certain, but the type bore no label in the cabinet of the late Dr. Levette. I considered this to be the *concolor* of LeConte, for some time, but the description will not serve, especially regarding the "narrowly margined" sides of the prothorax of *concolor*.

Eupisenus, gen. nov.

This is the only genus of the tribe Tetratomini which has been discovered thus far on the Pacific coast, the others all being inhabitants of the Atlantic districts. The body is elongate, parallel and moderately convex, with the prothorax relatively narrower than in the preceding genera, and the elytral humeri somewhat exposed at base. The following description of the only known species will bring out other characters which may prove to be generic:—

Parallel, polished, sparsely clothed with short fine and subdecumbent pubescence, black, the legs, antennæ, trophi and elytra pale luteous, the latter indefinitely shaded with piceous at the middle of the flanks and on the suture toward tip; antennæ rather stout, as long as the head and prothorax, the third joint about as

long as the next two together, eighth globular and perfectly similar to the seventh, the club very strong, parallel, the joints rather closely connected and strongly transverse, the last pointed and but little longer than wide; prothorax three-fourths wider than long, not more than two-thirds wider than the head, widest near basal third, the sides broadly arcuate, gradually converging anteriorly and almost even, the apex sensibly narrower than the base and broadly arcuate; basal angles slightly more than right and not at all rounded; surface rather coarsely and closely punctate; elytra parallel, obtusely and broadly rounded behind, four-fifths longer than wide, three and a half times as long as the prothorax and nearly a fourth wider, the punctures moderately fine but deeply impressed, somewhat close-set and nearly similar in size to those of the pronotum; humeri obtusely rectangular, the callus distinct; scutellum moderate, transverse; under surface polished, finely, rather sparsely punctured; legs slender, the four basal joints of the anterior and middle tarsi short, subequal and together but little longer than the last; basal joint of the posterior much shorter than the last. Length 4.5 mm.; width 1.65 mm. Alaska and southward..... .....**elongatus** *Lec.*

The head has a deep frontal impression at the middle of the line between the antennæ apparently in both sexes.

Pisenus, gen. nov.

The species of this genus may be readily distinguished from the preceding by the shorter, more oval form, greater convexity and much smaller size, as well as by the characters of the table; the prothorax, also, is as wide at base as the base of the elytra, so that the humeri are not exposed at base, and the sides of both form a virtually continuous arc. The antennæ are nearly similar in structure. The two species are the following:—

Body more elongate-oval, shining, clothed sparsely with rather short fine subdecumbent pubescence, black, the legs and antennæ dark testaceous, the basal regions of the elytra, especially at the humeri, suffusedly rufous; head about as wide as the rectilinearly truncate apex of the prothorax, the antennæ stout, fully as long as the head and prothorax, the eighth joint similar to the seventh and the club similar to that of *Eupisenus elongatus* but narrower; prothorax three-fourths or more wider than long, the sides almost perfectly even and broadly arcuate from the distinct basal angles to the apex, the latter much narrower than the base; surface rather finely but strongly, moderately closely punctate; scutellum transverse, broadly angulate behind; elytra suboval, rather ogivally pointed behind, scarcely at all wider than the prothorax and three times as long, two-thirds longer than wide, the punctures only moderately coarse, impressed, larger than those of the pronotum and somewhat sparse; under surface finely, rather sparsely punctate; legs moderately slender, rather short, the tarsi short, with the four basal joints of the anterior and intermediate equal among themselves and together about as long as the fifth, the last joint of the posterior very nearly as long as the first three combined. Length 2.8–3.1 mm.; width 1.3–1.4 mm. Pennsylvania, Indiana and northern Illinois; [*Triphyllus ruficornis* Lec.].....**humeralis** *Kirby*

Body nearly similar to the preceding but shorter and more broadly oval, strongly convex, shining, rufo-testaceous throughout, the pubescence long, coarse, rather abundant and conspicuous, ashy in color; head smaller, notably narrower than the apex of the prothorax, the antennæ similar to those of *humeralis* but still stouter, and with the third joint very much shorter than the next two combined; prothorax similar but only a little more than one-half wider than long and with the punctures coarse, deep and densely crowded; elytra sensibly wider than the prothorax and two and a half times as long, the sides slightly arcuate toward base, the apex gradually, rather narrowly rounded, one-half longer than wide, the punctures rather smaller than those of the pronotum and somewhat sparse, moderately coarse toward base, especially externally, gradually fine posteriorly; under surface finely, very densely punctate; legs rather stouter, the tarsi short but slender, the last joint of the posterior as long as the first three combined. Length 2.75 mm; width 1.4 mm. Virginia.....**pubescens,** sp. nov.

In no individual of the Tetratomini that I have seen, is there the faintest trace of serial arrangement of the always conspicuous elytral punctures at any part of the surface; the placing of *Tetratoma* near *Triplax*, by Redtenbacher, is an unaccountable error for this, as well as a multitude of other reasons, besides the radically different formation of the tarsi and palpi.