

Synopsis of the MONOTOMIDÆ of the United States.

BY GEORGE H. HORN, M. D.

This family contains a small number of genera in which the anterior coxæ are small and round, without trochanters, their cavities widely closed behind. Middle coxæ small, round, closed by the mesosternal epimera. Posterior coxæ transversely oval. Abdomen with five free ventral segments, the first and fifth elongated, the intermediate three shorter and equal. Tarsi three-jointed, last joint longer than the others united. Claws simple. Antennæ ten-jointed, club of either one or two joints. Maxillæ bilobed. Labrum almost entirely concealed by the epistoma. Elytra truncate, pygidium exposed.

The males have a small additional segment as in the Rhizophagini.

The differences between the genera composing this family and the Lathridiidæ seem to be narrowed down to — elytra truncate and pygidium exposed. I am unable to find that any more definite characters have been given by authors, and my studies of the genera of Lathridiidæ as restricted by Dr. Leconte are not so thorough as to warrant any definite expression of opinion, but I am inclined to adopt the views of Lacordaire and the Catalogus Gemm. et Har., where the genera here included are placed among the Lathridiidæ. A further discussion of this subject is deferred until an opportunity is afforded for revising *Lathridius* and its closely allied genera.

It is surprising what differences of opinion prevail in the books regarding the number of the tarsal joints. Lacordaire and Erichson say three, Aubé and Motschulsky four, Redtenbacher 3—4—4, Leconte five. My own observations are in accord with Erichson.

The following arrangement of the genera is proposed:

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|---|----------------------|
| Head slightly prolonged behind the eyes, then suddenly constricted..... | 2. |
| Head parallel behind the eyes, not at all constricted..... | 5. |
| 2.—Intercoxal process of abdomen broad, feebly rounded in front..... | 3. |
| Intercoxal process triangular, acute..... | 4. |
| 3.—Terminal joint of antennæ suddenly broader, joint nine not wider than eight..... | MONOTOMA. |
| Last two joints enlarged. | |
| Ninth joint as wide as the tenth. Elytra irregularly punctured. | PHYCONOMUS. |
| Ninth joint not as wide as tenth. Elytra punctured in striæ. | HESPEROBÆNUS. |
| 4.—Ninth joint as wide as tenth. Elytra punctured in striæ..... | EUROPS. |
| 5.—Last joint of antennæ suddenly enlarged, ninth not wider than eighth. | |
| Elytra punctured in striæ..... | BACTRIDIMUM. |

Species occur in each of the genera on both sides of the continent except *Phyconomus*, which occurs on the sea-shore of the Pacific only.

The sequence of genera in the above table is different from that adopted in the "Classification," as it seems to show a certain relationship with the Nitidulidæ through *Bactridium*, and to the Lathridiidæ through *Monotoma*, the other genera being very natural intermediates between these two.

MONOTOMA Hbst.

Head slightly prolonged behind the eyes, then suddenly constricted. Antennæ ten-jointed, last joint suddenly broader, ninth joint not wider than the preceding. Elytra with rows of punctures each bearing a short hair. Intercoxal process broad, feebly rounded in front, first ventral segment without coxal lines.

The species of this genus are much more difficult to separate than those of any other in the family, on account of the similarity of form and sculpture and the tendency to become coated with extraneous matters, which adhere to and hide to a greater or less extent the surface and are troublesome to remove.

The head is usually densely punctured, the punctures coarse and deep, each bearing a very short whitish hair.

The thorax is similarly sculptured, and has near the base two foveæ more or less marked, often very feeble. One species has four excavations. In shape there is a moderate variation. The usual form is narrowed in front, but species occur with the sides parallel or even slightly convergent posteriorly. The anterior angles may be prominent or not. The hind angles are also variable, usually rectangular and moderately prominent, often feeble or even obliterated.

The elytra vary somewhat in sculpture. One species has simple punctures, the others have punctures more or less muricate, especially near the base.

The underside of the body varies in sculpture from a coarse punctuation almost to smoothness and is a useful character in defining species.

The following table gives in brief the principal characters of the species and will enable them to be easily distinguished.

Antennæ slender, joints 4—9 longer than wide.....	producta.
Antennæ stouter, joints 4—9 submoniliform.....	1.
1.—Metasternum densely punctured at middle and sides.....	2.
Metasternum nearly smooth at middle and posteriorly.....	6.
2.—Head rather deeply obliquely impressed on each side.....	picipes.
Head regularly convex, not impressed.....	3.

- 3.—Thorax (as limited by the angles), longer than wide.....**fulvipes**.
 Thorax nearly square, or even slightly wider than long.....4.
 4.—Thorax quadrimaculate.....**quadrimaculata**.
 Thorax at most feebly impressed posteriorly.....5.
 5.—Thorax distinctly wider posteriorly, hind angles prominent...**americana**.
 Thorax parallel, hind angles not prominent.....**parallela**.
 6.—Thorax moderately densely punctured, opaque.
 First segment of abdomen distinctly punctured.....**mucida**.
 First segment nearly smooth.....**texana**.
 Thorax moderately shining, sparsely punctate, narrow posteriorly. Elytra
 with rows of fine, simple punctures.....**longicollis**.

In the Bull. Mosc. 1868, iii, p. 199—200, Motschulsky in a few words indicates the following species as occurring in our fauna, *fulvipennis*, *subnigra*, *parallelocollis* and *corpulenta*, the last two from New Orleans. The few notes are not at all adequate for their recognition and they cannot be considered as described species, I think under the circumstances it is better to drop them entirely.

M. producta Lec. Proc. Acad. 1855, p. 305.—Elongate, black, opaque, sparsely clothed with short white hair, antennæ and legs rufous. Head coarsely and densely punctured. Thorax longer than wide, gradually wider posteriorly, anterior angles obtuse not prominent, hind angles slightly prominent, disc moderately convex with a vague impression on each side of middle of base, surface coarsely and densely punctured, margin finely crenate. Elytra substriate, striæ with coarse punctures, submuricate at base becoming finer toward the apex. Body beneath black, opaque, coarsely and moderately densely punctured. Length .12 inch; 3 mm.

In the male the metasternum is broadly concave, the first ventral less broadly but rather more deeply concave, the terminal ventral not impressed.

This species is the most elongate in our fauna and is easily known by the structure of the antennæ. It should be compared with the European *angusticollis*.

Occurs in the Middle States region.

M. picipes Hbst. Käfer v, 24, pl. 46, fig. 2; *foveata* Lec. Proc. Acad. 1855, p. 305.—Moderately elongate, black or brownish, opaque; antennæ and legs rufous. Head densely and coarsely punctured, on each side rather deeply obliquely impressed. Thorax slightly longer than wide, sides finely crenate and very slightly diverging posteriorly, anterior angles obtusely prominent, hind angles small scarcely prominent, disc moderately convex, coarsely and densely punctured and slightly foveate at base on each side of middle. Elytra with striæ of moderate punctures, not closely placed and slightly submuricate at base. Body beneath moderately coarsely and densely punctured, first ventral more coarsely than the following. Length .08 inch; 2 mm.

In the male the first ventral is slightly concave the last ventral not impressed.

The surface is sparsely clothed with short whitish hairs as is usual in the genus. Its special distinctive character is in the impression of the head.

Occurs from the Middle States to Texas and California, probably introduced from Europe.

M. fulvipes Mels. Proc. Acad. ii, 111; Lec. Proc. Acad. 1855, p. 305; *opaca* Zieg. Proc. Acad. ii, 271.—Moderately elongate, black, subopaque, elytra often paler, legs and antennæ rufous. Head coarsely and densely punctured, not impressed. Thorax longer than wide, narrower in front, sides straight and finely crenate, anterior angles obtusely prominent, hind angles not prominent, disc convex, coarsely and densely punctured, bi-impressed at base. Elytra with striæ of fine, very feebly submuricate punctures, nearly equal in size at apex and base. Body beneath moderately coarsely and densely punctured, abdomen less evidently punctured. Length .08 inch; 2 mm.

This species resembles *picipes* but the head is not impressed. The form of its thorax recalls that of *productum*.

Occurs from Pennsylvania to Illinois.

M. quadrifoveolata Aubé, Ann. Ent. Soc. France, 6, p. 468, pl. 17, fig. 9; Motsch., Bull. Mosc. 1837, p. 115, pl. 7, fig. c.—Elongate, ferruginous, subopaque. Head coarsely and not densely punctured. Thorax as wide as long, sides finely crenate, straight and very slightly divergent posteriorly, anterior angles obtuse, not prominent, hind angles rectangular, moderately prominent, disc coarsely and densely punctured and with four rather deep impressions, the anterior and posterior on each side united by an intermediate groove. Elytra rather finely submuricately punctured at base, punctures becoming rapidly finer and more distant toward the tip. Body beneath moderately densely punctured, abdomen less coarsely punctured than the metasternum. Length .08 inch; 2 mm.

In the male the metasternum has a very feeble depression, the first ventral more distinctly concave, the last ventral is simple.

Occurs in the District of Columbia, (Ulke).

M. americana Aubé, Ann. Ent. Soc. Fr., 6, p. 461, pl. 17, fig. 5; Lec. Proc. Acad. 1855, p. 305.—Moderately elongate, black, subopaque, antennæ and legs rufous. Head coarsely and densely punctured, not impressed. Thorax distinctly wider than long, anterior angles obtuse, hind angles rectangular, moderately prominent, sides subcrenate, straight, moderately divergent posteriorly, disc convex, coarsely and densely punctured and with scarcely a trace of basal depressions. Elytra rather coarsely submuricately punctured, punctures somewhat finer at apex. Body beneath coarsely and moderately densely punctured. Length .08 inch; 2 mm.

The metasternum of the male is very slightly concave, the first ventral more distinctly concave, the last ventral with an oval flattened space.

Occurs from Pennsylvania to Illinois, Florida, Texas and Arizona.

M. parallela Lec., Proc. Acad. 1855, p. 305.—Moderately elongate, black, opaque, antennæ and legs rufous. Head coarsely and densely punctured, not impressed. Thorax nearly square, sides parallel, angles not prominent, disc

moderately convex, at base vaguely impressed, coarsely and densely punctured. Elytra with striæ of moderately fine submuricate punctures which become finer and more distant toward the tip. Body beneath densely and moderately coarsely punctured, the first ventral as coarsely and densely as the metasternum. Length .08 inch; 2 mm.

The metasternum of the male is slightly flattened, the first ventral vaguely concave, the last ventral simple.

Occurs in New York, Michigan and Canada.

M. mucida Lec., Proc. Acad. 1855, p. 305.—Moderately elongate, brownish, opaque, antennæ and legs rufous. Head coarsely and densely punctured, not impressed. Thorax nearly square, sides straight, parallel and subcrenate, anterior angles obtuse, not prominent, disc moderately convex, at apex with scarcely a trace of impression, surface coarsely and moderately densely punctured. Elytra with striæ of moderate punctures, not closely placed, feebly submuricate at base, finer and more distant at apex. Mesosternum very sparsely and finely punctured and with coarse punctures near the sides in front. Abdomen sparsely punctured, first ventral very distinctly and moderately densely punctulate. Length .06 inch; 1.5 mm.

The metasternum of the male is slightly flattened, the first ventral vaguely concave, the last ventral moderately deeply concave.

One specimen, Fort Yuma, California.

M. texana n. sp.—Moderately elongate, piceous, subopaque, antennæ and legs rufous. Head coarsely and densely punctured. Thorax nearly square, anterior angles not prominent, hind angles rectangular moderately prominent, sides straight, parallel, subcrenate, disc moderately convex, posteriorly very vaguely foveate, surface moderately densely and rather coarsely punctured. Elytra rather coarsely and moderately closely submuricately punctured, punctures finer and less muricate near the tip. Metasternum nearly smooth at middle, sparsely punctured near the sides. Abdomen nearly smooth, first ventral very sparsely and finely punctulate. Length .06 inch; 1.5 mm.

The male metasternum is slightly flattened, a median line moderately deeply impressed, first ventral merely flattened, last ventral moderately deeply concave.

Occurs at Waco, Texas, (Belfrage).

M. longicollis Gyll., Ins. Suecc. p. 635; Aubé, loc. cit. p. 467, pl. 17, fig. 8.—Elongate, ferruginous, slightly shining. Head coarsely but not densely punctured, hind angles distinctly dentiform. Thorax slightly longer than wide and slightly narrower posteriorly, anterior angles obtuse but slightly prominent, hind angles very small, sides very feebly arcuate, margin scarcely crenulate, disc moderately convex, moderately shining, not densely punctate posteriorly distinctly bifoveolate. Elytra with series of small round punctures, not closely placed becoming gradually finer to tip, intervals distinctly alutaceous. Body beneath sparsely punctulate, metasternum at middle nearly smooth, abdomen very sparsely and finely punctulate. Length .06 inch; 1.5 mm.

Three ♀ specimens from District of Columbia, differing from all our other species by the comparatively smooth and shining thorax.

PHYCONOMUS Lec.

Head slightly prolonged behind the eyes, then suddenly constricted, front slightly dilated over the base of the antennæ. Antennæ ten-jointed, last two joints suddenly enlarged and of equal width. Intercoxal process of abdomen rather wide, broadly arcuate in front. Elytra opaque, irregularly sparsely punctate and opaque. Prosternal sutures distinct.

This genus seems more closely allied to *Monotoma* than any other, and in fact follows naturally the last species of that genus in form. The prosternal sutures are nearly as distinct as in *Rhizophagus*. One species only is known.

P. marinus Lec., (*Monotoma*), Proc. Acad. 1858, p. 64; Classification, p. 86.—Moderately elongate, subdepressed, brownish, opaque, sparsely clothed with short whitish hairs. Head opaque, alutaceous, sparsely punctulate. Thorax slightly longer than wide, anterior angles acute, slightly prominent, sides feebly arcuate, gradually narrowed to base, margin crenate, posterior angles obliterated, disc moderately convex, opaque, alutaceous, moderately densely punctulate. Elytra slightly wider than the thorax, opaque, alutaceous, sparsely punctulate. Body beneath opaque, darker in color, sparsely punctulate, metasternum with subgranular aspect. Length .14—.18 inch; 3.5—4.5 mm.

Occurs on the sea-shore south of San Francisco, under decomposing sea-weeds.

HESPEROBÆNUS Lec.

Head slightly prolonged behind the eyes and then suddenly constricted. Antennæ ten-jointed, last two joints suddenly larger, the ninth however not as wide as the tenth. Intercoxal process oval at tip.

Two species occur in our fauna, one from the Atlantic region, the other in California.

They are distinguished as follows:

Elytra with basal third rufous, striæ fine, punctures fine and distant. Anterior angles of thorax prominent, disc with very narrow impunctured space.....**abbreviatus** Motsch.

Elytra entirely piceous, striæ rather deep, punctures coarser and rather approximate. Anterior angles of thorax not prominent, disc with broad impunctured space.....**rufipes** Lec.

H. abbreviatus Motsch., (*Rhizoph.*), Bull. Mosc. 1845, iv, p. 371, pl. 7, fig. 3; *rufipennis* Lec., (*Monotoma*), Proc. Acad. 1858, p. 64.—Moderately elongate, subdepressed, piceous, legs, antennæ and basal third of thorax rufous. Head rather densely and coarsely punctured. Thorax longer than wide, sides feebly arcuately narrowed to base, anterior angles acute and moderately prominent externally, hind angles obtusely rounded, margin finely serrulate, disc subdepressed, surface sparsely punctured, at middle a narrow smooth space, at sides densely punctured. Elytra subdepressed, sides very feebly

arcuate, surface finely striate, striæ with indistinct distant punctures. Body beneath punctured, ventral segments more densely and finely. Length .10 inch; 2.5 mm.

The first ventral segment has a fine coxal line which does not attain the posterior margin.

Occurs in California and Nevada, under bark.

H. rufipes Lec., New Species, 1863, p. 65.—Piceous, subdepressed, antennæ and legs rufous. Head coarsely punctured at the sides, at middle nearly smooth. Thorax as wide as long, sides feebly arcuate and gradually narrowed to base, anterior angles not prominent, hind angles rounded, margin obsoletely crenulate, disc coarsely punctured and with a broad median smooth space. Elytra slightly wider than the thorax, surface striate, striæ with moderately deep and rather closely placed punctures. Body beneath sparsely punctured. Abdomen moderately densely punctured, the first segment more coarsely but more sparsely. Length .12 inch; 3 mm.

As in the preceding there is a distinct but fine and short coxal line.

Occurs in Missouri, Georgia, Louisiana.

H. capito Fairm., (*Rhizoph.*), Rev. Zool. 1850, p. 54.—This insect resembles *abbreviatus* in coloration but has the elytra as distinctly sculptured as in *rufipes*. The thorax is very slightly longer than wide, anterior angles not prominent, sides feebly crenulate, disc depressed, with coarse punctures arranged irregularly in rows. Length .10 inch; 2.5 mm.

Occurs at Honolulu, Sandwich Islands.

EUROPS Woll.

Head slightly prolonged behind the eyes, then suddenly constricted. Antennæ ten-jointed, last two joints suddenly larger and of equal width. Front not dilated before the eyes. Intercoxal process narrow, triangular and subacute. Elytra with striæ of punctures.

This genus corresponds with *Nomophlæus* Lec., (Proc. Acad. 1878, p. 328). It agrees with *Phyconomus* in the structure of the antennæ but differs in all the other characters above mentioned.

Two species only are known in our fauna, one from each side of the continent, two others have been made known by Wollaston. For convenience of comparison a description of the latter is added.

Thorax as wide as long, a rather deep crescentic subbasal impression. First ventral with distinct coxal lines.....**pallipennis** Lec.
Thorax a little longer than wide, a vague longitudinal impression. First ventral without coxal lines.....**impressicollis** Woll.
Thorax one-half longer than wide, no discal impressions. First ventral without coxal lines.....**longicollis** n. sp.

E. impressicollis Woll., has been introduced in the above table as a point of comparison, the other species by the same author is unknown to me in nature.

E. pallipennis Lec., (*Nomophloeus*), Class. Col. 1861, p. 86.—Cylindrical, slightly depressed, piceous, front paler, elytra luteous, suture with a narrow piceous margin dilated at apex. Head sparsely punctate. Antennæ brownish. Thorax as wide as long, slightly narrowed posteriorly, sides nearly straight, margin slightly serrate near the hind angles, surface finely alutaceous and with coarse, slightly elongate punctures sparsely placed and much finer at the sides, middle of disc impunctured and with a moderately deep crescentic impression near the base. Elytra not wider than the thorax, surface finely alutaceous and with striæ of moderate punctures not deeply impressed, finer at tip. Body beneath sparsely and rather finely punctate; first ventral segment with distinct coxal lines. Pygidium moderately punctate. Length .10—.12 inch; 2.5—3 mm.

I have seen four specimens all collected in Pennsylvania. The males have the additional terminal abdominal segment.

E. impressicollis Woll., Ins. Mader. p. 150, pl. 3, fig. 2.—Elongate, subdepressed, body beneath piceous, above pale castaneous, elytra with suture and margin narrowly, tip more widely piceous. Head sparsely punctate at sides and base. Antennæ rufo-testaceous. Thorax longer than wide, sides parallel, surface finely alutaceous, middle of disc with vague longitudinal impression on each side of which are sparsely placed punctures. Elytra not wider than thorax, subdepressed, sides parallel, surface with striæ of moderate punctures rather distantly placed. Body beneath very sparsely punctate. Pygidium sparsely but more evidently punctate. Length .09 inch; 2.5 mm.

The punctures of the elytra as well as those on the under surface bear short hairs.

This species is one of the discoveries of Mr. Wollaston, in the Madeiras, and although not belonging at all to our fauna is introduced in the present paper for comparison.

E. longicollis n. sp.—Elongate, subdepressed, rufo-ferruginous. Head moderately coarsely but not densely punctate. Thorax one-half longer than wide, sides parallel, apex rather suddenly narrowed and very slightly tubulate in front, disc moderately convex and regularly punctate over the entire surface. Elytra not wider than the thorax, parallel, disc with rows of rather closely placed punctures, moderately deeply impressed. Prosternum sparsely punctured at the sides. Metasternum sparsely and more finely punctate. Abdomen moderately densely punctate, first segment more sparsely and finely. Pygidium moderately densely punctate. Length .14 inch; 3.5 mm.

The male has the first ventral segment moderately deeply longitudinally impressed, and in the impression on each side a row of fine hairs. The first ventral of the female is simple.

This species has a different appearance from the other two by its elongate form, and the slight prolongation of the thorax anteriorly in a tubulate manner. I cannot find any generic character for its separation.

Three specimens, California and Nevada.

BACTRIDIDIUM Lec.

Head parallel behind the eyes, not at all constricted. Antennæ ten-jointed, terminal joint suddenly larger, ninth joint not wider than the eighth. Intercoxal process rather broad, truncate in front. Elytra with rows of punctures. First ventral segment with distinct coxal lines.

Three species occur in our fauna, two from the Atlantic region and one from California, others are known to me from Mexico (*adustum* Reitter), and Rio, (*Fryi* n. sp.).

They may be known as follows:

Thorax merely flattened or with linear impressions.

Sides of elytra closely finely striate.....**ephippigerum** Guer.

Sides of elytra smooth or sparsely punctate.

Body beneath and abdomen scarcely punctured.

Thorax merely flattened; elytra rufous, tip and sides piceous.

striatum Lec.

(Thorax depressed and with a crescentic impression; elytra yellowish.

Fryi n. sp.)

Body beneath and abdomen rather coarsely punctured.

Color piceous, thorax and elytra scarcely depressed...**striolatum** Rtrr.

Thorax at middle broadly concave.

Elytra with a broad, vague longitudinal impression.....**cavicolle** n. sp.

Crine Pasc., Journ. of Ent. ii, 1863, p. 29, does not differ from *Bactridium*, his species is however quite different from *Fryi*, which is from the same region.

B. ephippigerum Guer., (*Rhizoph.*), Icon. Regne Anim. p. 190, pl. 41, fig. 1; *erythropterum* Mels., Proc. Acad. ii, p. 109; *nanum* Erich., Germ. Zeitschr. iv, p. 360.—Piceous, shining, depressed, elytra rufous, sides and tip darker, antennæ and legs rufous. Head rather coarsely and densely punctured. Thorax slightly wider than long, sides feebly arcuate and somewhat narrowed to base, margin posteriorly bidenticulate, disc flattened and with a vague median impression limited on each side and posteriorly with a very indistinct margin, surface sparsely punctured at middle, much more densely at the sides. Elytra slightly wider than the thorax, finely striate, striæ at the sides finer and approximate, those of the disc with fine, rather closely placed punctures. Body beneath sparsely punctured. Abdomen coarsely punctured, the last segment densely and rugulose, first segment with distinct coxal lines attaining the hind margin. Length .08 inch; 2 mm.

This species is easily distinguished from every other in our fauna by the densely striate sides of the elytra.

Occurs from New York to Missouri and Louisiana.

B. striatum Lec., (*Monotoma*), Proc. Acad. 1858, p. 65.—Elongate, depressed, rufous, shining. Head sparsely punctate. Thorax as wide as long, sides in front slightly arcuate posteriorly, straight and gradually convergent posteriorly, hind angles rounded, margin posteriorly obsoletely bidentate, disc

flattened with irregularly placed coarse punctures but without depressed space, sides more densely punctured. Elytra slightly wider than the thorax, paler than it and with the sides narrowly, apex more widely piceous, surface striate, striæ fine with fine distant punctures, striæ at sides replaced by irregularly placed punctures. Body beneath nearly smooth. Abdomen with punctures distinctly visible on the last two segments only, first segment with coxal lines. Length .08 inch; 2 mm.

This species closely resembles the preceding in form and color but is more depressed, smoother beneath and with no striæ on the sides of the elytra.

Occurs under bark, in the desert regions of south-eastern California.

B. adustum Reitter, from Mexico, is closely allied to this species, it is however more convex, the thorax with more punctures, the elytra more evidently striate and the striæ more deeply and closely punctured. It is as smooth beneath as *striatum*.

B. striolatum Reitter, (*Rhizoph.*), Verhandlungen des naturforschenden Vereins in Brünn, xii, 1872, (Sonderabdruck p. 14).—Piceous or rufo-piceous, antennæ and legs paler, form moderately elongate, subdepressed. Head coarsely but not densely punctured. Thorax slightly wider than long, sides feebly arcuate and gradually narrowed posteriorly, and obsoletely bidenticulate, disc subdepressed, moderately coarsely but not densely punctured, punctures of the middle subconfluent forming a vague U-shaped mark. Elytra slightly wider than the thorax, slightly convex, surface striate, striæ with fine not closely placed punctures, intervals finely alutaceous, striæ at sides replaced by sparse punctures. Abdomen coarsely punctured, first segment very finely and sparsely punctured and with distinct coxal lines. Length .08 inch; 2 mm.

This species is the most convex in our fauna. Its color varies from piceous to testaceous, and certain individuals present the appearance of a paler elytral vitta extending from the humeri toward the tip. *Hesperobæxus testaceus* Motsch., seems to be merely an immature form.

Occurs from Canada to Florida.

B. Fryi n. sp.—Pale rufous, elytra rufo-testaceous, elongate, subdepressed. Head sparsely punctate. Thorax quadrate, angles obtuse, sides straight, parallel, margin posteriorly obsoletely bidentate, disc flattened, very sparsely and irregularly punctured and with a feeble crescentic subbasal impression. Elytra slightly wider than the thorax, slightly convex, sides parallel, surface with rows of fine distant punctures, sides smooth. Body beneath nearly impunctured. First segment of abdomen with scarcely any trace of punctures and with distinct coxal lines, segments two to four with fine punctures, last segment more distinctly punctured. Pygidium sparsely punctured. Length .08 inch; 2 mm.

I have before me two specimens of this species, collected by Alexander Fry, Esq., of London, during a visit to Brazil, at Rio de Janeiro.

This species is introduced here to show the generic distribution.

B. cavicolle n. sp.—Moderately elongate, rufescent, shining. Head sparsely punctate. Thorax one-fourth broader than long, sides parallel, slightly sinuate at middle, anterior and posterior angles rounded, margin posteriorly very obsoletely bidentate, disc flattened, at middle rather broadly concave and very sparsely punctate, at sides more densely and coarsely. Elytra scarcely wider than the thorax, each longitudinally broadly impressed near the suture, surface striate, striæ with moderately impressed but not closely placed punctures which become finer near the tip, sides with a few sparsely placed punctures. Body beneath nearly smooth. First ventral segment very sparsely and finely punctured, second, third and fourth each with a single row of closely placed deep punctures, last ventral sparsely punctate. Pygidium coarsely punctured. Length .09 inch; 2.25 mm.

The concavity of the disc of the thorax, with its generally broader form readily distinguishes this species.

One specimen in my cabinet from Pennsylvania.

Revision of the NITIDULIDÆ of the United States.

BY GEORGE H. HORN, M. D.

Anterior and middle coxæ transverse, the former not prominent, posterior coxæ flat. Antennæ ten or eleven-jointed, capitate, straight. Tarsi usually five-jointed, nearly always dilated, first joint as long as the second; rarely four-jointed *Cybocephalus* or three-jointed *Smicrips*.

The above short diagnosis sufficiently indicates the more important and defining characters of the family. For a fuller exposition the student is referred to the "Classification of the Coleoptera of North America."

With the exception of the two genera above indicated the family is quite homogeneous, including them as aberrant members there is no more heterogeneity than is usual in almost every family of large size.

Mr. Murray (Monograph. p. 224), is willing to exclude *Cybocephalus*, basing his views on the four-jointed tarsi, the form of the thorax beneath and finally the general appearance, "to my eye *Cybocephalus* wants this family resemblance." The first objection is certainly entitled to a little consideration, but we are not informed where the genus is to be placed, if in a new family the precedent would require numerous new families everywhere among the Coleoptera from the Dytiscidæ down. The objection based on the structure of the thorax beneath is not at all valid, as *Cybocephalus* differs far less from *Amphicrossus* or *Cyllodes* than these do from *Nitidula*. Regarding the lack of family resemblance I am unable to see any feature which deserves more attention than another. *Pallodes* and *Conotelus* are