

The Coleoptera of Michigan.

BY H. G. HUBBARD AND E. A. SCHWARZ.

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1. *Descriptions of New Species* by JOHN L. LECONTE, M.D.

I have written these descriptions in order that fewer species without names may be referred to in the two lists which form the bulk of the present memoir.

The lists of the Coleoptera of the Upper and Lower Peninsulas of Michigan respectively, have been prepared by the authors with great care, after extensive explorations and collections in the two regions. The species, as far as described, have been identified with the series contained in my collection, and I cannot sufficiently express my thanks, to both Mr. Hubbard and Mr. Schwarz, for the great liberality with which they have given me even unique specimens, so that all the material necessary for comparison and investigation is placed in one single collection. My series, therefore, both of Florida and Michigan Coleoptera, contain all the species catalogued in their lists, and a basis for future studies in geographical distribution has been thus firmly established.

I have added to the list of the species from Lake Superior all those collected in my own extensive explorations of that basin, which were not contained in the collections of the authors. This list is therefore to be considered as a complete catalogue of the Coleopterous fauna of that region, so far as at present known, and exhibits some very interesting points in geographical distribution.

Especially worthy of notice is the large proportion of species common to Lake Superior and Alaska, and if types of the other species described by Mannerheim and Mäklin were accessible for comparison, the number of forms in this category could doubtless be still farther increased. Space and time alike forbid my making a separate list of such species on the present occasion, but I intend to recur to the subject again, when larger series from the Alpine heights of the Rocky Mountains have been collected. The occurrence at Lake Superior of *Euthia scitula* and *Syntomium confragosum*, previously known only from Alaska, and *Gonotropis gibbosa* from Colorado, deserves mention; as also the extension northward of *Callida smaragdina*.

1. **Dyschirius brevispinus.** Shining black, feebly bronzed, rather robust, antennæ, palpi, and legs rufous. Epistoma very slightly emarginate, angles not prominent, transverse impression deep, frontal impressions also deep. Prothorax longer than wide, oval, a little wider behind; lateral margin extremely fine, scarcely continued behind the posterior lateral puncture. Elytra oval, as wide as the prothorax, brownish at the tip, base not margined; striæ uniformly abbreviated in front, very coarsely punctured, obliterated a little behind the middle, 8th represented at the tip by a short groove; scutellar puncture large; dorsal punctures two, one on the 3d interspace near the base, the 2d near the 2d stria about the middle. Front

tibiæ not toothed on the outer edge, terminal digitation long, slender, curved; spur not longer than the first joint of the tarsus. Length 3.4 mm.; .135 inch.

Detroit; one specimen. This species is very distinct by the small size of the lower spur of the front tibiæ, and may be placed as a separate division in B, A, a, of my table (Proc. Ac. Nat. Soc. Phila. 1857, 76.) before *sphæricollis*.

2. **Badister obtusus.** Piceous, shining; prothorax, base of antennæ, palpi and legs testaceous; elytra piceo-testaceous, lateral margin and base testaceous. Prothorax wider than long, narrower behind, hind angles rounded, indistinct, side margin not wider towards the base, which is not explanate towards the sides, basal impressions rounded, not extended towards the sides; dorsal line deep, transverse impressions feeble. Elytra with well-marked striæ, interspaces nearly flat, 3d with two dorsal punctures contiguous to the 2d stria. Length 5.8 mm.; .23 inch.

Marquette, Lake Superior; one specimen. More allied to the Californian *B. ferrugineus* than to any other in my collection, but easily known by the more rounded hind angles of the prothorax.

3. **Bembidium** (Notaphus) **arcuatum.** Black, with a greenish bronzed lustre. Antennal scape, palpi and legs piceo-testaceous. Elytra piceous, with ill-defined testaceous markings, viz.: a humeral cloud, lateral narrow margin, curved band behind the middle, which is concave backwards, and apex; epipleuræ black and testaceous. Prothorax wider than long, rounded on the sides, strongly sinuate behind, base as wide as the apex; hind angles rectangular, carinate; basal impressions deep, dorsal line well-impressed, transverse impressions feeble. Elytra elongate-oval, humeri rounded, striæ distinctly punctured to behind the middle, then finer and smoother; 8th stria deep near the tip; dorsal punctures two, on the 3d interspace. Length 5.4 mm.; .21 inch.

Marquette, Lake Superior. This species resembles *B. flammulatum* of Europe, but is wider and less convex. It also greatly resembles *B. incrematum* Lec. from Cala., Oregon and Alaska, but the latter has the elytral markings undefined, and the striæ finer and less strongly punctured.

4. **Bembidium** (Notaphus) **versutum.** Beneath black, shining; above bronzed; head and prothorax not polished; antennæ piceous, base, palpi and legs testaceous. Prothorax wider than long, narrowed behind, sides rounded in front, strongly sinuate behind, base not narrower than the apex; basal angles rectangular, carinate, basal impression rugose, deep; dorsal line abbreviated at each end, transverse impressions obsolete. Elytra elongate-oval, wider than the prothorax, humeri rounded, angles slightly marked; striæ entire, fine, finely punctulate to behind the middle, inter-

spaces flat, 3d with two dorsal punctures; color brown with metallic lustre, with large ill-defined testaceous markings arranged as in *B. indistinctum*, epipleuræ testaceous edged with black. Length 4.3 mm.; .17 inch.

Marquette, Lake Superior. Smaller and less convex than the preceding, with the prothorax wider and not polished. This species resembles the Californian *B. approximatum* and *indistinctum* in form and markings, but differs by the sides of the prothorax more strongly sinuate towards the base, and by the head and prothorax being less shining, and of a brown-bronze, not green-bronze color.

5. **Hydroporus fuscatus** Crotch. Oblong-oval, elongate, pointed behind, shining brown above, mottled with darker; antennæ with the outer joints blackish. Prothorax slightly rounded on the sides finely and distinctly punctured, basal plica extending a short distance upon the elytra, which are more strongly and not densely punctured. Metasternum with a few scattered punctures, and three striæ behind. Length 1.7 mm.; .065 inch.

Detroit and Lake Superior. Allied to *affinis*, but the elytra are more strongly and sparsely punctured; the continuation of the stria upon the elytra is very short, and forms an angle with the thoracic stria. Among 14 specimens examined I find no sexual difference worthy of note, and I have redescribed this species in order to correct an error made by Mr. Crotch, who (Trans. Am. Ent. Soc. 1873, 391,) considered as the ♀ a different species, in which the stria is not continued upon the elytra.

6. **Hydroporus laccophilinus**. Ovate, depressed, pointed behind, brown, paler in front, darker behind; epistoma not margined, head finely punctulate; prothorax (♂) rugose and finely punctured, narrower in front, sides oblique, finely margined. Elytra (♂) strongly punctured, shining, (♀) opaque, finely sparsely punctulate. Metasternum channeled for the posterior half of its length; sparsely punctured in front; abdomen coarsely punctured in both sexes. Length 2.6 mm.; .10 inch.

Detroit; rare. The form is exactly that of a *Laccophilus* in miniature. The head and prothorax of the ♀ are opaque and very finely and sparsely punctulate.

7. **Suphis semipunctatus**. Elongate-oval, not pointed behind, moderately convex, yellow-brown, shining, smooth; elytra darker, covered from the middle to the tip with scattered coarse punctures; of which one series extends to the base half way between the margin and suture. Pros-

ternum not punctured, less dilated behind than in the other species, but with two short posterior striæ; metasternum with a deep impressed median line, smooth, with only a few scattered punctures behind. Length 26 mm. ; .10 inch.

Monroe, Michigan; one specimen; very different from the other species by the regularly oval form, scarcely narrower behind than before, by the peculiar punctuation of the elytra and by the impunctured sterna. The last joint of the maxillary palpi is nearly acute at tip, and does not appear emarginate from any point of view.

The insect mentioned in the Florida list (ante p. 438) as *Suphis* n. sp., on remounting, proves to be a very small species of *Laccophilus*, having the same form of prosternum as the others. It may be here conveniently described as:

8. **Laccophilus pumilio.** Ovate, pointed behind, not convex, impunctured, rufo-testaceous, meso- and metasternum darker; elytra piceous, slightly iridescent, regularly narrowed behind, and not obliquely truncate at tip; abdomen without the distant fine oblique lines seen in the other species. Length 1.9 mm. ; .075 inch.

Enterprise, Florida; one specimen. Very careful examination shows in certain lights traces of two or three lines on the second ventral segment towards the sides, but these are the only evidences of the characteristic ventral sculpture of the other species.

9. **Gaurodytes leptapsis.** ♀ Elongate-oval, less obtuse than usual, black, with a slight bronzed tint, opaque, finely strigose with lines forming very elongate meshes; base of antennæ, palpi, front and middle legs tinged with piceous. Head less opaque than the prothorax, the sides of the latter are oblique, finely margined and scarcely rounded. Elytra with the usual rows of punctures indistinct. Beneath shining, finely reticulate, mesosternum acutely emarginate, hind tibiæ sparsely, coarsely punctured, margined on the inner side, but without a very distinct row of punctures. Front and middle thighs distinctly, not densely punctured. Length 9.7 mm. ; .38 inch.

Marquette, Lake Superior; one specimen. This species is as elongate as *G. parallelus*, but less obtusely rounded, and is easily recognized by the peculiarly elongated meshes of the reticulation. The prosternum is obtusely carinate.

10. **Gaurodytes longulus.** Elongate-oval, obtuse at each end, not convex, shining, smooth black, with a slight metallic gloss. Antennæ, palpi

and feet tinged with piceous. Prothorax with sides oblique, finely margined; apical and basal rows of punctures strongly marked. Elytra with the rows of punctures strongly marked. Prosternum acutely carinate; mesosternum deeply emarginate; front and middle thighs punctured and rugose; hind tibiae smooth, with a few small punctures at the inner margin and some larger ones along the outer margin. Length 9 mm.; .35 inch.

♂ Smooth but not polished; claws of front tarsi long, not toothed, curved only near the tip.

♀ Scarcely perceptibly punctulate; claws of front tarsi not so long, and regularly curved.

Lake Superior; the elytra vary from brown to black, with only the edge brownish. The form is exactly as in *G. parallelus*, from which it differs greatly by the other characters.

11. **Hydrobius feminalis.** Sub-ovate, convex, blackish piceous, sides of prothorax and elytra and beneath paler. Head and prothorax sparsely punctulate, elytra finely not densely punctured, sutural stria deep, extending from the middle to the tip. Length 2 mm.; .08 inch.

Detroit. This species is less oval than the others of the same size in our fauna, and is somewhat narrower behind than in front; it is free from metallic lustre. The prosternum and mesosternum are not prominent, and the thighs are punctulate and pubescent from the base nearly to the knees. It therefore belongs to the genuine *Hydrobii*, and is allied to the two following Californian species.

12. **Hydrobius castaneus.** Oval, convex, shining brown, beneath piceous. Head prothorax and elytra finely, moderately densely punctured, the latter a little more strongly; sutural stria deep, extending from the middle to the tip. Length 2.5 mm.; .10 inch.

Lake Tahoe, Cal.; Mr. Crotch. The pro- and mesosternum are not carinated, and the thighs are punctulate and pubescent except near the knees.

13. **Hydrobius cuspidatus.** Oval, more elongate and somewhat less convex; blackish piceous, paler at the sides of the head and prothorax, also along the basal and apical margins of the latter; finely punctured, rather more strongly upon the elytra, with here and there indistinct traces of rows. Length 3.4 mm.; .14 inch.

Lake Tahoe, Cal.; Mr. Crotch. The prosternum is not carinate; the mesosternum is strongly carinate, with the anterior angle rectangular and slightly cuspidate. The under

surface and thighs are punctulate and pubescent almost to the knees.

14. **Habrocerus? magnus.** Elongate, depressed, blackish piceous. Head and prothorax shining, polished, the former with one frontal puncture each side. Prothorax twice as wide as long, emarginate at tip, broadly rounded at base, narrowed in front, strongly rounded on the sides, basal angles much rounded; sides finely margined, with two marginal punctures, and one in the base near the angle, base very finely margined; disc with one setigerous dorsal puncture each side. Elytra finely punctured and pubescent, with some feeble traces of striæ near the base towards the suture. Dorsal segments densely punctulate. Beneath finely punctured and pubescent; tip of abdomen, antennæ, palpi and legs piceous. Length 3.8 mm.; .15 inch.

♂ 6th ventral segment acutely emarginate, 7th more deeply emarginate almost to the base, 8th prominent, rounded at tip.

♀ Ventral segments not emarginate.

Isle Royale, Lake Superior. This species differs from *H. Schwarzi* by the much greater size, more elongate and depressed body, and pubescent elytra; it seems to be a connecting form between this genus and *Tachinus*.

15. **Agathidium globatile.** Black, shining, completely contractile into a ball. Head and prothorax smooth. Elytra smooth, without sutural stria, finely margined, margin extending along the base almost to the scutellum, which is large and triangular. Length (when contracted) 2 mm.; .08 inch.

Marquette and Detroit. Much smaller than *A. oniscoides*, but not otherwise specially different.

16. **Agathidium parvulum.** Hemispherical, not contractile, rufo-piceous, shining, smooth, elytra with sutural stria extending from the middle to the apex. Length 1.2 mm.; .05 inch.

Marquette, Lake Superior. This is the smallest species in my collection, and is less contractile than any other known to me.

17. **Staphylinus cæsareus** *Cederholm*; Er. Staph. 378.

A specimen of this European species, found at Detroit, differs by having the golden pubescence confined to the neck and to the posterior margin of the second dorsal segment. No golden hairs are visible either at the base and apex of the prothorax or on the sides of the ventral segments.

18. **Batrisus simplex.** Rufous, shining, sparsely pubescent. Head

slightly scabrous, vertex slightly elevated and convex, surrounded by a shallow curved impression. Prothorax campanulate, with the dorsal and lateral striæ deep; behind the middle between the striæ each side is an acute conical tubercle, and still nearer the base two very small teeth. Elytra indistinctly and sparsely punctulate. Antennæ with the joints 3-8 not longer than wide, 9th and 10th rounded gradually larger, 11th still larger, oval, pointed. Hind tibiæ with long terminal spur. Length 2 mm.; .08 inch.

♂ Head finely scarbrous, front protuberant anteriorly and retuse, with an apical concavity.

♀ Head nearly smooth, vertex entirely smooth, front gradually declivous not prominent.

Detroit; one pair. Sufficiently distinct by the feeble sculpture of the head, and the absence of antennal sexual characters.

19. **Orthoperus scutellaris.** Oblong-oval, slightly convex, piceous, black, glabrous, not very shining. Scutellum large, very distinct. Elytra narrowly margined behind with testaceous. Length .7 mm.; .027 inch.

Michipicoton River, north shore of Lake Superior; also found in Illinois, and abundantly in British Columbia, at Lake Labache. This species is double the size of *O. glaber*, and less rounded. It is recognized at once by the very distinct scutellum.

Under a high magnifying power the elytra are seen to be finely strigose, and very sparsely and indistinctly punctulate.

20. **Orthoperus suturalis.** Oval, rounded, slightly convex, piceous black, glabrous, shining. Scutellum distinct. Elytra with a very fine sutural stria slightly visible from the middle to the tip. Length .5 mm.; .02 inch.

Enterprise, Florida. Smaller, or of the same size and form as *O. glaber*, but easily known by the distinct scutellum, and fine sutural stria. The elytra are very sparsely and indistinctly punctulate as in the preceding.

21. **Orthoperus elongatus.** Oblong-elongate, slightly convex, piceous, moderately shining. Scutellum distinct. Elytra with a very fine sutural stria effaced behind, but curving in front around the base and ending half way between the scutellum and the humerus; tips separately rounded, with the apex of the abdomen more prominent than in the other species. Length .5 mm.; .02 inch.

Tampa, Florida. Smaller and narrower than the other species, having much the form of *Ptilium*.

22. *Lathridius opaculus*. Elongate, blackish piceous, opaque. Antennæ one-half longer than the head. Prothorax slightly convex, wider than long, a little narrowed behind, sides rounded in front, subsinuate behind the middle, margin not reflexed; disc transversely impressed near the base. Elytra elongate-oval, one-fourth wider than the prothorax, striæ fine punctulate, interspaces flat, disc oblique and broadly impressed in front of the middle; sutural stria more deeply impressed behind the middle. Length 1.5 mm.; .06 inch.

Detroit, Illinois, Mass., and Maryland. In some specimens the prothorax is obsoletely channeled.

23. *Lathridius maculatus*. Less elongate, blackish piceous, opaque. Head and prothorax broadly channeled, the latter feebly convex, wider than long, narrowed behind, sides finely serrate, not reflexed, rounded in front, sinuate towards the base; disc deeply transversely impressed behind the middle. Elytra nearly one-half wider than the prothorax, truncate at base, widest just behind the middle, sub-depressed, striæ fine, punctured, sutural and two outer ones deeper, especially near the tip; color testaceous, tessellated with black quadrate spots, margin blackish; disc deeply obliquely impressed near the base. Length 1.9 mm.; .075 inch.

Detroit. Allied to these two species is the following:

24. *Lathridius duplicatus*. Moderately elongate, blackish piceous, opaque. Prothorax one-half wider than long, narrowed behind, sides finely serrate, rounded in front, oblique behind, hind angles obtuse; disc feebly impressed in front of the middle, and with a shallow transverse impression behind the middle. Elytra one-third wider than the prothorax, elongate-oval, striæ composed of punctures, not regularly arranged, and approximated by pairs; the sutural and two outer ones are slightly impressed near the tip. Legs rufo-piceous. Length 1.9 mm.; .075 inch.

Illinois, and Detroit. This and the two preceding species belong to the group *Enicmus* Thomson, in which the prosternum extends to the hind margin of the prothorax, the antennæ are shorter than the head and prothorax, with the three outer joints enlarged; and the prothorax is not strongly margined at the sides.

In *L. sculptilis* only two joints of the antennæ form the club; it thus belongs to *Coninomus* Thomson. In *L. viratus*, a still more remarkable peculiarity, first mentioned to me by Dr. Horn, is seen; the prosternum extends only a short distance behind the coxæ, and is enclosed by the epimera, which coalesce on the median line as in *Rhynchophora*; the front

coxæ are also conical, prominent and contiguous. The antennæ are slender and longer than the head and thorax, as in the true *Lathridii* with costate prothorax. These differences in structure entitle it to be ranked as a distinct genus for which the name *Stephostethus* may be adopted.

The two following species belong to *Enicmus*, though the antennæ are more slender and a little longer than in those above described, and the sides of the prothorax are flattened.

25. **Lathridius tenuicornis.** Robust, depressed, dark brown, head and prothorax opaque, scabrous, slightly channeled. Prothorax more than one-half longer than wide, narrowed before and behind, sides strongly rounded, oblique towards the base, margin finely serrate, flattened but not reflexed; disc with a transverse slightly curved impression in front of the base, extending nearly to the sides. Elytra oval, wider than the prothorax, strongly margined, impressed near the base, shining; striæ scarcely impressed, finely punctured, interspaces flat, each with an obsolete row of very fine points. Antennæ shorter than the head and prothorax, slender, three outer joints longer, but very slightly thickened. Length 2 mm.; .08 inch.

California, near Sonoma.

26. **Lathridius laticollis.** Less robust, sub-depressed, brown, antennæ, legs and antennæ rufous. Head and prothorax opaque, scabrous, feebly channeled, the latter nearly twice as wide as long, formed and sculptured as in *L. tenuicornis*, but less rounded on the sides. Elytra elongate-oval, very little wider than the prothorax, truncate at base, strongly margined at the sides, slightly impressed near the base; striæ punctured, scarcely impressed, fainter behind; interspaces nearly smooth, flat. Antennæ two-thirds as long as the head and prothorax, slender, outer three joints a little thickened. Length 1.5 mm.; .06 inch.

Detroit. This species is very closely related to *L. tenuicornis*, and differs only by the prothorax being less rounded on the sides, and the elytra but little wider than it.

ODONTOSPHINDUS nov. gen. SPHINDIDÆ.

General characters as in *Sphindus*, except:

Body elongate, glabrous; sides of the prothorax but feebly rounded, with 6 or 7 distinct teeth; elytra with striæ not impressed but strongly punctured. Flanks of prothorax not concave for the reception of the antennæ. Antennæ, legs, tarsi and sterna precisely as in *Sphindus*.

This genus would seem to indicate a relation between the families Sphindidæ and Derodontidæ.

27. **O. denticollis.** Elongate, sub-cylindrical, brown, glabrous. Head finely punctured, transverse frontal impression deep, vertex, with a broad but not deep channel. Prothorax twice as wide as long, slightly narrowed in front, strongly but not coarsely punctured, sides nearly straight (♂), or slightly rounded (♀), with 6 or 7 distinct teeth, hind

angles obtuse, base slightly rounded, very finely margined. Scutellum large, acuminate behind. Elytra nearly four times as long as the prothorax, but not wider; striæ not impressed, strongly punctured; scutellar stria long; behind the base there is a shallow impression. Antennæ paler at base, club large, two-jointed; eyes convex prominent. Length 2.7 mm.; .10 inch.

Detroit; one specimen. I am indebted to Dr. Horn for other specimens from Canada and California.

EURYSPHINDUS nov. gen. SPHINDIDÆ.

General characters as in *Sphindus*, except:

Body broadly oval, moderately convex, clothed with erect hairs; prothorax narrowed in front, rounded on the sides; elytra with striæ feebly impressed, strongly punctured. Flanks of prothorax deeply and widely concave beneath. Eyes small, frontal suture finely impressed, not deep.

28. **E. hirtus.** Blackish brown, shining, pubescent with stiff erect hairs. Head sparsely punctulate, frontal suture fine, eyes small, not prominent, but convex. Prothorax more than twice as wide as its length, narrowed in front, sides slightly flattened, edge acute, crenulate, scarcely margined, base sub-sinuate not margined, disc strongly not coarsely punctured. Scutellum large, finely punctured. Elytra with striæ of well marked punctures, interspaces feebly convex, rugosely punctulate; humeral callus rather prominent, paler brown. Beneath punctured, tibiæ and tarsi paler. Length 1.6 mm.; .06 inch.

Detroit; one specimen. In the Munich Catalogue *Sphindus* is placed at the end of the *Ptinidæ*, a position for which it is unsuited, on account of the much smaller coxal cavities the prosternum distinctly separates the coxæ, which are themselves, though transverse, small and not prominent. The form of the antennæ and tarsi also forbids a reference to the *Ptinidæ*. To these characters I have to mention, that the antennæ, in repose, are flexed in a different manner, the slender part being laid each side along the prosternal suture, and the club bent suddenly outwards, behind the front leg. In *Eurysphindus* the flanks of the prothorax are deeply concave for the reception of these organs, in *Sphindus* the concavity is much less; and in *Odontosphindus* the depression is obsolete, though the form of the antennæ is the same in all three genera. I may here observe that the club of the antennæ is described as three-jointed; the 8th joint is so much

smaller than the 9th and 10th, and moreover, so little different in width and length from the 7th, that it seems more natural to view it as belonging rather to the stem than to the club, which would thus be properly designated as two-jointed.

MYCETOPHAGUS Hellw.*

The species known to occur in our fauna are eleven in number, three of which will now for the first time be described, two of these presenting characters worthy of special mention.

M. confusus departs remarkably in sculpture from the other species, to a degree that one of the generic characteristics becomes lost. There is no arrangement of punctures in striae except very feebly at middle near the base, while the punctures of the intervals become so numerous and large that the punctuation becomes confused as in *Triphyllus*,

M. tenuifasciatus has a peculiar male sexual character, consisting of a transverse row of fine silken hairs on the first abdominal segment. No other species in our fauna has any other male character than that afforded by the anterior tarsi which are three-jointed, in the female four-jointed.

In the vast majority of our species the antennae are either somewhat fusiform or gradually thickened to tip; two, however, have the last three joints of equal width and rather suddenly wider than the preceding. Other characters of less importance are made use of in the following synoptic table.

Table of species of MYCETOPHAGUS.

Elytra striato-punctate.....	1.
Elytra confusedly punctured.....	6.
1. Antennae gradually broader externally or sub-fusiform.....	2.
Antennae with last three joints rather suddenly larger.....	5.
2. Thorax broader at base.....	3.
Thorax narrower at base than at middle.....	4.
3. Abdomen moderately shining, punctuation less dense :	
Prosternum coarsely punctured. Antennae longer than head and thorax.....	punctatus.
Prosternum nearly smooth. Antennae not longer than head and thorax.....	californicus.
Abdomen densely and finely punctured, sub-opaque.	
Prosternum nearly smooth at middle.....	flexuosus.
Prosternum densely and coarsely punctured.....	bipustulatus.

* For this synopsis of *Mycetophagidae*, and the descriptions of the new species belonging to the family, I am indebted to the kindness of Dr. G. H. HORN.

4. Margin of thorax entire :

Form rather broad, thorax densely and freely punctured.....
pluriguttatus.

Form slender, thorax coarsely and deeply punctured *Melsheimeri*.

Margin of thorax serrulate :

Elytra maculate with yellow spots.....*pluripunctatus*.

Elytra piceous brown.....*pini*.

5. Elytra nearly black. Male with brush of hair on first ventral.....
tenuifasciatus, n. sp.

Elytra piceous, maculate with yellow. Male without brush.....
obsoletus, n. sp.

6. Elytra maculate with large yellow spots.....*confusus*, n. sp.

With *Melsheimeri* I have united *obscurus*, the latter seeming to be merely an unicolorous form. *M. pini* and *pluripunctatus* would seem to occupy the above relationship, but the latter is always more slender and less depressed.

Of the above species *californicus* and *pluriguttatus* are peculiar to California, *confusus* to Colorado, *tenuifasciatus* extends across the north of our territory, while the other species are widely distributed in the Atlantic and Gulf States.

29. ***Mycetophagus californicus*** *Horn*, n. sp. Oval, piceous, feebly shining, sparsely clothed with brownish pubescence. Head moderately densely punctate. Antennæ brownish, base and terminal joint paler, the latter nearly as long as the two preceding. Thorax transverse, broadest at base, sides arcuate and gradually narrower to apex, margin not serrulate, surface moderately densely punctured with coarse and fine punctures, basal impressions moderately deep. Elytra nearly black, with a yellow oblique spot at the humeri, and a transverse fascia at apical third, not attaining the suture nor margin, surface with striæ of small sub-quadrate punctures not closely placed, intervals flat, irregularly biserially punctulate. Body beneath and legs brownish, prosternum nearly smooth, abdomen finely but not densely punctulate. Length .16 inch ; 4 mm.

This species is of the same general form as *punctatus* but smaller. The elytral markings in the two species are of the same type but in the present the yellow color is less extended. The antennæ are not longer than the head and thorax. The abdomen of the male is simple, the first joint of the anterior tarsi slender and moderately long.

Two specimens, Lake Tahoe, California, Crotch.

30. ***Mycetophagus tenuifasciatus*** *Horn*, n. sp. Oval, piceous black, feebly shining, sparsely pubescent. Head moderately densely punctate. Antennæ piceous, last three joints broader. Thorax transverse, sides arcuate, margin not denticulate, base very slightly narrowed, disc densely punctured with coarse and fine punctures intermixed, those toward the sides coarse, basal impressions feeble. Elytra with striæ of moderate punctures rather closely placed, intervals finely biserially punctulate. Abdomen

finely punctulate, sparsely at middle, more densely at the sides. Legs nearly black. Length .20 inch ; 5 mm.

In addition to the short black pubescence clothing the elytra there are very narrow sinuous bands of grayish pubescence, the first at basal third, the second behind the middle, and also an apical spot. The median band divides near the middle of each elytra and sends one branch forward, another backward to the margin. When the pubescence of the bands is removed the surface beneath is somewhat paler.

The punctuation of the surface of the thorax varies somewhat. In a specimen from Marquette, Mich., the entire surface of the thorax is as coarsely punctured as at the sides, and the elytral sculpture also stronger.

In addition to the anterior tarsi being three-jointed, the male has a tuft of silken hairs arising from an arcuate line at the middle of the first ventral segment.

Occurs from the White Mountains of New Hampshire to Michigan, Colorado and British Columbia.

31. **M. confusus** Horn, n. sp.

Oval, piceous, sparsely pubescent, elytra maculate with yellow. Head densely punctured. Antennæ as long as head and thorax, outer four joints stouter. Thorax transverse, arcuately narrowed from base to apex, surface densely and coarsely punctured, basal impressions moderately deep, margin not serrulate. Elytra densely punctulate with a feebly striate arrangement at middle near the base, color piceous, maculate with large yellow spots as in *flexuosus*, the posterior band, however, not attaining the apex. Body beneath and legs rufo-piceous, prosternum sparsely punctate, abdomen densely punctate. Length .18 inch ; 4.5 mm.

One ♀ specimen, Colorado, Morrison.

32. **Diplocœlus angusticollis** Horn, n. sp. Oblong-oval, piceous, moderately shining, sparsely pubescent. Head coarsely and moderately densely punctured. Thorax trapezoidal, narrowed in front, sides very feebly arcuate, hind angles suddenly broader covering the base of the elytra, surface coarsely and deeply punctured, with three feebly elevated lines at the sides which are less distinct in front. Elytra oblong-oval, with rows of coarse closely placed punctures, intervals with a single row of fine punctures, surface sparsely clothed with fine recumbent pubescence, with short, semi-erect, stouter hairs arising from the interstitial punctures. Abdomen alutaceous, sparsely punctate and finely pubescent. Length .13 inch ; 3.25 mm.

This is the only species described with the thorax much narrowed in front. Its aspect is somewhat that of a *Throscus*.

One specimen, Marquette, Mich.

It seems to me that the opinion of Mr. Reitter is correct that *Marginus* does not appear to be sufficiently distinct

from *Diplocælus* (Verhandl., k. k. Zool. Bot. Gesells. Wien, 1877, p. 189). We have in our fauna, by this arrangement, three species, of which the one above described is new. They are as follows:

Table of species of DIPLOCÆLUS.

Lateral lines of thorax well marked.

Thorax narrowed in front, sides nearly straight, hind angles prominent externally.....**angusticollis.**

Thorax not narrowed in front, sides regularly arcuate.....**brunneus.**

Lateral lines of thorax obsolete.....**rudis.**

D. brunneus Lec., New species, 1863, p. 73, has the thorax equally wide at apex and base, and the lines at the sides of the thorax well marked. The elytra are slightly wider than the thorax and very sparsely clothed with a recumbent pubescence, the interstitial punctures bearing short semi-erect hairs. Length .14 inch ; 3.5 mm.

Occurs from Pennsylvania to Illinois.

D. rudis Lec., (*Marginus*) loc. cit ; *philothermoides* Reitter, Verhand. k. k. Zool. Bot., Gesellsch. Wien, 1877, p. 189.

A much smaller species than either of the preceding, resembling at first glance a *Philothermus*. The thorax is rather broader than the elytra, coarsely and densely punctured, with a feeble trace of one of the lines only. The surface is pubescent as in *brunneus*. Length .08 inch ; 2 mm.

In describing this species Mr. Reitter says the intervals are without fine punctures. They are nearly obsolete in some specimens but quite distinct in others.

D. mus Reitter, loc. cit., p. 188.

Under this name a species is described by Mr. Reitter, who is in doubt whether it came from "Amer. occ." or the West India Islands. It seems to be Mexican.

Table of species of LITARGUS.

The species may be distinguished in the following manner:

Terminal joint of antennæ oval, scarcely longer and never wider than the preceding.....**1.**

Terminal joint of antennæ truncate at tip, usually longer and always wider than the preceding.....**2.**

1. Club of antennæ rather loose ; thorax rather finely punctured and depressed, basal impressions distinct.....**1. sexpunctatus.**

Club of antennæ compact ; thorax coarsely punctured, convex basal impressions obsolete.....**4. didesmus.**

2. Form rather convex, elytra coarsely not densely punctate. Thorax without basal impressions.

Thorax more finely punctate than the elytra, the latter with the pubescence in distinct rows, last joint of antennæ not longer than the length.....3. **tetraspilotus**.

Thorax as coarsely punctate as the elytra, the latter without any serrate arrangement of pubescence, last joint of antennæ notably longer than the length.....5. **nebulosus**.

Form depressed, elytra rather finely and densely punctate. Thorax with basal impressions.

Thorax densely punctulate, pubescence of elytra partly serrate, partly recumbent; last joint of antennæ nearly as long as the two preceding together.....2. **balteatus**.

(1.) **L. sexpunctatus** Say, (*Mycetoph.*) Journ. Acad. V, 261; Lec. Proc. Acad. 1856, p. 14.

Piceous, depressed, moderately shining, each elytron with three yellow spots. Thorax sub-opaque, moderately densely punctate. Elytra densely punctate, shining, sparsely pubescent and with semi-erect hairs in rows. Length 2.75 mm.; .11 inch.

Pennsylvania, South Carolina, Illinois. This species and the next are the only ones with distinct basal thoracic impression and with a depressed form of body.

(2.) **L. balteatus** Lec.; *transversus* Lec.; *infulatus* Lec. Proc. Acad. 1856, p. 14.

The form, color and sculpture resemble the preceding species. The pubescence of the elytra is rather more evident while the seriated hairs are rather less distinct. The color of the elytra is piceous with yellow spots, as follows: one humeral, another post-scutellar, often united, a transverse band behind the middle angulated in front at the middle of each elytra. Length 2-2.75 mm.; .08-.11 inch.

The terminal joint of the antennæ is broader than the preceding, truncate at tip, and nearly as long as the ninth and tenth together.

Occurs from Missouri to Colorado, Arizona and California.

(3.) **L. tetraspilotus** Lec. loc. cit.

Oval, moderately convex, piceous, shining, sparsely pubescent. Antennæ with club rather loose, three-jointed, the last joint a little longer and broader than the preceding, and truncate at tip. Thorax less coarsely punctured than the elytra, intervals between the punctures alutaceous, basal impressions absent, basal margin rather suddenly sinuate on each side of the middle. Elytra rather coarsely and sparsely punctate, punctures vaguely arranged in rows, surface shining, color piceous, with two yellow spots on each side, one slightly in front of middle, the other larger, one-third from apex, hairs all semi-erect and in distinct rows. Length 2 mm.; .08 inch.

This species and *nebulosus* are the only ones in which a distinct sinuation occurs on each side of the middle of the base of the thorax.

Occurs from Pennsylvania to Georgia and Missouri.

(4.) **L. didesmus** *Lec. loc. cit. p. 15.*

Similar in form, color and sculpture to the preceding, and differing as follows :

Club of antennæ rather compact, three-jointed, the eighth joint, however, slightly wider than the seventh, terminal joint oval, not as wide as the preceding. Thorax rather coarsely punctate, not alutaceous, basal impressions wanting, basal margin squarely truncate. Elytra coarsely and moderately truncate, punctures not in striæ, pubescence partly erect not striate, color piceous, shining, each elytra with an oblique humeral yellow spot, another slightly behind the middle and also oblique, extending from the margin to the suture. Length 2.25 mm.; .09 inch.

The yellow markings vary somewhat in extent.

Occurs from Pennsylvania to Florida.

(5.) **L. nebulosus** *Lec. loc. cit.*

Resembles *didesmus* in form and sculpture. The antennæ are as in *tetraspilotus*. The thorax is as coarsely punctured as the elytra, and not alutaceous, basal impressions wanting, basal margin sinuate on each side of middle. Elytra coarsely punctate, pubescence partly semi-erect but not striate, the color is usually testaceous, with a piceous dentate band behind the middle, another one-third from apex. Length 1.5-2 mm.; .06-.08 inch.

This is our smallest species. It is usually of much paler color than the others, and the elytral markings are sometimes reduced to scattered piceous spots.

Occurs in the Middle States.

Table of species of TRIPHYLLUS.

Elongate, not convex; prothorax strongly margined at the sides.....

elongatus.

Elongate-oval, convex; prothorax finely margined at the sides. *ruficornis.*

33. **Rhizophagus brunneus** *Horn, n. sp.* Uniformly brownish, moderately shining. Head sparsely punctate. Thorax a little larger than wide, apex and base truncate, sides sub-parallel at middle, slightly arcuate at apex and base, disc convex, coarsely and sparsely punctured. Elytra slightly wider at base than the thorax, and feebly emarginate, disc with rows of moderately coarse punctures which become somewhat finer toward the tip. Prosternum coarsely punctured, side pieces nearly smooth. Metasternum smooth at middle. Abdomen coarsely and sparsely punctured, the first segment smooth at middle. Pygidium sparsely punctate. Length 3 mm.; .12 inch.

Marquette, Lake Superior. The punctures of the entire surface are coarser than in any other of our species. It must be considered the intermediate form between those with the long and those with the broad thorax.

34. **Pedilophorus subcanus.** Longer-oval, convex, rounded behind, obliquely narrowed in front of the elytra, black, irregularly mottled with very short gray pubescence like hoar frost, and thinly clothed with short erect black bristles. Beneath finely, densely punctured, finely pubescent, legs piceous; tarsi paler, fourth joint with a long lobe. Length 4.4 mm; .17 inch.

Escanaba, Lake Superior. In form and pubescence this species resembles *Byrrhus*, but the tarsal lobe requires its reference to the present genus, with which it also agrees in having the mandibles not covered by the prosternum in repose.

35. **Paromalus teres.** Cylindrical, but not slender, shining black; head and prothorax punctulate, elytra finely not densely punctured, each with faint traces of two oblique striae near the base; sutural stria wanting. Pygidium very finely punctulate, under surface finely and sparsely punctured; mesosternum emarginate in front, marked with a fine lateral line; prosternum flattened without striae. Length 2 mm; .08 inch.

Sault St. Marie; one specimen. This species only differs from *P. seminulum* by the cylindrical form, in which it deceptively resembles *Teretrius americanus*; by having the elytra more finely punctured, and by the entire absence of the sutural stria.

The following species may be conveniently described on the present occasion.

36. **Hetaerius Blanchardi.** Oval-quadrate, brown, shining, of the same form as *H. brunneipennis*, sparsely pilose with long slender sub-erect yellowish hairs. Head opaque, finely punctulate, broadly concave. Prothorax with the sides slightly nicked at the middle, lateral lobes of the disc obsoletely punctulate, divided behind the middle by a transverse groove, hinder part deeply margined on both sides; the impressed groove separating the lateral lobe from the disc is much deeper and broader at the base. Elytra with three very fine striae, the inner one effaced behind the middle. Pygidium opaque, very finely and densely punctulate. Prosternum narrow, flat, densely punctulate, lateral edges well defined. Length 2 mm; .08 inch.

Tyngsborough, Mass. Collected by Mr. Frederick Blanchard, to whom I dedicate it with much pleasure, as a mark

of appreciation of his success in recovering many local species, which would otherwise have remained undetermined.

37. *Ægialia rufa*. Elongate, cylindrical, not very convex, rufous. Head finely scabrous, with an obsolete transverse impressed line; epistoma very finely margined, sub-truncate. Prothorax scarcely wider than long, sub-quadrate, sides very slightly rounded, fringed with stiff hairs, serrate towards the base, which is broadly rounded and distinctly margined; front angles prominent, hind angles rounded, disc coarsely sparsely punctured with some fine punctures intermixed. Elytral striæ deep, distinctly punctured, interspaces smooth. Scutellum small, smooth. Front tibiæ with three large teeth, middle and hind tibiæ gradually but moderately dilated, transverse ridges short; spurs of hind tibiæ long, hind tarsi two-thirds as long as the tibiæ. Length 4.5 mm; .175 inch.

Marquette, Lake Superior, two specimens; California, (precise locality unknown, probably from the Sierra Nevada), one example. The humeri in one Lake Superior specimen are prominent and tuberculate, in the other two rounded; in the former the spurs of the hind tibiæ, though not longer, are more slender than in the two with simple humeri. These differences are probably sexual, but cannot be fully investigated without more specimens.

For the easy recognition of our species of this genus I have enlarged the table given by Dr. Horn (Trans. Am. Ent. Soc., 1871, 293), as follows:

Table of species of ÆGIALIA.

Spurs of hind tibiæ long and slender.....	2.
Spurs of hind tibiæ flattened and broad; hind tibiæ gradually and moderately thickened, with two transverse ridges.....	3.
Spurs of hind tibiæ long, thick, obliquely truncate; hind tibiæ gradually and very strongly thickened.....	4.
Spurs of hind tibiæ very short, cylindrical, hind tibiæ very strongly thickened.....	5.
2. Cylindrical, rufous, hind tibiæ with two transverse ridges..	1. <i>rufa</i> , n. sp.
Sub-cylindrical, black, hind tibiæ serrate; elytral interspaces punctured.....	2. <i>cylindrica</i> .
Sub-cylindrical, black, hind tibiæ serrate; elytral interspaces smooth..	3. <i>lacustris</i> .
3. Prothorax finely punctured; black, sub-ovate.....	4. <i>conferta</i> .
4. Robust, slightly ovate, black; prothorax coarsely punctured.....	5. <i>latispina</i> , n. sp.
Robust-ovate, black; prothorax coarsely punctured.....	6. <i>crassa</i> .

5. Elongate-ovate, rufous, hind tibiae with very short, thick cylindrical spurs 7. *spissipes*, n. sp.

38. ***Ægialia latispina***. Robust, sub-ovate, convex, black, Head less finely scabrous, epistoma finely margined, sub-truncate. Prothorax more than twice as wide as its length, narrowed in front, rounded on the sides and fringed with stiff yellow hairs; sides impressed near the front angles, which are small; base not margined; disc coarsely sparsely punctured, without intermixed small punctures, sides nearly smooth, with the lateral fovæ large, as in *Æ. crassa*. Elytra with strongly punctured striæ, interspaces moderately convex. Scutellum small, convex at the middle. Front tibiae with three large teeth, middle and hind tibiae strongly and gradually thickened, with two long prominent transverse ridges; spurs of hind tibiae long and thick, flattened and obliquely truncate as in *Æ. crassa*. Length 3.7 mm; .15 inch.

Mojave Desert, Mr. Crotch, two specimens. Allied to *Æ. crassa*, but differs by the less ovate body, and distinctly punctured elytral striæ.

39. ***Ægialia spissipes***. Sub-cylindrical, sub-ovate, a little wider behind, rufous. Head finely scabrous, epistoma very finely margined, sub-truncate in front. Prothorax one-half wider than long, not narrowed in front, rounded on the sides and fringed with stiff hairs; front angles prominent, hind angles rounded, base not margined; disc indistinctly rugoso-punctate. Scutellum small, bipunctate. Elytral striæ deep, slightly punctured, interspaces flat. Front tibiae with two very large teeth and one small one; middle tibiae gradually thickened sub-serrate, hind tibiae conical, very much thickened, not serrate, spurs short and very thick, tarsi very short. Length 4.5 mm; .175 inch.

Marquette, Lake Superior; one specimen.

40. ***Phausis inaccensa***. Elongate, gray, slightly pubescent. Prothorax wider than long, semicircularly rounded at the tip and sides, the latter strongly incurved at the base, hind angles dentiform, disc dark, convex, smooth, sides very widely flattened, scabrous, pale gray; near the apex are two large colorless transparent spots. Elytra reticulato-punctate, but less coarsely than in *P. reticulata*, with the longitudinal elevated lines very faint, sides rather strongly margined. Beneath densely punctured, gray, meso- and metasternum dirty testaceous; antennæ and legs gray. Length 6.3 mm; .25 inch.

Marquette; two ♂, one of which has been kindly sent me by Mr. Schwarz. This species is rather larger and a little less slender than *P. reticulata*, and is easily known by the entire absence of phosphorescent spots on the abdomen. I may here mention that a ♀ of the last named species in the collection

of Dr. Horn has short elytra, much as in the ♀ of *Photinus* (*Gynaptera*) *scintillans*. This insect has a very strong resemblance to *Lamprohiza splendidula* of Europe, but is generically distinct by the longer antennæ, and by the small acicular twelfth joint of those organs. Specifically, it differs by the disc of the prothorax being smooth, the transparent spots more oval, not curved, and by the hind angles of the prothorax being greatly retracted.

Hadrobregmus linearis Lec. Pr. Ac. Nat. Sc. Phila. 1865, 232.

A very singular series of this insect was collected at Detroit. In two individuals, both antennæ have ten joints, that is to say there are five small joints between the rounded second joint and the first of the elongated joints. In one specimen the right antennæ has eleven, while the left has ten joints; this difference is produced by the division of the fourth joint into two parts. In another specimen the right antenna has ten, while the left has but nine joints; and it is again the fourth joint of the left that is divided, so as to form the fourth and fifth of the right, the distal part resulting from this division, or the fifth joint of the eleven-jointed antenna, is even a little wider than the fourth joint. It is thus apparent, that in this type of the Serricorn series, the increase of number of joints from nine to eleven is produced by a power of segmentation, or vegetative repetition residing in the fourth joint of the antenna.

Another inference from this series of specimens is that the nominal species of this genus may have been unduly multiplied, and that they must be defined by other than antennal characters. A renewed examination of the specimens in my collection, indicates that all the species recognized by me in the memoir above cited are valid, and easily distinguished by the characters there given.

41. **Xyletinus lugubris**. Oval, convex, blackish, piceous, dull with very fine dense punctuation, and very short pruinose pubescence. Prothorax more than twice as wide as its length, very convex, declivous near the base, narrowed in front, sides rounded, incurved near the base which is slightly bisinuate. Elytra strongly striate, scutellar stria long. Beneath black, finely punctulate. Length 2.5 mm.; .10 inch.

Marquette, Lake Superior. Found also in Massachusetts and Nebraska. This species is allied to *X. fucatus*, but is smaller and less robust, and easily known by the prothorax more convex transversely and more declivous towards the base.

Several specimens of *X. fucatus* were collected by Mr. Crotch at Calaveras, California, which only differ from those found at Lake Superior by the smaller size, darker color and

less deep elytral striæ. The following species seems to differ by the much coarser pubescence, and by the sides of the prothorax not at all flattened.

42. **Xyletinus pubescens.** Oval, convex, piceous, opaque, with fine rugose punctuation, densely closed with rather coarse yellowish pubescence. Prothorax more than twice as wide as long, narrowed in front, rounded at the sides, which are not at all flattened, transversely convex, slightly declivous towards the base. Elytra with deep impunctured striæ, scutellar stria long, interspaces flat. Beneath densely punctulate and pubescent. Length 2.8 mm.; .11 inch.

Bosque Co., Texas; one specimen; Mr. G. W. Belfrage.

MICROMALTHUS n. g. LYMEXYLIDÆ?

Body elongate, head wide, with rounded, convex eyes; prothorax wider than long, narrowed behind, elytra a little shorter than the abdomen, substriate, smooth at the apex; resembling in miniature a narrow *Hydnocera*, but greatly differing by the antennæ, palpi and tarsi.

Antennæ shorter than the head and prothorax; 1st and 2d joints rounded, as wide as long; 3d small, 4-10th wider, and becoming gradually transverse, 11th oval, not wider than the 10th; inserted on the edge of the front, before the eyes, which are convex, prominent, rounded, not emarginate, and rather finely granulated. Maxillary palpi with the last joint moderately large, oval, pointed; labial similar but much smaller; gular sutures straight, widely separated. Prothorax transverse, without angles, narrowed behind, not margined on the sides. Legs rather long, slender, tibiæ without spurs, tarsi 5-jointed, as long as the tibiæ, joints 1-4 equal, not lobed, 5th as long as the others united, claws simple. Front coxæ, oblique, conical, prominent, contiguous at the apex; middle coxæ large, oblique, conical, not continuous, hind coxæ transverse, conical, prominent. Abdomen with six free and nearly equal ventral segments. Prosternal sutures not visible; side pieces of metathorax long and narrow.

No sexual difference can be observed in any of the specimens collected, two small spiculæ project from the tip of the abdomen in each of them.

43. **M. debilis.** Piceous, shining, antennæ, palpi and legs yellow, head smooth, front transversely depressed. Prothorax smooth, with a faint transverse impression. Elytra feebly scabrous, nearly smooth at the tip, striate except at base and tip. Beneath punctulate, slightly pubescent; two or three dorsal segments exposed. Length 2.2 mm.; .85 inch.

Detroit, in decomposing wood, August. I have referred this genus to Lymexylidæ on account of the resemblance of the antennæ and coxæ to those of *Hylecoetus*. In such a feeble and ill-developed form we should naturally expect the peculiar sexual characters seen in the palpi of the other genera to disappear.

44. **Phymatodes maculicollis.** Blackish, piceous, finely sparsely pubescent. Head and prothorax finely not densely punctured, the latter a little wider than long, rounded at the sides, rufous, with a broad black dorsal stripe. Elytra not wider than the prothorax, densely punctured. Beneath sparsely punctulate, prothorax rufous, legs piceous, coxæ and thighs (except at base) blackish. Front coxæ contiguous; mesosternum triangular, middle coxæ slightly separated. Antennæ slender, filiform, a little more than half as long as the body, 4th joint equal to 5th. Length 6.3 mm.; .25 inch.

Isle Royale, Lake Superior; but one specimen found.

45. **Typocerus sparsus.** Black, shining, pubescent with coarse black hair. Head rather finely punctured. Prothorax sparsely and coarsely punctured, margined at base and apex with golden hair. Elytra sparsely and coarsely punctured, punctures becoming finer towards the tips, which are dehiscent by the curvature of the suture; bidentate, the outer tooth longer than the sutural one; ornamented with a transverse yellow spot very near the base, and three transverse yellow bands extending from the side margin to the suture. Beneath punctulate, pubescent with yellowish gray hair. Antennæ (♀) two-thirds as long as the body, not serrate, sixth and following joints with an elongate depressed sensitive space, extending from base to tip or nearly so. Length 10 mm.; .40 inch.

Escanaba, Lake Superior. This species resembles in appearance *T. zebratus*, but is at once recognized by the sparse punctuation of the prothorax and elytra.

46. **Chlamys cribripennis.** Sub-quadrate, coppery bronze, of the same form and color as *C. assimilis*, from which it differs by the prothorax more shining, finely strigose, impunctured, with the dorsal elevation only obsoletely divided at the highest part. The elytra have the elevations similarly placed, but smaller, and the interspaces are very coarsely, but not densely punctured. The pygidium is less opaque, in fact, somewhat shining, and more deeply punctured, and without the shallow rounded impressions seen in that species. Antennæ fulvous, labrum black. Length 2.5 mm.; .10 inch.

Detroit; one specimen.

47. **Phyllotreta robusta.** Less elongate than usual, black with a greenish bronze lustre. Head punctured, vertex with a short, fine, longitudinal impressed line. Prothorax twice as wide as long, strongly punctured, slightly narrowed in front, sides rounded, base truncate, not margined. Elytra oval, wider than the prothorax, rounded on the sides, similarly punctured; pale yellow, with a wide sutural stripe narrowed near the base, and rounded behind at about one-fifth from the tip, where it ends; the side margin is blackish from the base nearly to the tip, and the color is a little wider about the middle; there are besides two spots on each elytron, one occupying the humeral callus, and attaining both the base and side

margin, the other at the middle and near the blackish lateral margin, though separate from it. Antennæ slender, more than one-half as long as the body, black, first three joints brown. Beneath black, tibiæ and tarsi piceo-testaceous. Length 2 mm.; .08 inch.

Detroit; one specimen. Quite different from any other striped species in our fauna, and representing the European *P. biguttata* Foudras. Alt. 251.

The adoption of the Kirbyan name *Orchestris* for this genus by Mr. Crotch (Proc. Ac. Nat. Sc. Phila. 1873, 65) in preference to *Phyllotreta* Foudras, seems to me inexpedient for the following reasons:

Kirby (Faun. Proc. Am. IV, 217), characterizes a sub-genus *Orchestris* by a very brief formula, which is applicable to several groups of the old genus *Haltica*, to which generic names are now affixed.

His sub-genus was evidently defined for the purpose of describing two striped species of large size now enrolled in *Disonycha* Chev., but in order to make his volume (exclusively devoted to North American species), more intelligible to the English student, he casually observes that his sub-genus corresponds with section b. 1,*††, of Stephens, "of which *H. nemorum* is the type."

Now while unwilling to dispute that *H. nemorum* is the type of Stephens' unnamed British group, it is quite apparent that the remark of Mr. Kirby indicates simply an error of judgment or observation in not perceiving the differences (if there be any), between his large American species, for which the sub-genus was established, and the small European species; and thus the sub-generic name belongs properly to the former group.

The name *Orchestris*, therefore, unless it is dropped entirely in consequence of its heterogeneous limitation, can be used only to supplant *Disonycha* Chev. (1844), and the present group must be known as *Phyllotreta*, under which name it was first characterized by Foudras in 1860.

48. **Chætocnema rudis.** Oval, convex, bronzed, not shining. Head finely punctured. Prothorax rather densely and strongly punctured, very little narrowed in front, sides slightly rounded, finely margined, base not margined. Elytra with rows of deep punctures, the inner ones slightly confused near the base; space between the scutellar stria and the suture irregularly punctured. Beneath punctured, tibiæ and tarsi brown. Length 1.8 mm.; .07 inch.

Marquette, Lake Superior; one specimen. This species belongs in the table (ante. p. 419), after *cribrata*, from which it differs by the much less confused elytral striæ.

49. **Mycetochares gracilis.** Elongate, piceous-black, shining, finely and sparsely pubescent. Head punctured, front depressed, vaguely foveate. Antennæ nearly half as long as the body, piceous, base brown; 2d joint small, 3d a little longer than the 4th. Eyes convex, prominent. Prothorax wider than the head, wider than long, narrowed and much

rounded on the sides in front ; strongly punctured, disc broadly longitudinally impressed behind, flattened and explanate at the hind angles, which are rectangular ; impressed each side at the base, which is truncate and not margined. Elytra a little wider than the prothorax, parallel, striæ punctured, scarcely impressed ; interspaces transversely sparsely rugose and finely punctured. Beneath shining, trunk finely punctured. Abdomen sparsely punctulate. Front coxæ separated by the prosternum, which is narrow and punctured. Length 5.5 mm. ; .22 inch.

Marquette, Lake Superior ; one specimen. This species is related to *M. bicolor*, but is quite different in the less deeply striate elytra, the more strongly punctured prothorax and the dark antennæ and legs.

For the pupose of more clearly defining several new species, my table (New Sp. Col. Smiths. 8vo., 138) may be expanded as follows :

Table of species of MYCETOCHARES.

- | | |
|---|----------------------|
| 1. Front coxæ separated by the prosternum..... | 2. |
| Front coxæ contiguous, cavities confluent..... | 9. |
| 2. Prothorax as wide as the elytra, or nearly so..... | 3. |
| Prothorax at base narrower than the elytra..... | 6. |
| 3. Pubescence long, rather dense, prosternum very narrow..... | 4. |
| Pubescence very fine, or wanting ; elytra with red humeral spot not striate ; antennæ palpi and legs more or less yellow..... | 5. |
| 4. Dull ferruginous beneath, piceous above, prothorax strongly densely punctured..... | 1. rufipes. |
| Black or piceous, prothorax finely punctured..... | 2. pubipennis n. sp. |
| 5. Prothorax very wide, sparsely punctulate..... | 3. laticollis n. sp. |
| Narrower, prothorax sparsely punctulate, elytra more strongly punctured, two inner striæ perceptible..... | 4. Haldemani. |
| Wider, prothorax less finely punctured, elytra strongly punctured, indistinctly striate..... | 5. fraterna. |
| 6. Elytra with red humeral spot..... | 7. |
| Elytra black, without spot..... | 8. |
| 7. Prothorax with three basal foveæ..... | 6. foveata. |
| Prothorax with two basal foveæ..... | 7. tenuis. |
| 8. Elytral striæ deep, legs yellow..... | 8. bicolor. |
| Elytral striæ less impressed, legs dark..... | 9. gracilis n. sp. |
| 9. Elytra black, without spots..... | 10. |
| Elytra with red humeral spot ; antennæ stouter and legs black..... | 11. |
| 10. Antennæ, legs and under surface ferruginous, last two ventral segments piceous ; prothoracic margin not flattened..... | 10. analis n. sp. |
| Antennæ, legs and under surface piceous ; prothoracic margin narrowly but strongly explanate..... | 11. lugubris n. sp. |

11. Prothorax with margin not explanate.....12.
 Prothorax as wide as the elytra, strongly punctured, sides narrowly but strongly explanate.....12. *marginata*, n. sp.
 12. Prothorax wide, strongly punctured, much rounded on the sides, which are not explanate.....13. *binotata*.
 Prothorax slightly narrower than the elytra, strongly punctured, sides not explanate.....14. *longula*, n. sp.

In the Munich Catalogue *Mycetophila* Gyll. (1810), which antedates *Mycetochares* Latr. (1825), is adopted for this genus; the former name was, however, pre-occupied by Meigen (1803), for a genus of Diptera, as is very properly mentioned by Lacordaire (Gen. Col. V., 507, note).

M. basillaris (Say) remains unknown. When found, it will be easily recognized by the scarcely punctured prothorax, with three posterior impressions, and the striate elytra having an oblique red spot like the species 3-5 of the table.

50. **Mycetochares pubipennis.** Dark brown, shining, rather densely clothed, especially on the elytra, with long brown pubescence. Head punctured, eyes more transverse and less prominent than in the other species; antennæ paler brown, rather stout, about half as long as the body. Prothorax one-half wider than long, scarcely narrowed in front, not densely nor strongly punctured, broadly longitudinally impressed at the middle of the base, and obliquely near the hind angles; sides moderately rounded, not explanate, base not margined. Elytra not wider than the prothorax, punctured; striæ punctured not impressed, nearly obliterated at the sides and behind. Beneath punctulate and finely pubescent, legs piceo-rufous; prosternum extremely narrow between the front coxæ. Length 4.8 mm.; .19 inch.

California, at Tejon and San Diego. Easily known by the more transverse and scarcely prominent eyes, and very narrow prosternum.

51. **Mycetochares laticollis.** Elongate-oval, not convex, above black, shining, elytra each with an oblique red spot near the base; sparsely pubescent. Head and prothorax sparsely punctulate, the latter fully twice as wide as long, widest at the middle, very much rounded on the sides, which are slightly explanate near the hind angles; base extremely finely margined, with three broad shallow impressions, of which the middle one is nearly obsolete. Elytra a little narrower than the prothorax, not densely punctured, with very faint traces of striæ near the suture. Antennæ rather stout, under surface and legs testaceous-red; palpi and large gular spot yellow. Length 6.3 mm.; .25 inch.

Pennsylvania; under bark of *Populus dilatata* in June; one specimen, Prof. S. S. Haldeman. I confounded this species formerly with *M. fraterna*, from which it differs by

the much more finely and sparsely punctured head and prothorax.

52. **Mycetochoares analis.** Elongate, black, shining, pubescent. Antennæ brown, slender, one-half as long as the body. Head and prothorax strongly rather densely punctured, the latter twice as wide as long, narrowed in front, rounded on the sides, which are not explanate; base scarcely impressed, indistinctly margined near the hind angles. Elytra very little wider than the prothorax, punctured, striæ punctured, slightly impressed, nearly obliterated at the sides and behind. Beneath finely punctured, dull ferruginous, 4th and 5th ventral segments dark piceous. Front coxæ contiguous. Length 7.5 mm.; .30 inch.

Detroit; one specimen. Of the same size, form and sculpture as *M. binotata*, but differing by the absence of the humeral spot, and the different color of the antennæ, legs and under surface.

53. **Mycetochoares lugubris.** More elongate, black, shining, pubescent. Antennæ dark brown, rather stout, one half as long as the body. Head and prothorax strongly punctured, the latter twice as wide as long, sides rounded, especially in front, side margin narrowly but strongly explanate behind the middle, depression extending some distance along the base, which is indistinctly margined; there are three vague shallow basal impressions. Elytra a little wider than the prothorax, punctured, striæ rather strongly impressed. Beneath shining, sparsely finely punctured. Legs piceous. Front coxæ contiguous. Length 6.4 mm.; .25 inch.

Detroit; one specimen. A similar one collected in Kansas by Prof. Snow, is slightly immature; the color is brown, with the base of the antennæ and legs testaceous.

54. **Mycetochoares marginata.** Elongate, of the same form as *M. binotata* but smaller, black, shining, pubescent. Antennæ rather stout, black. Head and prothorax strongly rather densely punctured; the latter twice as wide as long, much rounded on the sides, especially in front, sides behind the middle narrowly but strongly flattened; base with three very faint shallow impressions. Elytra very little wider than the prothorax, punctured, striæ punctured, scarcely impressed, marked with a red humeral rounded spot. Beneath shining, sparsely punctulate, tarsi piceous; front coxæ contiguous. Length 5.2 mm.; .21 inch.

Marquette, Lake Superior; one specimen.

55. **Mycetochoares longula.** More elongate, of the same form and size as *M. gracilis*, black, shining, pubescent. Antennæ stout, black, half as long as the body. Head and prothorax strongly, somewhat rugosely punctured, the latter about one-half wider than long, narrowed in front, rounded on the sides, which are not explanate, with three faint shallow basal

impressions. Elytra a little wider than the prothorax, punctured, striæ punctured, slightly impressed, obsolete towards the sides; marked with a small rounded humeral spot. Beneath shining, finely punctured, legs entirely black; front coxæ contiguous. Length 6 mm.; .23 inch.

Detroit; June; one specimen.

56. **Canifa pallipennis.** Elongate, rugosely punctured, finely pubescent. Head and prothorax black, the latter more than twice as wide as long, hind angles nearly rectangular, basal impressions broad, distinct. Elytra pale testaceous. Beneath and legs testaceous, abdomen and antennæ darker; second and third joints of the latter small, united shorter than the fourth. Length 2.7 mm.; .10 inch.

Marquette, Lake Superior. Similar to *C. pusilla*, but with the head and prothorax darker, and the elytra pale.

57. **Dircæa fusca.** Elongate, fuscous brown, densely rugosely punctured, and clothed with short sericeous brown pubescence. Head perpendicular, more strongly punctured. Antennæ and palpi ferruginous, the former with third joint not longer than the fourth, following joints scarcely diminishing in length, longer than wide, eleventh longer. Prothorax a little longer than wide, apex rounded into the sides; hind angles obtuse, rounded at tip. Elytra with faint traces of three elevated lines. Beneath densely punctulate. Length 8.7 mm.; .34 inch.

Marquette, Lake Superior, Virginia and North Carolina. Larger than *D. concolor*, and easily known by the antennæ being ferruginous, and more slender, with the joints longer than wide.

58. **Hallomenus serricornis.** Elongate, rounded at each end, not convex, blackish, shining, finely densely punctured and pubescent. Antennæ scarcely longer than the head and prothorax, strongly serrate. Prothorax twice as wide as long, narrowed in front, strongly rounded on the sides, which are very finely margined; base slightly bisinuate, margined near the hind angles, basal impressions broad well-marked. Elytra faintly striate, but the striæ are not indicated by rows of punctures. Beneath finely and densely punctulate. Length 6.3 mm.; .25 inch.

Marquette; two specimens. Larger than our other species, and of uniform dark piceous, nearly black color, with strongly serrate antennæ.

Table of the species of HALLOMENUS.

- | | |
|---|-----------------------------|
| Antennæ not serrate, joints sub-quadrate..... | 2. |
| Antennæ strongly serrate, joints triangular..... | 1. <i>serricornis</i> n sp. |
| 2. Finely and distinctly punctured..... | 3. |
| Very finely punctured, yellowish brown, elytra in front and legs paler..... | 2. <i>punctulatus</i> . |
| 3. Piceous, antennæ, legs and base of elytra testaceous..... | 3. <i>scapularis</i> . |
| Pale brown, head fuscous, much smaller (3 mm.)..... | 4. <i>debilis</i> . |

59. **Proctorus armatus** *Lec. Rhynch.* 212.

Several specimens of this curious insect were found at Marquette, and among them are ♂♂ in which the two processes of the apical edge of the last ventral segment are very short, and scarcely apparent, though the anterior tubercle or spine and the large excavation are as well developed as in the other specimens.

60. **Proctorus decipiens** *Lec. ibid.* 213, (*Encalus*.)

♂ Apical part of last ventral segment suddenly transversely depressed, with a short erect spine each side.

Marquette. The differences in the rostrum upon which I separated *Encalus* from *Proctorus*, are only sexual; and the peculiar ventral armature of the ♂ shows that they constitute but one genus.

61. **Orchestes canus** *Horn*,* n. sp. Black, sparsely clothed with grayish pubescence. Antennæ testaceous, funicle six-jointed. Thorax broader than long, apex one-third narrower than base, sides arcuate, disc coarsely punctured. Elytra oval, gradually narrowed posteriorly, disc convex, deeply and rather broadly striate, striæ with coarse, deep and closely placed punctures, intervals irregularly biserially punctured, the punctures bearing short grayish hairs. Body beneath and legs black. Length 3 mm.; .12 inch.

The posterior femora are strongly thickened. This species cannot be confounded with any other than *pallicornis*, from which the deeply striate elytra, and very evident grayish pubescence will distinguish it.

Specimens are before me from Isle Royale and Escanaba, Michigan, and from San Juan, Colorado.

62. **Orchestes minutus** *Horn*, n. sp. Black, sparsely clothed with grayish pubescence. Antennæ piceous, scape and first joint of funicle paler, the funicle 6-jointed. Thorax broader than long, apex scarcely narrower than base, sides arcuate, surface coarsely punctured. Elytra oval, broadest at middle, disc slightly flattened, deeply striate, striæ with indistinct distant punctures, intervals wrinkled, irregularly, finely, biserially punctulate. Body beneath and legs black. Posterior femora feebly thickened. Length 2 mm.; .08 inch.

This species resembles *rufipes*, but is somewhat smaller, disc of elytra flatter and with entirely black legs, and with the thorax much more arcuate at middle.

Four specimens, California, from Mr. James Behrens, collected probably near Sauzalito.

* Dr. Horn has kindly prepared the table of this genus and the descriptions of the two new species.

Table of Species of ORCHESTES.

Funiculus of antennæ 6-jointed.

Posterior femora much stouter than the middle.

Legs entirely yellow.

Pubescence of surface fulvous and conspicuous.....**puberulus**.

Legs black, tarsi sometimes pale.

Elytra feebly striate, pubescence scarcely evident.....**pallicornis**.

Elytra deeply striate, pubescence grayish, persistent...**canus**, n. sp.

Posterior femora scarcely stouter than the middle. Elytra deeply striate; species very small.

Legs entirely black.....**minutus**, n. sp.

Legs yellow, posterior femora infusate.....**rufipes**.

Funiculus of antennæ 7-jointed.

Pubescence above almost entirely black, a feeble grayish band at basal third. Scutellum densely white.....**niger**.

Pubescence above forming a somewhat saddle-shaped design in rather dense white pubescence ;

Legs in part yellow, thorax broader at apex than long.....**ephippiatus**.

Legs entirely black, thorax not broader at apex than long....**subhirtus**.

With *O. niger*, I have united *parvicollis* Lec., of which I have now five specimens not essentially differing. The distribution is not remarkable (Nova Scotia to California) as *O. subhirtus* occurs also in California, while *O. pallicornis* extends from Nova Scotia to Texas, and to Puget Sound.

63. **Elleschus bipunctatus** Linn. Faun. Suec. No. 599 (*Curculio*): Schönh. Curc. iii. 322 ; vii, 187 : &c.

Detroit and Marquette. The European synonymy of this species may be found in the references given above. The differences between this genus and *Alyca* (Lec. Rhynch. 209), do not seem sufficient to warrant the retention of the latter. The species upon it was established, *Erirhinus ephippiatus* Say, differs from *bipunctatus* by finer punctuation, and pale yellow color, with a large sutural dark spot on the elytra. There are other species indicated by the specimens in my collection, but I do not feel prepared to define them accurately without a larger series.

64. **Acalyptus Carpini** Herbst, Col. vi, 204 ; pl. 74, f. 3 ; Gyll. Schönh. Curc. iii, 447 : &c.

Michigan and Massachusetts ; first known from Northern Europe. A small blackish insect, densely clothed with silvery gray sericeous pubescence, and easily known by the ventral sutures being straight the pygidium exposed, and

the claws simple and divergent. The antennæ and legs are yellow; sometimes the elytra are rufous, with the suture blackish.

65. **Zygobaris subcalva.** Of the same size and form as *Z. conspersa*, sub-rhomboidal, black, rather shining, thinly clothed with short pubescence, and without scales. Beak as long as the head and prothorax, curved, slightly thickened at the base, punctulate; head finely punctate. Prothorax not wider than long, gradually narrowed in front, sides nearly straight, constricted near the tip; surface densely, not coarsely punctured, base bisinuate. Elytra wider behind the base, humeri oblique, striæ deep, interspaces rather wide, flat, each with a row of small punctures. Beneath densely punctured, finely, sparsely pubescent; claws small, approximate, but scarcely connate at base. Length 2 mm.; .08 inch.

Detroit; one specimen found; I have two others from Pennsylvania. Differs from *Z. conspersa* chiefly by the finer punctuation, and the absence of scales.

66. **Pityophthorus annectens.** Elongate-cylindrical, brown, shining, with a very few slender erect scarcely serrate yellow hairs. Prothorax longer than wide, in front roughened almost concentrically for about one-third the length, sides and base finely sparsely punctured, punctures becoming larger, as they approach the roughened surface. Elytra with approximate rows of small punctures, interspaces transversely rugose; apical declivity retuse, deeply impressed near the suture, which is elevated; sutural tip rather acute. Front tibiæ with two small teeth. Length 16 mm.; .06 inch.

♂. Head broadly concave, opaque with shallow punctures, concavity fringed with long yellow hairs.

♀. Head slightly convex, strongly and deeply punctured.

Tampa, Florida, on yellow pine; Mr. E. A. Schwarz. This species is of slender form, and is most nearly allied to *P. nitidulus*, but is smaller, and has the prothorax more finely punctured. The color is also different, the Californian and Alaskan *nitidulus* being black, while this is always brown.

67. **Pityophthorus consimilis.** Yellow brown, shining, with a few erect yellow hairs, of the same form and sculpture as *P. annectens*, except that the obtuse elevation of the apical declivity of the elytra, and the corresponding part of the suture are sparsely crenate. The antennæ and legs are yellow, and the form is perhaps a trifle more robust. Length 1.6 mm.; .06 inch.

♂. Head flat, slightly pubescent, with a large, sub-quadrate, densely punctured opaque spot occupying nearly the whole upper surface, and divided by a longitudinal impressed line; sides shining, sparsely punctured.

♀. Head slightly convex, strongly punctured.

Marquette, Lake Superior, Detroit. The females of this

and the preceding are undistinguishable, except by the characters given above; the ♂♂ are however easily recognized.

68. **Pityophthorus hirticeps.** Yellow brown, shining, cylindrical, less slender than the two preceding species, sparsely retose with fine, erect yellow hairs. Prothorax a little longer than wide, roughened concentrically for one-third its length; sides and posterior part strongly, rather densely punctured, with a narrow smooth median space. Elytra with approximate rows of punctures, interspaces irregularly transversely rugose; apical declivity retuse and crenate, deeply concave near the suture, which is elevated and also crenate. Length 1.6 mm.; .06 inch.

♂. Head broadly concave and opaque, fringed with long yellow hair.

♀. Head slightly convex, strongly punctured.

Marquette, Lake Superior. Related to the two preceding, agreeing with *P. annectens* in sexual characters, but with the crenations of the apical declivity of the elytra stronger than in *P. consimilis*, while the form is a little more robust than in either.

69. **Pityophthorus pusio.** Cylindrical, shining, piceous, with a few erect yellow hairs behind the middle of the elytra. Prothorax not longer than wide, roughened in front almost to the middle, strongly and densely punctured at the sides and behind, with a large, smooth, well-defined dorsal space. Elytra with small punctures, arranged in tolerably regular rows, apical declivity broadly concave, slightly retuse each side, with about three very small teeth; suture elevated, also with three or four slight inequalities. Front tibiae with two very faint small teeth. Length 1.6 mm.; .06 inch.

Marquette, Lake Superior; one specimen. The head is retracted so that the front cannot be seen. This species is of the size and form of *P. pulicarius*, but the elytral sculpture and the apical declivity are quite different; it is more nearly related to the Californian *P. puncticollis*, but differs by the more robust form, and by the sparse crenations of the apical declivity, which are wanting in that species.

70. **Pityophthorus opaculus.** Cylindrical, slender, testaceous, head and disc of prothorax darker; anterior half rather strongly asperate, sides and posterior half sub-rugosely punctulate, dorsal line smooth, narrow. Elytra finely alutaceous, nearly opaque, marked with scarcely perceptible distant striae of very fine punctures; apical declivity neither retuse nor concave, suture elevated, limited by a distinct striae. Length 1.3 mm.; .05 inch.

Marquette; one specimen. This species must be placed after *P. comatus* in my table (Rhynch. 352). The head is punctured, and slightly convex, the legs and antennae are yellow.

71. **Pityophthorus plagiatus**; *Xyleborus plagiatus* Lec., Tr. Am. Ent. Soc. 1868, 161; Rhynch 361.

Marquette; not rare. The club is transversely annulated, and it therefore belongs to *Pityophthorus*; the sexual differences indicate that *Xyleborus hamatus* Lec., Am. Ent. Soc. 1874, 72, is the ♀ of *carinulatus* Lec. *ibid.* (*Pityophthorus car.* Lec., Rhynch. 352).

72. **Pityophthorus sparsus.** *Xyleborus sparsus* Lec., Tr. Am. Ent. Soc. 1868, 160.

Marquette, Lake Superior; rare. This species, as is shown by the examination of well preserved specimens, has the club transversely annulated, and therefore belongs to *Pityophthorus*. There seems to be no sexual differences in the declivity of the elytra, but the ♂ has the head fringed with very long hair.

73. **Xyleborus punctipennis.** Slender, cylindrical, piceous, shining, thinly clothed with long erect yellow hair, granulato-asperate for more than one-half the length, sides and behind densely and coarsely punctured; smooth median line rather wide, very distinct. Elytra coarsely punctured, though not in altogether regular rows, suture elevated, and sutural stria deep for the whole length; declivity oblique, retuse, concave part coarsely punctured; there are two acute discoidal cusps, and several small indistinct marginal ones, the most anterior of which is near the suture and more prominent. Front tibiae moderately dilated, bidentate. Length 2.5 mm.; .10 inch.

Marquette, Lake Superior; one ♀ specimen. This species might be easily confounded with *Pityophthorus sparsus*, but on comparison the difference in the antennal club is quite obvious; in the present case it is thicker, and obliquely truncate at tip, so that the proximal half at least is smooth and shining, and limited by a curved line. The punctures of the prothorax and elytra are coarser and more numerous, and the apical declivity is also punctured.

74. **Xylocleptes decipiens.** Slender, cylindrical, brown, shining, sparsely clothed with erect yellow hairs; antennae and legs yellow. Prothorax longer than wide, slightly asperate in front with transverse rugosities; sides and behind coarsely but not densely punctured; median line and a smooth space each side well defined. Elytra ♂ coarsely punctured, punctures not arranged in rows; declivity nearly perpendicular, scarcely retuse, slightly impressed along the suture, which is feebly elevated. Head convex, finely punctured; front tibiae moderately dilated, serrate with four or five very small teeth. Length 1.3 mm.; .05 inch.

Detroit; one specimen. This species greatly resembles in sculpture *Pityophthorus pulicarius*, but is more slender, and the

antennal club is very different; the sutures are long curves, concentric with the apical margin, and the first joint is glabrous, shining and elliptical in form.

To this genus should be referred the Alaskan *Bostrichus concinnus* Mannh. Bull. Mosc. 1852, 358; *Tomicus conc.* Lec., Tr. Am. Ent. Soc. 1868, 164; Rhynch. 367. Only ♀♀ have thus far been collected.

75. **Tomicus balsameus.** Blackish piceous, or brown, cylindrical, shining, clothed with long erect yellow hairs. Prothorax longer than wide, asperate for about one-half the length, then strongly but not very densely punctured at the sides and behind; median space smooth, narrow, badly defined. Elytra with striae composed of large rather distant punctures, interspaces with equally large but very distant punctures; declivity concave, sparsely not deeply punctured, margin with several small teeth and two large ones; the apical part of the margin is not a continuous ridge. Front tibiae dilated, with four distinct teeth. Length 2.3 mm.; .09 inch.

♂ Head flat, shining, hairy with very long yellow hairs; the four larger teeth of the apical declivity less prominent.

♀ Head finely punctured; carinate with an acute elevated line; four larger teeth of apical declivity very prominent.

Central New York, where it has seriously injured the forests of *Abies balsamea*. For an account of the ravages of this insect see the Report of the Botanist in the 28th Annual Report of the New York State Museum of Natural History, 1874, p. 32-38. I am indebted to Mr. J. A. Lintner, of the State Museum, at Albany, for a series of specimens. Some care will be necessary to distinguish this insect from *Xyleborus punctipennis*, but apart from the differences of the antennal club, the prothorax of *T. balsameus* is less densely punctured, the striae are more distinctly formed, and the apical declivity is less punctured, with the teeth (♀) more prominent, and not distinctly separated from the elevation of the margin of the declivity. The front tibiae are more distinctly toothed. The sutures of the club are straight and transverse, so that it belongs to the division *Orthotomicus* Ferrari, and may be placed in the table (Rhynch. 363), after *latidens*, to which it has no resemblance.

76. **Micracis opaciollis.** Slender, cylindrical, dirty testaceous. Prothorax darker, opaque, finely asperate in front, indistinctly punctulate, thinly sprinkled with very small ochreous scales. Elytra shining, punc-

tured in rows, interspaces with rows of very short stout bristles. Eyes extending to the under surface of the head, not widely but distinctly separated beneath. Club of antennæ with broadly curved sutures. Length 1.7 mm. ; .07 inch.

♂. Scape of antennæ fringed with very long hair ; (front not visible, the head being retracted).

Detroit ; one specimen. To be placed in the table, (Rhynch. 368), before *M. rudis*.

77. **Micracis asperulus.** Slender, cylindrical, black, entirely opaque. Head not concave, scarcely punctured. Prothorax more strongly asperate in front than in the preceding, scarcely punctured behind, sprinkled with small yellowish scale-like hairs. Elytra obsoletely striate, densely rugosely punctured, interspaces with rows of very short stout bristles as in *M. opacicollis*. Eyes very narrowly separated beneath. Antennæ ferruginous, club with broadly curved sutures. Legs ferruginous. Length 1.7 mm. ; .07 inch.

♂. Scape of antennæ fringed with very long hair.

Detroit ; in dead oak twigs. Of the same size and form as the preceding, but quite different in sculpture.

78. **Scolytus unispinosus** Lec. Rhynch. 372.

Marquette, Lake Superior ; one specimen. This differs from the two specimens from Oregon upon which the species was established, by the punctures of the elytra being not so small, and by the spine of the first ventral segment being much less developed, becoming in fact a small tubercle ; the elytra are fringed with brown. I consider none of these as specific characters.

79. **Scolytus rugulosus** Ratzeburg, Ins. i, 230 ; pl. x. f. 10.

This is a suitable opportunity to notice the introduction of this European species into the United States. I have received specimens from Elmira, N. Y., where it attacks peach trees. According to Ratzeburg it is rare in Germany, but is found upon plum and apple trees.

80. **Choragus Harrisii.** Elongate-oval, sub-cylindrical, blackish-brown, shining, finely pubescent. Prothorax finely less densely punctured, not opaque ; elytra with deep coarsely punctured striæ, interspaces not wider than the striæ, scarcely punctulate. Length 1.2 mm. ; .05 inch.

Detroit ; August ; one specimen. Differs from our other two species by being more distinctly (though very finely) pubescent and by neither the prothorax nor elytra being opaque.

2. List of COLEOPTERA found in the Lake Superior Region.

BY H. G. HUBBARD AND E. A. SCHWARZ.

Abbreviations of Localities :

B. Bachewauung Bay.

E. Escanaba.

EH. Eagle Harbor.

I. Isle Royale.

LP. La Pointe.

M. Marquette.

Mi. Michipicoton Island.

Mr. Michipicoton River.

P. Pointe aux pins.

S. Sault de Ste Marie.

*. Species found by Dr. LeConte, mostly catalogued in Agassiz' Lake Superior, p. 203—239, which have not since occurred.

CICINDELIDÆ.

Cicindela longilabris Say. E.S.M.T.*patruela* Dej. M.*purpurea* Ol. E. M.*tranquebarica* Hbst.*12-guttata* Dej. Mi.*repanda* Dej. E. M.*hirticollis* Say. E. H. M.*punctulata* Fabr.

CARABIDÆ.

Omophron americanum Dej. M.*tesselatum* Dej. M.*Elaphrus olivaceus* Lec. E.*Clairvillei* Kby. E. M.*fuliginosus* Say. E.*riparius* Linn. M.*ruscarius* Say.**Blethisa multipunctata* Linn. E.*quadricollis* Hald. E. M.*Loricera cærulescens* Linn. M.*Notiophilus æneus* Hbst. M.*sibiricus* Mots. M.*Nebria Sahlbergi* Fisch. T. Mi. Mr.*suturalis* Lec.* Black Bay.*pallipes* Say.* M.*Calosoma scrutator* Fabr. E.*frigidum* Kby. M.*calidum* Fabr. T.*Carabus serratus* Say.**sylvosus* Say.**tædatus* Fabr. var.**Cychrus Lecontei* Dej. Mr. B. (fragments.)*Nomaretus bilobus* Say. M. Mi.*Clivina americana* Dej.**Dyschirius nigripes* Lec.**æneolus* Lec. M. T.*longulus* Lec.**globulosus* Say. E. M. Mr.*sphæricollis* Say. M.*brevispinus* Lec. n. sp. M.*Casnonia pensylvanica* Linn. M.*Loxopeza tricolor* Say. E.*Aphelogenia furcata* Lec.* EH.*Lebia pulchella* Dej.* M.*pleuritica* Lec.* EH.*viridis* Say. E. M.*var. moesta* Lec.* Mr.*pumila* Dej. S.*ornata* Say. M.*fuscata* Dej.* Eagle Harbor.*Dianchomena scapularis* Dej. M.*Dictya divisa* Lec.* (*Lebia*): EH.*Aphelogenia furcata* Lec. M.

- Dromius piceus* Dej. M. I.
Apristus subsulcatus Dej.*
Metabletus americanus Dej.
Blechnus linearis Lec.*
Cymindis cribricollis Dej. E. S. B.
Callida smaragdina Dej. E. M.
Rhombodera pallipes Lec. B.
Calathus ingratus Dej.
 gregarius Say.*
 mollis Mots. G. Mr. Mi. I.
 impunctatus Say. P. Mi. M.
Platynus tenebricosus Gemm. M. Mi.
 decens Say. E. Mi. M.
 sinuatus Dej. S. M.
 marginatus Lec.*
 ternuicollis Lec.*
 anchomenoides Rand. M.
 extensicollis Say.*
 decorus Say.*
 molestus Lec. S. M.
 melanarius Dej. M. Mr.
 metallescens Lec. M.
 tenuis Lec. M.
 carbo Lec. E. M.
 mutatus Gemm. E. M.
 cupripennis Say. S. M.
 æruginosus Dej. E. I.
 subcordatus Lec. E.
 cupreus Dej. S.
 ruficornis Lec. M.
 lutulentus Leconte M. ; black
 var.
 pivicornis Lec. S. M. B.
 sordens Kby.
 picipennis Kby.*
 lutulentus Lec. E. M.
 nigriceps Lec. M.
 obsoletus Say.
 bembidioides Kirby.*
 octocolus Mannh.
Olisthopus parmatum Say.* P. M.
Pterostichus adoxus Say.*
 honestus Say.*
 coracinus Newm. B. Mi.
 stygius Say.*
 punctatissimus Rand. I. Mi.
Pterostichus Sayi Brullé.*
 corvinus Dej.*
 caudicalis Say.
 lucublandus Say. S. M.
 convexicollis Say.* S.
 luctuosus Dej. E. M.
 mutus Say. E. M.
 Luczotii Dej.
 erythropus Dej. S.
 patruelis Dej.* EH.
 mandibularis Kby. var.
 M. Mr. I.
Myas foveatus Lec.* EH.
Amara arenaria Lec. M.
 avida Say. S.
 elongata Lec. M.
 latior Kby. E. Mr. I.
 septentrionalis Lec. E. M.
 angustata Say. M.
 pallipes Kby. S.
 impuncticollis Say. M. I.
 fallax Lec. M.
 polita Lec. E. M.
 erratica St. E. M. Mi. Mr.
 interstitialis Dej. M.
 obesa Say. E. S. M.
 gibba Lec. E. M. B.
 subænea Lec. E. M. B.
 musculus Say. M.
Badister micans Lec. E.
 obtus Lec. n. sp. M.
Diplochila laticollis Lec. E.
 var. *major* Lec. E.
Chlænius sericeus Forst. E. M.
 nemoralis Dej.*
 pensylvanicus Say. E. Mr.
 cordicollis Kirby.*
 impunctifrons Say. E.
 niger Rand. E. M.
 tomentosus Say. E.
Brachylobus lithophilus Say. M.
Anomoglossus emarginatus Say. E.
 pusillus Say. E.
Lachnocrepis parallela Say. E.
Miscodera americana Mann. G.
Nomius pygmæus Dej. M.

Psydrus piceus Lec.* EH.
Geopinus incrassatus Dej. E. M. Mr.
Agonoderus comma Fabr.
 pallipes Fabr. Mr.
 partarius Say. M.
Anisodactylus agricola Say. E. M.
 Harrisii Lec. M.
 discoideus Dej. M.
 baltimorensis Say. E. Mr.
 sericans Harr. E.
Spongopus verticalis Lec. E.
Anisotarsus terminatus Say. Mr.
Bradycellus badiipennis Hald* EH.
 nigrinus Dej. M. Mi.
 cognatus Gyll. M. Mi. S.
 cordicollis Lec. M. I.
 rupestris Say. M.
Selenophorus opalinus Lec. E. M.
Harpalus compar Lec. Mr.
 megacephalus Lec. M. I.
 fulvilabris Mannh. M. Mr. I.
 pleuriticus Kby. E. S. M.
 herbivagus Say. E. M.
 opacipennis Hald. M.
 innocuus Lec. M.
 rufimanus Lec. E. M. I.
 Lewisii Lec. E. M.
 laticeps Lec. E. M. I.
 basilaris Kby. M.
Stenolophus carbonarius Dej.*
 fuliginosus Dej. M.
 ochropezus Say.*
 conjunctus Say. E. M.
 carus Lec. E. S. Mr.
Patrobus longicornis Say. E. I.
 tenuis Lec. Mr. M. E.
Trechus micans Lec.
Amerizus oblongulus Mannh. M.
Bembidium impressum Fabr. M. Mr.
 paludosum Sturm. M. Mr.
 coxendix Say.*
 antiquum Dej. Mr.
 chalceum Dej. M. Mr.
 salebratum Lec.* L. P.
 nitidum Kirby.*
 concolor Kby. Mr. I.

Bembidium longulum Lec. Mr.
 nigrum Dej.*
 planatum Lec. I.
 tetraglyptum Mannh. M.
 simplex Lec. M. Mr.
 fugax Lec.* North shore.
 transversale Dej. M. Mr. I.
 lucidum Lec. S. M. Mr.
 rupestre Dej.*
 scopulinum Kby.
 picipes Kby.*
 nitens Lec. Mr.
 arcuatum Lec. n.sp. M.
 versutum Lec. n.sp. M.
 patrulele Dej. M. Mr. I.
 versicolor Lec.
 sulcatum Lec. S.
 affine Say. Mr.
 anguliferum Lec. M.
 cautum Lec. var. M.
 mutatum Gemm. M.
 axillare Lec.* S.
Tachys nanus Gyllh. B.
 incurvus Say. E. M.

HALIPLIDÆ.

Haliplus borealis Lec. E.
 cribrarius Lec. M.
 ruficollis Degeer.*
 longulus Lec.*
Cnemidotus edentulus Lec. E

DYTISCIDÆ.

Hydrovatus cuspidatus Germ.*
Hydroporus inæqualis Fab. M. B.
 picatus Kby.*
 impressopunctatus
 Sch. E. B.
 dissimilis Harris.*
 suturalis Lec.*
 lacustris Say. B.
 affinis Say. B.
 fuscatus Crotch.*
 scitulus Lec. Mr.

Hydroporus consimilis Lec.*

- sericeus Lec.*
- griseostriatus Degeer.*
- rotundatus Lec. B.
- alpinus Payk.* North Shore.
- subpubescens Lec. M. B. Mr.
- puberulus Mannh. B.
- tenebrosus Lec. M. B.
- tartaricus Lec.*
- caliginosus Lec. M.
- vilis Lec. M.
- tristis Payk.
- notabilis Lec.* North Shore.
- collaris Lec. B.
- persimilis Cr. P. Mr.
- oblitus Aubé. P. Mr.
- conoideus Lec. M. E.

Laccophilus maculosus Germ. B.

proximus Say.*

atristernalis? Cr. M.

Graphoderes cinereus Linn. M.

liberus Say.*

Hydaticus piceus Lec. E.

stagnalis Fab. E. M.

Scutopterus angustus Lec. M.**Colymbetes sculptilis** Harr. E. B.**Dytiscus Harrisii** Kby.*

confluens Say. M.

Cordieri Aubé.* Nth Sh.

fasciventris Say. M.

verticalis Say.* Nth Sh.

Rhantus binotatus Harr. E. B.

flavogriseus Cr. M.

bistriatus Bergstr.*

sinuatus Lec. M.

Ilybius confusus Aubé. M.

picipes Kby. E. M.

biguttulus Germ. M.

fraterculus Lec. M.

ignarus Lec. E. M.

Coptotomus interrogatus Fabr. E.**Copelatus Cherrolatii** Aubé.* EH.**Ilybiosoma bifaria** Kirby.* EH.**Gaurodytes erythropterus** Aubé.***Gaurodytes ovoideus** Cr. E. Mr.

semipunctatus Kirby.*

Gaurodytes lutosus Cr. M.

leptapsis Lec. n.sp. M.

parallelus Lec. M.

infuscatus Aubé.* N. Sh.

scapularis Mannh. M. B.

longulus Lec. n.sp. M.

obtusatus Say.*

punctulatus Aubé.*

fimbriatus Lec. M.

gagates Aubé.*

GYRINIDÆ.**Dineutes assimilis** Aub. M.**Gyrinus confinis** Lec. M. B.

fraternus Coup. S. B.

limbatus Say. M. B.

æneolus Lec. S. B.

dichrous Lec. M. B.

ventralis Kby. B.

aquiris Lec. E. B.

maculiventris Lec. S. B.

affinis Aub. S. B.

picipes Aub. M. B.

lugens Zimm. M.

analisis Say. S.

pectoralis Lec. S.

HYDROPHILIDÆ.**Helophorus oblongus** Lec.* EH.

locustris Lec. M.

nitidulus Lec.* EH.

lineatus Say. M.

inquinatus Mannh. S. M.

tuberculatus Gyll. S. M.

one unnamed species.

Hydrochus scabratus Muls.*

squamifer Lec. M.

rufipes Mels.*

Ochthebius cribricollis Lec.* EH.

nitidus Lec.* EH.

Hydræna pensylvanica Ksw. S. M.**Hydrophilus triangularis** Say. E.**Tropisternus nimbatus** Say. B.

glaber Hbst. E.

Tropisternus mixtus Lec. E.
Hydrocharis obtusatus Say. E.
Laccobius agilis Rand. M.
Chætarthria pallida Lec.* EH.
Philhydrus bifidus Lec. M.
 ochraceus Melsh. B. M.
 consors Lec. E.
 cinctus Lec. E.
 perplexus Lec. M. B.
 fimbriatus Melsh. E.S.B.
Hydrobius fuscipes Linn. E. M. B.
 tesselatus Ziegl. M.
 digestus Lec. M. I.
 subcupreus Say.
Cercyon flavipes Er. M.
 centromaculatum St. M.
 ocellatum Say. B.
 anale Er. M.
 one unnamed species. M.
Cryptopleurum vagans Lec. M. S.

TRICHOPTERYGIDÆ.

Ptenidium sp. M. G. B. Mi.
Ptilium canadense Lec. M. B. Mr.
Trichopteryx several unnamed sp.
Pteryx brunnea Lec. S. M.
 testacea Lec. M.
Ptinella quercus Lec. B.

STAPHYLINIDÆ.

(Aleocharini not determined.)
Gymnusa brevicollis Grav. M.
 variegata Kiesenw. M.
 one new species. M.
Dinopsis americana Kr. M.
Tachinus memnonius Grav. B. Mr.
 tachyporoides Horn. M. B.
 repandus Horn. M.
 addendus Horn. M. B.
 luridus Er. S. B.
 picipes Er. M. B.
 furnipennis Say. M. I.
 frigidus Er. B. G. Mi.
 circumcinctus Mkl. M. Mi.

Tachinus nitiduloides Horn.*
Leucoparyphus silphoides Linn.*
Tachyporus jocosus Say.
 chrysomelinus Linn.
 nanus Er. M.
 brunneus Fab.
Erchomus ventriculus Say. M. B.
Conosoma littoreum Linn. M.
 Knoxii Lec. B.
 crassum Grav. M.
 basale Er. M.
Bolitobius dimidiatus Er. M.
 intrusus Horn. M.
 cingulatus Mannh. I.
 cincticollis Say. S. B. I.
 anticus Horn. B. Mi.
 pygmaeus Fab. S. Mi.
 trinotatus Er.*
 obsoletus Say. M. B. Mi.
 cinctus Grav. Mi.
 longiceps Lec. Mi.
Bryoporus rufescens Lec. M.
Mycetoporus lepidus Grav. S.G. Mr.
 tenuis Horn. B. Mr.
 consors Lec. M. B. Mi.
 americanus Er.
 pictus Horn. M.
Habrocerus magnus Lec. n.sp. M. I.
Acylophorus pronus Er. E. M.
Euryporus puncticollis Er. M.
Heterothops n.sp. M. B.
Quedius lævigatus Gyllh. M. G. I.
 capucinus Grav. M.
 sublimbatus Mots. Mr.
 ænescens Mkl. Mr.
 molochinus Grav. B. G. Mr. M.
 4 undetermined species.
Staphylinus vulpinus Nordm. E.
 Lecontei † Fauv. M.
Philonthus cyanipennis Fab. B.
 blandus Grav. M.
 debilis Grav.
 lomatus Er. E. S. M.
 aterrimus Grav.
 sobrinus Er. M.
 pæderoides Lec. M.
 several unnamed species.

Xantholinus cephalus Say. S.
 obsidianus Melsh. M.
 emmesus Grav. var.? P.
Baptolinus macrocephalus Nordm.
 Mi.
Lathrobium grande Lec.*
 punctulatum Lec. E. M. I.
 simile Lec. B.
 nigrum Lec.
 concolor Lec.* N. Sh.
 longiusculum Grav.*
 collare Er. E.
Scopæus sp. E.
Lithocharis confluens Say. M.
Pæderus littorarius Grav. M. S.
Dianous chalybeus Lec. M.
Stenus semicolon Lec. E. M. B. Mr. I.
 Juno Fabr. E. M.
 stygius Say. M. Mr.
 egenus Er. E. M.
 flavicornis Er. E. M.
 annularis Er. E.
 punctatus Er. M. Mr.
 several undescribed species.
Euæsthetus americanus Er. E. M.
Oxyporus rufipennis Lec. M.
 stygius Say. M.
 vittatus Grav. M. B.
Bledius fumatus Lec. E.
 annularis Lec. M.
 confusus Lec. M.
 ruficornis Lec. M.
 divisus Lec. Mr.
 tau Lec. M.
Platystethus americanus Er. M.
Oxytelus sculptus Grav. M.
 fuscipennis Mannh. M. Mr.
 nanus Er. M.
Apocellus sphæricollis Say. E. M.
Trogophlœus quadripunctatus Say.
 M. Mr.
 several unnamed species.
Thinobius fimbriatus Lec. E.
Ancyrophorus planus Lec. I.
Syntomium confragosum Mkl. M.
Anthophagus verticalis Say. M. I.

Lesteva biguttula Lec. M. P. Mr. Mi.
Acidota seriata Lec. M. Mr. I.
 subcarinata Er. M.
 patruelis Lec. Mr.
 tenuis Lec.*
 n. sp. Mi.
Arpedium sp. M. I.
 sp. S. Mr.
Olophrum marginatum Mkl. S. P. M.
 convexicollis Lec. M. Mr.
 n. sp. S. P. Mr.
Porrhodytes brevicollis Mkl. Mr.
Omalium (*Phlœostiba*) *Argus* Lec.
 G. M.
 5 unnamed species.
Pycnoglypta lurida Gyll. B. Mr.
Anthobium several sp.
Protinus parvulus Lec. B. Mr.
 basalis Mkl. B. Mr.
Megarthus excisus Lec. B.
Olisthærus megacephalus Zett. Mi. I.
 nitidus Lec. I.
Siagonium americanum Melsh. M.
Pseudopsis sulcata Newm. M. P.
 B. G.
Micropeplus tesserula Curt. M.
 laticollis Mkl. Mr.

PSELAPHIDÆ.

Tyrus humeralis Aubé.*
Pselaphus Erichsonii Lec. S. P.
Tychus longipalpus Lec. M. I.
Bryaxis conjuncta Lec. M.
 propinqua Lec. M. P. Mi. I.
Decarthron longulum Lec.*
Batrisus globosus Lec. M. B.

SILPHIDÆ.

Necrophorus obscurus Kby. M.
 orbicollis Say.*
 vespilloides Hbst. E. Mi. I.
Silpha surinamensis Fabr. G.
 lapponica Hbst. E. M.
 inæqualis Fabr.*

Silpha americana Linn. G.

Catops opacus Say.*

brunneipennis Mannh. S. I.

terminans Lec. B. Mi. I.

Colon dentatum Lec. Mr.

magnicolle Mkl. ? M. Mr.

three unnamed species.

Hydnobius substriatus Lec. Mr.

Anisotoma assimilis Lec. M. Mr. I.

punctostriata Kby. M. Mi.

collaris Lec. Mr.

strigata Lec. M.

Cyrtusa picipennis Lec. M.

Liodes globosa Lec. M. I.

polita Lec. M.

discolor Melsh. M.

basalis Lec. M.

Agathidium globatile Lec. n.sp.M.

exiguum Melsh. M.B.

revolvens Lec. I.

politum Lec. B. Mr.

difforme Lec. M.

parvulum Lec. n.sp.M.

Clambus gibbulus Lec. M. I.

BRATHINIDÆ.

Brathinus nitidus Lec. M.

varicornis Lec. M.B.Mr.

SCYDMÆNIDÆ.

Scydmaenus subpunctatus Lec. Mr.

n. sp. near *subpunctatus*, Mr.

sp. near *analys*. S.

analys Lec. ? M.

clavipes Say. S.

fulvus Lec. M.

Euthia scitula Mkl. M.

CORYLOPHIDÆ.

Orthoperus scutellaris Lec. n. sp.

S. Mr.

Sacium lugubre Lec. M.

obscurum Lec. M.

Sacium fasciatum Say. Mr.

SCAPHIDIIDÆ.

Scaphidium 4-guttatum Say. M.

Scaphium castanipes Kby. B. G.
Mr. I.

Scaphisoma convexum Say. M. B.
suturale Lec. M.

terminatum Lec. M.

LATHRIDIIDÆ.

Lathridius liratus Lec. I.

minutus Linn. I.

cordicollis Mannh. ? M.

Corticaria grossa Lec. M.

serricollis Lec. Mr. I.

dentigera Lec. M. Mi.

deleta Mannh.

rugulosa Lec. M.

americana Mannh. S. M. G.

cavicollis Mannh. S. M. Mr.

pumila Melsh. M.

three unnamed species.

ENDOMYCHIDÆ.

Lycoperdina ferruginea Lec. B. I.

Mycetina perpulchra Newm. M.

vittata Fabr. M.

Endomychus biguttatus Say. S.

MYCETOPHAGIDÆ.

Mycetophagus flexuosus Say. E.

obsoletus Lec. var.? M.

tenuifasciatus Horn, n.sp. M.

pluripunctatus Lec. M.

Diplocœlus angusticollis Horn,

n. sp. M.

Litargus tetraspilotus Lec. M.

6-punctatus Say. M.

SPHINDIDÆ.

Sphindus americanus Lec. M.

CIOIDÆ.

- Cis creberrimus* Mell. M. I.
Cis brevisetosus Cr. † M.
 fuscipes Mell. M.
 three unnamed species.
Enneathron sp. M.

EROTYLIDÆ.

- Triplax macra* Lec. M.
 thoracica Say M.

CRYPTOPHAGIDÆ.

- Cryptophagus*, 7 unnamed species.
Paramecosoma serratum Gyllh.
 n. sp. E.
Atomaria ehippiata Zimm. P.
 13 unnamed species.

CUCUJIDÆ.

- Pediacus fuscus* E.
 depressus Hbst. S. M.
Lathropus vernalis Lec. M.
Læmophilæus biguttatus Say M.
 adustus Lec. M.
Dendrophagus glaber Lec. M.
Brontes dubius Fabr. M.

COLYDIIDÆ.

- Ditoma quadriguttata* Say. M.
Synchita nigripennis Lec. M.
Lasconotus borealis Horn M.
Philothermus glabriculus Lec. M.
Cerylon castaneum Say E. M. B.

RHIZOPHAGIDÆ.

- Rhizophagus dimidiatus* Mannh. B.
 brunneus Horn, n. sp. M.

TROGOSITIDÆ.

- Tenebroides collaris* St. M.

- Tenebroides castanea* Melsh. M.
Peltis ferruginea Linn. M.
Grynocharis 4-lineata Melsh. M.
Calitys scabra Thunb. E. M.
Thymalus fulgidus Er. M. B. Mr.

NITIDULIDÆ.

- Byturus* n. sp. ? M.
Colastus truncatus Rand M.
Carpophilus brachypterus Say E.G.
 discoideus Lec.
Epuræa helvola Er. M.
 rufa Say. M.
 Erichsonii Reitter.*
 immunda Sturm. M.
 truncatella Mann. M.
 planulata Er. M.
 æstiva Linn. M.
 labilis Ev.
Nitidula ziczac Say. M.
Soronia grisea Linn. M.
Omosita discoidea Fab. I.
Stelidota sp. M.
Meligethes seminulum Lec.
Cyllodes biplagiatus Lec. M.
Thalycra concolor Lec.* Nt'h Sh.
Ips 4-guttatus Fabr. M.
 sanguinolentus Oliv. M.
 confluens Say.*

PHALACRIDÆ.

- Phalacrus politus* Melsh. M. I.
 n. sp. ? M. B.
Olibrus striatulus Lec. B.
 consimilis Melsh. M. Mr.
 nitidus Melsh. S.

COCCINELLIDÆ.

- Hippodamia 5-signata* Kby. E.
 glacialis Fabr.*
 15-maculata Muls. B.
 13-punctata Linn. M. Mr.
 parenthesis Say. M. Mr.

Anisosticta strigata Thunb. M.

Coccinella affinis Rand. E. M.

trifasciata Linn. M. I.

9-notata Hbst. M.

transversalis Muls. B. I.

5-notata Kirby.*

Cycloneda sanguinea Linn. Mr. I.

Harmonia picta Rand. E. M. I.

Anisocalvia 14-guttata Linn. M.

12-maculata Gebl. M.

Anatis 15-punctata Ol.

Mysia pullata Say. E. M.

Chilocorus bivulnerus Muls. M.

Exochomus marginipennis Lec. M.

Pentilia marginata Lec. n. sp. M.

Brachiacantha ursina Fabr. small
var.*

Hyperaspis dissoluta Crotch.*

signata Oliv. M.

fimbriolata Mels.* Nt'h Sh.

disconotata Lec.* N'th Sh.

bigeminata Rand. M.

undulata Say. E. M.

mœrens Lec.* North Shore.

Scymnus ornatus Lec. M.

americanus Muls. S. M.

fraternus Lec. M.

consobrinus Lec. M.

lacustris Lec. E. M. I.

abbreviatus Lec. M.

nanus Lec. M.

punctum Lec. E. M.

n. sp. M.

BYRRHIDÆ.

Simplocaria metallica Sturm. N S.

Pedilophorus subcanus Lec. n.sp.
E. M.

Cytilus trivittatus Melsh.

Byrrhus americanus Lec. E. M.

cyclophorus Kby. E. M.

geminatus Lec. I.

Pettitii Horn E. M.

eximius Lec. Nt'h Sh.

murinus Fabr. M.

Syncalypta echinata Lec. M.

PSEPHENIDÆ.

Psephenus Lecontei Lec. E.

PARNIDÆ.

Helichus striatus Lec. M.

ELMIDÆ.

Elmis 4-notatus Say. M.

fastiditus Lec* North Shore.

HETEROCERIDÆ.

Heterocerus substriatus Kw. M.
sp. M.

HISTERIDÆ.

Hister merdarius Hoffm. E. M.

interruptus Beauv. E.

immunis Er. E.

abbreviatus Fab. M.

curtatus Lec. S.

depurator Say.*

americanus Payk. E.

subrotundus Say.*

Lecontei Mars. M.

parallelus Say. M.

basalis Lec. M. I.

cylindricus Payk. M.

Paromalus teres Lec. n.sp. S.
bistriatus Er.*

Saprinus oregonensis Lec.*

pensylvanicus Payk.*

assimilis Payk.*

sphæroides Lec.

fraternus Say. M. G. Mr.

mancus Say. E. M. B.

Plegaderus Sayi Mars. S. M. I.

LUCANIDÆ.

Platycerus depressus Lec. M.

quercus Weber.

Ceruchus piceus Web. M.

SCARABÆIDÆ.

- Aphodius pinguis* Hald. M.
hyperboreus Lec. E.
ruricola Melsh. M.
granarius Linn. M.
vittatus Say. M.
consentaneus Lec.* N'th Sh.
Dialytes striatulus Say. M.
Atænius stercorator Fab. M.
Ægialia lacustris Lec. M. Mr.
conferta Horn. Duluth.
rufa Lec. n. sp. M.
spissipes Lec. n.sp. M.
Odontæus cornigerus Melsh Mr.
Geotrupes Egeriei Germ. Mr.
Trox unistriatus Beauv. M.
Hoplia trifasciata Say.*
Dichelonycha elongata Fab. E. M.
subvittata Lec. M.
testacea Kirby.*
Backii Kirby.* North Shore.
albicollis Burm. M.
Serica vespertina Schh. M. Mr.
tristis Lec. B. M.
sericea Ill. G. M.
Diplotaxis sordida Say. M.
liberta Germ. E. M.
Lachnosterna fusca Frøhl.*
futilis Lec.
Cotalpa lanigera Linn.* M.
Ligyris relictus Say. E.
Trichius affinis Gory. E. M. S. I.

BUPRESTIDÆ.

- Chalcophora virginiensis* Dr. M.
Dicerca prolongata Lec. E. M.
divaricata Say. M.
tenebrosa Kby. M. Mr. I.
manca Lec. M.
lugubris Lec. M.
Buprestis lineata Fabr. E. M.
consularis Gory. E. M.
Nuttalli Kirby.*
maculiventris Say.

- Buprestis fasciata* Fabr. E. M. I.
var. Langii Mannh. I.
sulcicollis Lec. M.
striata Fabr. M.
Melanophila longipes Say. S. M.
fulvoguttata Harr. E. M. I.
æneola Melsh. M.
Chrysobothris femorata Lec. M.
floricola Gory. E. M.
dentipes Germ.
trinervia Kby. M. B. I.
scabripennis Lap. M. B.
Harrisii Hentz. M.
Agrilus torquatus Lec. M.
bilineatus Web. M.
vittaticollis Rand. E.
torpidus Lec. M.
plumbeus Lec.*
politus Say. M.
egenus Gory. M.
lacustris Lec.*

THROSCIDÆ.

- Throscus alienus* Bonv. S. B.
punctatus Bonv. M.
Chevrolati Bonv. M.

ELATERIDÆ.

- Tharops obliqua* Say. M.
Deltometopus amnicornis Say. M.
Fornax calceatus Say.* E. H.
Microrhagus triangularis Say. M.
Hypocœlus terminalis Lec. M.
Adelocera aurorata Say. M.
brevicornis Lec. E. M.
Alaus oculatus Linn. M.
myops Fab. M.
Cardiophorus amictus Melsh. E.
convexus Lec. E. M.
Cryptohypnus abbreviatus Say. M.
bicolor Esch. M. S. I.
tumescens Lec. S. I.
striatulus Lec.*
pectoralis Say. M. Mr.

Cryptohypnus futilis Lec. Mr.*Elater semicinctus* Rand. M. *luteus* Say.* *vitiosus* Lec. M. *apicatus* Say. M. *luctuosus* Lec.* *socer* Lec. E. M. *molestus* Lec.* *fuscatus* Melsh. M. *pedalis* Cand. E. M. *nigrinus* Payk. var. ? E. M. I. *lacustris* Lec. M. *fuscus* Lec.* *deletus* Lec.* *pullus* Cand. E. M. *mixtus* Hbst. M. Mi. I. *rubricus* Say. E. M. *protervus* Lec.**Drasterius dorsalis* Say. M.*Megapenthes stigmatus* Lec. E. M.*Monocrepidius auritus* Herbst.**Agriotes mancus* Say.* *pubescens* Melsh. M. *fucosus* Lec. M. *stabilis* Lec. M. *limosus* Lec. E. M. Mr. I. *oblongicollis* Mels.* E. H.*Dolopius lateralis* Esch.*Betarmon bigeminatus* Rand. M. I.*Melanotus Leonardi* Lec. M. I. *scrobicollis* Lec. E. M. I. *castanipes* Payk. M. *communis* Gyllh. E.*Limonius aurifer* Lec. M. *confusus* Lec.* E. H. *æger* Lec. M. I. *pectoralis* Lec. M.*Campylus productus* Rand. M. *denticornis* Kby. M. I.*Athous acanthus* Say. E. *scapularis* Say. M. *reflexus* Lec. M. Mr.*Paranomus costalis* Payk. I. G. *estriatus* Lec. M.*Nothodes dubitans* Lec. M.*Sericosomus fusiformis* Lec. E. M.*Sericosomus incongruus* Lec. M. I.*Corymbites virens* Schh. M. *resplendens* Esch. M. Mi. I. *cylindriciformis* Herbst.* *caricinus* Esch. M. *spinosus* Lec. E. M. I. *mendax* Lec. EH. I. *insidiosus* Lec. M. I. *falsificus* Lec. M. I. *apressus* Lec.* EH. *fallax* Say.* North Shore. *medianus* Germ. E. M. I. *triundulatus* Rand. M. I. *hamatus* Say. *propola* Lec. M. Mr. I. *nigricollis* Bland. M. I. *hieroglyphicus* Say. E. M. *æripennis* Kby. M. I. *splendens* Ziegl. M. *aratus* Lec. E. M. I. *metallicus* Payk. M. I.**DASYLLIDÆ.***Macropogon piceus* Lec. I.*Eurypogon niger* Melsh. Mr. I.*Cyphon fusciceps* Kby. M. Mr. *piceus* Lec. E. M. *nebulosus* Lec. S. M. *modestus* Lec. S. *pusillus* Lec. B. Mr.*Prionocyphon discoideus* Say. M.*Scirtes tibialis* Guér. E.*Eucinetus oviformis* Lec. M. *terminalis* Lec. E. M. I.**LAMPYRIDÆ.***Dictyoptera perfaceta* Say. M.*Calopterum typicum* Newm. M. *reticulatum* Fabr. E. M.*Cænna dimidiata* Fabr. *basalis* Newm. E. M.*Eros coccinatus* Say. M. *crenatus* Germ. M. *thoracicus* Randall M.

Eros humeralis Fabr. M.
 trilineatus Melsh. M.
 modestus Say. M. I.
Lucidota atra Fabr. E.
Photinus corruscus Linn. I. Mr.
 var. *lacustris* Lec. B.
 decipiens Harr. M.
 borealis Rand. M.
 lucifer Melsh. M.
 ardens Lec. M.
Phausis inaccensa Lec. n. sp. M.
Photuris pensylvanica DeG. E.

TELEPHORIDÆ.

Podabrus modestus Say. E. M. I.
 diadema Fabr. E. M.
 rugosulus Lec. *
 piniphilus Eschsch. M.
 punctatus Lec. M.
 puncticollis Kby. *
 lævicollis Kby. M. Mr. I.
 puberulus Lec. *
 three undescribed species.
Telephorus carolinus Fabr. M.
 rectus Melsh. M.
 lineola Fabr.
 flavipes Lec.
 var. *dichrous* Lec.
 fraxini Say. M.
 n. sp.?
 rotundicollis Fabr. M.
 Curtisii Kby. M. Mr. I.
 tuberculatus Lec. M.
Silis percomis Say. M.
 difficilis Lec. M.
Malthodes concavus Lec. M. I.
 transversus Lec. I.
 fragilis Lec. I.
 niger Lec. M. I.

MALACHIIDÆ.

Collops vittatus Say. E.
 tricolor Say. *
Anthocomus Erichsoni Lec. M.
Attalus nigrellus Lec. M.

CLERIDÆ.

Clerus nigripes Say. M.
 nigrifrons Say. M.
 dubius Fab. M. E.
 undatulus Say. E. M. I.
Hydnocera difficilis Lec. M.
 pallipennis Say. E.
 verticalis Say. M.
Corynetes violaceus Linn. M.

LYMEXYLIDÆ.

Hylecoetus lugubris Say. M.

PTINIDÆ.

Ernobius mollis Linn. M.
 granulatus Lec. M.
Xestobium squalidum Lec. M.
Oligomerus sericans Melsh. E.
Hadrobregmus errans Melsh. M.
 carinatus Say. E.
 foveatus Kby. M.
Anobium notatum Say. E. M.
Petalium bistriatum Say. M.
Theca profunda Lec. M.
Xyletinus fucatus Lec. M.
Dorcatoma pallicorne Lec. M.
Cænocara oculata Say. M.
Ptilinus ruficornis Say. M.
Hendecatomus rugosus Rand. M.
Bostrichus armiger Lec. M.
Amphicerus bicaudatus Say. M.
Dinoderus substriatus Payk. E. M.
 B. I.
 cribratus Lec. M.
 densus Lec. M.

SPONDYLIDÆ.

Parandra brunnea Fab. E.
Spondylis upiformis Mann. * E. H.

CERAMBYCIDÆ.

Tragosoma Harrisii Lec. E. M.

- Asemum mœstum* Hald. M.
Criocephalus agrestis Kby.
Tetropium cinnamopterum Kby. M.
Phymatodes dimidiatus Kby. M.
 maculicollis Lec. n. sp. I.
Merium Proteus Kby. M.
Gonocallus collaris Kby. M.
Elaphidium villosum Fab. M.
 parallelum Newm. M.
Glycobius speciosus Say.*
Calloides nobilis Harris. E. M.
Arhopalus fulminans Fab. E.
Xylotrechus colonus Fab. M.
 undulatus Say. M. B. I.
 annosus Say. M.
Neoclytus muricatus Kby. M.
Clytanthus ruricola Ol.
Cyrtophorus gibbulus Lec. I.
Atimia confusa Say. M.
Encyclops cæruleus Say. M.
Rhagium lineatum Oliv.
Centrodera decolorata Harris.
Pachyta monticola Rand. M. I.
 liturata Kirby.*
Anthophilax viridis Lec. M.
 malachiticus Hald. M.
 attenuatus Hald. M.
Acmæops discoidea Hald. M.
 Proteus Kby. M. I.
 pratensis Laich. M.
Gaurotes cyanipennis Say. M.
Bellamira scalaris Say. E. M.
Typocerus sparsus Lec. n. sp. E.
Leptura plebeja Rand. E. M.
 subhamata Rand. E.
 capitata Newm. M.
 subargentata Kby. M. I.
 similis Kby. M.
 cordifera Ol.*
 sexmaculata Linn. M.
 nigrella Say. M.
 n. sp. ? M. (*nigrella* ♂ ?)
 canadensis Fab. E. M.
 rubrica Say. M.
 vagans Ol. E. M.
 sanguinea Lec. M.
Leptura chrysocoma Kby. S. M. I.
 proxima Say. M.
 rufula Hald. I.
 tibialis Lec. M.
 pedalis Lec. M.
 vittata Germ. E. M.
 pubera Say. M.
 sphæricollis Say. M.
 vibex Newm. M.
 mutabilis Newm. M. I.
 aspera Lec. S. M.
Monohammus maculosus Hald. M.
 scutellatus Say.
 confusor Kby.
 marmoratus Rand. M.
Acanthoderes decipiens Hald. M.
Leptostylus commixtus Hald. M.
 macula Say.*
Sternidius alpha Say. E.
Liopus quercus Fitch. M.
Lepturges symmetricus Hald. M.
Hyperplatys maculatus Hald. M.
Graphisurus fasciatus DeG. M.
 pusillus Kby.*
Acanthocinus obsoletus Oliv. M.
Pogonocherus pennicollatus Lec. M.
 mixtus Hald. M. Mr. I.
 parvulus Lec. M.
Saperda calcarata Say. M.
 mœsta Lec. E.
 concolor Lec. M.

CHRYSOMELIDÆ.

Donacia piscatrix Lac. M.
 porosicollis Lac. M.
 hirticollis Kby. E.
 proxima Kby.*
 magnifica Lec. M.
 distincta Lec. E.
 subtilis Kunze. E. M.
 confusa Lec.*
 emarginata Kby. M.
 flavipes Kby.*
 cuprea Kby. M.
 jucunda Lec. M.

Macroplea Melsheimeri Lac. E.
Orsodachna Childreni Kby. I.
Zengophora varians Cr. I.
 abnormis Lec.*
Syneta ferruginea Germ. M. I.
Lema trilineata Oliv. M.
Cryptocephalus sellatus Suffr. E.
 M. I.
 venustus Fabr. E.
 4-maculatus Say. E.
 catarius Suffr. S. P. Mr.
 auratus Fabr. S.
Pachybrachys carbonarius Hald.? M.
 M-nigrum Melsh? S.
 sp. S. M. I.
 abdominalis Say.*
 hepaticus Melsh. M.
Adoxus vitis Linn.
Xanthonia 10-notata Say.*
Heteraspis pubescens Melsh. M.
Paria 6-notata Say. M.
Fidia longipes Mels.*
Chrysomela 10-lineata Say. E. M.
 multiguttis Stal.*
 philadelphica Linn.*
 elegans Ol. M.
 Bigsbyana Kby. S. P. G. B.
Prasocuris varipes Cr. S.
Gonioctena pallida Linn. M. B. I.
Phyllodecta vulgatissima Linn. I.
Plagioderia lapponica Linn. M. G.
 tremulæ Fabr. E. M.
 scripta Fabr. M.
Phyllobrotica decorata Say. E. M.
Diabrotica 12-punctata Ol. M. B. Mr.
Galeruca¹ rufosanguinea Say. M.
Gallerucella sagittariæ Gyllh. M.
 decora Say.
Trirhabda canadensis Kby. E.
 flavolimbata Mannh. Mr.
Hypolampsis pilosa Ill. M.
Cedionychis vians Ill. M.
Disonycha pallipes Cr. M.
 alternata Ill. M.

Disonycha punctigera Lec. M. B.
Graptodera bimarginata Say. M.
 ignita Ill.*
 exapta Say. M. Mr.
Longitarsus sp. M. Mr.
Phyllotreta vittata Fab. M.
Systema frontalis Fabr. B.
Crepidodera Helxines Linn. S.
 Modeeri Linn. M.
Chætocnema confinis Cr. M.
 rudis Lec. n. sp. M.
Psylliodes punctulata Melsh M.
Odontota rubra Web. M.
 rosea Web. M.
Cassida nigripes Oliv. M.
Coptocycla guttulata Oliv. M.
 purpurata Boh. M.

TENEBRIONIDÆ.

Phellopsis obcordata Lec. S. M.
Iphthimus opacus Lec. M.
Upis ceramboides Linn.
Haplandrus concolor Lec. E. M.
Bius estriatus Lec. M.
Blapstinus interruptus Say. E. S. M.
Tribolium madens Charp. M.
Paratenetus punctatus Sol. M.
 fuscus Lec. M. S.
Platydemia americanum Lap. M.
Scaphidema acneolum Lec. M. Mr.
Hypophlœus parallelus Melsh.
Bolitotherus bifurcus Fabr. M.
Bolitophagus corticola Say. E. M.
 depressus Rand. M.

CISTELIDÆ.

Hymenorus pilosus Melsh E.
 punctulatus Lec.
 niger Melsh. E. M. I.
Isomira 4-striata Coup.
Mycetochares Haldemani Lec. M.
 bicolor Coup. M.
 binotata Say. M.
 gracilis Lec. n. sp. M.

¹ I cannot adopt the changes proposed by Mr. Crotch in the names of this and the next genus.—Lec.

PYROCHROIDÆ.

- Ischalia costata* Lec. M. B.
Schizotus cervicalis Newm. M.
Dendroides canadensis Latr. E. M.
concolor Newm. M.

ANTHICIDÆ.

- Nematoplus collaris* Lec. M.
Corphyra lugubris Say.*
Notoxus anchora Hentz. E. M.
Anthicus formicarius Laf. E. M.
floralis Payk. M.
scabriceps Lec.
cervinus Laf. Mr.
spretus Lec. M.
coracinus Lec. M.
pallens Lec. E. M.
granularis Lec. M. Mr.
Xylophilus piceus Lec. E. M.
n. sp. M.

MELANDRYIDÆ.

- Canifa pallipes* Melsh.
pallipennis Lec. n. sp. M.
Tetratoma tessellata Melsh M. Mi.
Stenotrachelus arctatus Say.* EH.
Penthe obliquata Fab. M. S.
Synchroa punctata Newm. M.
Phryganophilus collaris Lec. M.
Emmesa connectens Newm. M. I.
Melandrya striata Say. M.
Prothalia undata Lec. M.
Xylita lævigata Hellen. Mi.
decolorata Rand. M.
Scotochroa atra Lec. M.
basalis Lec. E. M. I.
Carebara longula Lec. E.
Spilotus 4-pustulosus Melsh. E. M.
Zilora hispida Lec. M.
Serropalpus striatus Hellen.
Enchodes sericea Hald. M.
Dircæa liturata Lec. E. M.
fusca Lec. n. sp.

- Symphora flavicollis* Hald. E. M.
Hallomenus obscurus Lec. n. sp. M.
punctulatus Lec. Mi.
debilis Lec. E. M.
Eustrophus confinis Lec. E. M.
bicolor Say. M.
tomentosus Say. M.
Orchesia gracilis Melsh. M.

MORDELLIDÆ.

- Anaspis nigra* Hald. M. T.
flavipennis Hald. M. Mi.
rufa Say.
Mordella borealis Lec. S. M.
scutellaris Fabr. S. M. Mr.
lineata Melsh. E. M.
serval Say. M.
Glipodes helva Lec. M.
Mordellistena scapularis Say. E. M.
tosta Lec. M.
pectoralis Lec.* North Shore.
nigricans Melsh. E. M.
morula Lec.*
guttulata Hellm. M.
pityptera Lec. M.
Pelecotoma flavipes Melsh. M.
Myodites stylopides Newm. P.

MELOIDÆ.

- Macrobasis unicolor* Kirby.* N. S.
Epicauta convolvuli Melsh. M.
fissilabris Lec.* North Shore.

CEPHALOIDÆ.

- Cephaloon lepturides* Newm. M.
ungulare Lec. M.

CEDEMERIDÆ.

- Calopus angustus* Lec. Mi.
Ditylus cœruleus Rand. M.
Asclera ruficollis Say. M.
puncticollis Say. M.

MYCTERIDÆ.*Mycterus scaber* Hald. M.**PYTHIDÆ.***Pytho americanus* Kby. M.*Crymodes discicollis* Lec. M. I.*Priognathus monilicornis* Randall.**Boros unicolor* Say. M. I.*Salpingus virescens* Lec.

sp. M.

Rhinosimus nitens Lec. M. I.**RHINOMACERIDÆ.***Rhinomacer pilosus* Lec. M.*elongatus* Lec. M.**RHYNCHITIDÆ.***Rhynchites cyanellus* Lec. M.**ATTELABIDÆ.***Attelabus bipustulatus* Fabr. M.*rhois* Boh. M.**OTIORHYNCHIDÆ.***Hormorus undulatus* Uhler P.*Geoderces melanothrix* Kby. B.

Mi.

CURCULIONIDÆ.*Sitones flavescens* All. M.*Trichalophus alternatus* Say. Mr. I.*Ithycerus noveboracensis* Forst. E.*Lepyryus geminatus* Say. E.*Listronotus latiusculus* Boh. M.*Macrops* sp. M.*Hypomolyx pinicola* Coup. M. Mi.*Hylobius confusus* Kby.*Pissodes strobi* Peck.*affinis* Rand.*Pissodes dubius* Rand. M. I.*Procas picipes* Steph. M. Mr.*Erycus puncticollis* Lec. P. B.*Dorytomus laticollis* Lec. M. Mr.*brevicollis* Lec. M. I.

sp. M.

luridus Mannh. M.*Tanysphyrus Lemnæ* Gyllh. M.*Bagous mammillatus* Say. M.*Magdalis hispoides* Lec. M. I.*perforata* Horn E. M.*pallida* Say. M.*gentilis* Lec. M. I.*olyra* Herbst.**Acalyptus Carpini* Herbst. M.*Elleschus bipunctatus* Gyllh. M.*Anthonomus scutellatus* Gyl. EM.*signatus* Say. M.*rufipennis* Lec. M.*corvulus* Lec. M. I.*Crataegi* Walsh. M. I.

two undescribed species.

? *Anthonomus* n. sp. M.*Orchestes canus* Horn. n. sp. M. I.*pallicornis* Say. E. M. I.*subhirtus* Horn. n. sp. M.*Piazorhinus scutellaris* Gyll. M.*Proctorus armatus* Lec. M.*decipens* Lec. M.*Tyloderma æreum* Say. E.*Cnemogonus Epilobii* Payk. M. I.*Cœliodes cruralis* Lec. M.*nebulosus* Lec. M.*Ceuthorhynchus decipiens* Lec. M.*Pelenomus sulcicollis* Fahr. M.*Balaninus uniformis* Lec. M.**BRENTHIDÆ.***Eupsalis minuta* Dr. M.**CALANDRIDÆ.***Sphenophorus ochreus* Lec. E.*pertinax* Ol. E.*costipennis* Horn. E.

Sphenophorus sculptilis Uhler. E.
Dryophthorus corticalis Say. M. P.
 Nov. genus? near *Himatium*. S.
Cossonus subareatus Boh. E. M.
Phlæophagus apionides Horn. M.
Rhyncolus brunneus Mannh. S. M.
 Mi.

SCOLYTIDÆ.

Monarthrum mali Fitch. M.
Pityophthorus materiarius Fitch. M.
 sparsus Lec. M.
 plagiatus Lec. M.
 pullus Zimm. M.
 consimilis Lec. n. sp. M.
 hirticeps Lec. n. sp. M.
 puberulus Lec. M.
 pusio Lec. n. sp. M.
 opaculus Lec. n. sp. M.
Xyloterus bivittatus Kby. M.
Xyleborus cælatus Zimm. M.
Dryocætes septentrionis Mannh.
 S. M. Mr. Mi.
 affaber Mannh. M.
 granicollis Lec. M.
Tomicus calligraphus Germ. M.
 cacographus Lec. M.

Tomicus pini Say.
 hudsonicus Lec. M.
 interruptus Lec. M.
 balsameus Lec. M.
Scolytus unispinosus Lec. M.
Polygraphus rufipennis Lec.
Phlæosinus dentatus Say. M.
 punctatus Lec.*
Dendroctonus terebrans Oliv. M.
 similis Lec. M.
 rufipennis Kby. M. I.
 frontalis Fabr.*
Hylastes porculus Er. M.
 cavernosus Zimm. M.
Hylurgops pinifex Fitch.

ANTHRIBIDÆ.

Gonotropis gibbosa Lec. M.
Eurymycter fasciatus Lec. M.
Allandrus bifasciatus Lec. M.
Cratoparis lunatus Fabr. M.
Brachytarsus variegatus Say. M.

APIONIDÆ.

Apion sp. M. I.
 sp. M.

3. *Contribution to a List of the COLEOPTERA of the Lower Peninsula of Michigan.*

BY H. G. HUBBARD AND E. A. SCHWARZ.

Localities :

A. Ann Arbor.

M. Monroe.

H. Port Huron.

Where no locality is given, Detroit is to be understood.

CICINDELIDÆ.

Cicindela scutellaris var. *Lecontei*
 Hald.
sex-guttata Fabr.
purpurea Oliv.

Cicindela generosa Dej. H.
tranquebarica Hbst.
12-guttata Dej.
repanda Dej.
hirticollis Say.

CARABIDÆ.

- Omophron robustum* Horn. M.
 americanum Dej.
Elaphrus Clairvillei Kby. H.
 riparius Linn.
 ruscarius Say.
Notiophilus æneus Hbst.
 semistriatus Say.
 sibiricus Mots.
 Hardyi Putz.
Nebria pallipes Say.
Calosoma scrutator Fab.
 frigidum Kby.
 calidum Fabr.
Carabus palustris Fisch.
 vinctus Web.
Cychrus Lecontei Dej.
Scarites subterraneus Fab.
Dyschirius Dejeanii Putz.
 nigripes Lec.
 æneolus Lec.
 longulus Lec.
 edentulus Putz.
 setosus Lec.
 brevispinus Lec. n. sp. p.
Clivina impressifrons Lec.
 americana Dej.
 rufa Lec.?
 bipustulata Fab.
Schizogenius ferrugineus Putz. M.
Brachinus janthinipennis Dej.
 medius Harr.
 conformis Dej.
 fumans Fabr.
 stygicornis Say.
Galerita Janus Fab.
Casnonia pensylvanica Linn.
Plochionus timidus Hald. H.
Loxopeza grandis Hentz.
 atriventris Say.
 tricolor Say.
Lebia pulchella Dej.
 viridis Say.
 var. mœsta Lec.
 pumila Dej.

Lebia viridipennis Dej.

ornata Say.

fuscata Dej.

Dianchomena scapularis Dej.*Tetragonoderus fasciatus* Hald.*Perigona nigriceps* Dej. A.*Dromius piceus* Dej.*Metabletus americanus* Dej.*Blechnus linearis* Lec. A.*Axinopalpus biplagiatus* Dej.*Apenes lucidula* Dej.*Cymindis cribricollis* Dej.

pilosa Say.

americana Dej. A.

neglecta Hald.

Pinacodera limbata Dej.

platicollis Say.

Callida punctata Lec.*Calathus gregarius* Say.

impunctatus Say.

Platynus hypolithus Say.

pusillus Lec.

tenebricosus Gemm.

decens Say.

sinuatus Dej.

extensicollis Say.

decorus Say.

molestus Lec.

melanarius Dej.

affinis Kby.

cupripennis Say.

crenistriatus Lec.

æruginosus Dej.

excavatus Dej.

ferreus Hald.

subcordatus Lec.

nutans Say.

sordens Kby.

ruficornis Lec.

picipennis Kby.

lutulentus Lec.

id. *var.* black.

8-punctatus Fabr.

placidus Say.

obsoletus Say.

octocolus Mannh.

- Olisthopus parmatum* Say.
micans Lec. A.
Pterostichus adoxus Say.
honestus Say.
coracinus Newm.
stygius Say.
Sayi Brullé.
lucublandus Say.
caudicalis Say.
luctuosus Dej.
corvinus Dej.
mutus Say.
Luczotii Dej.
erythropus Dej.
patruelis Dej.
femoralis Kby.
Lophoglossus scrutator Lec.
Myas cyanescens Dej. Grand Haven.
Amara avida Say.
arenaria Lec. H.
latior Kby. A.
angustata Say.
impuncticollis Say.
interstitialis Dej.
obesa Say. H.
gibba Lec. H.
musculus Say. H.
Badister notatus Hald.
pulchellus Lec.
micans Lec.
Diplochila laticollis Lec.
var. major Lec.
Dicælus purpuratus Bon.
sculptilis Say. A.
teter Bon. Lansing.
politus Dej.
Chlænius erythropus Germ. Grand Haven.
sericeus Forst.
cordicollis Kirby.
tricolor Dej.
pensylvanicus Say.
impunctifrons Say. Grand Haven.
niger Rand.
Chlænius tomentosus Say. Lansing (Cooke).
Anomoglossus emarginatus Say.
H.
pusillus Say. H.
Atranus pubescens Dej. H.
Lachnocrepis parallelus Say.
Oodes fluvialis Lec.
Geopinus incrassatus Dej.
Agonoderus lineola Fab.
comma Fabr.
pallipes Fabr.
partiaris Say.
pauperculus Dej.
testaceus Dej.
n. sp.?
Anisodactylus rusticus Dej.
carbonarius Say.
nigerrimus Dej.*
Harrisii Lec.
nigrita Dej.
Lecontei Chd.
agricola Harr.
discoideus Dej.
baltimorensis Say.
sericeus Harr.
Xestonotus lugubris Dej.
Spongopus verticalis Lec. H.
Amphasia instertialis Say.
Anisotarsus piceus Lec.
terminatus Say.
Gynandropus hylacis Say.
Bradycellus dichrous Dej.
autumnalis Say.
badiipennis Hald.
atrimedius Say.
axillaris Mannh.
rupestris Say.
Harpalus caliginosus Fabr.
faunus Say.
vagans Lec.
pensylvanicus DeG.
compar Lec.
erythropus Dej.
spadiceus Dej.
pleuriticus Kby.

Harpalus herbivagus Say.

laticeps Lec. Lake Huron

basilaris Kby. A. H.

Stenolophus fuliginosus Dej.

plebejus Dej.

conjunctus Say.

ochropezus Say.

hydropicus Lec.

carus Lec.

Trechus micans Lec.**Bembidium americanum** Dej.

chalceum Dej.

striola Lec.

lucidum Lec.

patruale Dej.

variegatum Say.

versicolor Lec.

sulcatum Lec.

anguliferum Lec.

cautum Lec.

assimile Gyllh.

4-maculatum Linn.

pedicellatum Lec.

Tachys proximus Say.

lævis Say.

nanus Gyllh.

flavicauda Say.

vivax Lec.

xanthopus Lec.

incurvus Say.

HALIPLIDÆ.**Haliplus fasciatus** Aub.

punctatus Aub.*

triopsis Say.

borealis Lec. M.

cribrarius Lec.

Cnemidotus edentulus Lec.**DYTISCIDÆ.****Hydrovatus cuspidatus** Germ.**Hydroporus inæqualis** Fabr.

convexus Aub.

turbidus Lec.

nubilus Lec.

Hydroporus granarius Aub.

lacustris Say.

fuscatus Cr.

flavicollis Lec.

rotundatus Lec.

griseostriatus DeG. A.

undulatus Say.

mixtus Lec.

modestus Aub.

dichrous Melsh.

Hydroporus americanus Aub.

tartaricus Lec.

tristis Payk.

oblitus Aub.

conoideus Lec. H.

laccophilinus Lec. n. sp.

Suphis semipunctatus Lec. n. sp.**Laccophilus maculosus** Germ.

fasciatus Aub.

Acilius semisulcatus Aub.**Thermonectes basilaris** Harr. A.**Graphoderes cinereus** Linn. H.**Hydaticus stagnalis** Fab. H.

piceus Lec.

Colymbetes sculptilis Harr.**Dytiscus Harrisii** Kby.

fasciventris Say.

Rhantus binotatus Harr.

tostus Lec.

Ilybius picipes Kby.

biguttulus Germ.

fraterculus Lec.

ignarus Lec. H.

Matus bicarinatus Say.**Coptotomus interrogatus** Fab.**Copelatus glyphicus** Say.**Ilybiosoma bifarium** Kby. H.**Gaurodytes disintegratus** Cr. A.

semipunctatus Kby.

ovoideus Lec. H.

punctulatus Aub.

gagates Aub.

GYRINIDÆ.**Dineutes emarginatus** Say.

discolor Aub.*

Dineutes assimilis Aub.

Gyrinus fraternus Coup.

æneolus Lec.

limbatus Say.

ventralis Kby.

maculiventris Lec.

picipes Aub.

analisis Say.

minutus Fab. H.

HYDROPHILIDÆ.

Helophorus lineatus Say.

tuberculatus Gyllh.

sp. near *lacustris*.

two new species.

Hydrochus squamifer Lec.

two new sp.

Hydræna pensylvanica Kw.

Hydrophilus ovatus Har.

triangularis Say.

Tropisternus nimbatus Say.

glaber Hbst.

mixtus Lec.

Hydrocharis obtusatus Say.

Berosus striatus Say.

Chætarthria pallida Lec.

Philhydrus nebulosus Say.

bifidus Lec.

ochraceus Mels.

consors Lec.

cinctus Say.

perplexus Lec.

fimbriatus Melsh.

Hydrobius fuscipes Linn.

digestus Lec.

subcupreus Say.

despectus Lec.

feminalis Lec. n. sp.

Cyclonotum estriatum Say.

Cercyon flavipes Er.

naviculare Zimm.

centromaculatum St.

prætextatum Say.

ocellatum Say.

unipunctatum Linn.

Cercyon anale Er.

two unnamed species.

Cryptopleurum vagans Lec.

TRICHOPTERYGIDÆ.

Nossidium americanum Mots.

n. sp.

Ptenidium evanescens Marsham.

lineatum Lec.?

sp.

Ptilium Collani Mkl.

Smicrus filicornis Fairm.

Trichopteryx aspera Hald.

parallela Mots.

Dohrnii Matth.

Haldemani Lec.

several unnamed species.

Pteryx balteata Lec.

n. sp.

Ptinella quercus Lec.

n. sp.

STAPHYLINIDÆ.

Falagria cingulata Lec.

bilobata Say.

dissecta Er.

venustula Er.

Hoplandria lateralis Melsh.

Homalota trimaculata Er.

analisis Grav.

lividipennis Mannh.

numerous unnamed species.

Placusa sp.

Calodera several species.

Bolitochara sp.

Myrmedonia sp. A.

Atemeles cavus Lec. A.

Aleochara lata Grav.

brachyptera Fourc.

nitida Grav.

several unnamed species.

Oxypoda several species.

Phlæopora sp.

Oligota pedalis Lec.

two unnamed species.

Gyrophæna vinula Er.
 dissimilis Er.
 flavicornis Melsh.*
 corruscula Er.
 socia Er.
 several unnamed species.
Myllæna fuscipennis Kr.
 dubia Er.
 one unnamed species.
Dinopsis americanus Kr.
 myllænoides Kr.
 (Numerous undetermined genera of
 Aleocharini).
Tachinus memnonius Grav.
 repandus Horn.
 luridus Er.
 canadensis Horn.
 fimbriatus Grav.
 Schwarzii Horn. Paw Paw.
 frigidus Er.
 circumcinctus Mkl.
 nitiduloides Horn.
Tachyporus maculipennis Lec.
 elegans Horn.
 jocosus Say.
 chrysomelinus Linn.
 nanus Er.
 brunneus Fab.
Cilea silphoides Linn.
Erchomus ventriculus Say.
Conosoma littoreum Linn.
 Knoxii Lec.
 crassum Grav.
 pubescens Payk.
 basale Er.
 opicum Say.
 scriptum Horn.
Bolitobius niger Grav.
 dimidiatus Er. var.?
 cingulatus Mannh.
 cincticollis Say.
 anticus Horn.
 pygmæus Fab.
 trinotatus Er.
 obsoletus Say.*
 cinctus Grav.

Bryoporus rufescens Lec.
 var. *testaceus* Lec.
Mycetoporus lepidus Er.
 lucidulus Lec.
 consors Lec.
 americanus Er.
 pictus Horn.
Habrocerus Schwarzii Horn.
Acylophorus flavicollis Sachse.
 pronus Er.
Heterothops fumigatus Lec.
 pusio Lec.
Quedius fulgidus Fab.
 lævigatus Gyllh.
 vernix Lec.
 capucinus Grav.
 molochinus Grav.
 five unnamed species.
Creophilus villosus Grav.
Leistotrophus cingulatus Grav.
Staphylinus maculosus Grav.
 vulpinus Nordm.
 fossator Grav.
 tomentosus Grav.
 cinnamopterus Grav.
 violaceus Grav.
 varipes Sachse.
 cæsareus Cederh.
Ocypus ater Grav.
Belonuchus formosus Grav.
Philonthus cyanipennis Fabr.
 æneus Rossi.
 umbratilis Grav.
 hepaticus Er.
 blandus Grav.
 lætulus Say.
 niger Melsh.
 scybalarius Nordm.
 debilis Grav.
 lomatus Er.
 fulvipes Fabr.
 brunneus Grav.
 aterrimus Grav.
 baltimorensis Grav. Kalama-
 zoo.
 apicalis Say.

- Philonthus sobrinus* Er.
 pæderoides Lec.
 cinerascens Grav.
 several unnamed species.
Xantholinus cephalus Say.
 emmesus Grav.
 obsidianus Melsh.
 obscurus Er.
Leptacinus two n. sp.
Leptolinus longicollis Lec.
 sp.
Baptolinus pilicornis Payk.
 Plymouth.
Diochus Schaumii Kr.
Lathrobium grande Lec.
 punctulatum Lec.
 angulare Lec.
 puncticolle Kby.
 simile Lec.
 armatum Say.
 nigrum Lec.
 tenue Lec.
 longiusculum Grav.
 collare Er.
 several unnamed species.
Cryptobium badium Grav.
 bicolor Grav.
 pallipes Grav.
 latebricola Nordm.
 flavicorne Lec.
 cribratum Lec.
Stilicus rudis Lec.
 angularis Er.
 dentatus Say.
Scopæus exiguus Er.
 four or five unnamed species.
Lithocharis corticina Grav.
 confluens Say.
 ochracea Grav.
 one unnamed species.
Sunius prolixus Er.
 linearis Er.
 binotatus Say.
 longiusculus Mannh.
 brevipennis Aust.
Pæderus littorarius Grav.
- Pæderus palustris* Aust.
Palaminus testaceus Er.
 normalis Lec.
Stenus Juno Fab.
 erythropus Melsh.
 femoratus Say.
 egenus Er.
 flavicornis Er.
 annularis Er.
 punctatus Er.
 numerous undescribed
 species.
Euæsthetus americanus Er.
Edaphus nitidus Lec.
Oxyporus femoralis Grav.
 vittatus Grav.
 lateralis Grav.
Bledius semiferrugineus Lec.
 fumatus Lec.
 analisis Lec.
 assimilis † Fauvel.
 annularis Lec.
 emarginatus Say.
Oxytelus sculptus Grav.
 rugosus Er.
 insignitus Grav.
 pensylvanicus Er.
 nitidulus Grav.
 exiguus Er.
Thinobius brachypterus Lec.
 fimbriatus Lec.
Trogophlœus laticollis Lec.
 arcifer Lec.
 4-punctatus Say.
 numerous undescribed
 species.
Apocellus sphæricollis Say.
Anthophagus verticalis Say.
Acidota subcarinata Er.
 seriata Lec.
Olophrum rotundicolle Say.
 two unnamed species.
Coryphium notatum Lec.
Omalium several unnamed species.
Phlœonomus convexus † Zimm.
Protinus parvulus Lec.

Megarthus excisus Lec.
Siagonium americanum Melsh.
Eleusis pallidus Lec.
 picipennis Lec.
Glyptoma costale Er.
Pseudopsis sulcata Newm.
Micropeplus tesserula Curtis.

PSELAPHIDÆ.

Ceophyllus monilis Lec. Plymouth.
Cedius spinosus Lec.
Tmesiphorus carinatus Say.
Ctenistes piceus Lec.
 Zimmermanni Lec.
 consobrinus Lec.
Tyrus humeralis Aub.
Pselaphus Erichsoni Lec.
Tychus minor Lec.
Bythinus zonatus Br.
Bryaxis conjuncta Lec.
 Brendelii Horn.
 dentata Say.
 puncticollis Lec.
 scabra Brend.
 rubicunda Aub.
 two doubtful species.
Decarthron abnorme Lec.
 longulum Br.
 formiceti Lec.
Batrisus simplex Lec. n. sp.
 Schaumii Aubé.
 globosus Lec.
 spretus Lec.
 lineaticollis Aub.
Rhexius insculptus Lec.
Trimium dubium Lec.
 americanum Lec.
Euplectus interruptus Lec.
 arcuatus Lec.
 canaliculatus Lec.
 integer Lec. n. sp.
 crinitus Brendel.

SILPHIDÆ.

Necrophorus marginatus Fabr.

Necrophorus Sayi Lap.
 pustulatus Hersch.
 americanus Oliv.
 orbicollis Say.
 tomentosus Web.
 vespilloides Hbst.

Silpha surinamensis Fab.
 lapponica Hbst.
 noveboracensis Forst.
 inæqualis Fabr.
 americana Linn.

Choleva opaca Say.
Ptomaphagus brunneipennis
 Mannh.

consobrinus Lec.
 oblitus Lec.

Catopomorphus brachyderus Lec.

Colon dentatum Lec.
 three unnamed species.

Hydnobius substriatus Lec.

Anisotoma alternata Melsh.
 punctostriata Kby.
 collaris Lec.
 obsoleta Lec.

Cyrtusa egena Lec.
 picipennis Lec.
 sp.

Colenis impunctata Lec.

Aglyptus lævis Lec.

Liodes discolor Melsh.
 dichroa Lec.

Agathidium oniscoides Beauv.
 globatile Lec. n. sp.
 exiguum Melsh.
 politum Lec.

Clambus puberulus Lec.
 gibbulus Lec.

SCYDMÆNIDÆ.

Eumicrus Zimmermanni Sch. A.
Scydmaenus perforatus Schaum.
 magister Lec.
 flavitaris Lec.
 fossiger Lec.
 capillosulus Lec.
 rasus Lec.

Scydmaenus clavipes Say.
consobrinus Lec.
bicolor Lec.
salinator Lec.
fatuus Lec.
 several unnamed species.

CORYLOPHIDÆ.

Orthoperus glaber Lec.
scutellaris Lec. n. sp.
Corylophus marginicollis Lec.
truncatus Lec.
Sericoderus flavidus Lec.
obscurus Lec.
Sacium fasciatum Say.
lunatum Lec.
misellum Lec.

SCAPHIDIIDÆ.

Scaphidium 4-guttatum Say.
 var. *4-pustulatum* Say.
 var. *piceum* Melsh.
 var. *obliteratum* Lec.
Bæocera concolor Fab.*
apicalis Lec.
Scaphisoma convexum Say.
suturale Lec.
terminatum Melsh.
pusillum Lec.
 n. sp.

Toxidium gammaroides Lec.
compressum Zimm.

LATHRIDIIDÆ.

Stephostethus (n. g.) *liratus* Lec.
Lathridius carinatus Gyllh.
minutus Linn.
maculatus Lec. n. sp.
opaculus Lec. n. sp.
laticollis Lec. n. sp.
duplicatus Lec. n. sp.
filiformis Aub.
Corticaria serricollis Lec.

Corticaria deleta Mannh.
rugulosa Lec.
serrata Payk.
elongata Gyllh.
americana Mannh.
angularis Lec.
cavicollis Lec.
pumila Melsh.
picta Lec.
 three unnamed species.

DERMESTIDÆ.

Dermestes nubilus Say.
mucoreus Lec.*
lardarius Linn.
talpinus Mann. (introduced).
Attagenus pellio Linn.
megatoma Fabr.
longulus Lec.
Trogoderma tarsale Melsh.
Cryptorhopalum ruficorne Lec.
hæmorhoidale Lec.
Anthrenus thoracicus Melsh.
varius Fabr.
museorum Linn.
Orphilus ater Er.

ENDOMYCHIDÆ.

Lycoperdina ferruginea Lec.
Mycetina perpulchra Newm.
testacea Lec.
vittata Fabr.
Endomychus biguttatus Fab.
Rhanis unicolor Ziegl.
Phymaphora pulchella Newm. A.
Mycetæa hirta Melsh.
Rhymbus minor Cr.

MYCETOPHAGIDÆ.

Mycetophagus punctatus Say.
flexuosus Say.
obsoletus Melsh.
bipustulatus Melsh.

Mycetophagus pluripunctatus Lec.*Triphyllus humeralis* Kby.*Litargus tetraspilotus* Lec.

6-punctatus Say.

infulatus Lec.

didesmus Say.

Typhæa fumata Linn.*Diplocœlus brunneus* Lec.**SPHINDIDÆ.***Odontosphindus denticollis* Lec. n.
g. and sp.*Sphindus americanus* Lec.*Eurysphindus hirtus* Lec. n. g. and
sp.**CIOIDÆ.***Cis creberrimus* Mell.

brevisetosus Cr.

fuscipes Mell.

three other species.

Ennearthron Mellyi Mell.?

several other species.

EROTYLIDÆ.*Languria Mozardi* Latr.

gracilis Newm.

Dacne 4-maculata Say.*Hypodacne punctata* Lec. A.*Megalodacne fasciata* Fab.

heros Say.

Ischyrus 4-punctatus Oliv.*Mycotretus sanguinipennis* Say.

pulchra Say.

Cyrtotriplax humeralis Fab.

angulata Say.

unicolor Say.

Triplax festiva Lec.

macra Lec.

thoracica Say.

flavicollis Lac.

CRYPTOPHAGIDÆ.*Antherophagus ochraceus* Melsh.*Cryptophagus cellaris* Scop.

croceus Zimm.

crinitus Zimm.

nodangulus Zimm.

several unnamed species.

Paramecosoma serratum Gyllh.

n. sp.

Tomarus pulchellus Lec.*Atomaria ephippiata* Zimm.

numerous unnamed species.

Ephistemus apicalis Lec.*Telmatophilus americanus* Lec.*Loberus impressus* Lec.*Silvanus advena* Waltl.

surinamensis Linn.

bidentatus Fab.

planatus Germ.

var. cognatus Lec.

rectus Lec.

Nausibius dentatus Melsh.*Telephanus velox* Hald.**CUCUJIDÆ.***Catogenus rufus* Fab.*Cucujus clavipes* Fab.*Pediacus depressus* Hbst. H.*Lathropus vernalis* Lec.*Læmophlœus biguttatus* Say.

fasciatus Melsh.

testaceus Fab.

adustus Lec.

convexulus Lec. n. sp. H.

Narthecius grandiceps Lec.*Brontes dubius* Fab.**LYCTIDÆ.***Lyctus planicollis* Lec. H.

opaculus Lec.

COLYDIIDÆ.*Coxelus guttulatus* Lec.*Ditoma 4-guttata* Say.*Synchita nigripennis* Lec.

parvula Guér. A.

Aulonium parallelipedum Say.

Colydium lineola Say.
Bothrideres geminatus Say.
Philothermus glabriculus Lec.
Cerylon castanum Say.
 var. *unicolor* Ziegl.

RHYSSODIDÆ.

Rhyssodes exaratus Ill.

RHIZOPHAGIDÆ.

Rhizophagus bipunctatus Say.

MONOTOMIDÆ.

Bactridium ephippigerum Germ.
 nanum Er.
 striolatum Reitter.
Monotoma fulvipes Melsh.
 picipes Hbst.
 americana Aub.
 parallela Lec.

TROGOSITIDÆ.

Nemosoma parallelum Mels.
Tenebrioides corticalis Melsh.
 castanea Melsh.
 nana Melsh.
 bimaculata Melsh.
Calitys scabra Thunb.
Thymalus fulgidus Er.

NITIDULIDÆ.

Byturus unicolor Say.
Cercus abdominalis Er.
Brachypterus urticæ Fabr.
Colastus semitectus Say.
 unicolor Say.
 truncatus Rand.
Carpophilus niger Say.
 brachypterus Say.
 discoideus Lec.
Epuræa helvola Er.

Epuræa rufa Say.

Erichsonii Reitter.
immunda Sturm.
avara Rand.
truncatella Mann.
ovata Horn. n. sp.
peltoides Horn. n. sp.
labilis Er.

Nitidula bipustulata Linn.

ziczac Say.
 var. *humeralis* Lec.

Prometopia 6-maculata Say.

Lobiopa undulata Say.

Omosita colon Linn.

Phenolia grossa Fab.

Stelidota 8-maculata Say.

Thalycra concolor Lec.

Cyllodes biplagiatus Lec.

Cychramus adustus Er.

Amphicrossus ciliatus Ol.

Pallodes silaceus Er.

Cybocephalus nigrutilus Lec.

Cryptarcha ampla Er.

strigata Fabr.

litrata Lec.

Ips 4-guttatus Fab.

obtusum Say.

sanguinolentus Oliv.

confluens Say.

PHALACRIDÆ.

Phalacrus politus Melsh.

n. sp.

Olibrus ergoti † Walsh.

consimilis Melsh.

nitidus Mels.

Litochrus immaculatus Zimm.

COCCINELLIDÆ.

Megilla maculata DeG.

Hippodamia 13-punctata Linn.

parenthesis Say.

Anisosticta strigata Thunb.

Coccinella affinis Rand. H.

Coccinella trifasciata Linn.

9-notata Hbst.

monticola Muls.

Cycloneda sanguinea Linn.

Adalia bipunctata Linn.

Anatis 15-punctata Oliv.

Psyllobora 20-maculata Say.

Chilocorus bivulnerus Muls.

Ceneis pusilla Lec.

Brachyacantha ursina Fab.

indubitabilis Cr.

Hyperaspis signata Oliv.

proba Say.

bigeminata Rand.

undulata Say.

Scymnus punctatus Melsh.

terminatus Say.

americanus Muls.

fraternus Lec

ochroderus Muls.

cervicalis Muls.

nanus Lec.

punctum Lec.

n. sp.

Pentilia misella Lec.

Coccidula lepida Lec.

BYRRHIDÆ.

Nosodendron unicolor Say.

Cytilus sericeus Forst.

trivittatus Melsh. H.

Byrrhus americanus Lec.

cyclophorus Kby.

Pettiti Horn.

Limnichus punctatus Lec.

obscurus Lec.

PSEPHENIDÆ.

Psephenus Lecontei Lec.

ELMIDÆ.

Elmis bicarinatus Lec.

Ancyronyx variegatus Germ.

HISTERIDÆ.

Hololepta fossularis Say.

Hister merdarius Hoffm.

interruptus Beauv.

immunis Er.

cognatus Lec.

foedatus Lec.

abbreviatus Fab.

civilis Lec.*

depurator Say.

furtivus Lec.

curtatus Lec.

bimaculatus Linn.

16-striatus Say.

americanus Payk.

perplexus Lec.

subrotundus Say.

carolinus Payk.

Lecontei Mars.

coarctatus Lec.

Epierus ellipticus Lec.

Tribalus americanus Lec.

Onthophilus alternatus Say.

Paromalus æqualis Say.

bistriatus Er.

seminulum Er. A.

Saprinus rotundatus Kug.

distinguendus Mars.

assimilis Payk.

conformis Lec. A.

sphæroides Lec. H.

fraternus Say. H.

mancus Say H.

patruelis Lec.

Teretrius americanus Lec.

Plegaderus transversus Say. H.

Bacanius punctiformis Lec.

Acritus exiguus Er.

strigosus Lec.

Æletes politus Lec.

simplex Lec.

LUCANIDÆ.

Lucanus dama Thunb.

Lucanus placidus Say.
 Dorcus parallelus Say.
 Platycerus quercus Web.
 depressus Lec.
 Ceruchus piceus Web.
 Passalus cornutus Fab.

SCARABÆIDÆ.

Canthon vigilans Lec.
 Chœridium histeroides Web.
 Copris anaglypticus Say.
 minutus Dr.
 Onthophilus Hecate Panz.
 Janus var. striatus Beauv.
 pennsylvanicus Har.
 Aphodius fossor Linn.
 pinguis Hald. H.
 fimetarius Linn.
 ruricola Mels.
 n. sp.?
 granarius Linn.
 vittatus Say.
 inquinatus Hbst.
 lentus Horn.
 stercorosus Melsh.*
 bicolor Say.
 oblongus Say.
 humeralis Lec.
 Dialytes striatulus Say.
 Atænius imbricatus Melsh.
 gracilis Melsh.
 stercorator Fab.
 abditus Hald.
 Ægialia lacustris Lec.
 conferta Horn. M.
 Bolboceras farctus Fab.
 Odontæus filicornis Say.
 cornigerus Melsh.
 Geotrupes splendidus Fabr.
 semiopacus Jek.
 Egeriei Germ.
 Blackburnii Fabr.
 Balyi Jek.
 Nicagus obscurus Lec. H.
 Clœotus aphodioides Ill.

Trox unistriatus Beauv.
 sordidus Lec. *
 æqualis Say.
 scaber Linn.
 Hoplia trifasciata Say.
 Dichelonycha elongata Fabr.
 fuscula Lec.
 albicollis Burm. H.
 Serica vespertina Schh.
 tristis Lec. ?
 sericea Ill.
 Macroductylus subspinosus Fabr.
 Diplotaxis sordida Say.
 frondicola Say. A.
 Endrosa quercus Kn.
 Lachnosterna futilis Lec.
 fusca Fröhl.
 fraterna Harr.
 ciliata Lec.
 hirticula Kn.
 hirsuta Kn.
 crenulata Fröhl.
 tristis Fabr.
 Strigoderma arboricola Fabr.
 Pelidnota punctata Linn.
 Cotalpa lanigera Linn.
 Ligyrus relictus Say.
 Xyloryctes satyrus Fabr.
 Euryomia inda Linn.
 fulgida Fabr.
 Osmoderma scabra Beauv.
 Gnorimus maculosus Kn. H.
 Trichius piger Fabr.
 affinis Gory.
 viridulus Fabr.

BUPRESTIDÆ.

Chalcophora virginiensis Dr. H.
 campestris Say.
 Dicerca divaricata Say.
 obscura Fabr.
 asperata Lap.
 Pœcilonota cyanipes Say.
 Buprestis consularis Gory H.
 maculiventris Say. H.

Buprestis fasciata Fabr. H.
 striata Fabr.
Melanophila longipes Say H.
 fulvoguttata Harr. H.
Anthaxia cyanella Gory.
 viridicornis Say.
 viridifrons Gory.
 quercata Fabr.
Chrysobothris femorata Lec.
 dentipes Germ. H.
 6-signata Say H.
 scitula Gory.
Actenodes acornis Say.
Acmæodera pulchella Hbst.
 culta Web.
Agrilus ruficollis Fab.
 torquatus Lec.
 defectus Lec.
 difficilis Gor. H.
 bilineatus Web.
 acutipennis Mannh. H.
 plumbeus Lec.
 politus Say.
 egenus Gory H.
 putillus Say.
Taphrocerus gracilis Say.
Brachys ovata Web.
 aerosa Melsh.
Pachyscelus purpureus Say.
 lævigatus Say.

THROSCIDÆ.

Throscus alienus Bono.
 punctatus Bono.
 Chevrolati Bono.
 constrictor Say.
Drapetes geminatus Say.

ELATERIDÆ.

Tharops obliqua Say.
Deltametopus amënicornis Say.
Dromæolus cylindricollis Say. *
Fornax bicolor Melsh. A.
 calceatus Say.

Microrhagus humeralis Say.
 triangularis Say.
Nematodes penetrans Lec.
Adelocera impressicollis Say.
 discoidea Web.
 aurorata Say.
 obtecta Say.
Alaus oculatus Linn.
 myops Fabr.
Cardiophorus amictus Melsh.
 fenestratus Lec.? H.
 convexus Lec. H.
Cryptohypnus abbreviatus Say.
 choris Say.
 pectoralis Say. A.
 obliquatulus Melsh.
Elater nigricollis Hbst.
 linteus Say.
 discoideus Fab.
 semicinctus Rand.
 vitiosus Lec. A.
 apicatus Say.
 socer Lec.
 fuscatus Melsh.
 pedalis Cand.
 nigrinus Payk.
 sanguinipennis Say.
 rubricus Say.
 obliquus Say.
Drasterius dorsalis Say.
Monocrepidius auritus Say.
Ludius abruptus Say.
 attenuatus Say.
Agriotes mancus Say.
 pubescens Melsh.
 fucosus Lec. Lake Huron.
 stabilis Lec.
 oblongicollis Melsh.
Dolopius lateralis Eschsch.
Glyphonyx reticollis Say. ? A.
 testaceus Melsh. ?
Melanotus depressus Melsh.
 Leonardi Lec.
 scrobicollis Lec. H.
 castanipes Payk.
 fissilis Say.

Melanotus communis Gyllh.
parumpunctatus Melsh.
americanus Hbst. ?

Limonium auripilis Say.
aurifer Lec.
griseus Beauv.
plebejus Lec.
basillaris Lec.
agonus Say.

Campylus denticornis Kby. H.
Pityobius anguinus Lec. Lansing
Athous Brightwelli Kby.
maculicollis Lec.
cucullatus Say.
fossularis Lec.
scapularis Say.
reflexus Lec. A. H.

Sericosomus viridanus Say. A.

Oxygonus obesus Say. A.

Corymbites virens Sch. H.
vernalis Hentz. Lansing.
tesselatus Linn.
cylindriformis Hbst.
pyrrhos Hbst.
sulcicollis Say.
hieroglyphicus Say.
metallicus Germ.

Asaphes baridius Say.
memnonius Hbst.
bilobatus Say.

DASCILLIDÆ.

Dicranopselaphus thoracicus Zeigl.

Cyphon pallipes Lec.

fusciceps Kby. H.
piceus Lec.
nebulosus Lec.
modestus Lec.
pusillus Lec.
ruficollis Say.

Prionocyphon discoideus Say.

Helodes pulchella Guér.

thoracica Guér.
explanata Lec.

Scirtes tibialis Guér.

Eucinetus terminalis Lec.

morio Lec.

strigosus Lec.

testaceus Lec.

punctulatus Lec.

Ptilodactyla serricollis Say.

LAMPYRIDÆ.

Calopteron typicum Newm.
 var. *apicale* Lec.

Eros coccinatus Say.

thoracicus Rand.

sculptilis Say.

humeralis Fab. H.

modestus Say.

Lucidota atra Fabr.

Photinus corruscus Linn.

nigricans Say.

angulatus Say.

borealis Rand.

lucifer Mels.

angustatus Lec. H.

ardens Lec.

consanguineus Lec.

n. sp.

Photuris pensylvanica De G.

Phausis inaccensa Lec. n. sp. M.

TELEPHORIDÆ.

Chauliognathus marginatus Fab.

Podabrus tricoloratus Say.

flavicollis Lec.

modestus Say.

diadema Fabr.

rugosulus Lec.

Telephorus excavatus Lec.

carolinus Fab.

angulatus Say.

lineola Fab.

rectus Melsh.

cruralis Lec.

dichrous Lec.?

luteicollis Germ.

scitulus Say.

vilis Lec.

Telephorus fraxini Say.
rotundicollis Say.
tuberculatus Lec.
bilineatus Say.
limbatus Lec.

Silis percomis Say.

Malthodes concavus Lec.
transversus Lec.
exilis Melsh.
fragilis Lec.
parvulus Lec.

MALACHIIDÆ.

Collops 4-maculatus Fabr.
vittatus Say. H.
Anthocomus Erichsonii Lec.
Pseudebæus bicolor Lec.
oblitus Lec.
Attalus terminalis Er.
pallifrons Mots.
Pettiti Horn.
morulus Lec.

CLERIDÆ.

Cymatodera inornata Say.
Priocera castanea Newm.
Trichodes Nuttalli Kby.
Clerus nigripes Say.
nigrifrons Say.
thoracicus Oliv.
dubius Fab.
sanguineus Say.
Hydnocera humeralis Say.
var. difficilis Lec.
var. cyanescens Lec.
pallipennis Say.
verticalis Say.
tabida Lec.
longicollis Ziegl.
Phyllobænus dislocatus Say.
Orthopleura damicornis Fabr.
Laricobius rubidus Lec.
Corynetes violaceus Linn.

LYMEXYLIDÆ.

Hylecœtus lugubris Say.
Micromalthus debilis Lec. n. g. and
 sp.

CUPESIDÆ.

Cupes capitata Fab. Kalamazoo.
concolor Westw.

PTINIDÆ.

Ptinus fur Linn.
bimaculatus Melsh.
Eucrada humeralis Melsh.
Ernobius mollis Linn.
Oligomerus sericans Melsh.
Sitodrepa panicea Linn.
Trichodesma gibbosa Say.
Hadrobregmus errans Mels.
carinatus Say.
linearis Lec.
Anobium notatum Say.
Trypopitys sericeus Say.
Petalium bistriatum Say.
Xyletinus mucoreus Lec.?
fucatus Lec.
lugubris Lec. n. sp.
Lasioderma serricorne Fab.
Hemiptychus gravis Lec.
ventralis Lec.
Protheca puberula Lec.
Dorcatoma pallicorne Lec.
setulosum Lec.
incomptum Lec.
Cænocara oculata Say.
scymnoides Lec.
intermedia Lec.
Ptilinus ruficornis Say.
Hendecatomus rugosus Rand.
Sinoxylon bidentatum Horn. p.544.
Bostrichus armiger Lec.
truncaticollis Lec.

SPONDYLIDÆ.

Parandra brunnea Fabr.

CERAMBYCIDÆ.

Orthosoma brunneum Forst.
Tragosoma Harrisii Lec.
Aseum moestum Hald.
Criocephalus obsoletus Rand.
Smodicum cucujiforme Say.
Dularius brevilineus Say.
Phymatodes variabilis Fabr.
 varius Fabr.
 maculicollis Lec. n. sp. I.
Chion cinctus Dr.
Elaphidion incertum Newm
 villosum Fabr.
 parallelum Newm.
 unicolor Rand.
Callimoxys fuscipennis Lec.
Molorchus bimaculatus Say.
Batyle ruber Lec.
Cyllene pictus Drury.
 Robiniae Forst.
Calloides nobilis Say. H.
Arhopalus fulminans Fab.
Xylotrechus colonus Fab.
 sagittatus Germ.
 undulatus Say.
Neoclytus capræa Say.
 erythrocephalus Fab.
Clytanthus ruricola Oliv.
Microclytus gazellula Hald.
Cyrtophorus verrucosus Oliv.
Euderces picipes Fab.
Distenia undata Oliv.
Desmocerus palliatus Forst.
Encyclops cæruleus Say.
Centrodera decolorata Harr. H.
Acmaeops bivittata Say.
Gaurotes cyanipennis Say.
Bellamira scalaris Say. H.
Typocerus velutinus Oliv.
 sparsus Lec. n. sp. E.
Leptura capitata Newm.
 zebra Oliv.

Leptura rubrica Say.

proxima Say.
 vittata Germ.
 sphaericollis Say.
 vibex Newm.
 aspera Lec.

Psenocerus supernotatus Say.
Monohammus scutellatus Say.
 confusor Kby.

Dorcaschema nigrum Say.
Goes oculatus Lec.
Plectrodera scalator Fab. Lake
 Huron.

Acanthoderes decipiens Hald.
Leptostylus planidorsus Lec.
 commixtus Hald. H.
 macula Say.

Sternidius variegatus Hald.
 alpha Say
 cinereus Lec.
 Xanthoxyli Shimer.

Liopus signatus Lec.
 quercus Fitch.
 facetus Say.

Lepturgus symmetricus Hald.
Hyperplatys maculatus Hald.
Graphisurus fasciatus DeG.
 pusillus Kby.

Acanthocinus obsoletus Oliv.
Hoplosia nubila Lec.

Pogonocherus mixtus Hald. H.

Ecyrus dasycerus Say.

Eupogonius tomentosus Hald. H.
 vestitus Say.
 subarmatus Lec.

Saperda obliqua Say.
 cretata Newm.
 vestita Say.
 discoidea Fabr.
 tridentata Oliv.
 lateralis Fab.
 moesta Lec. H.
 concolor Lec.

Oberea ocellata Hald.
 bimaculata Oliv.

Tetraopes tetraophthalmus Forst.

BRUCHIDÆ.

- Bruchus pisi* Linn.
alboscuteUellatus Horn.
distinguendus Horn.
calvus Horn. var.
Hibisci Oliv.
musculus Say.
 several unnamed or new
 species.

CHRYSOMELIDÆ.

- Donacia piscatrix* Lac.
tuberculata Lac.
hirticollis Kby.
proxima Kby.
subtilis Kunze.
pubescens Lec.
confusa Lec.
femoralis Kby.
jucunda Lec.
Kirbyi Lec.
Macrolea Melsheimeri Lac.
Orsodachna atra Ahr. A.
Zeugophora scutellaris Suffr.
puberula Cr. var. ?
varians Cr.
consanguinea Cr. *
Lema brunnicollis Lac.
trilineata Oliv.
Chlamys plicata Fab.
cribripennis Lec. n. sp. p.
Exema conspersa Mannh.
Monachus saponatus Fab.
Cryptocephalus congestus Fab.
 var. *sulphuripennis* Melsh.
formosus Mels.
sellatus Suffr.
lituratus Fab.
venustus Fab.
Schreibersii Suffr.
dispersus Hald.
4-maculatus Say.
quadruplex Newm.
catarius Suffr.

- Cryptocephalus auratus* Fabr.
atomus Suffr.
 n. sp.

- Pachybrachys trinotatus* Melsh.
M-nigrum Melsh.
subfasciatus Hald.
atomarius Melsh.
femoratus Oliv.
infaustus Hald.
tridens Melsh.
abdominalis Say.
hepaticus Melsh.

- Adoxus vitis* Linn. H.
Xanthonia 10-notata Say.
villosula Melsh.

- Heteraspis pubescens* Melsh.
Chrysochus auratus Fab.
Paria 6-notata Say.
Colaspis brunnea Fab.
prætexta Say.
tristis Oliv.

- Chrysomela clivicollis* Kby.
10-lineata Say.
suturalis Fabr.
similis Rog.
elegans Ol.
multiguttis Stål.
philadelphica Linn.
Bigsbyana Kby.

- Gastrophysa Polygoni* Linn.
Prasocuris Phellandrii Ill. H.
varipes Cr.
obliquata Cr.

- Phyllodecta vulgatissima* Linn.
Plagioder a scripta Fab.
Cerotoma caminea Fabr.
Phyllobrotica decorata Say.
discoidea Fabr.
Luperus meraca Fabr.
Diabrotica 12-punctata Oliv.
vittata Fabr.
Galeruca americana Fab.
Sagittariæ Gyllh.
decora Say.
notata Fab.

- Trirhabda canadensis* Kby.

Hypolampsis Clarkii Cr. H.
Cedionychis gibbitarsis Say.
 vians Ill. var. *scripticollis*
 Say.
 thyamoides Cr.
 6-maculata Ill.
 quercata Fabr.
 scalaris Melsh.
Disonycha limbicollis Lec.
 var. *pallipes* Cr.
 alternata Ill.
 triangularis Say.
 collata Fabr.
Graptodera bimarginata Say.
 carinata Germ.
 exapta Say.
 rufa Linn.
 one unnamed species.
Longitarsus melanurus Melsh.
 testaceus Lec.
 several unnamed species.
Batophila spuria Lec.
Phyllotreta Zimmermanni Cr.
 vittata Fabr.
 bipustulata Fabr.
 robusta Lec. n. sp.
Dibolia ærea Melsh.
Systema frontalis Fabr.
 marginalis Ill.
Crepidodera Helxines Linn.
 atriventris Melsh.
 Modeeri Linn.
Epitrix cucumeris Harr.
 hirtipennis Melsh.
Mantura floridana Cr.
Chætoconema denticulata Ill.
 parcepunctata Cr.
 confinis Cr.
 rudis Lec. n. sp. M.
 protensa Lec.
 flavicornis Lec.
Psylliodes punctulata Melsh.
Blepharida rhois Forst.
Stenispa metallica Fabr.
 collaris Baly.
Odontota scapularis Oliv.

Odontota rubra Web.
 rosea Web.
Microrhopala porcata Melsh.
Physonota unipunctata Say.
Cassida nigripes Oliv.
Coptocycla aurichalcea Fab.
 guttata Oliv.
 purpurata Boh.
 clavata Fabr.

TENEBRIONIDÆ.

Nyctobates pensylvanica De G.
 barbata Kn. H.
Merinus lævis Oliv.
Upis ceramoides Linn.
Haplândrus femoratus Fabr. Kala-
 mazoo.
 concolor Lec. H.
Scotobates calcaratus Fab.
Xylopinus saperdioides Oliv.
Tenebrio obscurus Fab.
 molitor Linn.
 castaneus Kn.
 tenebrioides Beauv.
Blapstinus moestus Mels.
 interruptus Say.
Dicædus punctatus Lec.
Echocerus maxillosus Fab.
Uloma impressa Melsh.
 mentalis Horn.
Paratenetus punctatus Sol.
 gibbipennis Mots.
Diaperis Hydni Fab.
Hoplocephala bicornis Oliv.
Platydemà excavatum Say.
 ruficorne St.
 americanum Lap.
 picilabrum Mels.
 subcostatum Lap.
Scaphidema æneolum Lec.
Hypophlæus parallelus Fab. H.
Pentaphyllus pallidus Lec.
Bolitotherus bifurcus Fab.
Bolitophagus corticola Say. H.
Rhipidandrus paradoxus Beauv.

Meracantha contracta Beauv.
Strongylium tenuicolle Say.

CISTELIDÆ.

Hymenorus pilosus Mels. var.
 obscurus Say. var.?
 punctulatus Lec.
 niger Mels.
 rufipes Lec. H.
Cistela brevis Say.
 sericea Say.
Isomira 4-striata Coup.
Mycetochares Haldemani Lec.
 foveata Lec.
 tenuis Lec.
 binotata Say. H.
 longula Lec. n. sp.
 lugubris Lec. n. sp.
 analís Lec. n. sp.
 marginata Lec. n. sp. M.
 gracilis Lec. n. sp. M.
Capnochroa fuliginosa Melsh.
Androchirus luteipes Lec.

LAGRIIDÆ.

Arthromacra ænea Say.

PYROCHROIDÆ.

Pyrochroa flabellata Fab.
 femoralis Lec.
Schizotus cervicalis Newm.
Dendroides canadensis Latr.
 concolor Newm.

ANTHICIDÆ.

Corphyra Newmani Lec.
 lugubris Say.
 labiata Say.
 terminalis Say.
 elegans Hentz.
Notoxus anchora Hentz.
 monodon Fab.
Tomoderus interruptus Laf.

Anthicus formicarius Laf.
Anthicus floralis Payk.

difficilis Lec.
 scabriceps Lec.
 cervinus Laf.
 spretus Lec.
 fulvipes Laf.
 coracinus Lec.
 pallens Lec. H.
 granularis Lec.
 n. sp.

Xylophilus piceus Lec.
 fasciatus Mels.
 signatus Hald.
 basalis Lec.
 n. sp.?

MELANDRYIDÆ.

Canifa plagiata Mels.
 pallipes Mels.
 pallipennis Lec. n. sp. M.
Penthe obliquata Fabr.
 pimelia Fabr.
Synchroa punctata Newm.
Emmesa labiata Say.
Melandrya striata Say.
Spilotus 4-pustulosus Melsh.
Mystaxis simulator Newm.
Serropalpus striatus Hellen. H.
Dircæa liturata Lec.
 fusca Lec. n. sp. M.
Symphora flavicollis Hald.
Hallomenus scapularis Mels.
 debilis Lec.
 serricornis Lec. n. sp. M.
Eustrophus confinis Lec.
 bicolor Say.
 bifasciatus Say.
 tomentosus Say.
Orchesia castanea Melsh.
 gracilis Melsh.

MORDELLIDÆ.

Pentaria trifasciata Melsh.
Anaspis flavipennis Hald.

Anaspis rufa Say.

n. sp.?

Mordella melæna Grav.

scutellaris Fab.

irrorata Lec.

baltimorensis † Zimm.

marginata Mels.

lineata Mels.

undulata Mels.

Glipodes helva Lec.

Mordellistena trifasciata Say.

lutea Mels.

ornata Mels.

scapularis Say.

tosta Lec.

picicornis Lec.

cervicalis Lec.

fulvicollis Mels.

impatiens Lec.

nigricans Mels.

guttulata Hellm.

pustulata Mels.

convicta Lec.

ambusta Lec.

marginalis Say.

fuscata Mels.

discolor Mels.

n. sp.

Myodites Walshii Lec.

MELOIDÆ.

Meloe rugipennis Lec.

Macrobasis unicolor Kby.

Epicauta Convoluti Mels H.

vittata Fabr.

cinerea Forst.

pensylvanica De G.

CEDEMERIDÆ.

Ditylus cœruleus Rand. Lake Huron

Asclera ruficollis Say.

puncticollis Say.

MYCTERIDÆ.

Lacconotus punctatus Lec.

PYTHIDÆ.

Salpingus virescens Lec.

two other species.?

Rhinosimus nitens Lec.

RHYNCHITIDÆ.

Auletes ater Lec. H.

Cassandræ Lec.

Eugnaptus angustatus Gyllh.

var. *collaris* Gyllh.

Rhynchites æneus Boh.

cyanellus Lec.

Pterocolus ovatus Gyllh.

ATTELABIDÆ.

Attelabus analis Ill.

Rhois Boh.

OTIORHYNCHIDÆ.

Hormorus undulatus Uhler. Lake
Huron.

Panscopus erinaceus Say.

Anametis grisea Horn.

Phyxelis rigidus Say.

Otiorhynchus ligneus Oliv.

Cercopeus chrysorrhœus Say.

Pandeleteius hilaris Hbst.

Cyphomimus dorsalis Horn.

CURCULIONIDÆ.

Sitones flavescens Marsh.

tibialis Germ.

Ithycerus noveboracensis Forst.

Phytonomus comptus Say.

nigrirostris Gyllh.

Lepyrus geminatus Say.

Listronotus tuberosus Lec.

callosus Lec.

inæqualipennis Boh.

caudatus Say.

appendiculatus Boh.

frontalis Lec.

latiusculus Boh. H.

Macrops solutus Boh.

several unnamed species.

Hypomolyx pinicola Coup. H.**Hylobius pales** Boh. H.

confusus Kby.

Pissodes Strobi Peck. H.**Lixus rubellus** Rand.

rectus Lec.

mucidus Lec.

concavus Say.

Grypidius Equiseti Gyllh.**Erycus puncticollis** Lec.**Dorytomus laticollis** Lec.

brevicollis Lec.

luridus Mannh.

Acalyptus Carpini Linn.**Desmoris constrictus** Say.**Pachytychius discoideus** Lec.**Smicronyx ovipennis** Lec.

tychioides Lec.

vestitus Lec.

squamulatus Lec.

Endalus limatulus Lap.

ovalis Lec.

Tanysphyrus Lemnæ Gyllh.**Onychylis nigrirostris** Boh.

longulus Lec.

Anchodemus angustus Lec.

Hubbardi Lec.

Schwarzi Lec.

Lissorhoptrus simplex Say.

apiculatus Gyllh.

Bagous mamillatus Say.

obliquus Lec.

americanus Lec.

magister Lec.

nebulosus Lec.

bituberosus Lec.

transversus Lec.

Otidocephalus Chevrolati Horn.

perforatus Horn.

Magdalis hispoides Lec. H.

barbita Say.

olyra Hbst.

salicis Horn.

inconspicua Horn.

pandura Say.

armicollis Say.

pallida Say.

Anthonomus 4-gibbus Say

nebulosus Lec.

scutellatus Gyllh.

signatus Say.

rubidus Lec.

sycophanta Walsh.

rufipennis Lec.

suturalis Lec.

n. sp. near flavicornis.

corvulus Lec.

disjunctus Lec.

cratægi Walsh.

n. sp. near cratægi.

decipiens Lec.

Orchestes pallicornis Say.

niger Horn.

subhirtus Horn.

ephipiatus Say.

Elleschus ephippiatus Say.**Prionomerus calceatus** Say.**Piazorhinus scutellaris** Gyllh.**Proctorus decipiens** Lec.**Plocetes Ulmi** Lec.**Gymnetron teter** Schh.**Conotrachelus albicinctus** Lec.

nenuphar Harr.

seniculus Lec.

elegans Boh.

Cratægi Walsh.

posticatus Boh.

anaglypticus Fahr.

Rhyssomatus lineaticollis Say.**Zaglyptus striatus** Lec.**Acamptus rigidus** Lec.**Acalles sordidus** Lec. A.**Tyloderma foveolatum** Say. H.

Tyloderma variegatum Horn.
 æreum Say.
Cryptorhynchus parochus Say.
 bisignatus Say.
 fuscatus Lec.
 fallax Lec.
 ferratus Say.
Piazurus oculatus Say.
Copturus quercus Gyllh.
Acoptus suturalis Lec.
Mononychus vulpeculus Boh.
Craponius inæqualis Say.
Cœliodes acephalus Germ.
 asper Lec.
 cruralis Lec.
 nebulosus Lec.
Acallodes ventricosus Lec.
Ceuthorhynchus Rapæ Gyll.
 sulcipennis Lec.
 decipiens Lec.
 pusio Mannh.
 semirufus Lec.
 puberulus Lec.
 Erysimi Fab.?
 n. sp.
Phytobius velatus Gyllh.
Pelonomus sulcicollis Fahr.
 squamosus Lec.
Cœlogaster Zimmermanni Lec.
 cretura Hbst.
Rhinoncus pericarpus Gyllh.
 pyrrhopus Boh.
 longulus Lec.
Trichobaris trinotata Say.
Baris striata Say.
 tumescens Lec.
Pseudobaris nigrina Say.
 T-signum Boh.
Ampelogypter Sesostris Lec.
 ater Lec.
Madarus undulatus Boh.
Stethobaris corpulenta Lec.
Centrinus scutellum-album Say.
 rectirostris Lec.
 prolixus Lec.
 confinis Lec.

Zygobaris conspersa Lec.
 subcalva Lec. n. sp.
Barilepton cribricolle Lec.
 quadricolle Lec.
 filiforme Lec.
Balaninus uniformis Lec.
 nasicus Lec.

BRENTHIDÆ.

Eupsalis minuta Drury.

CALANDRIDÆ.

Sphenophorus ochreus Lec. Lake
 Michigan.
 pertinax Oliv. South Haven.
 robustus Horn. South Haven.
 costipennis Horn.
 cariosus Oliv.
 sculptilis Uhler.
 melanocephalus Fab.
 placidus Say.
Rhodobæus 13-punctatus Ill.
Calandra Oryzæ Fabr.
Dryophthorus corticalis Say.
Cossonus concinnus Boh.
 n. sp.
Allomimus dubius Horn. A.
Phlœophagus apionides Horn.
 minor Horn.
Rhyncolus oregonensis Horn.
Stenoscelis brevis Boh.

SCOLYTIDÆ.

Monarthrum fasciatum Say.
 mali Fitch.
Pityophthorus materiarius Fitch.
 minutissimus Harr.
 cariniceps Lec.
 puberulus Lec. H.
 consimilis Lec. n. sp.
 hirticeps Lec. n. sp. M.
 pusio Lec. n. sp. M.
 opaculus Lec. n. sp. M.

Xyloterus politus Say.
Xyleborus celsus Eichh.
 fuscatus Eichh.
 biographus Lec
 xylographus Zimm. Lansing.
 cælatus Zimm.
 punctipennis Lec. n. sp. M.
Dryocœtes septentrionis Mannh.
 affaber Mannh.
Xylocleptes decipiens Lec. n. sp.
Cryphalus rigidus Lec.
Tomicus pini Say. H.
Micracis suturalis Lec.
 rudis Lec.
 opacicollis Lec. n. sp.
 asperulus Lec. n. sp.
Chramesus Icoriæ Lec.
Phlœotribus liminaris Harr. Lan-
 sing.
Hylesinus aculeatus Say.

Hylesinus opaculus Say.
Dendroctonus similis Lec. H.
Hylurgops pinifex Fitch. H.

ANTHRIBIDÆ.

Eurymycter fasciatus Oliv.
Hormiscus saltator Lec.
Eusphyrus Walshii Lec.
Cratoparis lunatus Fab.
Brachytarsus tomentosus Say.
 variegatus Say.
Choragus Harrisii Lec. n. sp.
Euxenus punctatus Lec.

APIONIDÆ.

Apion rostrum Say.
 several unnamed species.

4. Description of the Larva of MICROMALTHUS DEBILIS Lec.

BY H. G. HUBBARD.

Color transparent white, mandibles and anal appendage castaneous.

Form cylindrical, very slightly flattened beneath, hardly narrowed laterally in front and behind. Body glabrous, except a few hardly visible hairs upon the sides, without legs. Length 0.10-.12 inch.; width about 0.03 inches.

Head not quite as broad as the segments of the abdomen, convex, transverse, enlarged posteriorly; sides rounded, convex; anterior border nearly straight, posterior border emarginate; above and below a few long bristles. No ocelli.

Antennæ short, inserted in depressions on the anterior angles of the head, of four joints increasing in length, the first very short, transverse, the second smaller, about as long as broad, the third longer than the preceding, with a short oval lobe below, before the tip, the fourth twice as long as the third, slender, blade-shaped, tipped with a minute spine.

Labrum transverse, somewhat enlarged anteriorly, borders nearly straight, anterior angles rounded, with long stout spines above and below. Mandibles as long as the antennæ, stout, curved, three-toothed with a large hatchet-shaped basal lobe, obliquely ridged upon the under surface.

Maxillæ, very large and prominent, longer than the mandibles; with palpi of three joints, the first and second short, cylindrical, the third as long as the first and second united, more slender, flat, and divided nearly to the base into two superimposed lobes bearing papillæ; maxillary lobe

divided anteriorly by a deep notch into two portions, the apical, smaller and narrower than the basal, blade-shaped, tipped with a long slender spine, and bearing four long and stout teeth projecting at right angles to the lobe, like the blades of a half-opened penknife; the basal portion with two rows of teeth on the border, and a slender tooth and bristle at the apex.

Labium consisting firstly, of an elongated, triangular mentum, with the apex thickened in a conical protuberance, bearing a pair of bristles near the middle, and another pair upon the thickened tip; secondly, of a transverse palpiger, bearing small fleshy palpi of two subequal joints, and its anterior border prolonged between them in a conical projection; thirdly, of an elongated, convex, corneous ligula, enlarged anteriorly, with straight borders and a pair of bristles near the tip. Behind and above the mentum and plainly seen through the transparent tissues, is a broadly triangular, horny piece, the base of which extends between the hinges of the mandibles, and the apex reaches as far as the middle of the ligula; upon the upper surface oblique grooves on each side correspond with the ridges upon the basal lobes of the mandibles, into which they lock when the mandibles are closed.*

Thoracic segments slightly thicker than the abdomen, the first longer, the two following subequal in length.

Abdomen cylindrical or slightly depressed, of nine segments, the first eight subequal, transverse, each with a few long bristles, the ninth conical, scatteringly covered with long bristles, terminating abruptly in two minute toothed appendages, one proceeding from the dorsal surface, and arching downwards, the other from the ventral surface, curving upwards, and resembling two hands with partly extended fingers, having the palms turned towards each other. The upper and longer appendage appears to be tubular for one-third of its length from the base, the remainder is concave beneath, and terminates in two terminal and six lateral teeth, directed downwards, their bases forming longitudinal ridges on the concave under surface. The lower appendage is shorter, more strongly curved, and in the opposite direction, concave above, expanded into a palm at the end, with eight teeth as in the preceding; the concave upper surface is distinctly denticulate.

The larva lives in damp situations, in the soft, crumbling wood of old oak logs, which have become entirely disintegrated and colored dark red, probably by a microscopic fungus. A number of larvæ, pupæ, and imagos were found together in a small portion of such a log on August 17th, 1874, at Detroit, Michigan.

As Dr. LeConte has placed this insect in the family Lymexylidæ, it will be interesting to compare its larva with that of *Hylecætus lugubris* Say, specimens of which are before me. The larvæ of *Hylecætus* were taken from cylindrical burrows in the solid wood of the American linden. It

* This piece and the mandibles, the forms and relative positions of which are shown in fig. 9 of the plate, though very conspicuous in dissections under the microscope, are omitted in fig. 5 in order to avoid obscuring overlying parts.

has a cylindrical body of twelve segments; a globular head, with two large ocelli, which are, however, covered by the epidermis; the first thoracic segment is enlarged, and partly covers the head, like a hood; the three thoracic segments bear well-developed legs; and the abdomen terminates in a long tapering style, toothed and concave on the upper surface, and turning upwards at the end; the stigmata are large and in their normal positions, one pair beneath, on the thorax, and eight pairs on the sides of the abdominal segments.

The antennæ are four-jointed, exceedingly minute and stout, and, as in *Micromalthus*, have the third joint lobed beneath, an apical spine, and occupy similar positions on the anterior angles of the head; the maxillæ also have the lobe divided into an upper and lower portion, although the separation is not very distinct, and appears under the lens as a corneous line, the spines upon the lobe are slender and not markedly different upon the two portions. The labrum and labium are stout and thick, but do not present important structural differences from the same parts in *Micromalthus*. The mandibles are simple or slightly notched, the basal lobes not prominent, but finely ridged, and closing upon a triangular corneous piece which lies above the mentum. All the parts of the mouth in *Hylecætus* are smaller, stouter, and simpler in their structural details than the corresponding organs in *Micromalthus*, differences which perhaps have some relation to the harder material in which the former lives. Notwithstanding the striking difference in their external forms, the important structural analogies between the antennæ and mouth parts, seem to indicate a relationship between these two larval forms.

Explanation of Plate 15.

Micromalthus debilis Lec., Imago, central figure.

1. " " " Larva, enlarged twelve times.
- 2.—Head and thoracic segments, lateral view; much enlarged.
- 3.—Terminal segments, showing the anal appendages, lateral view.
- 4.—Head from above, very much enlarged.
- 5.—Head from below, with mandibles omitted.
- 6.—Right maxilla, seen from below.
- 7.—Right antenna, from below.
- 8.—Anal appendages, seen from below, very much enlarged.
- 9.—Corneous triangular piece lying above the mentum, with the left mandible thrown back, seen from above; the ridges upon the under surface of the mandible are indicated by dotted lines.

NOTE—For the sake of distinctness, the appendages in fig. 3 are drawn too large in proportion to the segments. The proportions are more correctly given in figs 1 and 8.

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