

MATERIALS FOR THE STUDY OF THE PHYTOPHAGA OF THE UNITED STATES.

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The following paper does not profess to be an exhaustive monograph upon this group; for such a work the time is not come, and the species here noticed will be nearly doubled if they are diligently collected and observed in different States. In particular, I would call attention to the *Halticini*, as being in almost a complete chaos. I have endeavored to diagnose the various genera, adding as few as possible at present, and to give tables, and often diagnoses of all the species; in some intricate genera, I have, however, abstained from remark. The immediate object of this publication is to make known the numerous unnamed species common in collections, in order that they may be inserted in the forthcoming check list of the Coleoptera of the United States, now printing at Salem. All the species described are from the cabinets of Drs. Leconte and Horn, without whose help and aid, this paper could not have been attempted.

CHRYSOMELIDÆ.

Form elongate, thorax not margined, head constricted behind.

1st ventral segment very long, claws simple. *Donaciides.*

1st ventral segment not longer than the rest.

Claws dentate, posterior coxæ nearly contiguous. *Orsodacnides.*

Claws simple, connate. *Criocerides.*

Form more or less rounded, thorax margined, head inserted.

Antennæ distant.

Pygidium vertical, bare, last ventral segments connate.

Anterior coxæ prominent, contiguous. *Melolonthides.*

Anterior coxæ transverse, distant. *Cryptocephalides.*

Abdomen normal.

Anterior coxæ transverse, claws generally simple.

Chrysomelides.

Anterior coxæ globose, claws bifid. *Eumolpides.*

Antennæ approximate, anterior coxæ conical, prominent.

Galerucides.

Form variable, antennæ approximate, inserted on the front.

Head free, form elongate.

Hispides.

Head hidden under the thorax, elytra explanate.

Cassidides.

DONACIIDES.

DONACIA, Fabr.

I. Anterior tibiæ simple, form elongate subtriangular, elytra truncate at the apex, upper surface flattened, femora often elongate, dentate.

Aa. 3d joint of antennæ much longer than the second—legs more or less pale.

Ba. Head, thorax, and scutellum pubescent.

Ca. Elytra rounded, femora simple, elytral interstices punctulate. *pubicollis.*

Cb. Elytra subtruncate, ♂ femora unidentate. *Harrisii.*

Bb. Above glabrous.

Ca. Thorax scarcely punctulate.

Da. ♂ posterior femora, 2-3-dentate, tibiæ serrate.

lucida.

Db. ♂ posterior femora, 1-dentate, tibiæ simple.

Ea. ♀ posterior femora dentate.

Fa. Thorax with the anterior callus obsolete.

Ga. Elytra transversely regulose, ♂ anterior tarsi dilated. *palmata.*

Gb. Elytra smooth.

Ha. Elytra striate punctate, interstices convex. *hypoleuca.*

Hb. Elytra seriate punctate. *texana.*

Fb. Callus well marked, ♀ with last segment produced. *piscatrix.*

Eb. ♀ posterior femora simple, form of next section.

tuberculata.

Cb. Thorax closely punctulate, subrugulose. *porosicollis.*

Ab. 3d joint of antennæ not, or hardly, longer than 2d, legs æneous.

Ba. Thorax and head pubescent. *hirticollis.*

Bb. Glabrous.

Ca. Posterior femora 2-3-dentate, tibiæ serrate.

Da. Thorax quadrate, antennal joints equal.

magnifica.

Db. Thorax elongate, 3d joint visibly longer than 2d.

proxima.

Cb. Posterior femora shorter, 1-dentate.

Da. Thorax with distinct callus, ♂ pygidium emarginate.

distincta.

Db. Thorax closely punctate (tibiæ sometimes pale).

subtilis.

II. Elytra subtruncate or rounded, convex, parallel; antennæ short; legs short, thick; anterior tibiæ with the apex produced into a tooth.

(*Plateumaris* Th.)

- Aa.* Pubescent. *pubescens.*
Ab. Glabrous.
Ba. Elytra subtruncate, legs nearly black.
Ca. Elytra bi-impressed, thorax foveolate inside the callus. *confusa.*
Cb. Thorax nearly smooth. *torosa.*
Bb. Elytra rounded, scutellum pilose.
Ca. Thorax more or less rugulose, basal groove not defined.
Da. ♂ ♀ posterior femora dentate.
Ea. ♂ pygidium emarginate, legs black, thorax sparsely punctulate. *emarginata.*
Eb. Thorax rugulose, legs more or less red.
Fa. Antennæ with the 2d and 3d joints equal. *pyritosa.*
Fb. 3d distinctly longer than 2d. *cuprea.*
Db. ♀ femora simple.
Ea. Thorax rugulose, with smooth reliefs, legs red. *femoralis.*
Eb. Thorax with disk smooth, dorsal channel visible, legs nearly black. *metallica.*
Cb. Thorax convex, dorsal and basal grooves marked, legs red.
Da. Thorax less convex, rugulose. *flavipes.*
Db. Thorax convex, punctate. *jucunda.*
Dc. Thorax very sparingly punctate. *Kirbyi.*

For a full description of these species the reader is referred to Leconte's synopsis, in the Proceedings of the Academy for 1852. Several species therein described are here marked as varieties, possibly in some cases incorrectly; but I have included only those species that I could definitely tabulate out, and rejected all others. The synonymy thus introduced will stand thus: *D. rufescens* = *pulchella* = *lucida*; *D. congener* = *alutacea* = *piscatrix*; *D. confluens* = *fulgens* = *subtilis*; *D. aurifer* = *dives* = *pusilla* = *cuprea*; *D. gentilis* = *metallica*; *D. sulcicollis* = *D. Kirbyi*. I am unable to add anything about the doubtful species, of which types must be compared; of species described since, *D. Californica* = *proxima*, *D. junci* = *emarginata*, and *D. pubescens* will be found above.

D. pubicollis, sp. n.

Narrow, elongate æneous; legs pale-red, under surface silvery; head, thorax, and scutellum cinereous, pubescent; eyes prominent; thorax longer than broad, callus not well-marked, surface punctu-

late; elytra closely striate punctate, apex rounded, interstices rugulose; tibia carinate externally, apex not produced. L. .42. Illinois. Very distinctly the rounded elytra, simple femora, and pubescent thorax.

D. texana, sp. n.

Head and thorax narrow, elytra rather broad, triangular; beneath silvery, above dark-green; eyes prominent, head sulcate, bituberculate in front; thorax broader than long, alutaceous, hardly punctulate; elytra smooth, interstices flat, broad, the rows of punctures golden-green; legs and antennæ æneous, base of femora pale. L. .40. Texas.

The only other genus belonging to this sub-family is *Macrolea* (*Hæmonia*), readily recognized by the glabrous testaceous surface, and by its elytra produced into a spine at the apex. The only species is *H. Melsheimeri*, which lives in rivers clinging to aquatic plants, and may be found throughout the summer.

ORSODACHNIDES.

- | | |
|---|---------------------|
| A. Anterior coxal cavities open, thorax with sides dentate. | <i>Syneta</i> . |
| B. Coxal cavities closed. | |
| a. Eyes entire. | <i>Orsodachna</i> . |
| b. Eyes emarginate, thorax with a lateral tubercle. | <i>Zeugophora</i> . |

ORSODACHNA, Latr.

1. **O. atra** (Ahrens), N. Act. Hal., i. 3, p. 26, 27.

Elongate, thorax coarsely rugosely punctate, with several smooth places in relief; elytra coarsely, rather closely punctate; beneath finely punctate, and clothed with a short decumbent pubescence. L. .22-.26. Atlantic region.

This species is extremely variable, the thorax is black or red, and the elytra are black or ochreous, with the suture and margins black; the legs are red or black. From these varieties have been formed the *hepatica* and *vittata* of Say, the *bivittata* of Lacordaire, the *ruficollis* and *inconstans* of Newman, and the *armeniaceæ* of Germar. Ahren's name is much older than any of these.

2. **O. Childreni**, Kirby, Faun., B. A., p. 221, 298, pl. 7, f. 6, *tibialis*, Kirby, l. c.

Closely allied to the preceding, similarly variable, but smaller, narrower, more shining; thorax sparsely not deeply punctate, elytra less strongly and less coarsely punctate normally, with

the margin narrowly, and a broad fascia behind the middle, black; under side as in *O. atra*. L. .21-.24. Canada, Hudson's Bay, Lake Superior.

Black varieties of this species also occur.

3. *O. luctuosa*, Lac., Mon. i. p. 72, 73.

Black, thorax red, with a very large spot black, tolerably narrowed behind, margins thickly, disk vaguely punctate, elytra closely punctate, finely transversely rugose. L. $3\frac{1}{2}$ lin. Oregon (Reiche). This species I have not seen.

ZEUGOPHORA (Kunze), (TARAXIS, Lec.).

1. *Z. scutellaris*, Suffr. Lac., Mon. i. 236, 1.

Black, head, thorax, scutellum, legs, pro- and meso-sternum clear, testaceous yellow; antennæ with the first joint yellow, 2-3 yellowish; scarcely pubescent, coarsely punctate. L. .15. Illinois (Leconte).

2. *Z. abnormis* (Lec.), Lake Sup., p. 237.

Rather elongate, very sparsely pubescent, coarsely punctate; thorax with the lateral spine obtusely rounded, short, black; antennæ, parts of the mouth, and legs red; epipleuræ of thorax and elytra pitchy. L. .16. Lake Superior, Oregon. More elongate than the other species; fifth joint of antennæ larger than the sixth. A variety entirely rufous also occurs.

3. *Z. puberula*, sp. n.

Allied to *Z. scutellaris*, but with short antennæ and thickly pubescent surface; the lateral spine is well marked, triangular, the color is dark ferrugineous, the meta-sternum, abdomen, and joints, 5-11 of the antennæ being black. L. .14. Illinois (Leconte).

4. *Z. varians*, sp. n.

Very sparingly pubescent, shining; front of head antennæ, legs, and pro-sternum pale ferrugineous; thorax ferrugineous, spine obtuse, disk on each side with a broad black patch; elytra pitchy-black, with a common discoidal patch, and the sutural margin ferrugineous. L. .13. Illinois, Kansas, Pennsylvania.

5. *Z. consanguinea*, sp. n.

Very like *Z. varians*, but longer, more deeply colored, thorax entirely red, elytra entirely black. L. .14. Illinois. Easily distinguished by the elongate form.

SYNETA, Esch.

1. *S. ferruginea* (Germ.), Nov. Act. Hal., i. 6, p. 34; *rubicunda*, Lac. Mon., i. 230, 2 *tripla* Say, T. Acad., v. 391.

Elongate, entirely ferruginous; antennæ infusate, base pale; elytra with four elevated lines, the third only visible at the apex, the second sharply costate; interstices deeply punctate. L. 30-32. Lake Superior, Middle, and Western States. To this belongs *S. costata* Newm.

2. *S. carinata* (Mannh.), Lac. Mon., i. 228, 1.

Larger than the preceding, more deeply punctate, all the elytral lines sharply costate, color brown. L. 32-33. Sitka, Vancouver, Oregon.

♂ Posterior tibia largely dilated at the apex, with a hamate process near the apex, of the length of the first joint of the tarsi.

3. *S. albida*, Lec., Pac. R. Rep. p. 66.

Pale ochreous, elytral lines hardly elevated, third indistinct. L. 30-32. Vancouver, Oregon.

♂ Disk of thorax and suture of elytra black. (*Suturalis* Lec.) This includes *S. seriata* Lec. as a variety.

4. *S. simplex*, Lec., Pac. R. Rep., p. 66.

Only one female from Oregon; this is very near *S. ferruginea*, but the elevated lines are only visible at the base of the elytra.

CRIOCERIDES.

LEMA (Farr.) Lac.

- A. Elytra with the ninth stria entire.

Elytra unicolorous blue.

Thorax red.

Head bituberculate, red.

First joint of antennæ, abdomen, and legs red. *texana*.

Antennæ, abdomen, and legs black. *brunnicollis*.

Antennæ and tibiæ black, abdomen red. *cornutus*.

Head simple, thorax spotted with black. *maculicollis*.

Head simple, black, thorax short. *collaris*.

Thorax black. *peninsula*.

Elytra more or less marked with testaceous.

Head black, elytra blue with testaceous fascia. *solani*.

Head red, elytra testaceous, suture and vitta black. *nigrovittata*.

Elytra blue, margin and basal spot testaceous. *conjuncta*.

Elytra testaceous, suture and marginal vitta black. *trilineata*.

B. Elytra with the ninth stria interrupted.

Elytra blue, thorax red.

Sayi.

Elytra red, spotted with black.

Larger, spots discoidal.

6-punctata.

Smaller, spots common, sutural.

albini.

1. *L. cornuta* (Feb. 1801), Lac. Mon., i. p. 382.

Red, elytra blue, knees, tibiæ, tarsi, and antennæ black. L. .22. South Carolina, Leconte.

2. *L. texana*, sp. n.

Very near *L. cornuta*, but rather smaller; head much less strongly tuberculate; first joint of antennæ, scutellum, and legs entirely red. L. .21. Texas, not rare.

3. *L. brunnicollis*, Lac. Mon., i. p. 391.

Also near *L. cornuta*, but smaller and in proportion broader; antennæ, legs, and abdomen black. L. .18. Southern States.

4. *L. maculicollis*, Lac. Mon., i. p. 392.

Black, elytra blue; thorax red, elongate, subcylindrical, alutaceous, with two fuscous vittæ. L. .18. Southern States.

5. *L. collaris*, Say, J. Acad., iii. 430.

Black, thorax red, elytra black; head roughly sculptured in front; thorax short, hardly constricted, impunctate; elytra punctate, striate shining. L. .20. Texas.

Var. Elytra blue, thorax faintly punctate, more constricted. Illinois.

6. *L. peninsulæ*, sp. n.

Entirely polished black, elytra steel-blue; head deeply sculptured, front with an impressed V-like mark; thorax longer than broad, constricted obliquely behind the middle, disk sparingly punctate; elytra seriate punctate, interstices very sparsely punctulate. L. .22. Lower California (Leconte).

7. *L. solani* (Fab.), Lac. Mon., i. p. 400.

Red, metasternum, legs, antennæ, and head black; elytra blue; margin and a medial fascia red; interstices very sparingly punctulate. L. .25. Florida.

8. *L. conjuncta*, Lac. Mon., i. p. 405.

Red, antennæ (except the first joint), tibiæ, and tarsi black; elytra blue, margin and a small basal spot red. L. .24. Florida.

This probably has a less developed form.

9. *L. trilineata* (Oliv.), Lac. Mon., i. p. 40.

Red, antennæ (first joint excepted), tibiæ, and tarsi black; thorax with two black spots; elytra with the suture and a submarginal vitta black. L. .25. Atlantic region, Mexico.

Var. Elytral bands very narrow (*trivirgata*, Lec.).

Var. Elytral bands more or less confluent.

10. *L. nigrovittata* (Guér.), Lac. Mon., i. p. 421.

Closely allied to *L. trilineata*, but with the head and metasternum black; the legs are irregularly black and red; thorax with two lateral black spots. L. .25. Arizona, California.

11. *L. 6-punctata* (Oliv.), Lac. Mon., i. p. 486.

Ferruginous red, legs and antennæ black (base of femora and first joint of antennæ red); sides of metasternum black, elytra each with the humeral angle, a spot near the suture before the middle and another layer at 3-4 black. L. .24. Southern States.

Var. Spots confluent on the suture, humeral angles paler (*ephippiata*, Lac.). L. .20.

Var. Spots confluent on the suture (*albini*, Lac.).

12. *L. Sayi*, sp. n.

Ferrugineous red, antennæ and legs black; elytra blue; head with a small black fovea on the vertex; thorax elongate, rather sharply constricted, thickly punctulate, disk black; elytra punctate striate, 9th stria narrowly interrupted; femora clavate, pubescent. L. .24. Southern States.

L. melanocephala, Say (J. Acad., v. 294), has not yet been identified; the head and abdomen are black, thorax and elytra testaceous red.

L. signaticornis, Chev. (*intermedia*, Guér.) is given in the Mel-sheimer Catalogue, and is common in Mexico. It is rather like *trilineata*, but the antennæ are pale, with joints 6-8 black.

Crioceris asparagi (Linn.) has been introduced, and occurs in many parts of the United States, and may be readily known by its coloring; bluish-green, thorax red, with two green spots, elytra with four lateral yellow spots confluent with a yellow margin.

MELOLONTHIDES.

- A. Tarsal claws simple.
 B. Anterior coxæ contiguous. *Anomæa.*
 Bb. Anterior coxæ separated by the prosternum.
 C. Elytra striate punctate. *Euryscopa.*
 Cb. Elytra irregularly punctate. *Coscinoptera.*
- Ao.* Claws appendiculate.
 B. Anterior coxæ contiguous. *Babia.*
 Bb. Anterior coxæ separate.
 C. Elytra without epipleural lobes. *Urodera.*
 Cb. Elytra with large epipleural lobes. *Saxinis.*

I have elsewhere exposed the reasons that induce me to adopt Geoffroy's name for the typical genus of this subfamily, which has at least twenty years of priority.

ANOMÆA, Lac.

1. *A. laticlavata* (Forst., 1771), Lac. Mon., ii. p. 132, 2.

Elongate, cylindrical, fulvous, obsoletely punctulate, subopaque; elytra and legs unicolorous or suffused with black. L. .30-.32. Middle and Southern States, Texas.

Lacordaire (l. c. p. 137) has separated *C. mutabilis* on some Texan and Mexican specimen with the thorax and a fascia across the elytra black; but I cannot see any structural differences.

2. *C. militaris*, Lec. Pr. Acad. 1858, 83.

Black, cylindric, pubescent beneath; thorax unequal, sparsely punctate; elytra blue-green, with a large triangular humeral, and a round subapical spot red, coarsely subseriate punctate. L. .18. Texas (Leconte). Allied to the *C. humerigera*, Lac., which, however, wants the apical spot.

BABIA, Chev.

1. *B. biguttata* (Oliv., 1790), Lac. Mon., ii. p. 428, 5.

Oblong, black, shining, elytra coarsely punctate striate, interstices coarsely and sparsely punctate, each with a humeral and subapical spot red. L. .14-.16. Southern States, Texas, Mexico.

B. pulla, Lac. (l. c. p. 429) is a variety with the thorax very finely punctulate.

B. tetraspilota, Lec. is a depauperated specimen from the Colorado desert.

URODERA, Lac.

1. *U. crucifera*, Lac. Mon., ii. p. 454, 6.

Cylindrical, polished, black, thickly clothed with white pubescence beneath; head and thorax impunctate; elytra fulvous; very lightly punctate striate, intervals smooth, with a sinuous medial fascia black, running along to the apex. L. .30. New Mexico, Arizona.

SAXINIS, Lac.

1. *S. omogera*, Lac. Mon., ii. p. 482.

Cylindrical, short, blue-green, pubescent beneath; thorax coarsely and rather closely punctate: elytra with a humeral spot red, strongly and confusedly punctate striate, interstices very sparingly punctate. L. .10-.14. Texas, Southern States.

2. *S. saucia*, Lec. Pac. R. Rep. p. 66.

Much larger than *S. omogera*, elytra confusedly rugulose, thorax very sparingly punctate, shining. L. .26-.30.

This is evidently the *Clythra bisignata*, Walk.

EURYSCOPA, Lac.

1. *E. Lecontii*, sp. n., *scapularis*, ‡ Lec.

Elongate, attenuate behind; head, thorax, and under side densely pubescent; elytra shining, deeply punctate striate (punctures large, closely packed), intervals smooth; humeral angles with an oblique red vitta. L. .24. Texas boundary.

This cannot easily be identified with *E. scapularis*, Lac., as the thorax is coarsely and strongly punctate.

2. *E. vittata*, Lec. J. Acad., iv. 26.

Differs from *E. Lecontii* by the punctuation of the thorax, which is fine and sparse; the elytral vitta is curved and prolonged nearly to the apex. L. .26, Texas (Pope).

COSCINOPTERA, Lec.

1. *C. æneipennis* (Lec.), J. Acad., iv. 26.

Head, thorax, and under surface pubescent; elytra brassy, glabrous, deeply subseriate, impunctate; thorax finely and closely punctate, median line smooth. L. .26, Texas.

Closely allied to *C. cribrata*, Lac., but he does not mention the red labrum, and describes the legs and antennæ as red.

2. *C. ænescens*, sp. n.

Black, pubescent, above brassy, labrum bordered with yellow, thorax closely punctate, medial line smooth; elytra closely and evidently punctate, punctures arranged rather in rows; tibiæ piceous. L. .18, Southern States.

3. *C. axillaris*, Lec., Tr. Ent. Soc., 1868, p. 56.

Cylindrical, narrow, brassy black, clothed with a whitish pubescence; thorax with the hind angles prominent, rather sparingly evidently punctate, medial line hardly visible; elytra coarsely serially punctate, interstices sparsely punctate, humeral angle fulvous. L. .12. Colorado (Leconte).

4. *C. mucorea* (Lec.), Pr. Acad., 1858, 83.

Cylindrical, very densely clothed with whitish pubescence, brassy; thorax rather sparingly punctate; elytra with the callus red, striate punctate; interstices transversely rugulose, the punctures obsolete towards the apex. L. .21. California (Leconte).

5. *C. dominicana* (Fab., 1801), Lac. Mon., ii. p. 515, 6.

Black, oblong, clothed sparingly with a whitish pubescence; labrum yellow; thorax closely punctate, median line smooth; elytra closely punctate. L. .20–.22. Southern and Western States. *C. franciscana*, Lec., does not differ specifically.

6. *C. subfasciata*, Lec., Tr. Ent. Soc., 1868, p. 56.

Cylindrical, black, labrum black, sparsely pubescent above; thorax evidently not thickly punctate, median line obsolete; hind angles prominent; elytra shining, coarsely and sparingly punctate; humeral angles with a large quadrate red spot. L. .25–.30. Arizona, Lec.

Var.—Elytra with a basal fascia fulvous.

7. *C. major*, sp. n.

Very similar to *C. subfasciata*, but much larger, more convex; hind angles of thorax not prominent, the basal spot is large, but the callus is black; the punctuation also is a little closer. L. .42. Texas.

8. *C. vittigera*, Lec., Pr. Acad., 1861, p. 357.

Very distinct by the Clytra-like form parallel; thorax short,

unequal sparingly and deeply punctate; elytra coarsely and rather sparingly punctate, each with an equally broad fulvous vitta from the shoulder to the apex, where it recurves to meet the suture. L. 21. Kansas (Leconte).

CRYPTOCEPHALIDES.

- | | |
|---|-------------------------|
| A. Antennæ short, dentate received in grooves. | Chlamydini. |
| B. Antennæ with joints 5-11 dentate. | <i>Chlamys</i> . |
| Bb. Antennæ with joints 6-11 dentate. | <i>Exema</i> . |
| Ab. Antennæ tolerably long, free. | Cryptocephalini. |
| B. Thorax not margined or impressed at base. | |
| C. Antennæ thickened, prosternum broader than long. | <i>Monachus</i> . |
| Cb. Antennæ long, filiform, prosternum long. | <i>Cryptocephalus</i> . |
| Bb. Thorax with an impressed margin along the base. | |
| C. Prosternum flat. | <i>Griburius</i> . |
| Cb. Prosternum grooved, pointed behind. | <i>Pachybrachys</i> . |

CHLAMYS, Knoch.

- | | |
|--------------------------------|--------------------|
| A. Legs black, above metallic. | <i>plicata</i> . |
| B. Legs red, above black. | <i>foveolata</i> . |

I am unable to separate *C. assimilis*, Klug, and *C. polycocca*, Lac., from *C. plicata*. Of *C. tuberculata*, Klug, I have seen no specimens.

EXEMA, Lac.

- | | |
|----------------------------------|--------------------|
| A. Metallic, subcupreous. | <i>gibber</i> . |
| B. Black or varied with fulvous. | <i>conspersa</i> . |

Mannerheim's *conspersa* is evidently identical with *E. dispar*, Lac., which is a most variable little species.

MONACHUS, Chev.

- | | |
|---|----------------------|
| A. Steel blue; legs concolorous. | { <i>saponatus</i> , |
| | { <i>seminulum</i> . |
| Ab. Steel blue; legs red. | |
| B. Thorax with a basal row of deep punctures. | <i>auritus</i> . |
| Bb. Thorax red with no basal punctures. | <i>thoracica</i> . |

I am unable to distinguish *M. ater*, Hald., and *M. seminumum*, Suffr. I have not seen; it is quite small ($\frac{3}{4}$ lin.), clypeus, basal joint of antennæ, and anterior tibiæ reddish; the punctuation is much as in *saponatus*. Suff. Linn. Ent. xii. 344, 4. Georgia.

M. affinis, Hald. is the ♀ of *M. auritus*.

M. Thoracica, sp. n.

Very like *M. saponatus* in form, size, and sculpture; but the head, thorax, and legs entirely red, the thorax also is devoid of the basal line of punctures. L. .16. South Carolina, Florida (Leconte).

M. guerini, Perbosc, has been found in Sonora, and is easily known by the red thorax with two green spots, and elytra blue with a red band.

CRYPTOCEPHALUS, Geoff.

So many species of this genus have been described by Suffrian that I am unable to make a proper table of the species. I hope, however, in time, to get a good series revised by him. The groups into which he divides the genus are hardly satisfactory, and I have used the ♂ characters in preference.

A. First ventral segment with a large plate produced into two acute diverging points behind; prosternum with an acute tubercle between the coxæ. Here belong *C. lituratus*, Fabr. (from which I doubt the propriety of separating *C. lativittis*, *S. vittatus*), *C. congestus*, Fabr., *formosus*, Mels., *detritus*, Oliv., *sellatus*, Suff.; also *C. sulphuripennis*, Mels., *areolatus*, Suff., *maminifer*, Newm. *egenus*, Suff., which appear to me doubtful.

B. Prosternum with the anterior edge carinate or produced in the ♂.

C. Prosternum alike in both sexes.

C. vitticollis, Lec. appears to me not to differ from *C. leucomelas*, Suff.

C. mucoreus, Lec. is very distinct by its pubescent upper surface.

C. schreibersii, Suff. is also very distinct by the closely rugulose thorax.

In the group of very small species at the end of the genus I have recognized *C. catarius*, Suff., *C. auratus*, Fab. (with which I unite *C. æneolus*, Lec., *C. chalconotus*, Mann., *C. viridis*, Hald.) *C. atomus*, Suff., *C. chlorizans*, *nanus*, *luscus*, *pallidicornis*, remain unknown to me. *C. gracilis* rests on the original Fabrician example of *C. parvulus*, which is identical with the European species; as this is the only specimen, and the only species common to the two countries, it seems to me better to omit it. *C. lævis*

Hald. is probably only *C. auratus* or *C. atomus*; the type is not now extant. *C. pumilus*, Hald. is closely allied to *C. nanus*.

GRIBURIUS, Hald. (SCOLOCHRUS, Suff.)

A. Legs yellow.

B. Above black, elytra with orange spots.

scutellaris.

Bb. Above yellow, with black spots.

larvatus.

Ab. Legs black and white, elytra with the suture white.

Montezumæ.

Ac. Legs entirely black, elytra with two red spots.

Lecontii.

G. speciosus, Lec. appears to me to agree with the description of *Scolochrus Montezumæ*, Suffr. *G. larvatus* may be a pale form of *G. scutellaris*, but the thorax is less punctate.

G. Lecontii, sp. n.

Black, clothed beneath with a gray pubescence; head with the clypeus and a large triangular frontal mark whitish-yellow; thorax shining, with scattered deep punctures and a few minute ones intermixed; base deeply impressed; scutellum punctate; elytra with the basal half and sometimes an apical spot dull red, deeply punctate striate, the striae near the suture confused, interstices rugulose. L. .16. Texas.

PACHYBRACHYS, Chevr.

This genus is extremely rich in species and very variable; Suffrian has described many entirely unknown to me, some of which I cannot think will stand. One species from Lower California appears to me entirely new.

P. Xanti, sp. n.

Ochreous, cylindrical, very slightly covered with short erect hairs; head with a brown frontal dash, eyes not closely approximate in the ♂; thorax very long, nearly quadrate, with a smooth discoidal line and no basal impression, ochreous, irrorated with brown, thickly covered with deep elongate punctures, interstices faintly punctulate; scutellum small; elytra opaque, ochreous, the punctures brown, serially disposed at the sides, irregularly towards the suture; beneath pubescent, metasternum nearly black. L. .10-.12. Lower California (Leconte).

♂ anterior tibiae curved.

EUMOLPIDES.

Anterior coxæ globose, never transverse, third joint of tarsi deeply bilobed.

A. Pubescent or squamulate.

Thorax not margined at the sides.

Prosternum separate from its episterna.

Subquadrate, brown.

Adoxus.

Metallic, eyes with a deep groove above them. *Heteraspis.*

Prosternum not separate from its episterna.

Thorax transverse, flattened.

Xanthonia.

Thorax cylindric.

Fidia.

Thorax margined.

Elytra striate, sides of thorax denticulate.

Myochrous.

Elytra punctate, thorax entire.

Glyptoscelis.

B. Glabrous.

Thorax lobed behind the eyes, head immersed.

Claws appendiculate, elytra punctate.

Thorax not margined at base, small, globose. *Chalcoparia.*

Thorax margined, oblong.

Antennæ not long, heavily clubbed.

Chrysochus.

Antennæ long, filiform.

Typophorus.

Claws bifid; elytra striate punctate.

Paria.

Thorax not lobed behind the eyes.

Second and third joints of antennæ equal.

Head broad, not sulcate above the eyes.

Metaparia.

Head rather narrow, with a groove round the eyes.

Metachroma.

Second joint of antennæ shorter than the third.

Colaspis.

ADOXUS, Kirby (*typ. vitis*).A. *vitis*. (Linn.)

Broad, subquadrate; head and thorax narrow; black, tibiæ and antennæ with the club dark; elytra reddish-brown; surface clothed with golden pubescence; thorax closely punctate; elytra irregularly punctate (the translucent spots are arranged in rows, but the real punctures are not so). L. .21. Middle States, Lake Superior, Oregon, Europe.

FIDIA, Dej. (*typ. murina*).1. *F. murina*. (Dej. Cat.) sp. n.

Elongate, subcylindric; legs very long, entirely brownish-red throughout and clothed with a dense gray pubescence; head and

thorax evidently not densely punctate, that with a smooth medial line, this longer than broad, cylindric elytra deeply punctate striate, interstices sparsely rugose, with a few deeper punctures. L. .26. Middle and Southern States.

♂ metasternum and first ventral segment smooth in the middle; second with a smooth rounded fovea, fifth with a transverse punctate fovea.

2. *F. longipes* (Mels.), Pr. Acad., iii. 169, 1; *viticolus* (Uhler.) Pr. Acad., vii. 418.

Allied to the preceding, but smaller, black; pubescence ashy; base of femora and of antennæ red; head and thorax more densely punctate; that without median line. L. .24. Middle and Southern States.

♂. First ventral segment smooth in the middle.

XANTHONIA, Baly. (*typ.* 10-notatus Say).

1. *X. 10-notatus*, J. Acad., iii. 445.

Subquadrate, scabrous, brownish-red, with a suberect brown pubescence; head and thorax densely punctate, the punctures umbilicate; elytra confusedly densely punctate; interstices of the punctures shining; marked with various indeterminate black markings; under side black, opaque; antennæ pale-red. L. .12. Atlantic region.

Very variable, sometimes unicolorous testaceous.

2. *X. villosulus* (Mels.), J. Acad., iii. p. 169, 2.

Very closely allied to *X. 10-notata*, but uniformly testaceous; elytra substriate punctate. L. .13. Middle and Southern States.

Var. Entirely black above.

3. *X. Stevensii*, Baly, J. of Ent., ii. 151.

Oblong, subcylindrical, fulvous, subnitidous, covered with fine concolorous hairs; eyes and apex of jaws black. L. $1\frac{1}{2}$ lin. Canada.

Head short, subrotundate, closely punctate; epistoma concave, face impressed; thorax transverse; elytra closely punctate, punctures confused near the suture, arranged in striæ on the disk.

HETERASPIS (Chev.), Lec.

1. *H. pubescens* (Mels.), Pr. Acad., iii. 169, 3.

Oblong, æneo-cupreous, sparsely clothed with a gray pubescence;

surface alutaceous; head little punctate, deeply foveolate; thorax about as long as broad, sparsely punctate; sides more or less transversely rugose; elytra sparingly punctate, with traces of seriate punctures, and a sutural stria evident behind; base with a reflexed margin; under side densely but obsoletely punctulate. L. .13. Middle and Southern States.

2. *H. curtipennis* (Mels.), l. c. n. 4.

Much smaller; thorax entirely rugose; eyes very prominent; elytra more strongly punctate. L. .9. Middle and Southern States.

3. *H. marcassita* (Zimm. MSS.), sp. n.

Closely resembling *H. pubescens*, but the clypeus is deeply and acutely emarginate in front, with the lateral lobes also prominent; the thorax is not rugose; the form is shorter, the elytra more visibly striate, and the basal margin does not reach the scutellum. L. .12-.13. Middle and Southern States.

4. *H. nebulosus*, Lec.

Also very near *H. pubescens* and with the clypeus truncate, but the thorax is not rugose, but has smooth reliefs on the disk; the elytra are more evidently striate punctate; the pubescence is stronger and more marbled; the basal margin of the elytra is incomplete. L. .13. Kansas, Iowa, and Wisconsin.

5. *H. smaragdulus*, Lec.

Apparently distinct by the uniform metallic green color, but otherwise extremely close to *H. nebulosus*.

GLYPTOSCELIS, Lec.

1. *G. hirtus* (Oliv.), Ent. vi. 96, p. 906, t. 1. f. 16.

Cylindrical, brilliant cupreous, tolerably thickly clothed with a decumbent pubescence of white and brown hairs intermixed; thorax and elytra deeply and closely punctate, the sides of the former suddenly narrowed towards the base. L. .35-.40. Middle and Southern States, Oregon.

This may be known by the parti-colored pubescence, and the nearly bare scutellum.

2. *G. illustris*, sp. n.

Cylindric, of a brilliant burnished copper color; very sparingly

pubescent, but the elytra with the base, margin, suture, and a discal spot clothed with long white hairs; less closely punctate than *G. hirtus*, and the sides of the thorax gradually narrowed to the base. L. 40-41. California (Horn), Oregon (Walsingham).

Very distinct by the irregular pubescence.

♂ Last ventral segment with a deep smooth fovea.

3. *G. albidus*, Lec., Proc. Acad. 1859, 81.

Cylindrical, allied to *G. hirtus*, but rather densely clothed with squamiform, pale hairs; thorax and elytra less closely punctate. L. 30-32. California.

4. *G. barbatus* (Say), J. Acad., v. 296.

Shorter and stouter than the other species; thorax distinctly narrower than the elytra, strongly and closely punctate, as in *G. hirtus*; surface densely clothed with uniform brown hairs. L. 30. Pennsylvania.

5. *G. squamulatus*, sp. n.

Cylindric; thorax subelongate, sides straight; punctuation rather open; surface densely clothed above and below with whitish elongate scales. L. 30. California (Leconte); Oregon (Walsingham).

6. *G. crypticus*, Say, J. Acad., iii. 449.

Form and size of *G. hirtus*, more sparingly punctate; clothed throughout with a whitish subsquamiform pubescence; claws much less strongly bifid. L. 30. Atlantic region.

♂ Elytra mucronate at the apex; last ventral segment with a smooth fovea.

7. *G. alternatus*, sp. n.

Very similar to *G. crypticus*, but with the pubescence on the elytra denser on the alternate interstices, so as to give a faint striped appearance. Thorax with the sides rounded. L. 37. California (Horn).

♂ Elytra not mucronate; last ventral segment with a smooth fovea.

8. *G. cuprascens* (Lec.), Pr. Acad. 1858, 85.

Subquadrate, shining, cupreous, rather sparingly clothed with short erect hairs; upper surface evidently and not closely punctate, interstices of the punctures shining; thorax subtransverse,

and sides oblique; front margin not produced. L. .19. California (Leconte).

9. *G. smaragdulus* (Lec.), Pac. R. Rep. p. 67.

Very closely allied to *G. cuprascens*, but greenish-blue, very shortly and slightly pubescent; thorax always more finely and more densely punctate than the elytra. L. .17-.19. California (Leconte).

These two species have the appearance of *Heteraspis*, but agree with *Glyptoscelis* in the punctate elytra, lobed thorax, etc.

MYOCHROUS (Chev.), Lec.

1. *M. denticollis* (Say), J. Acad., iii. 448.

Subelongate, subæneous, densely clothed with easily abraded gray scale-like hairs; antennal club infusate, legs subæneous; head and thorax very densely and not strongly punctate, opaque, subscabrous, the latter broader than long; front angles deflexed, sides tridentate; elytra with about sixteen rows of closely packed deeply impressed punctures; interstices hardly visible; under side evidently punctate. L. .20-.22. Texas, Southern and Western States.

2. *M. longulus*, Lec. Pr. Acad. 1858, 86.

More elongate, parallel; thorax longer than broad, sparingly punctate; elytra punctate striate; interstices as broad as the punctures; surface densely clothed with yellowish scale-like hairs. L. .20. California.

3. *M. squamosus*, Lec. Col. Kans. p. 24.

Form of *M. denticollis*, but thorax rather longer than broad; sides not denticulate; surface closely and densely rugulose; elytra with thirteen punctate striæ; punctures not deep; interstices closely punctulate; surface covered with short rounded scales. L. .20. Kansas, Colorado.

CHRYSOCHUS, Chev.

1. *C. auratus*, Fab. Syst. El., i. p. 419.

Oblong, convex, brilliant polished green; elytra golden-green varied with coppery; head and thorax very sparsely coarsely punctate, surface covered with minute sparse punctures; elytra

finely and irregularly punctate; ventral surface and thoracic epipleuræ hardly punctate. L. .40. Atlantic region, Arizona.

2. *C. cobaltinus*, Lec. Pac. R. Rep., p. 67.

Extremely close to the preceding, but entirely of a deep-blue color or blue-green; clypeus closely punctate. L. .40-.41. California, and Oregon.

Three other species are described by the Rev. T. A. Marshall (J. Linn. Soc., viii. p. 449).

C. californicus, bluish-green (not dark-blue), thorax broader, more gibbous at the sides. L. 8 lin. (= *cobaltinus*, Lec.)

C. tenibricosus, black tinged with blue, thorax not gibbous or dilated at the sides. L. 5 lin. (? *cobaltinus* var.)

C. castaneus, chestnut-colored, beneath testaceous; thorax transverse, very slightly dilated, densely covered with two sorts of punctures; elytra substriate punctate. (immaturus.)

TYPOPHORUS, Chev.

Thorax lobed behind the eyes, head broad, antennæ distant, no ocular sulci, antennæ long filiform, second joint very short, third longer than the fourth, posterior tibiæ produced at the apex.

1. *T. tricolor* (Fab.), Ent. Syst., i. 316, 41; *viridis*, Fab. Syst. El., i. 413, 8; *picipes*, Ol.

Oblong, sub-parallel, above green or bronzed, beneath brown, legs and antennæ pale-red; head closely punctate, clypeus raised on a level above the front; thorax closely punctate, sides very little rounded, slightly explanate, disk with a smooth space towards the base; elytra irregularly rather coarsely punctate; under side scarcely punctulate, thoracic epipleuræ closely punctate. L. .20-.24. Middle and Southern States. ♂ Apex of elytra slightly mucronate, fifth segment foveolate.

2. *T. metasternalis*, sp. n.

Very similar to the preceding, but elytra more sparsely punctate, subcastate; ventral segments and metasternum closely and deeply punctate. L. .22. Illinois.

3. *T. oregonensis*, sp. n.

Very closely allied to *T. tricolor*, but distinct by the well-marked hind angles of the thorax, which is also more sparsely and more strongly punctate; the ventral segment and metasternum are

also roughly punctate. L. .24. Oregon (Walsingham). The color varies from blue to green or golden.

CHALCOPARIA, g. n.

Head deeply immersed, antennæ distant, eyes not emarginate, no ocular sulci; thorax hardly lobed behind the eyes, antennæ with joints 2-4 equal, short; tibiæ not produced at the apex, claws appendiculate. This genus is formed for a small globose species having the aspect of *Colaspis tristis*, but the thorax is not margined behind, a character unique in the N. American *Eumolpidæ*.

1. *C. globosa*, Oliv. Ent., vi. p. 893.

Globose, shining, cupreous; antennæ, four anterior legs, and posterior tibiæ red; head sparingly punctate, front impressed; thorax transverse, deeply emarginate for the head, evidently punctate, sides slightly rounded, finely margined, base immarginate with a row of punctures along the edge; elytra deeply irregularly punctate, punctures sometimes subseriate. L. .10. Middle and Southern States, Texas.

PARIA, Lec.

Eyes bordered by a deeply impressed base; posterior tibiæ broadly emarginate at tip, claws bifid; thorax lobed behind the eyes; elytra striate punctate; antennæ with second joint shorter than third.

1. *P. 6-notata* (Say), J. Acad., iii. 445.

Oblong, short, yellowish-red, ventral segments and three spots on each elytron black; head coarsely punctate; thorax margined, sides slightly rounded, sparsely punctate; elytra deeply punctate striate, interstices smooth, striæ obsolete before the apex. L. .12-.16. Atlantic region, extending also to California.

Var. 6-guttata, Lec. Pr. Acad., 1858, 86.

Elytra with the two lower spots united.

Var. 6-notata (Say), l. c., 446.

Thorax black, elytra with the spots much larger.

Var. Gilvipes (Dej.).

Entirely black, legs pale.

Many intermediate forms occur, especially one with the thorax and scutellar region red, the rest black.

2. *P. aterrima* (Oliv.), Enc. Meth., 6, 913.

Extremely like the preceding, and similarly variable, but the head is much less punctate, thorax less punctate and minutely alutaceous. L. .12-.16.

The dark varieties seem more common than the pale ones in this species. *P. opacicollis*, Lec., seems to be a small pale specimen with unusually opaque thorax.

3. *P. lævicollis*, sp. n.

Also extremely like *P. 6-notata*, but head and thorax scarcely visibly and very sparingly punctulate; elytra with two spots, one basal and one larger medial. L. .15. Pennsylvania, Wisconsin.

4. *P. pumila*, Lec. Col. Trans., p. 23.

Entirely yellowish-red, shape of *P. 6-notata*, but much smaller; thorax smooth, elytra obsoletely seriate punctate, the punctures coarse but very sparse; ocular grooves produced in front so as to meet on the front above the clypeus. L. .10. Kansas (Leconte).

5. *P. viridicyanea*, sp. n.

Bluish-green (or rarely æneous); antennæ red, club infusate; head foveolate, ocular sulci deep; second joint of antennæ distinctly shorter than third; thorax alutaceous, sparingly punctate subquadrate, narrow in front, anterior angles deflexed, sides nearly straight; elytra punctate, striate, smooth. L. .30. Middle and Southern States, Illinois, Mexico.

This species is a little anomalous, but the ocular sulci and thoracic lobes clearly belong here.

METAPARIA, g. n.

Head broad, antennæ distant, eyes emarginate, not bordered by a groove; deeply inserted in the thorax which is not lobed behind the eyes; antennæ with joints 2-4 equal, claws appendiculate, tibiæ dentate at tip.

1. *M. clytroides*, sp. n.

Oblong, parallel, green, antennæ and legs red; surface alutaceous; head very sparingly and obsoletely punctulate, front impressed, vertical; thorax transverse, produced in front over the head, sides

oblique, rounded, evidently (disk more sparingly) punctate; scutellum alutaceous; elytra irregularly punctate; under side and epipleuræ nearly smooth. L. .15 Texas.

METACHROMA (Chevr.) (*typ. quercata*, Fab.)

Antennæ with the second and third joints equal, fourth as long as the fifth; posterior tibiæ broadly emarginate at tip; eyes bordered by a deep impression.

1. *M. angustulum*, sp. n.

Narrow, parallel, black, base of antennæ, legs, and upper surface yellow; head shining, sparsely punctate, postocular sulci faint, medial line impressed; thorax broader than long, sparingly punctate, anterior angles not auriculate; scutellum alutaceous, with two or three impressed punctures; elytra punctate striate, the first three regular, the others rather confused, especially towards the apex; ventral segments sparingly and obsoletely punctate. L. .23. Missouri, Illinois, L. Superior, Kansas.

♂ Ventral segments concave, first with a small acute tubercle on the apical margin in the middle.

Var. Thorax more or less suffused with black.

Var. Elytra black, margins narrowly pale.

Var. Elytra entirely black, thorax and scutellum red.

2. *M. californicum*, sp. n.

Subelongate parallel, reddish-brown, shining; head strongly and rather closely punctate, median line impressed, ocular sulci not converging; thorax slightly produced in front, sides acutely reflexed, slightly rounded, disk sparingly, sides closely punctate; elytra regularly striate punctate, interstices very finely and sparingly punctulate, eighth broad. L. .18. California (Horn).

3. *M. ustum*, Lec. Pr. Acad., 1858, 85.

Brownish-red varied with paler; head evidently punctate, clypeus with the sides reflexed, broadly emarginate, labrum prominent, trilobed; thorax broader than long, evidently more closely punctate, sides rounded, anterior angles auriculate; elytra strongly punctate striate, the punctures obsolete towards the apex, the striæ confused externally. L. .23-.24. Texas (Leconte).

4. *M. dubiosum* (Say), J. Acad., iii. 447; *suturale*, Lec. Pr. Acad., 1858, 85.

Black, legs pale, knees broadly infuscate, head nearly smooth, two frontal spots, a fine raised middle line on the front; thorax

broader than long, sides much deflexed, rounded, narrowed behind, evidently punctate; elytra red, suture broadly black; striate punctate, ten striæ visible at the base; the sixth interstice with a few punctures, eighth broad, with a supplementary stria inclosed in it. L. .13-.22. Atlantic region, Texas.

♂ Last ventral segment with a smooth medial line.

5. *M. interruptum* (Say), J. Acad., iii. 448.

Oblong, reddish-brown (varying from yellowish-red to black beneath); head coarsely punctate, labrum prominent, hardly tridentate in front; thorax broader than long, disk sparingly, sides closely punctate; front angles auriculate, sides strongly rounded, hind angles very obtuse, color red, with the discal third red or black; scutellum alutaceous with a few visible punctures; elytra yellowish-red (or with an interrupted dorsal vitta and the suture black), punctate striate, the external striæ quite confused, interstices irregularly and very sparingly punctulate; ventral segments sparingly punctate and pubescent, hind angles of thoracic epipleuræ punctate. L. .22. Kansas (Leconte).

6. *M. peninsulare*, sp. n.

Near *M. ustum* in color and shape, but thorax closely and densely punctate, head coarsely punctate, the tubercles above the antennæ but little marked; thorax with the sides steeply deflexed, broadly rounded; scutellum alutaceous, with four or five punctures; elytra punctate striate, the striæ as in *suturale*; thoracic epipleuræ punctate at the hind angles. L. .20. California (Leconte).

Closely allied to the preceding, but distinct from all by the densely punctate thorax, from *suturale* and *ustum* by the punctate epipleuræ, from *interruptum* by the regular striæ.

7. *M. quercatum* (Fabr.), Syst. El., i. 507, *puncticolle*, Lec. Pr. Acad., 1858, p. 85.

Reddish-brown or black, variable; head almost smooth, front even; thorax densely rugosely punctate, sides steeply deflexed, strongly rounded; elytra finely alutaceous, rather obsoletely and irregularly punctate striate; thoracic epipleuræ smooth. L. .12-.20. Middle and Southern States, Texas.

Olivier's description of *C. quercata* shows that it refers to this insect.

8. *M. vicinum* (Zimm. MSS.), sp. n.

Depressed, subparallel, rather like *M. augustatum*; brownish beneath, antennæ and legs pale yellowish-red; head piceous, pale in front, evidently punctate, front even; thorax piceous, rather coarsely and closely punctate, sides hardly deflexed and but little rounded; elytra smooth, rather regularly punctate striate, margins brown. L. .12. South Carolina.

9. *M. marginale* (Zimm. MSS.), sp. n.

Allied to *M. vicinum* in color and form, but the ocular sulci meet across the front, which is evidently punctate and opaque; thorax transverse, sides strongly rounded, but not much deflexed, finely alutaceous, closely punctate; scutellum black; elytra tolerably regularly punctate striate, margins pitchy. L. .16. North Carolina, Kansas.

10. *M. floridanum*, sp. n.

Oblong subparallel depressed, entirely testaceous, surface alutaceous; head with the ocular sulci well marked, meeting in the middle, and with a short impressed medial line; thorax finely, obsoletely, and sparingly punctulate, sides not strongly rounded; elytra regularly punctate striate, eighth interstice broad, inclosing two small striæ. L. .18. Florida (Doubleday).

Distinct by the finely punctulate thorax and alutaceous sculpture.

11. *M. pallidum* (Say), J. Acad., iii. 446.

Oblong, testaceous red; head as in *M. floridanum*; thorax shining, evidently and tolerably closely punctate, sides rather deflexed, strongly rounded; elytra regularly striate as in *M. floridanum*. L. .12-13. North Carolina (Zimmerman).

12. *M. lævicolle* (Zimm. MSS.), sp. n.

Oblong, entirely testaceous, and closely allied to *M. pallidum*; but front even, head and thorax smooth, shining, the latter more produced in front, less transverse, sides rounded. L. .11. North Carolina (Zimmerman).

13. *M. pellucidum* (Zimm. MSS.), sp. n.

Allied to *M. lævicolle*, with which it agrees in the less transverse more deflexed thorax; head smooth, sulci deep, meeting in the middle, medial line impressed; thorax shining, sparingly punctulate; elytra finely punctate striate, striæ obsolete beyond the middle. L. .11. North Carolina (Zimmerman).

14. *M. laterale* (Zimm. MSS.), sp. n.

This little species is testaceous, the elytra, however, have a black subtriangular spot on the external margin; the head is sulcate across the front, but with no medial line; the thorax is made as in *M. pellucidus*, but is a little shorter, though the sides are similarly rounded. L. .11. North Carolina, Kansas.

[These species of *Metachroma* are very hard to separate accurately, but will, I believe, be found eventually to be really distinct; they are, as far as I am aware, rare in collections.]

COLASPIS, Fabr.

1. *C. favosa* (Say), J. Acad., iii. 448.

Entirely metallic blue or green; antennæ yellowish, red at the base; legs black or brownish; head sparingly punctate; antennal tubercles smooth, coppery; eyes emarginate; thorax rather transverse, sides broadly rounded, reflexed, somewhat explanate; base rounded, thickly and deeply (disk more sparingly) punctate; scutellum smooth, elytra deeply and closely multiseriate punctate; ventral segments alutaceous, hardly punctate, epipleuræ of the prothorax punctate. L. .23-.25.

Southern and Western States. Purple varieties also occur.

2. *C. brunnea* (Fab.), Suppl. 94, 4; *suilla*, Fab., Sys. El., i. 417, 24; *lurida*, Oliv. Ent., vi. 892; *flavida*, Say, Long's Exp., ii. 295.

Entirely ochreous or testaceous; head and thorax as in *C. favosa*, except that the sides of the latter are not so broadly reflexed; elytra with eight smooth subcostate interstices, the punctures between them sometimes uniseriate, and at others irregular or triseriate; thoracic epipleuræ punctate. L. 23. Atlantic region.

Var. costipennis. Head and thorax metallic green; elytra brown with four yellow costate interstices.

Every lead can be found between these extremes.

3. *C. prætexta*, Say, J. Acad., iii. p. 442.

Shape of *C. favosa*, above dark copper color, beneath brown; legs and antennæ ferruginous; head sparsely punctate, front channelled, antennal tubercles smooth, nearly united across the middle; thorax as in *C. favosa*, but less punctate; elytra irregularly and sparsely punctate; punctures sometimes subseriate behind; epipleuræ nearly smooth. L. .22-.24. Atlantic region;

on the myrtle (according to Say). This cannot, I think, be the *C. picipes*, Oliv., for the thorax there is finely punctate and the legs obscure; it was probably *Typophorus tricolor*.

4. *C. arizonæ*, sp. n.

Oblong, ovate; reddish-brown, elytra red; head rugosely punctate; clypeus nearly smooth, emarginate; antennæ very distant; thorax transverse, sides but little rounded, rather broadly explanate, coarsely rugosely punctate; elytra rugosely punctate with traces of smooth raised interstices; under side alutaceous, faintly punctulate; thoracic epipleuræ with a few punctures. L. .32. Arizona (Leconte).

♂ 5th segment triangularly emarginate.

The anterior tibiæ are deeply sulcate for the tarsi and bidentate at the apex.

5. *C. nigrocyanæa*, sp. n.

Ovate, bluish-black, beneath purplish; thorax deeply and very closely punctate; the interstices irregularly broad and smooth; sides explanate, distinctly angulate in the middle; epipleuræ deeply punctate; elytra deeply and closely seriate punctate, the rows somewhat geminate; ventral segments alutaceous, hardly punctulate. L. .23. Arizona (Leconte).

The unique specimen before me is unfortunately without a head.

6. *C. tristis*, Oliv. Enc. Méth., v. 889; *pilula*, Germ. sp. nov., p. 567; *ovata*, Say, J. Acad., iii. 442; *convexa*, Say, l. c. p. 443; *puncticollis*, Say, l. c., *humeralis*; Lec. Pr. Acad. 1858, p. 85.

This is the most variable insect in sculpture and form that I have seen; but I am entirely unable to draw any lines between the forms quoted above. It is convex, shortly ovate; antennæ comparatively short; last five joints distinctly thickened, base yellowish; the head is finely and sparingly punctate; thorax subtransverse, sides margined, rounded, hind angles prominent, rectangular; base margined with a row of punctures inside the margin; disk variously punctate, sometimes with close rather elongate punctures, or sparsely and rather finely punctate; elytra either deeply irregularly punctate, or more finely and subseriate punctate; the rows geminate, leaving irregular smooth interstices, humeral callus always prominent; legs black or red; epipleuræ punctate or almost smooth. L. .16-.18. Atlantic region.

CHRYSMELIDES.

Anterior coxal cavities closed, metasternum very short. *Timarcha*.

Anterior coxal cavities open.

Post. episterna elongate triangular, metasternum with a post coxal line following the margin.

Claws simple.

Thorax margined at base.

Tarsi with the 3d joint entire. *Chrysomela*.

Tarsi with the 3d joint emarginate or bilobed.

Gastrophysa.

Thorax immarginate.

Prosternum produced behind.

Prasocuris.

Tibiæ excavated at the apex.

Entomoscelis.

Claws dentate.

Tibiæ produced at apex.

Gonioctena.

Tibiæ simple, 3d joint of tarsi bifid.

Phyllodecta.

Post. episterna parallel, post coxal line oblique, cutting off the external angle of the metasternum.

Plagiodera.

1. TIMARCHA, Meg.

1. *T. intricata*, Hald. Proc. Phil., vi. 363. (1854.)

T. intertexta, Hald. is only a variety.

2. *T. cerdo*, Stål., l. c., p. 8, 2.

Western America (Deyrolle.) Differs by being smaller, narrower, and with a bronzed color; the thorax also appears to be equally punctate.

This subfamily has been carefully studied first by Mr. Rogers in the Proceedings of the Academy for 1856, p. 29, and lately by C. Stål in a quarto extract from the Transactions of the Swedish Academy. Mr. Rogers' paper was also translated and revised by Suffrian (Stett. Ent. Zeit. xix., p. 237, 1858). Hence I have merely given tables of the species with remarks where necessary.

2. CHRYSOMELA.

Last joint of palpi small, truncate.

Mesosternum produced in front.

Labidomera.

Mesosternum simple.

Myocoryna.

Last joint of palpi dilated.

Claws approximate, claw joint dentate beneath.

Zygogramma.

Claws distant, claw joint simple.

Thorax not margined.

Calligrapha.

Thorax thickly margined.

Chrysomela.

A. LABIDOMERA, Chevr.

1. *C. clivicollis*, Kirby. Faun, B. A., iv. 213. *trimaculata*, Fab. (nec. Linn., Syst., p. 312).

C. Rogersii, Lec. appears to me to be simply a variety of this species.

B. MYOCORYNA, Stål.

- | | |
|---------------------------------------|--------------------|
| a. Unicolorous blue. | <i>Haldemani.</i> |
| b. Unicolorous red, legs black. | <i>rubiginosa.</i> |
| c. Thorax æneous. | |
| 1. Elytra with four æneous vittæ. | <i>lineolata.</i> |
| 2. Elytra with two vittæ. | <i>Dahlbomi.</i> |
| d. Thorax maculate. | |
| 1. Entirely black beneath. | <i>11-lineata.</i> |
| 2. Pale, spotted with black, beneath. | |
| * Elytra regularly striate punctate. | <i>juncta.</i> |
| ** Striæ confusedly punctate. | <i>10-lineata.</i> |

2. *C. lineolata*, Stål. Chrys. Amer., p. 140, 298.

"Æneous, thorax thickly and finely punctate, elytra yellow, striæ geminate, not very regularly punctate, alternate interstices black, interrupted; legs æneous, tibiæ pale." L. 8 mm. Texas (Chevrolat).

3. *C. 11-lineata*, Stål, l. c. p. 163, 301.

Black, above pale yellow, head with a frontal spot, and thorax with various marks black; elytra with the suture, and vittæ, and the epipleuræ æneous. L. .44. Southern coast range of California (Horn), Mexico (Stål).

4. *C. 10-lineata*, Say, J. Acad., iii. 453.

The common species appears to be the true species of Say, which Stål had not seen, his *mutilineata* differs in having the posterior portion of the epipleura black, and the marginal and sutural vittæ joined at the apex, and is a Mexican species.

5. *C. juncta*, Germ., sp. nov. p. 590.

Differs from the preceding by the regular punctures in the striæ. *C. defecta*, Stål (l. c. 165-304) is a variety in which the fourth and eighth interstices are confluent, and the other two abbreviated; but a specimen in Leconte's collection from Tamaulipas is intermediate in this respect.

6. *C. Dahlbomi*, Stål, l. c. p. 156, 307.

Æneous, legs and under side testaceous, tinged with brassy;

elytra regularly striate punctate, with the 3d and 8-9th interstices yellow. L. 7 mm. Texas, Mexico (Chevrolat).

7 *C. Haldemani*, Rogers, l. c.

8. *C. rubiginosa*, Rogers, l. c.

C. ZYGOGRAMMA, Ev.

a. Thorax unicolorous brown or brassy.

1. First and second interstices brown, forming a sutural vitta. *suturalis*.

2. Second interstice brown, exterior vittæ irregular. *disrupta*.

b. Thorax brown, anterior angles broadly ochreous, interstices punctate.

1. First vittæ free, not joined to the suture. *exclamationis*.

2. First vittæ confused with the sutural line.

Two lateral vittæ joined a little before the apex, no extra marks. *continua*.

Lateral vittæ joined at $\frac{2}{3}$, traces of the external vittæ visible. *conjuncta*.

9. *C. exclamationis*, Fabr., Rogers, l. c.

10. *C. conjuncta*, Rogers, l. c.

With this is to be united *C. stolata*, Suffr. from Mexico, and *C. pallida*, Bland; both differing in the more or less interrupted vittæ.

11. *C. continua*, Lec., Tr. Ent. Soc. 1868, p. 57.

Very near *C. conjuncta*, but with two lateral rather broad brown vittæ and no traces of the external one. The coloring is that of *C. suturalis*, from which the punctate interstices distinguish it.

12. *C. suturalis*, Fabr. (1775), Stål, l. c.

This name is to be preferred to *pulchra*, under which he described it in 1792; *C. casta*, Rogers, is merely a variety in which the lateral vitta is divided into two.

13. *C. disrupta*, Rogers, l. c.

In this the lateral vittæ are obsolete; a smaller variety occurs in Texas and Colorado with slightly different markings.

D. CALLIGRAPHA, Er.

a. Elytra more or less distinctly striate punctate, resembling *Zygogramma*.

1. Thorax brown.

* Sutural vitta uniform. *similis*.

** Sutural vitta dilated before the apex. *incisa*.

2. Thorax with sides, and from margin yellow. *præcelsis*.

3. Thorax yellow with black marks, form narrow. *elegans*.

b. Elytra striate punctate, thorax brown, last joint of palpi very large. *lunata*.

c. Elytra irregularly variegated.

1. Epipleuræ of prothorax simple, of elytra yellow.

Thorax pale, or with the front margin and angles pale.

multipunctata.

Thorax green.

First vitta joined to the suture, which is laterally tridentate.

multiguttis.

First vitta free, suture not green.

Philadelphica.

2. Epipleuræ of prothorax impressed.

Epipleura of elytra yellow.

First and sutural vittæ confluent.

Black, extreme base of antennæ pale. *sigmoidea.*Thorax, legs, and antennæ brownish-red. *tortuosa.*

First vitta linear, free, joints 1-4 of antennæ paler.

dislocata.

Epipleuræ of elytra green.

Sutural vitta trifid in front, legs red.

serpentina.

Sutural vitta narrowed at base, legs black.

*sylvia.*14. *C. similis*, Rogers, l. c.Very close to *C. suturalis* in color, but more oblong.15. *C. incisa*, Rogers, l. c.

This has the rounded form of the last group, but belongs here by the claws.

16. *C. præcel sis*, Rogers, l. c.17. *C. elegans*, Oliv., Rogers, l. c.18. *C. lunata*, Fabr.This name must be used in preference to *hybrida*, Say; the palpi are unusually dilated.19. *C. multiguttis*, Stål, l. c.Leconte's name *scalaris* is preoccupied; a fine variety with black legs is called *labyrinthica*, in Leconte's cabinet, but this name is already in use.20. *C. philadelphia*, Linn.I am unable to follow Stål in separating *C. spireæ*, Say, which appears to me only a slight variety.21. *C. multipunctata*, Say.This species, of which *C. Bigsbyana* and *C. verrucosa* are varieties, appears to me very doubtfully distinct from *C. philadelphia*.

22. *C. dislocata*, Rogers, l. c.

23. *C. Sigmoidea*, Lec.

Very near *C. dislocata*, but I have seen nothing intermediate, the markings are much stronger, broader, and more confluent.

24. *C. tortuosa*, Rogers, l. c.

Distinct by its small size and rather rounded form.

25. *C. serpentina*, Rogers, l. c.

Stål has recorded a variety (*mexicana*) with black legs.

26. *C. sylvia*, Stål, l. c.

Very distinct by its narrow depressed form, small size (28), and generally unicolorous green surface beneath. Arizona.

[This is the right place to notice a specimen of *C. limbaticollis*, Stål, said to be from Chicago; it is a Mexican species, allied to *C. sylvia* in form, but reddish-brown instead of green, and the thorax has the margin, sides, and a T-like mark on the disk white.]

E. CHRYSOMELA, Linn.

a. Thorax with the margin broad, not well defined.

1. Elytra subsulcate, unicolorous.

subsulcata.

2. Elytra simple.

Elytra margined with fulvous.

flavomarginata.

Elytra unicolorous.

basilaris.

b. Margin of thorax abruptly limited.

1. Size large, color golden or purple.

auripennis.

2. Smaller, uniform æneous.

Elytra tolerably shining.

inornata.

Elytra minutely alutaceous, opaque.

opacipennis.

27. *C. subsulcata*, Mannh.

This belongs to a small group of North China species, according to Suffrian.

28. *C. flavomarginata*, Say.

Suffrian gives a few comparative differences between this and the European species, but I doubt their value.

29. *C. basilaris*, Say.

Leconte has united the *vidua* of Rogers and his own *subseriata* under this name; I feel tempted to go further and consider it is a unicolorous form of *C. flavomarginata*.

30. *C. auripennis*, Say.

Very variable in size and color; *C. cribraria*, Rogers, has the punctuation closer and more confused, but is not distinct.

31. *C. inornata*, Rogers, l. c.32. *C. opacipennis*, Rogers, l. c.

Differs from the last only by the alutaceous surface of the elytra, which is, however, slightly visible in *C. inornata*. Both these species are very near *C. auripennis*.

3. GASTROPHYSA, Chev.

a. Thorax and legs red.

polygoni.

b. Elytra externally golden, suture purple.

formosa.

c. Unicolorous green or blue.

1. Head sulcate, punctuation rough.

dissimilis.

2. Head flat, size small, punctuation fine.

cyanea.

1. *C. polygoni*, Linn.2. *C. formosa*, Say.

This is probably the *C. raphnai* of Europe.

3. *C. dissimilis*, Say.4. *C. cyanea*, Mels.

I cannot separate the Californian *C. cæsia* from this species.

4. ENTOMOSCELIS, Chev.

1. *C. Adonidis*, Fab.

Readily known by its opaque fulvous color, the suture and bilateral vittæ black. Hudson's Bay and Utah.

5. PRASOCURIS, Latr.

A. Elytral vittæ not confluent at the base.

phellandrii.

B. Elytral vittæ confluent at base.

a. Tibiæ pale.

varipes.

b. Legs black.

obliquata.

1. *P. Phellandrii* (Linn.), Faun. Snec., p. 569.

Illinois (Walsh).

2. *P. varipes* (Lec. MSS.), sp. n.

Elongate, narrow, brassy green, sides of thorax and elytra, and a dorsal stripe on the latter fulvous; base of antennæ, tibiæ, and tarsi pale; thorax sparsely coarsely punctate, elytra deeply striate punctate, interstices smooth, under surface coarsely punctate. L.

.15. Middle States, Canada, Lake Superior.

3. *P. obliquata* (Lec. MSS.), sp. n.

Allied to the preceding but broader; thorax more finely punctate; elytra more finely and less regularly punctate striate; dorsal vitta more suddenly oblique at base; legs black. L. 16. Illinois.

Very near *P. hannoverana* of Europe, but with the thorax finely punctate.

6. PHYLLODECTA, Kirby.

1. *P. vulgatissima* (Linn).

Suffrian (l. c. p. 394) refers specimens received by him to this species, from which they differ markedly in color, being generally purple; *P. interstitialis*, Mannh. appears to be founded on a malformed specimen.

7. GONIOCTENA, Chev.

1. *G. arctica*, Mannh.

Of this species I have only seen two specimens from Kenai; it may be known by the black legs and pale tibiae; Suffrian refers it with doubt to *G. affinis*, but it agrees better with his *G. triandrae* especially according to Thomson's description.

2. *G. pallida* (Linn.).

To this species I refer the *C. rufipes* of Rogers, and the *C. simplex*, Suffr. It is very distinct by the anterior tibiae hardly dentate, and the sutural angle of the elytra produced.

8. PLAGIODERA, Chev.

a. Elongate, sides of thorax not thickened, claw joint dentate beneath.

Unicolorous green.

californica.

Thorax red, elytra blue.

arizonæ.

b. Elongate, sides of thorax thickened.

Claw-joint not dentate beneath.

Thorax with the sides yellow, elytra variable.

lapponica.

Thorax green, elytra testaceous.

tremulæ.

Claw-joint dentate beneath.

Elytra spotted, or unicolorous green.

scripta.

Elytra purple, narrowly margined with yellow.

obsoleta.

c. Globose, small, striate punctate (*Phædon* Chev.).

a. Serial punctures fine, hardly stronger than the interstitial ones, which are numerous and visible.

prasinella.

b. Punctate striate, interstices nearly smooth.

1. Interstices very finely punctulate, callus visible. *cochleariæ*.
2. Callus well marked, interstices subrugulose. *ovipennis*.
3. Callus none, interstices subrugulose, form convex. *viridis*.

1. *P. californica*, Rogers.

2. *P. arizonæ*, sp. n.

Testaceous red, metasternum and elytra blue; antennæ black; joints 1-4 testaceous; head foveolate; thorax very sparingly punctate; elytra coarsely subseriate punctate; scutellum black, smooth. L. .20. Arizona. Extremely near *P. californica*.

3. *P. lapponica* (Linn.).

I cannot separate the avowed specimens of *C. lapponica* from Kenai from the *C. interrupta*, Fab., which occurs nearly all over the States. Dr. Horn has a series from California distinguished by the fine punctuation, subseriate towards the suture; but they do not differ specifically.

4. *P. tremulæ* (Fabr.).

Distinct by its coloration. It is very common in Europe, and has been sent from Hudson's Bay.

5. *P. scripta* (Fabr.) Rogers, l. c.

The *C. confluens*, Rogers, is only a variety of this species, which appears to be very near *P. 20-maculata* of Europe. In the North varieties occur with entirely green elytra, but I have seen intermediate specimens.

6. *P. obsoleta* (Say). Rogers, l. c.

Apparently distinct from the preceding.

7. *P. prasinella* (Lec.).

Oregon (Leconte), the serial punctures are almost lost in this species.

8. *P. cochleariæ* (Syll.).

I refer to this European species two specimens in Dr. Leconte's collection without exact locality.

9. *P. oviformis* (Lec.).

Oregon (Leconte). Near *P. viridis*, but more oval, depressed and with a distinct callus.

10. *P. viridis* (Mels.). Rogers, l. c.

Very variable in color and sculpture. *P. æruginosum*, Suffr.

(l. c. p. 333) seems to me to be a variety with the thorax more finely punctate.

GALERUCIDES.

Tribe *Galerucini*.

The species of this subfamily have been carefully worked out by Dr. Leconte in the Proceedings of the Academy for 1865. Since then, much Californian and other material has accumulated, and I find it necessary to add a few species, and rearrange some of the preceding ones.

The only additions since Leconte's paper are *Luperus luteicollis*, *L. varicornis*, *Phyllethrus nigripennis*, *Diabrotica blandula*, *D. virgifera*, described by Dr. Leconte in the Transactions of the American Entomological Society for 1868, and *Andrector* (g. n.) *6-punctatus*, by Dr. Horn, in 1872. *Malacosoma*, the two species referred by Dr. Leconte to this genus, appear to me to belong to the *Halticini*.

Phyllethrus dorsalis (Oliv.).

I cannot separate specifically *P. atripennis* (Say), which differs only in color.

Phyllethrus gentilis, Lec.

P. nigripennis also differs only in color; I do not see that these color variations, however constant, are indicative of more than races; and we are not yet in a position to say much of their constancy even.

Luperus brunneus (Zimm. MSS.), sp. n.

This species has the third joint of the antennæ quite short, as in *P. morulus*; but is much larger than that species and of a shining brown color, less pale; antennæ long, thorax broader than long, with the elytra very finely and sparingly punctulate; upper side convex, rather ventricose. L. 16. North Carolina (Zimmerman).

Luperus morulus, Lec.

The length of this species is printed .4, in error for .14.

Luperus rufipes, Lec.

This name has been in use in Europe since 1787; I have therefore changed it to *L. Lecontii*.

Androlyperus (g. n.).

A. fulvus, sp. n.

Ovate, rather depressed, shining, fulvous; head, scutellum, metasternum, legs, and antennæ black; thorax rather longer than broad, coarctate behind, sides and base margined, disk smooth; elytra impunctate. L. .20. Coast Range, S. of San Francisco (Horn).

♂ First ventral segment deeply foveolate, third and fourth concave, each with a long linear process curving laterally over, 5-6 black, concave; elytra with a small brown spot before the apex, margin deeply plicate and distorted at about $\frac{3}{4}$; antennæ sub-serrate.

This genus, by its general appearance, its antennæ, margined elytra, etc., belongs in the vicinity of *Luperus*; from which it is abundantly distinct by the last joint of the palpi, rather longer than the preceding, acute, and by the prosternum distinctly visible between the coxæ, a character anomalous in the *Galerucini*, though universal in the *Halticini*; the posterior femora are in no way dilated. The remarkable sexual characters have suggested the name employed.

GALERUCA.—The type of Geoffroy's genus was *G. tanaceti*, and *Adimonia* is merely a synonym. I propose to restrict the name *Galeruca* to Leconte's first group, in which the anterior coxal cavities are closed, and the tibiæ setulose. (These characters were first used by Thomson in his Skand. Col.)

Of the five species described, *G. cribrata* appears to me certainly to be a variety of *G. americana*, and *G. bivittata* is somewhat doubtful.

GALERUCELLA, g. n., differs from *Galeruca* by the open coxal cavities. It may be divided (as Thomson has done) into groups by the relative position of the mesocoxæ, which are distant in *G. nymphaeæ* and *sagittariæ*, and nearly contiguous in the other species.

Galeruca cavicollis, Lec.

Dr. Zimmerman's specimens were from Massachusetts and not N. Carolina. A further series shows that it is not to be distinguished from *G. hæmatica*.

G. marginella, Kirby.

This certainly is the *G. nymphaeæ* of Europe; *G. punctipennis* Mannh., also is not, as far as I can see, specifically distinct.

MONOXIA.—The characters derived from the claws appear to me to be certainly sexual; hence, *M. obtusa*, *guttulata*, and *debilis* are not in my opinion separable; the type of *M. angularis* has the angles of the thorax more developed, but that is a character to be used with caution; *M. consputa* is distinct by the black suture, and *M. sordida* by the thick pubescence.

TRIHABDA.—This genus includes *G. viburni*, Payk., and was separated by M. Joannis as a subgenus under the name *Pyrrhalta* in 1866; the species are very hard to define, and the increased material before me leads me to different results from those arrived at by Dr. Leconte. Nevertheless, he does not, I believe, coincide in the views here expressed, preferring to retain these species as distinct.

T. tomentosa, *canadensis*, and *virgata*, I consider as forming one variable species, with black vittæ and black scutellum; *T. flavolimbata* and *T. luteocincta* form another, with blue vittæ, to which may ultimately be added *T. attenuata*; *T. convergens* appears distinct; *T. nitidicollis* and *T. brevicollis* have a more or less white scutellum.

There is still a form brought abundantly from New Mexico by Dr. Lewis, which closely resembles *T. nitidicollis* in form, and the white scutellum, but is much smaller, and the thorax is distinctly punctate. This variety (or species) I propose to name *T. Lewisii*; and it is most interesting on account of the links it affords. The specimens were taken with *T. nitidicollis*, the vittæ vary from metallic green to dull black, and vary slightly in extent.

Tribe *Halticini*.

Prosternum separating the anterior coxæ, elytral epipleuræ reaching the apex, legs saltatorial.

A. Posterior tarsi with the last joint inflated.

B. Elytra striate punctate.

C. Elytra pilose.

Cb. Elytra glabrous.

Bb. Elytra punctate.

Ab. Posterior tarsi simple.

B. Claws simple or dentate.

Hypolampsis.
 { *Pachyonychus*.
 { *Phædimus*.
 { *Hamletia*.
 { *Edionychis*.

C. Anterior coxal cavities open, thorax not margined at base.

D. Antennæ separated at base.

E. Posterior tarsi normal.

{ *Disonycha.*
Graptodera.
Orchestra.
Aphthona.

Eb. Posterior tarsi with the first joint elongate.

Longitarsus.

Db. Antennæ almost contiguous.

Dibolia.

Cb. Anterior coxal cavities closed, elytra generally striate punctate.

D. Antennæ 11-jointed, posterior tarsi normal.

E. Posterior tibiae simple.

F. Glabrous above.

G. Elytra punctate.

{ *Haltica.*
Systema.

Gb. Elytra striate.

H. Thorax impressed at base.

Crepidodera.

Hb. Thorax with a basal plica.

Balanomorpha.

Fb. Pubescent.

Epitrix.

Eb. Posterior tibiae dentate.

{ *Euplectroscelis.*
Chaetocnema.

Db. Antennæ 10-jointed, tarsi inserted on the side of the posterior tibiae.

Psylliodes.

Bb. Claws bifid.

Blepharida.

HYPOLAMPSIS, Clark, Cat. Halt., p. 230.

Distinct from the other North American genera by the pubescent surface and striate elytra. Anterior coxal cavities closed.

1. *H. pilosa* (Ill.), Mag., vi. p. 105.

Oblong, brown, reddish beneath, above clothed with long erect dark hairs, and a close griseous rather maculate pubescence; head deeply punctate, antennæ with second joint short, 1-6 pale red, 7-11 black, distinctly thickened; thorax quadrate, rounded in front, sides straight, very closely punctate; scutellum griseous, pubescent; elytra deeply punctate, striate, broader than thorax, sides parallel; body beneath smooth, shining. L. .10-.12. Virginia, Texas, Illinois, Pennsylvania.

2. *H. Clarkii*, Cr., *pilosa* ‡, Clk. l. c., p. 238.

Evidently very distinct; head granulate, ferrugineous, antennæ subincrassate, flavous; thorax transverse fuscous; elytra broad,

globose, punctate, striate, with a thick flavous pubescence concealing the striæ. L. 1 line. Pennsylvania (Chevrolat).

3. *H. Mellyi*, sp. n.

Oblong parallel, clothed throughout with a cinereous pubescence, and with sparse erect pale hairs; antennæ nearly contiguous, long, second joint short, 3-11 elongate, not thickened; thorax subtransverse, faintly constricted towards the base; elytra parallel, punctate striate, punctures hardly distinct. L. .10. Kansas (Melly). Differs from both the preceding by the antemedial depression of the elytra.

PACHYONYCHUS, Chev.

Differs from any of the genera given in Clark's Catalogue by the antennæ with joints 2-3 short, subequal, 4-11 thicker and pubescent; maxillary palpi inflated, posterior tibiæ simple, with one spur.

P. paradoxus (Mels.), Proc. Acad., iii. p. 163.

Oblong, parallel, glabrous, shining, bright ferrugineous, elytra deep brown with the suture ferrugineous; antennæ with joints 4-11 fuscous; head smooth, thorax transverse, sparsely but rather deeply punctate, front and hind angles acute, prominent, base transversely impressed, excavate between the hind angles; scutellum smooth, tip truncate; elytra rather deeply punctate striate, interstices plane, smooth. L. .14-.15. Virginia, Pennsylvania.

This is the first species described by any author under the above generic name, which must thus be kept for it.

Phædromus Waterhousii, Clk., Cat. Halt., p. 66, pl. iii. f. 1, is entirely unknown to me, but must be allied to the species just described, from which it differs in having the posterior tibiæ excavate externally, with no terminal spur, maxillary palpi elongate, etc.

It is described as being black, glabrous, shining; thorax yellow, impunctate; sides angulate; elytra punctate-striate, striæ obsolete towards the apex, antennæ black, legs pale. L. 3 lin. South Carolina (Waterhouse).

Pachyonychus || *paradoxus*, Clk., Cat. Halt., p. 61, t. 2, f. 7, is also unknown to me. It differs by having the elytra coarsely and densely punctate throughout, of a dark olive-green color, antennæ with the base and apex pale, legs pale. Philadelphia (Chevrolat).

This name cannot be retained, so I propose to revert to the Dejeanian specific name, *dimidiaticornis*, and to give the genus the name *Hamletia*, in honor of the Rev. Hamlet Clark, who did so much to elucidate this troublesome group of Coleoptera.

ÆDIONYCHIS, Latr.

Distinct from the preceding genera by the open coxal cavities, and by the smooth or simply punctulate elytra.

A. Thorax with the margins reflexed but not produced, explanate; size large.

B. Thorax impunctate, yellow.

C. Elytra blue or green.

D. Elytra opaque, punctulate; thorax unicolorous.

opacior, sp. n.

Db. Elytra green, punctate, shining; thorax spotted.

gibbitarsis.

Dc. Elytra blue, impunctate; thorax unicolorous.

lustrans, sp. n.

Cb. Elytra variegated with white.

D. Elytra each with four spots; epipleuræ black.

8-maculatis.

Db. Elytra with a pale vitta; epipleuræ pale.

interjectionis.

Bb. Thorax punctate.

C. Epipleuræ black.

D. Abdomen beneath more or less pale.

abdominalis.

E. Thorax yellow spotted with black.

V. scripticollis.

Eb. Thorax black margined with yellow.

F. Elytra punctulate, shining.

V. vians.

Fb. Elytra opaque.

V. discicollis.

Ec. Thorax black.

V. concinna.

Db. Abdomen beneath entirely black, whole insect black.

E. Opaque.

lugens.

Eb. Shining, thorax with hind angles prominent.

violasceus.

Cb. Epipleuræ pale.

D. Elytra blue.

thoracica.

Db. Elytra pale with a black vitta.

circumcincta.

Ab. Thorax with the margins explanate; elytra mostly pallid, size generally small; epipleuræ always pale; antennæ with the third joint nearly glabrous.

B. Elytra blue, margins narrowly yellow. L. 24.

flavocyanea.

Bb. Elytra pale variegated with darker.

C. Epipleuræ of elytra sinuate.

D. Intermediate tibiæ simple.

E. Elytra with two vittæ, one dorsal, one lateral.

petaurista.

- Eb.* Elytra with one dorsal vitta. *miniata.*
Db. Intermediate tibiæ angulate externally.
E. Oval, suture broadly black. *thyamoides.*
Eb. Parallel, suture and a dorsal vitta black. *texana.*
Cb. Epipleuræ equally broad.
D. Thorax coarsely punctate; elytra with a plica. *6-maculata.*
Db. Thorax smooth; elytra simple.
E. Short, oblong. *guercata.*
Eb. Elongate, elytra more finely punctate. *scalaris.*
- A. Thorax with the sides narrowly reflexed, antennæ with joints 3-11 pubescent, fuscous.*

1. *O. opacior*, sp. n.

Elongate, oval, black, opaque, femora and thorax red; head and thorax smooth, this with the sides rounded, reflexed, hind angles obtuse, base rounded not marginated; elytra evidently and closely punctate, posterior femora smooth, tibiæ subexcavate at tip. L. .40. Texas.

2. *O. gibbitarsis*, Say, J. Acad., iv. 83.

Ovate, ferrugineous; antennæ, tibiæ, and tarsi fuscous, elytra brilliant green; head and thorax smooth; this generally with four green discoidal spots placed transversely; hind angles acute, distinct; elytra rather faintly and sparsely punctate; body beneath ferrugineous. L. .28. Kansas, Pennsylvania.

3. *O. lustrans*, sp. n.

Allied to *O. gibbitarsis*, but with impunctate elytra, and much less strongly developed posterior claw-joint; the head, thorax, femora, and body beneath are yellow; the metasternum and a frontal spot being black; the thorax is less transverse, and the hind angles are rather obtuse. L. .28. Texas.

4. *O. 8-maculata*, sp. n.

Subelongate, ochreous-white; antennæ fuscous, basal joints partly pale; head with a frontal spot white, thorax white above and below, formed as in *O. lustrans*; elytra black, impunctate, each with four large white spots, and the humeral angle narrowly white; the spots are one subscutellar, one submarginal before the middle, one pear-shaped near the suture, just behind the middle, one reniform transverse, subapical. L. .24. Texas.

Body beneath pale, four anterior legs fuscous.

5. *O. interjectionis*, sp. n.

Ovate, ochreous-white, body and legs fuscous, posterior femora red; head black with a frontal spot white; thorax white, transverse, hind angles obtuse; scutellum black; elytra brownish-black, the margin and a dorsal vitta ochreous-white (this vitta broad at the apex and sometimes interrupted), surface impunctate, or scarcely visibly punctulate. L. .25. Texas (Leconte).

6. *O. vians*, Ill. Mag., vi. p. 33.

Ovate, black, above olive green, alutaceous; head deeply punctate, thorax transverse, sides nearly straight, hind angles acute, base deeply sinuate behind the angles, ochraceous, sparsely punctate, alutaceous, disk with a broad transverse black spot leaving a narrow ochreous margin; scutellum smooth, black; elytra alutaceous, sparsely punctate; beneath black; posterior tibiæ simple. L. .23. Middle, Southern, and Western States.

v. *scripticollis*, Say, J. Acad., iv. 84.

Somewhat larger, the thoracic spot is less developed, and forms a sinuous band across the thorax. Hudson's Bay, Slave Lake.

v. *discicollis*, Dej.

Very opaque, the elytral punctuation obsolete, thoracic punctuation very deep and coarse. Southern States.

v. *concinna*, Fabr., Syst El., i. 499, 109.

Differs from the type by having the thorax entirely greenish-black. These four very different looking forms appear to me at most races of one species, all agreeing in having the apex of the abdomen testaceous.

7. *O. violaceus*, Lec. Pr. Acad., 1859, p. 137.

Ovate, violet-blue, rather shining; antennæ short, black, head deeply punctate; thorax transverse, sparsely punctate, angles acute; elytra rather closely and distinctly punctate, body beneath black, posterior femora sparingly punctate. L. .25. Fort Tejon (Leconte).

8. *O. lugens*, Lec. Col., Kans., p. 24.

Very similar to the above, from which it differs, being entirely alutaceous; thorax sparingly, elytra not visibly punctate; hind angles of thorax much less prominent. L. .24. New Mexico (Leconte).

9. *O. thoracica* (Fabr.), Syst. El., i. 498.

Broadly ovate, ferrugineous; antennæ, tibiæ, and tarsi fuscous; elytra violet, margin narrowly and epipleuræ ferruginous; thorax transverse, sides nearly straight, angles acute, deeply punctate, disk with seven black dots (four anterior and three immediately posterior and alternate to them); scutellum smooth; elytra closely punctate; anterior tibiæ deeply sulcate externally. L. .30. Southern and Middle States.

10. *O. circumcincta*, sp. n.

Ochreous, antennæ, tibiæ, metasternum black; head deeply punctate; thorax opaque, sides curved, angles moderately prominent, surface sparingly punctate, generally with two oblique discoidal marks black; elytra closely punctate, subrugose, suture and margin very narrowly black, also a broad dorsal vitta black, not reaching the apex. L. .24. Southern States.

Var. Dorsal vitta absent.

B. Thorax more transverse, sides explanate, antennæ with the third joint subglabrous like the second.

11. *O. flavocyanea*, sp. n.

Ovate, ferrugineous, antennæ with joints 4-11 fuscous; thorax ochreous, disk broadly black, sparingly and obsoletely punctate, angles acute; scutellum smooth, black; elytra steel-blue, margin and epipleuræ ochreous, finely and sparingly punctulate, with a few deeper punctures on the callus; posterior femora punctate externally; tibiæ emarginate before the apex. L. .24. Texas (Bel-frage).

12. *O. petaurista* (Fabr.), Syst. El. i. 495.

Ovate, ochreous, beneath ferrugineous; antennæ (except the base) and 4 anterior tibiæ fuscous; head ferrugineous deeply punctate; thorax with a variable discal mark blackish, obsoletely punctate; elytra distinctly punctate with the suture, a dorsal and a lateral vitta black; posterior femora punctate externally, tibiæ emarginate. L. .27. Southern States, Texas.

Var. Sutural and dorsal vitta confluent.

Var. Elytra finely punctate.

13. *O. miniata* (Fabr.), Syst. El., i. 495; *fallax*, Mels., Pr. Acad., iii.

Very closely allied to the preceding, but smaller; thorax with the hind angles obtuse, lateral vitta of the elytra absent, and the

dorsal vitta more remote from the suture. L. .24. Middle and Southern States.

14. *O. thyamoides*, sp. n.

Regularly oval, ferrugineous; antennæ fuscous, base pale; head with a few deep punctures near the eyes; thorax scarcely punctulate, opaque, sides rounded, angles acute; scutellum smooth; elytra finely alutaceous, rather closely punctate, external margin broad ochreous; a broad sutural vitta not reaching the apex, black. L. .15-.16. Western States (Leconte).

Differs from the preceding by the intermediate tibiæ angulate externally.

15. *O. texana*, sp. n.

Elongate, subparallel, depressed, head and body beneath black; antennæ at the base, legs, and prosternum ferruginous; head evidently punctate; thorax with the sides nearly straight, smooth, subopaque, ochreous; scutellum black; elytra ochreous, punctate, suture and a dorsal vitta not reaching the apex, black. L. .16. Texas (Belfrage).

Very like a species of *Systema* in form and coloration.

16. *O. 6-maculata* (Ill.), Mag. vi., p. 104.

Oblong, opaque, obscurely ferruginous, above coarsely punctate; thorax and elytra irregularly variegated with brownish-black, these with a distinct plica parallel to the margin. L. .12. Middle States.

This and the following species agree in having the elytral epipleuræ equally broad and not sinuate about the middle as in the others.

17. *O. quercata* (Fab.), Syst. El., i. 495, *limbalis*, Mels., Pr. Acad. iii.

Very like *O. 6-maculata*, but thorax obsoletely punctulate; elytra black, margin pale ochreous, and body beneath black. The elytra also have no submarginal plica. L. .12. Southern and Middle States.

The punctuation of the elytra is variable in strength, and pale varieties occur in which there is only a basal dot and dorsal vitta dark.

18. *O. scalaris*, Mels. Pr. Acad., iii. 163; *lobata*, Lec. Col. Kans., p. 24.

More elongate than the preceding; thorax impunctate; elytra much more sparingly and finely punctate; irregularly variegated with brown. L. .20. Kansas, Pennsylvania.

DISONYCHA, Chev.

Elytra yellow with black vittæ.

Under surface pubescent.

Thorax short, sides broadly reflexed with a marked callus, head black.

Legs and under side black.

limbicollis.

Hind femora at least and part of the body red. *V. pallipes.*

Thorax convex, subequal, with four black spots or immaculate; epipleuræ with the outer edge pale.

Metasternum black, a narrow mesial line smooth. *alternata.*

Metasternum red, the mesial surface broadly smooth.

punctigera.

Epipleuræ black.

Legs and under side black; elytra subcostate. *pennsylvanica.*

Legs and under side red; elytra very smooth, shining.

glabrata.

Under side glabrous.

Epipleuræ, legs, and under side black, thorax coarsely punctate.

maritima.

Under side red.

Elytra with the suture and a dorsal vitta black. *abbrevita.*

Elytra with a common broad sutural vitta black. *discoidea.*

Elytra blue or green.

Thorax concolorous, surface opaque, apex of venter yellow. *funerea.*

Thorax yellow.

Head, legs, and under side black, head coarsely punctate.

triangularis.

Head and under side varied with red, front of head smooth.

collaris.

The species of this group vary to an inordinate degree, and the determination of true specific limits is one of extreme difficulty. No certain result can be arrived at until long series have been collected from different parts and the plants on which they feed carefully noted. This table is only intended as an approximation.

GRAPTODERA, Chev.

The species of this genus, from their similarity of coloration, are even more embarrassing than those of the last genus; numerous species have been described, but at different times, so that the characters are not contrasted; and the true specific limits can only be ascertained when we shall have seen series consisting of a dozen of each quasi-species from all parts of the country.

The uniform bluish-green color, transversely impressed thorax, and simply punctate elytra render them readily recognizable.

LONGITARSUS, Chev.

Also easily known, generally, by the elongate first joint of the posterior tarsus and the pale testaceous color; the elytra are punctate, thorax not impressed. The species are beyond my skill to unravel from the incomplete material before me.

BALOPHILA, Foudr. (GLYPTINA, Lec.).

Thorax not margined at the base or impressed; elytra striate, first joint of posterior tarsi tolerably long. Anterior coxal cavities open.

1. *B. spuria* (Lec.), Col., Kansas, p. 26.

Subovate, shining, above testaceous, beneath darker, legs pale red; head and thorax sparingly punctulate; elytra with the interstices smooth, and a small scutellar stria apparent; punctures tolerably deep, apparent; body black, smooth, shining. L. .6. Kansas, Pennsylvania, North and South Carolina, Maryland.

B. lissotorques (Lec.), is a variety with the thorax almost smooth.

2. *B. cerina* (Lec.), Pac. R. Rep., p. 68.

More elongate, body pale beneath, thorax testaceous, elytra yellow, obsoletely punctate striate. L. .65. S. Jose (California).

3. *B. cyanipennis*, sp. n.

Ovate, narrowed in front, black; head, thorax, legs, antennæ, and scutellum red; elytra blue; facial carina rather broad; thorax convex, sides deflexed, rounded; surface sparingly punctate; elytra striate punctate, interstices smooth. L. .6. Texas (Belfrage, 699).

ORCHESTRIS, Kirby. Faun. Bor. Amer. (typ., nemorum.)

Anterior coxal cavities open behind; elytra punctate; thorax not margined at base, second and third joints of antenna equal.

A. Elytra vittate.

1. *O. lepidula*, Lec., Pac. R. Rep., p. 68.

Subovate, æneous, black, shining; head, thorax, and elytra distinctly and closely punctate; elytra with a narrow uniform

dorsal vitta ochreous, slightly incurved at the apex; base of tibiae pale. L. .10. California.

♂ Fifth joint of antennæ very large, elongate, quadrate.

2. *O. Zimmermanni*, sp. n.

Very close to *O. lepidula*, but the elytral vitta is deeply excavate outside, straight at the base and incurved at the apex; base of tibiae pale. L. .10. Missouri (Riley).

♂ Fifth joint of antennæ very large, elongate quadrate.

3. *O. vittata* (Fab.), Syst. El., i. p. 469.

Allied to *O. lepidula* but more oval; head smooth; thorax alutaceous, punctate; elytral vitta deeply excavate externally, incurved at base and apex; four anterior legs and base of antennæ yellow. L. .9 Atlantic region.

♂ Fifth joint elongate, not dilated.

4. *O. oregonensis*, sp. n.

Allied to *O. striolata*, by the shape of the elytral vittæ and the red base to the antennæ, differing by the shining thorax, dark legs (base of tibiae alone pale). L. .11. Oregon (Horn).

♂ fourth and fifth joints dilated.

B. Elytra each with two pale spots.

5. *O. bipustulata* (Fab.), Syst. El., i. p. 464.

Ovate, black; base of antennæ and legs entirely pale red; head and thorax finely and sparingly punctulate; elytra sparsely subseriate-punctate, each with two fulvous spots, one large basal, one subapical. L. .10. Middle States.

C. Elytra unicolorous.

6. *O. albionica* (Lee.).

Bronzed, evidently punctate; antennæ with the first joint black, 2-4 pale; thorax transverse, sides rounded; head punctate, carinate between the antennæ. L. .8. California, Texas.

I cannot satisfactorily separate the Texan specimens of this species.

7. *O. Lewisii*, sp. n.

Very like *O. albionica*, but entirely bluish-green, more evidently punctate; antennæ with the base entirely red. L. .9. Colorado, Illinois.

8. *O. æneicollis*, sp. n.

Shape and size of *O. Lewisii*, elytra blue-green, thorax æneous; antennæ very distinctly shorter and stouter than in the preceding; elytra with traces of deeper punctures arranged serially, especially two rows near the suture at the base; tibiæ pale. L. .9. Texas (Belfrage, 874), Middle and Southern States.

Prosternum rugose, sometimes the elytra are less blue and more æneous, and have the whole tibia pale.

9. *O. chalybeipennis*, sp. n.

Rather like *O. æneicollis* but much larger; above clear blue, beneath black; antennæ, four anterior legs, and posterior tibiæ red; head with an elevated carina between the eyes; vertex sparsely punctulate; thorax alutaceous, punctulate; elytra punctulate, with very evident traces of striæ of larger punctures before the middle; prosternum rugose. L. .11. New Jersey.

APHTHONIA, Chevr.

Thorax not margined at base, coxal cavities open; elytra punctate, first joint of posterior tarsi not elongate.

1. *A. picta* (Say.), J. Acad., iv. 87.

Ovate, shining, black; head, thorax, antennæ, and legs bright ferrugineous; elytra blue; head with a raised smooth space on the vertex; thorax much broader than long, very sparingly punctate; elytra sparingly and obsoletely punctate. L. .8. Southern States.

2. *A. texana*, sp. n.

Ovate, not convex; same coloration as the preceding, but closely punctate on the upper surface throughout; elytra with irregular rows of larger punctures. L. .10. Texas (Belfrage, 437).

DIBOLIA, Chevr.

Anterior coxæ not prominent, subtransverse; head deeply sunk in the thorax, vertical; antennæ almost contiguous on the front; elytral epipleuræ very narrow after the first third; posterior tibæ broad, apical spur large and bifid at the extremity.

D. ærea, Mels. Pr. Acad., iii. 167.

Ovate, convex, shining, bluish-green or æneous; legs and an-

tennæ red; thorax with the sides deflexed, slightly rounded, closely punctulate with coarser punctures intermixed; elytra with nine rows of punctures, interstices obsoletely finely punctulate with a few larger punctures. L. .10-.11. Middle and Southern States, Texas.

Var. Ovata, Lec.

Æneous; elytral punctures less marked. California.

SYSTEMA, Chevr.

Anterior coxal cavities closed; antennæ with the second joint oval, shorter than the third, which is elongate, equal to the fourth; tarsi short, first joint much shorter than the last; claws ample; thorax finely margined at base; elytra punctate.

A. Thorax and elytra unicolorous, black, or brassy.

1. *S. hudsonias* (Forst.), Nov. Spec. Ins.

Elongate oval, black, anterior legs and joints 3-7 of the antennæ paler; head and thorax obsoletely punctulate, the latter slightly broader than long; sides straight, not narrowed in front, broadly margined; scutellum smooth; elytra rather closely punctulate, evidently margined; under surface smooth, subpubescent. L. .16. Middle and Southern States.

2. *S. frontalis* (Fab.), Syst. El., i. 500.

Very closely resembling the preceding, but the head is entirely red, and the thorax more visibly punctate. L. .16. Middle and Southern States.

♂ Last ventral segment subemarginate with a smooth medial line.

3. *S. subænea*, Lec., Pac. R. Rep., p. 68.

Smaller than *S. hudsonias*; shining, decidedly æneous; legs and antennæ more visibly red; head, thorax, and elytra equally and visibly punctate; thorax broader in front, anterior angles deflexed. L. .14. San José, California.

4. *S. collaris*, sp. n.

Resembles *S. frontalis* in its quadrate thorax; bluish-black, thorax yellowish-red, base of antennæ piceous; head smooth; thorax sparsely, elytra more closely punctate; under side smooth. L. .16-.20. Texas (Belfrage, 878).

B. Elytra with an ochreous vitta, epipleuræ black.

5. *S. elongata* (Fab.), Syst. El. i. 500.

Elongate oval, æneous, head and thorax punctate shining, the latter broader in front; elytra obsoletely punctate, with a narrow dorsal vitta ochreous, not reaching the apex. L. .16. Atlantic region.

6. *S. miles* (Lec.), Pac. R. Rep., p. 68.

Very like *S. frontalis*, but head sparingly punctate; thorax almost smooth; legs pale, head and thorax ochreous, this with the sides black; elytra as in *S. elongata*, but with deeper punctures by the scutellum and along the suture. L. .15. California.

S. ligata (Lec.) is a mature specimen, in which the thorax is much darker and has numerous larger punctures visible.

S. ochracea (Lec.) is entirely immature, but may belong here also.

7. *S. marginalis* (Ill.), Mag., vi. 160; *oblonga* (Lec.), Ann. Lye., i. 173.

Entirely ochreous, sides of thorax and elytra and elytral epipleuræ black; thorax and elytra rather closely punctate, alutaceous; thorax short, sides nearly straight; posterior angles prominent. L. .14-.16. Southern and Western States.

The eyes are nearer together in this species, so that the frontal space is narrower; the elytral epipleuræ are frequently almost pale; the thorax is often transversely impressed across the base.

C. Elytra with a dorsal vitta, margin, and epipleuræ pale.

8. *S. blanda*, Mels. Pr. Acad., iii. 164.

Ochreous, under side black; thorax short, closely resembling that of *S. miles*, from which it differs in having the elytral epipleuræ pale. L. .14-.16. Atlantic region, New Mexico.

S. bitæniata (Lec.) appears to me to be founded on unusually large and dark individuals of this species.

ORTHALTICA, g. n.

Very distinct by the long antennæ, parallel form, short tarsi, and irregularly striate elytra; the antennæ are closely approximate, the frontal tubercles very distinct; the prosternum rather broad, anterior coxæ distant.

1. *O. copalina* (Fabr.), Syst. El., i. 466. *Forticornis*, Ill. Mag., vi. 3.

Parallel, subelongate, shining, pitchy; head, thorax, antennæ, and legs red; head closely and deeply punctate; thorax trans-

verse, sides slightly rounded, crenulate, disk sparingly punctate, base impressed, impression not limited; elytra confusedly punctate below the scutellum, externally striate punctate. L. .10-.11. Middle and Southern States.

2. *O. recticornis* (Lec.).

Allied to the preceding, but thorax quadrate, sides nearly straight, anterior angles with a seta, disk rather more punctate; elytra regularly striate punctate, scutellar stria well marked; surface pubescent. L. .10. California (Leconte).

LUPERALTICA, g. n.

This genus is established for three small species which have all the facies of a *Luperus*, but by the incrassate femora, entire epipleuræ, separated anterior coxæ, appear to belong to the *Hal-ticidæ*. The form is very much that of *Orthaltica*, but the elytra are much more finely sculptured and not striate; the first joint of the posterior tarsus is elongate; the anterior coxæ are closed behind, but very narrowly, the base of the prosternum being dilated to meet the epimera; antennæ long, basal joint short, claws dentate at the base.

1. *L. fuscula* (Lec.), Pro. Acad., 1865, p. 206.

Fuscous, subopaque; head yellow in front; tubercles well marked, separated from the front which is pitchy; thorax subquadrate, sides rounded in front, hind angles acute, base produced, broadly and faintly trifoveolate, disk obsoletely punctulate; elytra parallel, margin acutely reflexed, with a marginal series of evident punctures; disk obsoletely punctulate. L. .12-.15. Pennsylvania, Illinois, Kansas.

♂ Fifth segment with a broad obtusely truncate appendage.

Var. *Novellus* (Zimm.). Head, thorax, and legs clear red. South Carolina.

2. *L. senilis* (Say), J. Acad., iv. 87-9. *tincta* (Lec.), l. c., p. 206, 2.

Closely allied to *L. fuscula*, but elytra distinctly punctulate, bluish-green, rest of the body testaceous. L. .12-.15. Illinois.

♂ Fifth ventral segment with a narrow acute process.

HALTICA, Geoff.

Closely allied to *Crepidodera*, but with punctate elytra; thorax transversely impressed and margined at the base.

1. *P. Burgessi*, sp. n.

Black, head, thorax, legs, and antennæ bright red, club of the latter fuscous; elytra bright blue; thorax nearly smooth, convex, sides rounded, elytra irregularly rather shortly punctate. L. .16. Key West, Florida.

CREPIDODERA, Chev.

Distinct by the striate glabrous elytra, and the thorax with a well marked posterior impression terminating in a plica.

1. *C. rufipes* (Linn.), F. S. n. 545. *erythropus*, Mels., Pr. Acad., iii. 165.

Oblong ovate, shining; breast and abdomen black; head, thorax, antennæ, and legs red; elytra blue, punctate, striate; thorax smooth. L. .10. Middle and Southern States. This appears to me certainly identical with the European species.

2. *C. helxines* (Linn.), F. S. n. 540. *nana*, Say, J. Acad., iv. 86. *violacea*, Mels. Pr. Acad., iii. 164. *areola*, Lec. *opulenta*, Lec.

Oblong ovate, shining, beneath bluish-black, above green, purple, or æneous, legs and antennæ red; thorax sparingly punctate, elytra deeply punctate striate. L. .10. Atlantic region, California.

3. *C. atriventris* (Mels.), l. c., p. 165.

Testaceous red, shortly ovate, ventral segments black; thorax smooth, deeply impressed at the base; elytra not very deeply punctate striate. L. .06. Atlantic region.

4. *C. modeeri* (Linn.), F. S. n. 539.

Ovate, very shining, brassy; antennæ and legs pale red; thorax with the base lightly impressed, the terminal plica very deep; punctuation fine and not close, produced in front of the scutellum; elytra strongly punctate striate, striæ subobsolete apically; apical region pale yellow. L. .07-.08. Hudson's Bay.

V. mancula, Lec. Larger, elytra hardly paler at the extremity. L. .9. Oregon (Leconte).

5. *C. scabricula*, sp. n.

Oblong oval, ferruginous red, antennæ with the apex fuscous, elytra violet blue; head smooth, thorax with a very deep basal impression, abruptly limited on either side, broader than long, sides rounded in front, disk with a few scattered deep punctures; scutellum red; elytra deeply punctate striate, the punctures

regular and closely packed, scutellar stria short, interstices smooth. L. .11. Texas (Belfrage, 436). Differs from *C. rufipes* by the red abdomen and strongly punctate elytra.

6. *C. ? nana* (Zimm. MSS.), sp. n.

Narrow, ovate, blue-black, antennæ and legs yellowish-red; frontal carina acute, vertex smooth; thorax narrow, broader than long, front angles deflexed, sides rounded in front, base transversely broadly impressed, surface almost smoothly shining; elytra irregularly, conspicuously punctate. L. .06. South Carolina.

EPITRIX, Foudr.

Closely allied to *Crepidodera*; thorax impressed at base, impression terminating in a plica, surface pubescent.

1. *E. cucumeris* (Harr.), Ins., p. 103. *seminulum* (Lec.).

Black, clothed with a short erect gray pubescence; antennæ and legs red, posterior femora infusate; head and thorax shining, that smooth, this sparsely but evidently punctate; elytra punctate striate. L. .06. Middle States. Very destructive to the cucumber vines, according to Harris (l. c.). I cannot separate the Californian example described by Leconte from this species.

2. *E. subcarinata* (Lec.), Pac. R. Rep., p. 68.

Very nearly allied to the preceding, but entirely brassy above, more elongate, thorax more thickly punctate (but still shining), basal impression less distinct. L. .07. San Francisco (Leconte).

3. *E. fuscula* (Zimm. MSS.), sp. n.

Also very near *E. cucumeris*, but broader and equally black; but all the femora are infusate, and the thorax is coarsely and densely punctate, so as to appear opaque; the basal impression is distinct. L. .65. North and South Carolina (Zimm. n. 5443.)

4. *E. lobata* (Zimm. MSS.), sp. n.

This species is extremely close to *E. fuscula*, of which it has the precise shape; the thorax is not quite so densely punctate, and the legs are entirely red; it also is slightly smaller. South Carolina (Zimm. n. 5675).

5. *E. hirtipennis* (Mels.), Pr. Acad., iii. 165.

Oval, entirely testaceous, body beneath darker, elytra ochreous with a medial ill-defined brown fascia; thorax short, small, shin-

ing, tolerably closely punctate, basal impression faint. L. .6. Middle, Southern, and Western States.

MANTURA, Steph.

This genus is distinct by the sculpture of the thorax, which has a deep fovea on either side the base, but no transverse depression. Elytra punctate striate; no scutellar stria; form subcylindrical, front not carinate.

M. floridana, sp. n.

Convex, ovate, reddish-brown, beneath black, legs and antennæ red; head and thorax coarsely punctate, the latter transverse, sides deflexed, hardly rounded, hind angles obtuse; base very deeply foveolate; elytra deeply punctate striate, interstices impunctate, shining, striæ 10, four and five united before the apex. L. .08. Florida, Louisiana, Pennsylvania. The elytra have the apical $\frac{1}{3}$ distinctly paler, as in the European *M. rustica*.

CERATALTICA, g. n.

Antennæ stout, second joint shorter than third, 5-11 stout subquadrate, longer than broad, eleventh suddenly constricted at the apex and acuminate; thorax not margined at the base, impunctate, posterior tarsi short, elytra striate.

1. *C. insolita* (Mels.), Pr. Acad., iii. 168.

Subquadrate, entirely brownish-red, antennæ fuscous in the middle, the acuminate tip of the eleventh joint black; eyes prominent, frontal keel not elevated; thorax convex, front angles deflexed, sides rounded, hind angles prominent, much narrower than the elytra, which are very finely striate punctate, interstices extremely finely punctulate. L. .065. Southern States.

CHÆTOCNEMA, Steph.

Easily recognized by the blue or æneous surface and pale tibiæ; the posterior tibiæ are dentate externally, being deeply sulcate for the tarsi.

A. Striæ irregular near the suture, eyes large, antennæ rather distant.

1. *C. irregularis*, Lec.

Brassy or bluish, oval, convex, opaque, minutely alutaceous;

thorax strongly punctate, medial line evident only at the base; elytra irregularly evidently punctate striate, interstices smooth. L. .07-.08. S. José (California), Oregon.

B. Striæ regular, interstices impunctate.

2. *C. subviridis*, Lec.

Oval, greenish-blue, antennæ long, red, apex infusate, tibiæ red; head smooth, thorax short, coarsely punctate, elytra punctate striate, punctures closely packed, interstices punctulate. L. .08-.09. Kansas (Leconte).

3. *C. denticulata* (Ill.), Mag., vi 163.

Oval, brassy, in anterior legs, hind tibiæ, and antennæ (apex infusate) red; surface alutaceous, head obsoletely, thorax evidently punctate; elytra rather deeply punctate striate. L. .08-.09. North and South Carolina, Maryland, Kansas, Pennsylvania, Texas. The Texan specimens are smaller, narrower, and possibly distinct. (No. 869, Belfr.)

4. *C. crenulata*, sp. n.

Ovate, brassy, antennæ and four anterior legs red; head and thorax alutaceous, that smooth, this deeply but sparingly punctate; elytra deeply punctate and striate; punctures large, interstices crenulate. L. .06. North Carolina (Zimm. 5441).

5. *C. alutacea*, sp. n.

Subcylindrical, bluish-black, antennæ red; surface alutaceous; head smooth, thorax coarsely, tolerably closely punctate; elytra deeply punctate striate; scutellar stria rather long. L. .065. Florida (Leconte).

6. *C. parcepunctata*, sp. n.

Broadly ovate, brassy, four anterior legs, posterior tibiæ, and antennæ red; head and thorax alutaceous, that smooth, this finely and sparsely punctulate, with a line of deeper punctures along the base; elytra deeply punctate striate, shining. L. .06. Pennsylvania, Lake Superior.

7. *C. texana*, sp. n.

Ovate, tibiæ, tarsi, and antennæ red, surface alutaceous, brassy; head very obsoletely, thorax obsoletely but closely punctulate; elytra punctate-striate, striæ hardly impressed. L. .08. Texas (Belfr. n. 435).

8. *C. confinis*, sp. n.

Ovate, brassy, antennæ, four anterior legs, and posterior tibiæ red; surface alutaceous, head smooth, thorax closely but lightly punctate, elytra not very deeply striate. L. .055-.06. North and South Carolina (Zimm. n. 5027).

Very like *C. texana*, but about half the size.

9. *C. pulicaria* (Mels.), Proc. Acad. iii. 167 (*vide* Zimm).

Rather narrowly oval, brassy, base of antennæ, four anterior legs, and posterior tibiæ red, surface alutaceous, head and thorax opaque, this very obsoletely punctulate with deeper punctures along the base; elytra clearly punctate, striate, shining. L. .06. North Carolina (Zimm. n. 5440), Texas (Belfr. n. 702).

10. *C. elongatula*, sp. n.

Elongate oval, narrow, pointed, black shining, legs and antennæ ferrugineous; head and thorax alutaceous, very sparsely punctulate, this transverse, side straight; elytra clearly punctate striate scutellar striæ reaching the middle. L. .06.

Very unlike the other members of the genus by its depressed form like *orchestris*, the intermediate tibiæ are dentate as well as the posterior. Colorado (Lewis).

EUPLECTROSCELIS, g. n.

Allied to *Chætocnema*, but distinct by the posterior tibiæ sulcate throughout. The clypeus is strongly reflexed and thickened in front, the antennæ not very approximate, long, 2d joint quite short; thorax not impressed, elytra confusedly striate; posterior tibiæ distinctly sulcate throughout, the sides ciliated, and the external edge with a tooth before the apex. I have been obliged to form this genus for a Lower California species, which has much the appearance of a *Eumolpide*.

1. *E. xanti*, sp. n.

Oblong ovate, ochreous, tinged with purple, tibiæ and tarsi brown; head punctate on either side, disk smooth, shining, eyes large, thorax transverse, not emarginate in front, sides straight, base margined, disk unequal, sparingly punctate; scutellum smooth, shining; elytra thickly and closely substriate punctate; clothed beneath with a short gray pubescence (as in *Disonycha*). L. .24-.25. Lower California (Xantus).

♂ First joint of four anterior tarsi broadly dilated.

PSYLLIODES, Latr.

Easily known by the 10-jointed antennæ, striate elytra with punctate interstices, and the posterior tarsi inserted on the side of the tibiæ. The species are very difficult to distinguish. *P. interstitialis* and *P. convexior*, Lec., appear to me to be identical; and *P. parvicollis*, Lec., seems to me to be *P. punctulata*, Mels.

BLEPHARIDA, Chevr.

1. *B. rhois* (Forst.), Cent. Ins. i. 21.

This species is carefully described by Mr. Rogers in his paper on *Chrysomelidæ* in the Proceedings for 1856 (p. 29). I cannot, however, consider it as belonging to that sub-family, and no course remains but to place it as a separate group of *Halticini* distinguished by its bifid claws.

CASSIDIDES.

The number of species here enumerated is eighteen, of which two are unknown to me; but several other species have been attributed to North America by the earlier authors, and Mannerheim (Bull. Mosc. 1853) records the European *C. nobilis*, Linn., as occurring in Russian America. Two species of *Mesomphalia* have been said to occur on the Mexican boundary, but are very doubtful. They are easily recognized by the coloration, which is green with large red blotches.

The other genera are thus arranged by Boheman, in his monograph of the group; to which reference should be made for detailed descriptions.

- | | |
|--|----------------------|
| A. Head prominent, visible. | <i>Porphyraspis.</i> |
| B. Head partially prominent, prosternum produced in front. | <i>Chelymorpha.</i> |
| C. Head concealed, prosternum not produced. | |
| a. Thorax with the margins thickened. | <i>Physonota.</i> |
| b. Thorax transverse, angles rounded, margin simple. | |
| 1. Antennæ short. | <i>Cassida.</i> |
| 2. Antennæ longer than the thorax. | <i>Coptocycla.</i> |

PORPHYRASPIS, Boh.

P. cyanea (Say), Boh. Mon. i. 97.

Hemispherical, very coarsely foveolate; above light blue.
Antennæ testaceous. L. 20. Southern States.

CHELYMORPHA, Chev.

1. *C. casidea* (Fab. 1775). *cribraria* (Fab.), Boh. Mon. i.

Oval oblong, bright red, body beneath and legs black; thorax with four black dots placed transversely; elytra with a common sutural spot below the scutellum, and each with six dots black. L. .38-.46. Atlantic Region.

Var. Thorax with six spots black.

Var. Legs more or less red.

2. *C. Lewisii*, sp. nov.

Very similar to the above, but much paler; thorax with two or four spots (in the former case, body pale beneath; in the latter, dark); prosternum with the groove not extending in front of the coxæ. (In *C. cassidea* it goes the whole length.) L. .42. New Mexico (Leconte).

3. *C. phytophagica*, sp. nov.

Again very near *C. cassidea*; thorax smaller, more shining, more sparingly and strongly punctate; elytra more coarsely and visibly punctate. L. .40. Arizona (Leconte).

PHYSONOTA, Boh.

1. *P. unipunctata* (Say), J. Acad., iii. 434. *Helianthi* (Rand.), Bost. J. ii. p. 30 Boh. Mon. i.

Oval, convex, pale yellowish-ochreous; thorax with three black dots, one discoidal sub-elongate, one on either side nearer the base; antennæ black, base pale. L. .38-.46. Atlantic Region.

C. 5-punctata, Walsh, does not differ from this species.

CASSIDA, Linn.

1. *C. nigripes*, Oliv. E. M., v. 348. Boh. Mon. ii. 362, 29.

Brownish-red above, black beneath, antennæ with joints 1-7 red; elytra rather deeply punctate striate, margin not widely explanate, edge thickened, each with three rather obsolete black spots, one before the middle in the fourth and fifth interstices, one under the callus, and one behind the middle, both in the eighth and ninth interstices. L. .20-30.

Legs black, or at most the tibiæ pale. (*9-maculata*, Mann. Boh.)
(3. Legs entire pale. *ellipsis*, Lec.)

Ranges across the continent.

2. *C. bivittata*, Say. *striolata*, Boh. l. c. ii. 444. *vittula*, Boh. l. c.

Shortly ovate, convex, yellowish-red, black beneath, antennæ with six joints red; legs brownish-red; elytra with the sides not explanate, deeply punctate striate, a line of sub-marginal coarse punctures; each with the suture and two vittæ deep brown. L. .19. Middle and Southern States, Illinois.

3. *C. thoracica* (Ill.), Boh. Mon. ii. 376, 41.

Oblong ovate, green, thorax and scutellar region reddish; beneath black, sides of abdomen narrowly paler; basal half of femora black; elytra confusedly punctate. L. .28. Illinois.

4. *C. texana*, sp. n.

Oblong ovate, sides sub-parallel, last three joints of antennæ black, the rest pale ochreous, shining; thorax with the angles rounded; elytra with the humeral angles prominent, margins tolerably broad, with nine striæ of very deep coarse punctures. L. .22. Texas (Belfrage).

5. *C. callosa*, Boh. Mon. ii. p. 471.

Elytra irregularly tuberculate, and gibbous, dark brown, margin with two yellow patches, one medial, one sub-apical; thorax with base largely brown. L. .20. Texas (Sallé).

Closely resembling *Copt. clavata*, but a true *Cassida*.

COPTOCYCLA, Chev.

1. *C. aurichalcea* (Fab.), Boh. Mon. iii. p. 142.

Above shining, finely seriate punctate, golden, after death testaceous, body beneath and last four joints of antennæ black. L. .23.

Var. Femora with the base infusate.

Middle, Western, and Southern States.

C. aurisplendens, Boh., is only a pale form of this.

2. *C. Arizonae*, sp. n.

Above reddish, with a large lateral hyaline triangular patch, well defined posteriorly; body beneath and four last joints of antennæ black. L. .23. Arizona (Leconte).

3. *C. guttata* (Oliv.), Boh. Mon. iii. p. 314.

Testaceous above, base of thorax, disk, and base of elytra dark; body beneath black, sides broadly red; last two joints of antennæ black. L. .23. Atlantic region.

Paler varieties have the dorsal mark less developed, and are described by Boheman as *C. trabeata* and *C. lucidula*.

4. *C. purpurata*, Boh. Mon. iii. p. 300.

Above brownish-red, with a lateral triangular hyaline patch, body beneath black, antennæ and legs pale. L. .23. Kansas, Pennsylvania.

5. *C. Lecontei*, sp. nov.

Differs from the others by its more oval, depressed form, recalling that of *Cassida*; the antennæ are however long, the last two joints black; body beneath pale; thorax with an M-like mark at the base; elytra with the disk black, variegated with fulvous, humeral angles black at the point. L. .24. Arizona (Leconte).

6. *C. clavata* (Fabr.) Boh. Mon. iii. p. 391.

Pale testaceous, elytra brown, tuberculate, gibbous, margin with a large oblong hyaline spot in the middle, and a small subapical one; antennæ with the last joint dark. L. .30. Southern States.

7. *C. bisignata*, Boh. Mon. iii. p. 119.

Ovate, rufo-ferruginous, body beneath and last four joints of antennæ black; elytra deeply punctate striate, disk with a round black dot. L. .29. "America borealis." This species is unknown to me.

8. *C. plicata*, Boh. Mon. iii. p. 493.

Easily distinguished by the claws pectinate at the base; body beneath pale, last joint of antennæ black, elytra with the disk black, and a well-marked foveole on each. L. .28. North America. I have not seen this.

[A large species from Mexico and Texas has the elytra acutely gibbous, and is probably described in Boheman; it has been received from Europe with the MS. name *lucida*.]

HISPIDES.

The species of this group are but few in number (19), but their synonymy is somewhat confused, and their descriptions do not exist in any accessible works. I have therefore made the following brief diagnoses to enable the student to name his species, leaving full descriptions for a time when the whole family of *Chrysomelidæ* shall undergo revision.

Antennæ 11-jointed.

Elytra finely seriate-punctate, interstices not costate.

Stenispa.

Elytra punctate-striate, alternate interstices costate.

Odontota.

Antennæ 8-jointed, joints 9-11 connate.

Microrhopala.

STENISPA.

1. *S. metallica* (Fab.), Baly, Cat. Hisp. p. 13; *brevicollis* (Rand.) Bost. J. ii. p. 48.
[Languria!]

Elongate, linear, æneous; antennæ black; thorax very finely and sparingly punctulate. L. .23. Middle States.

2. *S. collaris*, Baly.

Very similar to the preceding but longer, thorax entirely red, elytra more finely punctate. L. .25. Indian Territory (Horn).

ODONTOTA, Chev.

- A. Elytra 10-striate, interstices costate; at least at base and apex.

2d and 3d interstices not costate.

omogera.

3d interstice not costate.

3d and 4th pairs of stria regular.

Sides of thorax and humeral angles of elytra orange.

scapularis.

Thorax red, disk and elytra black.

notata.

Thorax and elytra red, suture black.

Harrisii.

3d and 4th pairs of stria confluent in the middle.

bicolor.

3d interstice costate at base and apex, elytra dilated behind.

quadrata.

- B. Elytra 8-striate.

Elytra broad, subtruncate, pale, varied with fuscous.

rosea.

Elytra narrow linear, black, or metallic.

Thorax longer than broad.

Entirely black or greenish-black.

nigrita.

Thorax red, front and hind margin black.

Ariadne.

Thorax transverse, red, front and hind margin black.

Lecontii.

1. *O. omogera*, sp. n.

Elongate, black, dilated behind, sides of thorax and humeral angles of elytra red; antennæ with the 3d joint elongate; elytra regularly and deeply punctate striate; 2d and 8th interstices costate; apical margin deeply and unequally acutely dentate. L. .31. Tampico (Mexico).

2. *O. scapularis*, Ol. Ent. vi. 766, pl. 1, 13; *lateralis*, Say, J. Acad., iii. 431.

Black, sides of thorax and humeral angles of elytra red, the latter broad; apex rounded, serrate, deeply striate punctate, alternate

interstices costate. L. .22-.26. Middle and Western States, Arizona, New Mexico.

3. *O. notata*, Ol. l. c. t. 2, f. 26.

Black, thorax red, with the disk black; form of *O. scapularis*, but elytra less acutely costate; less visible serrate at apex. L. .24. Southern States.

4. *O. scutellaris* (Ol.), l. c. f. 21. *suturalis* † Harr. Ins. p. 98.

Rather broad parallel, black, thorax and elytra red; the latter with the suture black; the color dilating behind. L. .24. Middle and Southern States.

Var. Suture narrowly black, color broadest in front.

5. *O. bicolor* (Ol.), l. c. f. 27. *Bacchus*, Newm. Ent. 76.

Black, elongate, parallel, thorax, scutellum, and under side red; elytra acutely costate. L. .25. Georgia, Illinois.

6. *O. Walshii*, sp. n.

Elongate, parallel, black, thorax red above; head smooth above, deeply foveate between the eyes, antennæ rather shorter than *O. bicolor*, 3d joint elongate, nearly equal to the two following; thorax transverse, sides rounded, hardly narrowed in front; deeply punctate; elytra with ten uniform rows of deep approximate punctures, the 8th interstice only carinate; beneath opaque, metasternum shining. L. .14. Illinois (Entomological Society).

7. *O. rubra* (Web.), Obs. p. 66. *quadrata* (Fab.), Syst. El. ii. 60.

Rose red, acuminate in front, elytra dilate, and obtusely punctate behind; metasternum and middle of ventral segments black; elytra acutely costate; the 3d costa visible at base and apex only. L. .20. Texas, California, Middle States.

8. *O. rosea* (Web.), Obs. Ent. p. 66; *inæqualis* (Web.), l. c. *obsoleta* (Say) J. Acad. iii. 432; *pallida* (Say) l. c., *suturalis* (Fab.) Syst. El. ii. 63. *Philemon* (Newm.) E. M. v. 390; *Baucis* (Newm.) l. c. *flavipes*, Germ. sp., Nov. 529.

Black, elytra elongate quadrate, finely serrate; legs pale, thorax and elytra marked irregularly with fuscous, the latter acutely costate. L. .15. Canada, Middle and Southern States, Texas.

Var. Body beneath pale red.

9. *O. nigrita* (Oliv.), l. c. f. 35, Baly, Tr. Ent. Soc. Lond. ii. 251.

Narrow, linear, black, or subæneous; elytra parallel, acutely costate; thorax longer than broad, coarsely punctate. L. .15-.16. Southern States.

Specimens from Florida in Dr. Horn's collection are dull-black, those from Georgia æneous, and two from New Mexico greenish-blue; but I can see no other differences.

10. *O. Ariadne* (Newm.), Ent., i. 77, Baly l. c.

Black, thorax red, front and hind margins black; thorax coarsely punctate. L. .175. S. Carolina (Zimmerman).

11. *O. Lecontii* (Baly), l. c.

Very like *O. Ariadne* in color, but larger; thorax transverse, form less cylindrical; thorax with the base transversely sulcate; disk with a raised vitta. L. .2½ lin. Unknown to me.

These three species form the genus *Charistena* of Baly.

MICRORHOPALA, Chev.

Elytra 8-striate, alternate interstices costate.

Above more or less marked with red.

Punctures of the elytra lightly impressed, second costa and often the thorax red. *vittata.*

Punctures deep and regular, second costa red.

Under side black.

Xerene.

Under side steel-blue.

rubrolineata.

Above unicolorous.

Punctures regular.

cyanea.

Punctures very coarse, subconfluent.

excavata.

Elytra 10-striate in the apical part, black.

porcata.

Elytra regularly 10-striate, pale above.

Melsheimeri.

Elytra irregularly plicate and tuberculate.

plicatula.

1. *M. vittata* (Fabr.), Syst. El., ii. 64.

Bluish-black, somewhat ovate; elytra faintly costate, punctures lightly impressed, second costa more or less red. L. .23. Middle and Western States, Oregon.

Var. lætula, Lec., thorax red; elytral costa clearly red.

2. *M. Xerene* (Newm.), Ent. Mag., v. 390.

Black, sides of thorax, second elytral costa and apex of first red; punctures of the striae deep and regular; costa but little elevated. L. .16-.17. Middle and Southern States.

Var. interrupta, Coup. Can. Nat. (2), ii. 63, second costa interrupted by red.

3. *M. rubrolineata* (Mannh.), Beitrag. p. 307.

This seems to me to differ only in having the under side blue. California.

Var. signaticollis, Lec., Elytra unicolorous.

4. *M. cyanea* (Say), J. Acad., iii. 433; *Hecate*, Newm. Ent., p. 77.

In shape like *M. vittata*, but entirely unicolorous, bluish or brassy-black; elytral punctures deep and regular; interstices not elevated; last ventral segment red on each side. L. .22-.24. Middle and Western States, Colorado.

5. *M. excavata* (Oliv.), l. c. f. 29; *Erebus* (Newm.), l. c.; *Pluto* (Newm.), l. c.

Smaller than the preceding, similarly unicolorous; alternate interstices elevated, punctures very large subconfluent; under side unicolorous.

6. *M. porcata* (Mels.), Pr. Acad., iii. 161.

Entirely dull black, rather parallel; antennæ short; thorax coarsely punctate; elytra with the alternate interstices costate; the third pair of striæ confused throughout their length, forming two distinct pairs at their apex. L. .12-.13 Pennsylvania, Illinois.

7. *M. Melsheimeri*, sp. n.

Short, subquadrate, antennæ very short; coloration precisely that of *A. rosea*; elytra 10-striate; alternate interstices acutely costate. L. .13. Pennsylvania.

8. *M. plicatula* (Fab.), Syst. El., ii. 63.

Black, front of thorax, scutellum, base of femora, and of antennæ orange; surface rugulose and plicate in every direction, as in *Chlamys*. L. .20. Southern States.



Crotch, George Robert. 1873. "Materials for the study of the Phytophaga." *Proceedings of the Academy of Natural Sciences of Philadelphia* 25, 19–83.

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