

## A REVISION OF THE AMERICAN PAEDERINI.\*

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The following revision has been long in contemplation, but it is only recently that the author has felt warranted in beginning the study of so great a multitude of species, most interesting and instructive though they are in their varied structural characters. They indeed form a taxonomic problem hardly less fascinating, though rather less difficult, than that afforded by the still more numerous Aleocharini, the latter being even more diversified in structure and more involved in their relationships with the other tribes of Staphylinidae. But few of our described species are not included in the material serving as the basis of this revision and it is hoped that the relationships of the various genera and species are given with sufficient clearness to enable the student to identify and arrange his material, with a view to the gradual evolution of a more complete and cosmopolitan comparative morphology of the tribe. With this end in view all genera, native and foreign, of which it was possible to procure examples, have been included in the tables, but the only species considered, excepting typical representatives of hitherto undescribed foreign genera, are those which occur in North America above the northern boundary of Mexico.

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### PAEDERINI.

The Paederini include all those Staphylinidae, with large anterior coxae, having the fourth joint of the maxillary palpi small and either aciculate, conical or specially modified in structure and the antennae remotely separated and inserted at

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the extreme sides of the front under a more or less prominent supra-antennal ridge or tumidity. The Aleocharini, Stenini, Euaesthetini and some Xantholinini have the fourth palpal joint small and aciculate, but the antennae are placed more upon the upper surface of the front, in smaller and more exposed foveae and are less widely separated at base, being notably approximate in the Xantholinini. The Pinophilini, having the antennae inserted as in Paederini, have the fourth joint of the maxillary palpi large and very obliquely securiform; they are therefore not closely related to the Paederini and their reference to that tribe as a subtribal group in the European catalogue of Heyden, Reitter and Weise is not justified in any way.

The general form of the body in this tribe is more or less parallel and moderately to feebly convex; in size they vary from very minute to that of a moderately large *Staphylinus*. The integuments are moderately dense, generally rather sparsely sculptured and with inconspicuous vestiture, except in a few cases, such as the Lithochares and in *Pseudomedon*, where the sculpture and short vestiture become very dense and the surface lustreless. The head is well developed as a rule, but the neck varies greatly in width, more so in fact than in most of the other Staphylinid tribes and forms a valuable taxonomic criterion, as is also the case with the labrum, which is greatly diversified in structure as may be inferred from the generic descriptions of the tables. The fourth joint of the maxillary palpi, although small in size throughout, varies in structure to a remarkable degree as seen in *Gastrolobium*, *Paederus* and *Echiaster*. The ligula may be bilobed, as in the Cryptobia and Lathrobia, fimbriate as in the Lithochares, tridentate as in the Scopaei or unarmed at tip. But comparatively little variation has been noted in the mentum or labial palpi. The gular sutures are greatly diversified and have been employed in the definition of the genera in some of the larger subtribes, such as the Lathrobia and Medones, though within the limits of some others, as in the greater part of the Cryptobia, the Sunii, Stilici and Echiasteres, they are so fixed and uniform as to be of no use in generic classification. These sutures may be either united, forming a single suture, or extremely widely

separated and may be most approximate at base or near the anterior part of the post-oral surface of the head, with all intermediate modifications. When considered broadly the gular sutures undoubtedly form very valuable and reliable generic characters in the Paederini. Such other characters as have been found useful in the definition of genera and species will be mentioned under the more or less detailed descriptions or subjoined notes.

Many of the Paederini have been found in the company of ants of various species and it is quite possible that most of them may be thus associated to a greater or less degree of intimacy at some stage of their existence, but in only a very few cases does this association assume the form of true and life-long symbiosis, as in the case of *Megastilicus* for example. A correspondent — Dr. W. M. Wheeler — recently sent me a specimen of *Hesperobium flavicorne*, with the statement that it had been hatched from pupae found in the nests of *Formica incerta* Emery. Probably in such cases the Staphylinid is an intruder, for the subsequent life-history of the numerous species of Cryptobia and Lathrobia does not appear to be identified in any particular or peculiar way with that of the ants and they have no specialized structures, as is virtually always the case with true ant-guests.

The tribe Paederini is composed as far as known to me at present of twelve subtribal groups, all of which occur within the geographical limits of this revision except the two marked by prefixed asterisks; these subtribes are distinguishable by the following characters: —

- Prosternum abbreviated between and under the coxae, forming an acute point which does not attain the mesosternum..... 2
- Prosternum prolonged posteriorly in a more or less acute point which attains the mesosternum, but not much dilated under the coxae..... 9
- Prosternum attaining the mesosternum and also greatly dilated laterally under the coxae as far as the inflexed sides of the pronotum — hypomera..... 10
- \* — Antennae anteriorly flexile and strongly geniculate, the basal joint usually very much elongated and having an anterior sinus in its apical margin; anterior tarsi not dilated..... 3
- Antennae posteriorly flexile, the basal joint less elongate and with a posterior apical sinus; anterior tarsi variable..... 4

- 3 — Neck more or less broad; fourth palpal joint distinct, more or less conical.....**Cryptobia**  
 Neck extremely slender as in *Scopaeus*; fourth palpal joint indistinct, apparently obtuse and more or less pubescent.....\***Sphaeronia**  
 4 — Ligula bilobed at tip; sculpture and vestiture never very dense; labrum never strongly dentate at the middle..... 5  
 Ligula densely fimbriate at tip; labrum dentate only at the middle; sculpture and vestiture very dense, the surface devoid of lustre..... 8  
 5 — Fourth joint of the maxillary palpi compressed and lineate at apex and clothed with fine pubescence..... 6  
 Fourth palpal joint conical, sometimes aciculate, always nude..... 7  
 6 — Neck very broad; body feebly convex; hind tarsi filiform...\***Dolicaones**  
 Neck narrow; body strongly convex; tarsi with the fourth joint lobed beneath.....**Paederi**  
 7 — Anterior tarsi always strongly dilated in both sexes, the posterior filiform and simple; body more or less parallel as in *Dolicaones* and moderately convex as a rule.....**Lathrobia**  
 8 — Body more or less parallel and feebly convex; anterior tarsi variable.....**Lithochares**  
 9 — Ligula loosely fimbriate at tip; neck never very slender.....**Medones**  
 Ligula tricuspid at tip; neck variable but never very broad.....**Scopaei**  
 10 — Prosternum remaining far below — viewed from below — the level of the edges of the hypomera, with a widely open space between the two surfaces; tarsi filiform, the fourth joint simple; antennae as in *Paederi*; neck very slender.....**Stilici**  
 Prosternum approaching very close to the edge of the hypomera in a vertical sense, the opening between them narrow but evident; tarsi short and stout, the fourth joint bilobed; antennae straight, not flexile at the first joint, the apex of the latter not sinuate behind; neck very slender.....**Stilicopses**  
 Prosternum touching or connate with the edges of the hypomera, the coxal cavities entirely chitinous..... 11  
 11 — Fourth tarsal joint bilobed; antennae straight, not flexile at the first joint, the apex of which is not sinuate behind; mentum simple; maxillary palpi slender, the third joint elongate and fusiform, the fourth small, obtuse and inconspicuous; neck moderately narrow; integuments moderately dense; species small in size.....**Sunii**  
 Fourth tarsal joint simple; antennae flexile, the apex of the first joint sinuate posteriorly; mentum usually modified at the sides, sometimes spinose; third joint of the maxillary palpi more or less securiform or otherwise abnormal, the fourth very minute and indistinct; neck usually very slender; integuments thicker and much denser; species generally very small in size.....**Echiasteres**

In the following pages 89 genera are defined in the tables of genera, of which 64 occur within the limits of the United States of America and 25 are exclusively foreign; these latter are distinguished in each case by a prefixed asterisk.

It would be a source of the greatest satisfaction if typical examples of all the American genera described by Dr. Sharp could have been procured, not only for the purpose of arranging them in proper succession with the others, but especially in order to avoid the possible redescription of some of them from our southwestern regions under new and unnecessary names, but this was found to be impracticable and recourse was had to inferences derived from the rather too short diagnoses and poor figures of the "Biologia." \* It is probable however that but few synonyms will be found among the genera. It seems scarcely necessary to repeat, in view of what I have already published (*Annals N. Y. Acad.* VII, p. 353), that *Liparocephalus* and related genera are in no way Paederids but belong to the Aleocharini.

#### CRYPTOBIA.

The components of this extensive subtribe are the most highly organized and actively predaceous of the Paederini and include some of the largest species of the tribe. They are very poorly represented in the western parts of the old world, extremely abundant and greatly diversified in North and South America and are moderately numerous in eastern Asia, to which regions they probably migrated from North America in rather remote geologic time, for at present the Asiatic genera are all different from those of North America. Their close relationship with the *Lathrobia* is shown not only by general organization and prosternal structure, but especially by the occurrence of a pleural fold on the elytra, the origin and meaning of which are rather obscure. The absence or

\* My failure to secure the rich and varied collection of Staphylinidae brought home from Brazil by Mr. H. H. Smith, was one of the greatest disappointments of my scientific career, for this copious material contains examples of nearly all the tropical American genera, besides a large proportion of the remarkably diversified species of those regions, as I inferred from mounting nearly a thousand specimens forming a sample lot placed in my hands by Mr. Smith for examination. These specimens are probably at present in the Carnegie Museum at Pittsburg with the Smith collection.

modification of this fold in the present subtribe is accompanied by so many peculiarities of habitus or specialized structure as to indicate its really important nature from a generic standpoint, and I have therefore used it as one of the primary criteria both here and in the *Lathrobia*, where it apparently loses none of its significance. In the *Cryptobia* the fold is present as a rule and its absence is the exception, while the reverse is the case in the *Lathrobia*, there being more species in the latter without than with this plication. The anteriorly flexile antennae, with greatly elongate basal joint, and the undilated anterior tarsi, are the only important characters distinguishing the *Cryptobia* from the *Lathrobia*, the large conical glabrous fourth palpal joint being common to the two, but in the table of subtribal groups it is necessary for convenience to separate them by a few subtribes having the fourth joint completely different in form, being compressed and finely pubescent. This difficulty of course arises from the practical necessities of a lineal succession in the grouping. The genera represented by material in my cabinet may be defined as follows:—

- Gular sutures separated; maxillary palpi coarsely and very sparsely setulose; pleural fold when present never united with the side margin posteriorly ..... 2
- Gular sutures united throughout their length from the small triangular postmental piece; third palpal joint finely and closely pubescent; pleural fold gradually becoming fused with and forming part of the side margin posteriorly ..... 12
- 2 — Elytra with a pleural fold near the side margin ..... 3
- Elytra without trace of a pleural fold ..... 7
- 3 — Pleural fold entire, extending from the humeri to the outer angle of the elytra ..... 4
- Pleural fold incomplete ..... 6
- 4 — Neck entirely unconstricted on the upper and lower surface, feebly constricted at the sides, very broad and but slightly narrower than the widest part of head, the latter elongate and rather depressed, but little narrowed before the eyes which are moderate in size and anterior in position; two post-ocular setigerous punctures — characterizing most of the genera — wholly obsolete; labrum short, edentate, feebly and biobliquely truncate, with a small median sinus; lobes of the ligula large, obtriangular, apparently connate throughout their length, membranous, the basal part corneous; mentum large, trapezoidal, with more than apical half coriaceous, unimpressed at base; gular sutures more widely separated than usual, straight and only very slightly converging

to the base, the basal part of the intermediate surface elevated above the general level; basal joint of the antennae shorter than usual, being scarcely one-half as long as the width of the head; prothorax slightly broader near the base than at apex; elytra longer and wider than the prothorax, parallel; abdomen as wide as the elytra, conically tapering from the apex of the fourth segment; legs moderate, the tibiae strongly spinulose, the hind tarsi long and slender with the basal joint almost as long as the next two combined and much longer than the fifth; integuments smooth, polished and sculptureless above, except the basal parts of the head and the abdomen, which are feebly micro-reticulate, the head and pronotum rather finely, very sparsely punctate, the elytra with widely separated even unimpressed series of extremely fine feeble setigerous punctures. Brazil.....\**Aderobium*

Neck distinctly and abruptly constricted across the dorsal surface; sculpture strong and distinct, the punctures simple..... 5

- 5 — Antennal joints not constricted at base, obconical, shorter and broader toward tip; elytral suture strongly beaded. Body parallel, moderately convex, moderate to large in size; head oblong, parallel, inflated or narrowed behind the eyes which are well developed, finely faceted, more or less prominent and anterior, the post-ocular foveolae well developed; neck broad, three-fifths to three-fourths as wide as the head, the basal angles of the latter only very rarely obliterated; mandibles tridentate within, the two lower teeth on a broad common base and equal in size, more developed on the left mandible; labrum edentate, short, biobliquely truncate with a shallow rounded median sinus; basal joint of the antennae relatively very moderate in length, not as long as the next three combined; gular sutures fine, becoming very approximate behind the middle; lobes of the ligula rounded, coriaceous or membranous, separate; mentum trapezoidal, large, feebly convex, coriaceous in apical half; prothorax rather small, oblong, always narrower than the head; elytra greatly developed, always longer and wider than the prothorax, usually elongate; abdomen seldom quite as wide as the elytra, the sides parallel, the segments feebly impressed at base; legs moderately long, slender, the hind tarsi elongate with the basal joint usually distinctly shorter than the next two combined but about as long as the fifth. Male with the subbasal ventral segments modified by discal foveae or short transverse setose furrows, the third segment lobed in the middle at apex, the lobe very variable. North and South America..... *Gastrolobium*

Antennal joints not constricted or compressed at base, the elytral suture strongly beaded. Body parallel or anteriorly attenuate, moderately convex; head oblong, parallel, inflated or gradually narrowed behind the eyes, sometimes notably small, the neck broad, three-fifths to three-fourths as wide as the head, the basal angles rounded to the neck or obliterated; mandibles bidentate within; eyes moderately large, anterior, more or less prominent, the facets fine and feebly convex; labrum short, biobliquely truncate, edentate, with a small shallow rounded median sinus; basal joint of the antennae elongate, as long as the next three or four combined; post-ocular setigerous punctures well developed; gular sutures fine and feeble, narrowly separated, most ap-



proximate well behind the middle; lobes of the ligula rounded, separate, coriaceous, their basal parts corneous as usual; mentum large, trapezoidal, obliquely tumid at each side, coriaceous in less than apical half; prothorax oblong, larger than in *Gastrolobium*; elytra parallel, generally longer and wider than the prothorax; abdomen as wide as the elytra or nearly so; legs moderately long and slender, the tibiae not strongly spiculate, the hind tarsi rather long, with the basal joint much longer than the second but not as long as the next two combined and but little longer than the fifth. Male without modification of the sub-basal ventrals. Temperate North America.....**Hesperobium**

Antennal joints compressed and constricted at base; elytral suture not beaded. Body stout, parallel, moderately convex, finely and densely punctured; head well developed, as in *Hesperobium* throughout, except that the median emargination of the labrum is larger, deeper and triangular in form; submembranous lobes of the ligula shorter, more diverging and quadrate; mentum very much shorter and more transverse, unimpressed, with only the anterior margin coriaceous, the dividing line being broadly sinuous; gular sutures, neck, prothorax and elytra similar; abdomen as wide as the elytra, parallel, the segments similarly feebly impressed at base; legs much more elongate, moderately stout, the basal joint of the hind tarsi as long as the next two combined and much longer than the fifth. Southeastern Europe.....**\*Homoeotarsus**

6 — Elytral suture not beaded, the surface not at all impressed along the suture; pleural fold beginning well behind the humeri and not extending to the hind angles; legs moderate in length, rather stout, the tibiae with numerous spicules among the setae; hind tarsi nearly as in *Hesperobium*; prothorax oblong, the elytra longer and wider as in the preceding genera; abdomen rather narrower than the elytra, the segments not impressed; pronotum shining, with rather coarse, circular and very shallow punctures separated by about their own widths, each puncture composed of a small central ring bearing a hair, the ring surrounded by a circle of minute punctules; elytra dull in luster but wholly sculptureless, finely, closely, irregularly punctured, each puncture consisting of an aggregation of minute polished punctules; abdomen finely, not densely punctulate, the surface micro-reticulate. Brazil...**\*Encryptina**

Elytral suture strongly beaded, the surface broadly impressed along the beading; pleural fold beginning at basal third or fourth and extending to about apical fourth of the elytra; punctures throughout sparse, simple and impressed, those of the elytra very coarse; head narrow and elongate, the sides feebly, evenly arcuate and strongly converging behind the eyes to the neck, which is less than half as wide as the head, the basal angles obsolete; eyes normal; front not greatly reduced in width; basal joint of the antennae very elongate; labrum rectilinearly and transversely truncate, edentate, with a small parabolic median sinus wider than deep; mandibles long, evenly arcuate, very slender and extremely gradually and finely acuminate toward tip, having within two large acutely pointed teeth near the middle, the inner margin thence to the base with a narrow membranous margin which is fimbriate with short setae; membranous lobes of the ligula narrow, diverging, somewhat pointed; mentum short, coriaceous only along the anterior mar-

gin, the corneous part strongly, circularly impressed at base; prothorax narrowed anteriorly from near the middle, elongate, convex; prosternum much longer than usual before the coxae; gular sutures, elytra and abdomen nearly as in *Hesperobium*; legs long and very slender, very sparsely setulose, the basal joint of the hind tarsi as long as the next two combined and very much longer than the fifth; integuments throughout highly polished. Southeastern States of America.....**Lissobiops**

7 — Labrum edentate; eyes situated near the middle of the head, the sides behind them rapidly narrowed and evenly arcuate to the neck which is relatively narrower than in *Hesperobium*..... 8

Labrum bidentate; body much smaller in size and generally very slender. 9

8 — Body large and stout, the abdomen inflated, arcuate at the sides and wider than the elytra; head and pronotum in the type minutely sparsely and very inconspicuously punctate, very dull and wholly lustreless because of extremely minute deep closely crowded punctules, each of which is shining at the bottom; elytra polished, sculptureless, with coarse impressed simple punctures irregularly disposed and moderately close-set; abdomen finely, rather sparsely punctulate, rather strongly micro-reticulate but shining; head large and greatly developed; labrum short, truncate, with a very minute and abruptly formed median notch, nearly as deep as wide and broadly rounded at the bottom, with its sides straight and but slightly diverging; mandibles very large and stouter than in *Hesperobium*, bidentate within, the inner edge thence to the base nude and without trace of the membranous fimbria of *Lissobiops*, the left mandible abruptly bent beyond the teeth, the right more evenly arcuate; eyes moderate, just before the middle, the two post-ocular setigerous foveae distinct, the surface between them elevated, subcarinate and laterally prominent; neck stout and but little narrower than the prothorax and only slightly more than half as wide as the head; basal joint of the antennae much elongated, longer than the width of the prothorax; membranous lobes of the ligula small, rounded; mentum moderate, coriaceous in apical half, not impressed basally, the apical margin arcuate; maxillary palpi long and extremely slender, the third joint six or seven times as long as wide, with perfectly rectilinear sides; gular sutures deeply impressed, very approximate slightly behind the middle; prothorax relatively small, oblong, parallel; prosternum well developed before the coxae, transversely impressed posteriorly; elytra large, parallel, wider than long; abdominal border broad, inclined, the segments impressed at base toward the middle, the third and fourth with a median longitudinal carina crossing the impression; legs long, rather slender, polished and sparsely setulose, the anterior tibiae densely clothed with stiff fulvous hairs in apical half; posterior tarsi long, rather stout, the basal joint almost as long as the next three combined and very much longer than the fifth. Central and South America.....**\*Pycnocypta**

Body moderate in size and convexity, fusiform; punctures throughout simple and small in size; head relatively small in size, the eyes well developed, prominent, slightly behind the middle of the length, the frontal part of the head before them greatly reduced in width; post-ocular foveolae small, the surface between them feebly tumid and not

laterally prominent; neck about half as wide as the head; basal joint of the antennae longer than in *Hesperobium* but relatively shorter than in *Pycnocypta*; labrum short, strongly, biobliquely truncate, with a broad shallow rounded median sinus; mandibles slender, finely aciculate apically, evenly and equally arcuate, tridentate within, the outer tooth longer and more aciculate than the other two which are equal; membranous lobes of the ligula rather pointed; mentum large, trapezoidal, coriaceous in apical third, the dividing line transverse and rectilinear; palpi as in *Hesperobium*, the gular sutures rather less approximate but similar in form; prothorax moderate, somewhat narrowed apically, the prosternum long, well developed and unimpressed before the coxae; elytra longer and wider than the prothorax, very feebly impressed along the suture which is scarcely at all beaded; abdomen rather narrower than the elytra, uniafflated, the segments not much impressed at base; legs rather long and very slender; hind tarsi with the basal joint as long as the next two. Southeastern States of America.....**Biocrypta**

9 — Neck more than half as wide as the head; eyes submedian in position. 10 Neck much narrower, distinctly less than half as wide as the head; eyes anterior in position..... 11

10 — Body subparallel, moderately slender and convex, strongly and simply punctate, the integuments shining, feebly micro-reticulate, the elytra not minutely sculptured; head moderately developed, the eyes at or slightly behind the middle, the sides parallel behind them to the broadly rounded basal angles; base broadly arcuate-truncate; post-ocular foveolae apparently wanting; neck fully three-fifths as wide as the head; frontal parts before the eyes conspicuously narrower; labrum transversely, rectilinearly truncate, with a small rounded emargination between the teeth; basal joint of the antennae moderate, as long as three-fourths the width of the head, the last joint short truncate and spongiöse at tip; lobes of the ligula small, rounded; mentum biobliquely tumid, the apex strongly rounded and coriaceous; gular sutures becoming extremely approximate posteriorly to the base; prothorax about as wide as the head, the sides converging from the rounded apical angles to the base; elytra about as long as the prothorax and wider; abdomen parallel, about as wide as the elytra, the segments feebly impressed at base; legs short but slender, the hind tarsi short, with the basal joint as long as the next two but subequal to the fifth. Panama.....**\*Cryptobiella**

Body fusiform, slender, rather convex; integuments polished and wholly sculptureless, strongly but not densely, simply punctate; abdomen minutely reticulate and punctulate; head narrow and elongate, moderately narrowed before the eyes, the latter obliquely truncate posteriorly, situated at or just before the middle of the length, the sides behind them converging to the very narrowly rounded basal angles; neck three-fifths as wide as the head; post-ocular foveolae apparently wanting; labrum, palpi and mentum as in *Cryptobiella*; gular sutures rather well separated, straight and parallel, diverging anteriorly and near the base; basal joint of the antennae as long as the next three combined, and though only moderately elongate, nearly as long as the width of the head; prothorax oblong, with the sides parallel and arcuate, wider than the head; elytra wider than the prothorax, with the suture beaded;

abdomen narrower than the elytra; legs slender, the hind tarsi long, only slightly shorter than the tibiae, the basal joint not quite as long as the next two but longer than the last. Europe.....**\*Cryptobium**

11 — Form narrow, subfusiform, the head small and much narrower than the elytra, only feebly convex, the integuments polished and devoid of minute sculpture throughout, the punctures moderate in size, not very close-set and simple; head oblong, the sides parallel or feebly converging behind the eyes to the broadly rounded basal angles, moderately narrowed before the eyes, which are rounded behind, prominent and situated well before the middle; post-ocular areolae distinct, the surface between them sometimes tumid; labrum nearly as in *Cryptobium*; basal joint of the antennae moderate; neck barely two-fifths as wide as the head, mentum trapezoidal, coriaceous only at apex, deeply impressed along the basal margin; gular sutures becoming extremely approximate behind the middle; prothorax very narrow and elongate-oval, parallel, much narrower than the head; elytra almost twice as wide as the prothorax and very much longer, notably elongate, parallel, the suture strongly beaded; abdomen narrow, the segments feebly impressed at base; legs rather short, very slender, the hind tarsi notably short, the first and fifth joints subequal in length and much longer than the others which are relatively more elongate than usual. Southern North America.....**Ababactus**

12 — Body parallel, rather convex, more or less densely and coarsely but simply punctate; head oblong-elongate, usually parallel at the sides, with broadly rounded basal angles; neck broad, about three-fifths as wide as the head; eyes well developed, convex and prominent, situated distinctly before the middle of the length; basal joint of the antennae as long as the next four combined, the joints not constricted at base; labrum short, truncate, bidenticulate, the teeth separated by a rounded and rather shallow median sinus of moderately large size; post-ocular foveolae large and well developed, rather approximate, the surface between them longitudinally tumid; membranous lobes of the ligula narrow, well separated, arcuate toward each other, the basal parts corneous as usual; mentum large, trapezoidal, flat, the apical part coriaceous, the dividing line posteriorly arcuate; second maxillary palpal joint sparsely setulose, the third rather longer than the second, moderately stout, obconical, with the apex slightly narrowed, the surface dull in lustre, finely and closely pubescent, the fourth joint smaller than usual, acutely conical; prothorax oblong, parallel, narrower than the head; elytra parallel, wider than the head and usually longer than the prothorax, the suture strongly beaded; abdomen parallel, nearly or quite as wide as the elytra, the segments distinctly impressed at base; legs slender, moderate in length, the hind tarsi long, slender, of the usual form, the basal joint as long as the next two and longer than the fifth. Japan .....**\*Monocrypta**

The majority of the above genera being foreign to our territories, it is necessary to remark upon those thus indicated above before proceeding further: —

**ADEROBIUM** n. gen. — The structure of the basal parts of the head, short basal joint of the antennae and type of elytral sculpture, isolate this genus completely; it is founded upon the Amazonian *Cryptobium angustifrons*, of Sharp.

**HOMOEOTARSUS** Hochh. — The remarkable structure of the antennal joints and absence of any well-defined beading of the elytral suture, as well as some minor structural features, such as the form of the mentum, will readily serve to separate this genus from *Hesperobium*, which it strikingly resembles in facies and general organization. The type is *H. chaudoiri* Hoch., a male of which from Lenkoran is before me. The sexual characters are peculiar, the fifth ventral being feebly impressed in the middle and with a very abruptly formed median emargination at the transversely rectilinear apex, the emargination almost exactly circular in form, the opening being narrower than its greatest width; the emargination of the sixth ventral is somewhat as in our *Hesperobium cinctum* Say. It has been stated that the genus *Spirosoma* Mots. — Bull. Mosc. 1858, p. 206 — described from India, is the same as *Homoeotarsus*, but the statement that the tarsi are one-half shorter than the tibiae, with the first four joints triangular and equal, the last as long as the two preceding combined, would seem to indicate generic difference, for even if the tarsus referred to be the anterior, it would not be true of *Homoeotarsus*, where the basal joint is still notably longer than the second. It is also said of *Spirosoma* that the second and third antennal joints are equal in length, the fourth shorter, whereas in *Homoeotarsus* the second joint is much shorter than the third and equal to the fourth.

**EUCRYPTINA** n. gen. — This genus is founded upon the Amazonian *Cryptobium opacum*, of Sharp, and is described above from a single headless specimen. As the peculiarities of the elytra, referred to in the description, are of generic value, this mutilation is not so important, but the cephalic characters are doubtless also distinctive. There is no trace of the sutural beading and juxta-sutural impressions so characteristic of *Hesperobium*.

**PYCNOCRYPTA** n. gen. — The type of this genus is one of

the most remarkable Paederids that I have observed. It is very large in size, stout in form, deep black in color throughout the body, legs and antennae, the head and pronotum opaque and with minute sparse punctulation, the elytra one-half wider than the prothorax and equal to the latter in length, equal in width to the head, parallel, with distinctly angulate and broadly exposed humeri, polished surface and coarse deep and rather close-set, irregularly disposed punctures; they are shorter than wide, broadly, feebly impressed toward the suture, with the sutural bead distinctly elevated. The abdomen is remarkable in form and size, as may be inferred from the generic diagnosis. This species — which was named *Crypt. maxillosum* by Guérin, — measures 15.0 by 3.5 mm. in size. The type was given to me by Dr. Geo. W. Bock, of St. Louis, and was collected by him near Guatemala City. *Pycnocypta* will include also several other large Central and South American forms with broad and inflated abdomen, though differing in great degree from *maxillosa* in sculpture of the anterior parts, — such as the Amazonian *gigas* and *plagipennis* and the Mexican and Central American *ducalis*, *grandis* and *planata*, of Sharp.

**CRYPTOBIELLA** n. gen.\* — This is one of the small slender

\* I would include in this genus, until its status can be more accurately determined, a species named *Cryptobium pusillum*, by LeConte. This is not before me at present, but some notes and a manuscript drawing taken from the original type many years ago, show that it is narrow, slender, of parallel, compact build, dark rufo-piceous in color, with the pronotum and abdomen less dark, the head not quite as wide as the elytra and but little longer than wide, rather abruptly and strongly narrowed before the eyes which are moderate in size and somewhat prominent, the sides parallel behind them for a short distance, then broadly rounded to the neck, which is rather less than half as wide as the head, — according to the drawing, — the punctures very coarse, deep and close-set throughout, almost mutually contiguous. The prothorax is longer than wide, narrower than the head, with the anterior angles distinct, the sides feebly converging and nearly straight thence to the base, rather closely, coarsely punctate, with a wide, impunctate area bounded by series. The elytra are scarcely as long as wide, parallel, distinctly shorter and much broader than the prothorax, more finely and closely punctate, the punctures subserial toward the suture. Antennal scape as long as the next four joints combined. Male with a small canaliculate impression at the middle of the apex of the fifth ventral, the sixth with a deep parallel cleft three times as deep as wide. Length 5.0 mm.; width 0.8 mm.

types allied to *Cryptobium* in its bidentate labrum, obsolete pleural fold and other structural characters, but is much more strongly and compactly built than either that genus or *Ababactus*. It is founded upon a species sent to me from Colon, in Panama, by Mr. Beaumont, of parallel and moderately slender form, deep black color, with a fine apical border of the elytra and apices of the fifth and sixth abdominal segments testaceous, the antennae pale, the legs extremely pale flavo-testaceous throughout. The head is equal in width to the apical part of the prothorax, and, together with the latter, rather coarsely, deeply and moderately closely punctured; the elytra are rather longer than wide, parallel, much wider than the prothorax and of equal length, less coarsely and still more closely punctured than the anterior parts and distinctly impressed along the strong sutural beading. The abdomen is finely, not densely punctulate and shining like the rest of the surface. Its dimensions are 5.3 by 0.88 mm., and it may be named *colonica* n. sp. It is allied closely to the Central American *Crypt. rostratum*, of Sharp, differing in its rather smaller size, polished abdomen and other minor points and the genus will include also the Amazonian *triste*, of Sharp.

**CRYPTOBIUM** Mann. — The two or three European species constituting this genus are of small size and more or less slender form, with the head notably narrow and elongate, differing from *Ababactus*, to which it is most closely allied, in that respect, as well as in its broader prothorax and smaller elytra, more elongate tarsi, less approximate gular sutures and many other characters of more or less importance. The surface is polished and devoid of minute sculpture, the punctures not very coarse and notably sparse, except on the elytra, where they are close-set and arranged without order. The surface of the elytra is impressed along the rather fine but distinctly elevated sutural bead. The basal joint of the antennae is about as long as the next three joints combined. The prosternum is circularly emarginate throughout the width at apex, with an exposure of whitish membrane — more or less evident throughout the subtribe.

**MONOCRYPTA** n. gen. — The completely united gular sutures,

forming a coarse and cleft-like stria extending to the extreme base of the head, and more densely pubescent or setulose third palpal joint, are characters which isolate this genus completely, and it is without any very close allies known to me. The general habitus of *Monocrypta* is however not unlike that of several of our common forms of *Hesperobium*. The generic diagnosis is taken from the Japanese *Cryptobium apicatum* and *pectorale*, of Sharp.

#### **Gastrolobium** n. gen.

This is by far the most extensive and widely distributed genus of the American Cryptobia and includes some of the largest species. It is abundantly represented in temperate and tropical North and South America but has not yet occurred in the true Pacific coast fauna of North America, a significant fact when comparing the American and Asiatic types of the subtribe. The elytral punctures generally have but feeble indication of serial order, but in some cases, such as *lugubre*, the series are almost perfectly regular, constituting one of the most conspicuous features. The basal joint of the antennae is only moderately long when compared with other genera of the subtribe, being greatly surpassed in length by *Hesperobium* and, to a still greater degree, by *Lissobiops* in that respect. The male sexual characters are more elaborate than perhaps anywhere else in the Paederini, and the lobation of the third ventral segment is a character distinctive of, if not peculiar to, this genus. In at least one Amazonian species this singular lobe is strongly bilobed and there are doubtless many other remarkable modifications. The hind trochanters in the male of another species brought home from Brazil by Mr. H. H. Smith, are greatly prolonged and spiculiform, but I have remarked no such sexual character among our species. The lobe of the third ventral\* is not constant in size but

\* This is described as the fourth segment by Dr. Horn in his revision of *Cryptobium* (Tr. Am. Ent. Soc., XII), he having mistaken the elevated basal margin of the first segment for a basal segment partially concealed by the coxae, and all the figures of the plates accompanying that paper are erroneously drawn in this respect. As illustrating the true structure of the

diminishes in less developed males and is completely obsolete in others, leaving only the peculiar discal foveae or short transverse setose folds of the second and third segments. The female has the abdomen entirely unmodified as a rule, but in *badium*, *bicolor*, *parallelum* and some others, the discal mark of the second segment — a fovea in some or a transverse fold in others — seems to remain in that sex. The sixth ventral of the male is obtusely rounded at tip or subtruncate. *Gastrolobium* differs very much from *Cryptobium*, under which name all the species have been described thus far, in structure and habitus. The species represented in my cabinet may be identified as follows: —

- Head parallel, inflated or moderately narrowed behind the eyes, the basal angles always more or less evident and broadly rounded..... 2  
 Head gradually narrowed behind the eyes, the sides converging from the latter to the neck and evenly, feebly arcuate throughout, the basal angles wholly obsolete.....24  
 2 — Elytral punctures close-set, never more than feebly and partially serial in arrangement..... 3  
 Elytral punctures sparse, very coarse, arranged in even series. ....23  
 3 — Elytra generally pale, rarely black, never pale at tip..... 4  
 Elytra black, with a fine, abruptly pale testaceous apical margin.....22  
 4 — Pronotum highly polished, without minute ground sculpture of any kind.... 5  
 Pronotum alutaceous in lustre, the dullness caused by excessively minute close-set and regular punctulation, only distinct under comparatively high amplification.....21  
 5 — Head black or piceous-black in color..... 6  
 Head pale and concolorous with the prothorax and elytra.....16  
 6 — Prothorax black or piceous-black in color..... 7  
 Prothorax paler in color and generally concolorous with the elytra..... 9  
 7 — Head parallel and straight at the sides for one and one-half times the length of the eye behind the latter, the sides thence broadly rounded to the neck. Body moderately large and stout, deep black throughout, the abdomen feebly rufo-picescent; legs very pale, the antennae dusky; head longer than wide, narrower than the elytra in the female, coarsely, closely punctate, the ridge between the post-ocular foveae very pronounced; prothorax oblong-elongate, parallel, with the sides nearly straight, much narrower than the head, the punctures unusually coarse, moderately sparse; elytra slightly elongate, two-fifths wider and nearly a third longer than the prothorax, parallel, the sides straight,

abdomen the reader is referred to some remarks upon this subject published many years ago by the writer (Bull. Cal. Acad. Sci., II, 1886, p. 159 and plate).

the punctures coarse, rather close-set and irregular in arrangement; abdomen but slightly narrower than the elytra, sparsely but distinctly punctulate, each segment with a large shallow fovea at base and lateral fourth or fifth. Male unknown; female with the abdomen completely unmodified, the sixth ventral obtusely and transversely arcuate-truncate at apex. Length 10.0 mm.; width 1.6 mm. Virginia (Norfolk).....*virginicum* n. sp.

Head narrowed behind the eyes, the sides converging from the latter to the very broadly rounded and subobsolete basal angles and but slightly arcuate..... 8

8 — Form rather stout, piceous-black throughout; the abdomen not paler at tip, the legs very pale, the antennae dusky except toward base; head longer than wide, much narrower than the elytra, coarsely, deeply and closely punctured; prothorax rather short, but little longer than wide, much narrower than the head, the sides parallel and almost straight, the punctures notably coarse, deep, moderately sparse, unevenly disposed; elytra parallel, about a fifth longer than wide, nearly one-half wider and two-fifths longer than the prothorax, rather coarsely, deeply and closely punctate, the punctures obscurely serial except toward apex; abdomen distinctly narrower than the elytra, strongly, not densely punctulate. Male with a transverse setose discal fold at the middle of the second and third ventrals, the folds equal in size and about an eighth as wide as the segments; lobe of the third segment obsolete in specimens at hand; sixth ventral very obtusely rounded at tip, becoming subtruncate toward the middle, the edge thinned and translucent, the surface notably convex toward the edge posteriorly; female not at hand. Length 9.4 mm.; width 1.5 mm. Florida to New Jersey.....*floridanum* Lec.

Form less stout and rather more convex, the head black, prothorax piceous-black, the elytra dark rufous, the abdomen blackish, rufescent at tip; head longer than wide, subequal in width to the elytra, less coarsely and closely punctate; prothorax distinctly narrower than the head, much more elongate than in *floridanum* and nearly a third longer than wide, parallel and nearly straight at the sides, the punctures less coarse and about equally close-set; elytra much narrower and more elongate, parallel, two-fifths wider and a fourth longer than the prothorax, less coarsely but rather more closely punctate, the punctures without serial arrangement; abdomen almost as wide as the elytra, the punctures distinct and not close-set. Male with a very strongly developed transverse setose fold near the middle of the second and third segments, somewhat as in *floridanum*, the folds larger, nearly a sixth as long as the width of the segment; lobe of the third obsolete in specimens at hand; sixth segment narrower, obtusely rounded at tip, the surface cylindrically and transversely convex throughout, not at all convex toward tip; female unknown. Length 8.0 mm.; width 1.35 mm. New Jersey.

*convergens* Csy.

9 — Female with the abdomen wholly unmodified; male with a rounded discal fovea on the third, and a transverse fold on the second ventral. 10  
 Female with a short transverse setose discal fold near the middle of the second ventral, the third and remainder of the abdomen unmodified. 13

- 10 — Abdomen blackish, brightly rufescent at tip. Body moderately stout, polished, the head black; prothorax and elytra dark rufous; legs pale flavate, the antennae somewhat dusky rufous toward base; head large, longer than wide, parallel, arcuate and somewhat inflated behind the eyes especially in the male, where it is much wider than the elytra, only slightly wider than the latter in the female; tumescent posterior longitudinal ridge at each side distinct; punctures coarse and deep, moderately close-set; prothorax only slightly elongate, much narrower than the head, parallel at the sides, the punctures coarse and rather sparse; elytra unusually small in size, but little longer than wide, parallel and straight at the sides, equal in length to the prothorax in the female and rather shorter in the male and only a fourth or fifth wider, very coarsely, deeply, rather closely punctate, the punctures scarcely at all seriate, each elytron however with two approximate sets of series each enclosing a tolerably distinct smooth line; abdomen fully as wide as the elytra, sparsely and strongly punctulate. Male with an unusually long straight setose discal fold occupying median sixth of the second ventral, the third with a moderate circular setose fovea, the apical lobe parabolic, not extending quite to the apex of the fourth segment and one-third as wide as the apex, bristling with long setae, the sixth ventral conical, evenly, transversely convex, rather narrow at tip, the latter obtusely and broadly rounded. Length 10.5 mm.; width 1.55 mm. North Carolina and Maryland.....*carolinum* Er.

Abdomen uniform in color throughout.....11

- 11 — Body and legs very pale flavo-testaceous in color throughout, the head black; abdomen very broad, fully as wide as the elytra. Form stout, parallel; head large, about as wide as the elytra, parallel and slightly arcuate at the sides behind the eyes, the tumescent lateral ridge feeble; antennae very slender, the seventh and eighth joints in the male about two and one-half times as long as wide, ninth not quite twice as long as wide; punctures rather coarse but decidedly sparse; prothorax slightly elongate, much narrower than the head, the sides parallel, somewhat arcuate anteriorly, the punctures moderately coarse, rather feeble and sparse; elytra only slightly longer than wide, parallel and straight at the sides, a fifth longer and one-third wider than the prothorax, the punctures notably coarse, deep, moderately close-set and subserial, the disk shaded slightly darker in color toward the suture; abdomen strongly, not closely, evenly punctulate. Male with a straight transverse setose fold occupying median seventh of the second ventral, the fovea of the third unusually large, a fourth or fifth as long as the entire segment; lobe completely obsolete in specimens at hand, the sixth ventral obtusely rounded at tip. Length 9.0 mm.; width 1.6 mm. Illinois.....*atriceps* n. sp.

Body dark and more or less obscure rufous in color, the head darker; legs more or less pale flavate as usual, the antennae more or less infusate; abdomen narrower than the elytra.....12

- 12 — Form moderately stout, parallel; head not quite as wide as the elytra, the sides parallel and straight behind the eyes for some distance, then broadly arcuate to the neck; punctures rather coarse, deep and close-set, separated by scarcely their own diameters; prothorax much narrower

than the head, distinctly longer than wide, parallel, the sides feebly arcuate medially, the punctures coarse and rather close; elytra distinctly elongate, two-fifths wider and a third longer than the prothorax, coarsely, closely and confusedly punctured, the punctures decidedly smaller toward the sides and tip; abdomen finely but strongly, rather closely punctate. Male with a short transverse straight and strongly setose fold behind the middle of the second ventral and occupying about median eighth to tenth of the width, the third with a moderate circular setose fovea before the middle, the lobe large, extending beyond the apex of the fourth, evenly rounded at tip and occupying more than median two-fifths of the width; sixth broadly rounded, the apical margin becoming just visibly sinuate at the middle. Length 8.4–10.5 mm.; width 1.22–1.6 mm. Texas (Houston, Austin and El Paso), Iowa (Keokuk), Indiana, Arizona (Tucson) and California (Needles).

*pimerianum* Lec.

Form and coloration similar to *pimerianum*, the punctuation less dense; head well developed, subequal in width to the elytra, parallel and with the sides feebly arcuate for some distance behind the eyes, then broadly rounded to the neck; punctures moderately coarse and not very close-set, separated, except at the sides, by fully twice their own widths; prothorax as in *pimerianum* but more sparsely and feebly punctate; elytra similar and similarly punctured but rather less closely, the abdomen also more sparsely punctulate above and beneath. Male with a transversely arcuate setose fold, much longer than in *pimerianum*, behind the middle of the second ventral and occupying about median sixth of the width; third with a rather larger and more transversely elliptical setose fovea, moderate in size, just before the middle, the lobe obsolete in specimens at hand. Length 10.5 mm.; width 1.6 mm. Iowa [= *carolinum* Er. (Lec.) — erroneous determination].....*lecontei* Horn

- 13 — Abdomen black, the last two segments abruptly pale rufous. Body not very stout, the head black; prothorax and elytra bright rufous, the latter usually clouded with piceous toward the suture except at apex; legs pale; head parallel and feebly arcuate at the sides, the basal angles broadly rounded, not quite as wide as the elytra, the punctures rather coarse deep and close-set, separated by slightly more than their own widths; prothorax but slightly elongate, distinctly narrower than the head, parallel, only very slightly narrower at base than at apex, the punctures coarse, strong and rather close; elytra distinctly longer than wide, two-fifths to nearly a half wider and two-fifths longer than the prothorax, moderately coarsely and closely, irregularly punctate; abdomen slightly narrower than the elytra, strongly but not densely punctulate. Male with the setose fold of the second ventral occupying about median seventh, the rounded fovea of the third large, the lobe rather long and narrow, extending beyond the tip of the fourth segment and occupying scarcely more than median third of the width; sixth segment rather narrowly rounded at tip; fold of the second ventral in the female much smaller than in the male. Length 9.8 mm.; width 1.5 mm. New York to North Carolina and Iowa.....*bicolor* Grav.
- Abdomen uniform in color throughout, sometimes very slightly paler at tip.....14

14 — Body pale flavo-testaceous throughout, the head black. Head unusually small in size, very much narrower than the elytra, the sides parallel and straight, broadly rounded and converging at base to the neck, the punctures strong and well separated; prothorax distinctly narrower than the head, only very slightly elongate, the sides sub-parallel, the punctures coarse, impressed, deep, irregular and moderately close-set; elytra unusually large, parallel, only slightly longer than wide, fully one-half wider and longer than the prothorax, the punctures much smaller than those of the latter, rather close-set and irregular; abdomen not much narrower than the elytra, rather coarsely, moderately closely punctulate. Male not at hand; female with the foveiform fold of the second ventral stronger than in *bicolor*. Length 9.0 mm.; width 1.65 mm. New York and Virginia (Newport News).

*melanocephalum* Er.

Body dark piceo-rufous in color, the head black. .... 15

15 — Head moderately large but not quite as wide as the elytra, the sides parallel and nearly straight for half the distance from the eyes to the neck, then gradually rounded and converging to the latter; punctures moderately coarse, deep and very close-set, separated by rather less than their own widths; prothorax much narrower than the head, the sides parallel and feebly arcuate, only slightly elongate, the base and apex equal in width; punctures rather coarse, deep, not very close; elytra distinctly elongated, parallel, two-fifths wider and longer than the prothorax, coarsely, deeply, closely and irregularly punctured; abdomen narrower than the elytra, rather finely, not densely punctulate. Male not at hand; female with the straight transverse setose fold of the second ventral occupying about a tenth of the entire width. Length 10.5 mm.; width 1.6 mm. New Jersey.....*badium* Grav.

Head larger, very nearly as wide as the elytra, the sides parallel and more or less arcuate behind the eyes, broadly rounding to the base; punctures not very coarse and separated by about twice their own widths; prothorax as in *badium* but with the punctures sparser and rather feebler; elytra shorter and broader, only slightly elongate, nearly one-half wider and a third longer than the prothorax, the punctures less coarse and distinctly less close-set, irregular throughout; abdomen much narrower than the elytra, the punctures finer and sparser. Male with the fold of the second ventral straight and occupying median sixth or seventh, the fovea of the third transversely elliptical and moderately large, the lobe narrow, parallel and elongate, extending beyond the apex of the fourth, evenly and strongly rounded at tip and occupying less than median third, the sixth small, narrow, obtusely rounded at apex; female with the fold of the second ventral nearly as in *badium*. Length 11.8 mm.; width 1.75 mm. Ohio, Iowa, Missouri and Texas.

*strenuum* n. sp.

Var A — Similar to *strenuum* but smaller and more slender, the head not inflated behind the eyes, the sculpture throughout similar; prothorax notably smaller, still less elongate, with the sides strongly converging behind the middle, the base being much narrower than the apex; elytra narrower and more elongate, scarcely at all wider than the head. Male unknown; female with sexual characters nearly as in

*strenuum*, the fold of the second ventral, however, smaller and about a twelfth or fifteenth as wide as the segment. Length 9.7 mm.; width 1.5 mm. Illinois.....*illiniense* n. var.

Var B — Similar to *strenuum* but stouter, the head larger, fully as wide as the elytra, strongly inflated behind the eyes and rounded at the sides, similarly punctured; prothorax small, but little longer than wide, similarly sculptured, the base narrower than the apex as in *illiniense*, but to a much less degree; elytra distinctly elongate, much longer than in *strenuum* and more coarsely and somewhat more closely punctured; abdomen broader, very nearly as wide as the elytra, the punctures coarser and a little more close-set. Male unknown; female with sexual characters nearly as in *strenuum*. Length 10.5 mm.; width 1.8 mm. Texas.....*spissiceps* n. var.

16 — Abdomen black or piceous, with the last two segments pale in color as in *bicolor*..... 17

Abdomen uniform in coloration throughout, pale or blackish in color.... 18

17 — Body rather stout, shining, pale red-brown in color throughout, the elytra sometimes feebly clouded with piceous toward the suture; legs very pale, the antennae infuscate; head well developed but not quite as wide as the elytra, the sides not inflated, parallel, and nearly straight behind the eyes, then broadly rounded to the neck; punctures only moderately coarse and well separated; prothorax slightly elongate, parallel, distinctly narrower than the head, the punctures rather coarse but not very close-set; elytra but slightly longer than wide, parallel, two-fifths wider and a third longer than the prothorax, the punctures rather coarse, wholly confused and moderately close; abdomen slightly narrower than the elytra, polished, finely, rather sparsely punctate. Male with the transverse fold of the second ventral short and broad, occupying about median tenth of the width, the fovea of the third large and circular, the lobe strongly rounded at tip, not extending quite to the tip of the fourth and occupying about median third; sixth segment narrow, evenly and broadly rounded at tip; female with the abdomen wholly unmodified. Length 10.5 mm.; width 1.65 mm. Texas (Galveston) to New Mexico (Albuquerque).....*texanum* Lec.

18 — Abdomen blackish throughout dorsally, paler beneath; head rather small in size, very much narrower than the elytra, parallel and straight at the sides behind the eyes, the basal angles broadly rounded; punctures as in *texanum*; prothorax as in that species but less decidedly narrower than the head and with the punctures rather feebler; elytra distinctly elongate, much wider and longer than the prothorax, the punctures coarse, deeper and closer than in *texanum*, confused throughout; abdomen slightly narrower than the elytra, finely and not very closely punctured. Male not at hand; female having the abdomen wholly unmodified. Length 9.3 mm.; width 1.6 mm. Arizona...*ventrale* Horn

Abdomen pale in color throughout and concolorous with the remainder of the body..... 19

19 — Head very sparsely punctured even at the sides. Body not very stout, parallel, shining, pale red-brown in color throughout, the legs very pale and flavate; head well developed, elongate, only slightly narrower than the elytra, the sides parallel and nearly straight for two-thirds of



the distance from the eyes to the neck, then broadly rounded; punctures moderately coarse, deep, more distinct and perforate than usual, very sparse throughout, the lateral tumidity feeble; prothorax only very slightly longer than wide, distinctly narrower than the head, subparallel and very feebly arcuate at the sides, moderately coarsely, strongly, somewhat closely but irregularly punctate; elytra much elongated, two-fifths wider and a third to nearly one-half longer than the prothorax, the punctures moderately coarse, rather well separated, confused; abdomen distinctly narrower than the elytra, finely, sparsely punctulate. Male with the transverse fold of the second ventral long, about a sixth or seventh as long as the segmental width, the third ventral also with a setose transverse fold but shorter than that of the second, the lobe obsolete in specimens at hand; sixth obtusely arcuato-truncate at tip; female with a transverse setose fold on the second segment occupying median seventh or eighth of the width. Length 9.3 mm.; width 1.5 mm. New York (Long Island), New Jersey and North Carolina. [= *proximum* Csy.].....**parallelum** Csy.

Head closely punctured, at least toward the sides.....20

20 — Third ventral of the male with a short transverse fold. Body moderately stout, parallel, pale and uniform red-brown in color throughout, the legs still paler and rather more flavate; head well developed, about as wide as the elytra, the sides parallel and more or less arcuate behind the eyes, then more broadly rounded to the neck, the punctures rather coarse, separated by scarcely more than their own widths toward the middle of the occiput, the lateral tumescent ridge — between the setigerous foveolae — strong; prothorax distinctly elongate, subparallel, much narrower than the head, the punctures rather coarse but impressed, not very close-set; elytra slightly elongate, much wider and longer than the prothorax, coarsely but not very closely punctate, the punctures confused, becoming sparser and subserial toward the humeral angles; abdomen much narrower than the elytra, finely and sparsely punctulate. Male with the transverse fold of the second ventral very small, shorter than that of the third ventral, the latter also small and occupying about median twelfth of the width, the lobe rounded, extending about to the middle of the fourth in the only male at hand and occupying median fourth of the width, the sixth ventral broadly arcuato-truncate at tip; female with the abdomen wholly unmodified. Length 11.0 mm.; width 1.7 mm. Arizona (Clear Creek Cañon) and Colorado (Cañon City), — Mr. H. F. Wickham.....**coloradense** n. sp.

Third ventral of the male with a small rounded fovea. Form rather more slender than in the preceding, similar in coloration, the sculpture finer and much denser; head rather depressed, not quite as wide as the elytra, the sides parallel for a short distance behind the eyes, almost evenly arcuate thence to the neck, the punctures notably small and close-set, the lateral tumidity feeble; prothorax distinctly elongated, subparallel, much narrower than the head, the punctures rather coarse, deep and moderately close-set; elytra longer than wide, more depressed than usual, much wider and longer than the prothorax, the punctures unusually small but deep and close-set, confused in arrangement, sparser and sublinear near the humeri; abdomen slightly narrower than

the elytra, the punctures fine and rather close. Male with a small but broadly impressed transverse fold near the middle of the second ventral, occupying about median twelfth or fourteenth of the width, the third with the small fovea not broadly impressed but unusually abrupt and perforate, the lobe large, parabolic, extending beyond the apex of the fourth and occupying fully median two-fifths of the width; sixth arcuato-truncate at tip; female with the abdomen wholly unmodified. Length 10.5 mm.; width 1.68 mm. Arizona (Nogales).

#### **arizonense** Horn

Var A — Smaller in size and of still narrower form, the head and elytra rather less depressed; head less elongate, with more pronounced basal angles and more prominent eyes; prothorax smaller, with smaller and feebler punctures; elytra similarly sculptured but rather narrower and more elongate; abdomen similar in the female. Length 9.0 mm.; width 1.45 mm. Lower California.....**peninsulare** n. var.

21 — Form rather stout, pale testaceous in color, the elytra still paler and more flavate, the suture broadly clouded with blackish-piceous, the abdomen infuscate or piceo-testaceous throughout; head only moderately elongate, almost as wide as the elytra, alutaceous in lustre, the sides very slightly converging behind the eyes, the basal angles broadly rounded; punctures not very coarse and decidedly sparse; prothorax parallel, much narrower than the head, only slightly longer than wide, strongly alutaceous, the punctures rather small in size but distinct, sparse; elytra distinctly elongate, parallel, fully two-fifths longer and wider than the prothorax, slightly alutaceous, the punctures not very coarse and rather close-set, confused but with two widely spaced close-set series on each elytron in less than basal half, the depression along the sutural bead also linearly punctate as usual; abdomen rather more shining than the anterior parts, slightly narrower than the elytra, finely, rather sparsely punctate. Male with a short, broad transverse fold behind the middle of the second ventral and occupying about median tenth or twelfth of the width, the fovea of the third circular, somewhat perforate and small in size, the lobe large, regularly ogival in outline, extending slightly beyond the apex of the fourth and occupying median two-fifths of the width; sixth obtusely rounded at tip. Length 7.8 mm.; width 1.35 mm. Texas.....**suturale** n. sp.

Form more elongate, dark and uniform red-brown in color, the abdomen black with the apex slightly and indefinitely paler; legs very pale flavo-testaceous, the antennae infuscate; surface alutaceous, except the abdomen which is strongly shining; head rather small, much narrower than the elytra, the sides feebly converging and straight for some distance behind the eyes, the basal angles broadly rounding thence to the neck, the punctures only moderately coarse and not very close-set, rather uneven; prothorax distinctly elongated, narrower than the head, parallel, the punctures not coarse and rather feeble but distinct, more or less sparse; elytra longer than wide, rather convex transversely, much longer and wider than the prothorax, the punctures comparatively small and close-set, confused but with feeble traces of the two smooth longitudinal lines on each elytron formed by approximate series, which is a feature more or less obvious throughout the genus; abdomen narrower

than the elytra, finely, sparsely punctate. Male with a transversely oval setose fovea of moderately large size only slightly behind the middle of the second ventral, the third with a much smaller discal fovea which is well defined and slightly longitudinally elliptical—an exception to the general rule,—the lobe rather small and obtusely pointed, scarcely extending to the apex of the fourth, its sides diverging to the base which occupies scarcely more than a fourth of the width; sixth segment rather strongly, evenly rounded; female with the abdomen wholly unmodified. Length 7.7–8.7 mm.; width 1.3–1.35 mm. Texas (Austin). [= *alutaceum* Fvl., i. litt.].....**vagum** Horn

22 — Body small in size, moderately stout, deep black in color throughout except a fine apical border of the elytra and the legs, which are pale flavo-testaceous; antennae dusky-testaceous toward base; head very distinctly narrower than the elytra, oblong, only very slightly longer than wide, with the eyes unusually large and prominent and less anterior than usual, the sides behind them parallel or very feebly converging and straight to the rounded but unusually distinct basal angles; surface alutaceous as in the two preceding species, closely and finely punctate; prothorax slightly elongate, distinctly narrower than the head, parallel, polished, the punctures coarse deep and close-set; elytra slightly elongate, parallel, much wider and longer than the prothorax, the punctures but slightly less coarse than those of the pronotum and dense, arranged without order; abdomen much narrower than the elytra, alutaceous, finely and not closely punctulate. Male with a fine transverse setose fold at the centre of the second ventral, occupying median eighth or ninth of the width, the third also with a similar though slightly shorter and still finer setose discal fold, the lobe very broad and obtusely rounded, occupying nearly median three-fifths and not extending to the apex of the fourth; sixth broadly rounded at tip; female with the abdomen wholly unmodified, the sixth ventral truncate at tip, with the surface feebly ascending, paler and translucent at the edge. Length 6.8–7.5 mm.; width 1.2–1.28 mm. Florida to Texas (Brownsville).....**despectum** Lec.

23 — Body very small, notably slender and parallel in form, dark testaceous and polished throughout, the legs pale flavo-testaceous; head well developed, distinctly elongate, a little wider than the elytra, parallel and straight at the sides, the basal angles more broadly rounded and the eyes smaller and less prominent than in *despectum*, the punctures coarse and rather sparse; prothorax distinctly elongate, parallel, narrower than the head, still more coarsely and nearly as sparsely punctate; elytra at least a fourth longer than wide, parallel, distinctly wider than the prothorax but only as long as the latter in the female and a little shorter in the male, the punctures relatively very coarse, not close-set, serial; abdomen scarcely narrower than the elytra, rather coarsely, unevenly and not densely punctulate. Male with a rather long and strongly setose fold well behind the middle of the second ventral, the third with a circular perforate discal fovea before the middle, the lobe obsolete in specimens at hand; sixth ventral obtusely rounded at tip; female with a very small transverse setose fold well behind the middle of the second

ventral—otherwise unmodified. Length 6.0 mm.; width 0.8 mm. Florida and Louisiana.....**lugubre** Lec.

24 — Form stouter than in *lugubre* but equally small in size, much less parallel, polished and deep black throughout, rather convex, the legs pale flavo-testaceous, the antennae black with the two basal joints rufous; head elongate, much narrower than the elytra, the eyes moderate in size and prominence, anterior; punctures sparse and moderately coarse; prothorax elongate, distinctly narrower than the head, the sides subparallel and feebly arcuate, slightly narrowed toward apex, the latter being sensibly narrower than the base; punctures rather coarse, not very close-set; elytra well developed, elongate, parallel, two-fifths wider and a third longer than the prothorax, the punctures moderately coarse and close-set and in great part serial in arrangement; abdomen much narrower than the elytra, the punctures strong but rather sparse. Male with a short transverse setose fold behind the middle of the second ventral, the third with a very minute discal fold, the lobe unusually narrow, rather acutely triangular, not extending to the apex of the fourth and occupying apical fifth or sixth of the width; sixth obtusely rounded at tip; female not at hand. Length 6.7 mm.; width 1.08 mm. Florida. [= *parcum* Lec.].....**obliquum** Lec.

The arrangement proposed above may not give a succession so truly in accordance with natural affinity as that based upon male structural modifications, but it is thought that the characters employed, together with variations of the color scheme, are sufficiently radical and constant to enable the student to place any specimen he may have at hand, irrespective of sex. It is possible, for example, that *parallelum* may be more closely allied to *floridanum* than to *coloradense* or *arizonense*, and it was probably by a hasty examination of the sexual characters alone, that Dr. Horn was led to the conclusion that it was identical with *floridanum*; the form, coloration and sculpture are, however, altogether different, and, other than the similarity in type of sexual characters, there is no close relationship between these two species. The name *proximum* was applied to one of those rather perplexing variations having the elytra less elongate, but it probably does not differ even subspecifically.

At Austin, Texas, I collected a very large series of the widely distributed *pimerianum*, in order to form an idea of the extent of specific variation and find that this is rather surprising and unusual, some of the very small depauperate individuals being proportionately more slender, with the head

sensibly narrowing behind the eyes, so that they would seem to be almost subspecifically distinct, and, if seen in the extremes alone, might be considered specifically different; I notice the same variability, however, in specimens of *texanus* taken at Galveston.

The two species *anceps* and *vitatum*\* of Horn, — the only other members of the genus thus far described — are not represented in the material before me, and I am therefore compelled to omit them from the table; the former seems allied to *floridanum* and the latter to *pimerianum*, but differs from this as well as all other of our species in coloration, being testaceous with the last two abdominal segments black, the usual rule in bicolored species being to have the last two ventrals paler than the others. *Anceps* is black, shining, with piceous abdomen, robust in form, with unusually large head, and, like *vitatum*, occurs in southern Arizona. *Convergens* is by no means identical with *floridanum*, as announced by Horn, the two species differing in the sexual modifications of the sixth ventral, the latter being singularly and exceptionally modified in *floridanum* as represented by New Jersey cotypes.

In this genus there are only two really distinct kinds or classes of males and not three as stated by Horn. The first kind has the lobe of the third ventral present in more or less developed degree, and the second has no vestige of lobe but retains the discal marks as perfectly developed as the first. There is apparently no other differential character, though the two classes of males probably play quite different roles in the life history of the species. If the lobe gradually diminished to complete disappearance, there would manifestly be but one class of males having a very variable appendage, but I have never seen an unlobed male presenting any trace of the lobe, and such traces would undoubtedly be seen occasionally if the lobe disappeared in that manner. We are therefore led to the conclusion that there is only a certain amount of variability in the lobe and that the unlobed males must constitute a distinct class of that sex — possibly infertile.

\* The significance of this specific name is somewhat obscure. Its repetition several times would seem to show that it is not a misprint for *vittatum*.

### Hesperobium Csy.

The dentition of the mandibles will at once distinguish this genus from *Gastrolobium*, there being but two large elongate sharply pointed and much less unequal teeth, instead of the three teeth of the latter genus. The two teeth of the right mandible are clearly and evenly outlined throughout, but the lower tooth of the left mandible has a small shallow notch and vestigial tooth-like inequality of the edge far down on its lower side. The species, which are less numerous than those of *Gastrolobium*, differ considerably from the latter in facies, and, except in a few aberrant forms, in their sombre black or piceous coloration, longer basal joint of the antennae and type of male sexual modification, no trace of the folds, foveae or lobe of the second and third ventrals ever being observable. They appear also to be exclusively confined to temperate and boreal North America, not extending below the Mexican boundary and inhabit the entire country from the Atlantic to the Pacific, being the only genus of Cryptobia, except *Ababactus*, forming part of the true Pacific coast fauna. It is therefore the ancestral stem-forms of this genus, in all probability, rather than the preceding that, migrating in remote times to Asia by way of Alaska, have gradually become the present *Monocrypta*, *Spirosoma*, *Homoeotarsus* and *Cryptobium* of Asia and Europe. The species are tolerably homogeneous but *sellatum*, perfectly normal otherwise, differs greatly in its pale elytra, maculate with black, and *cribratum* and *rubripenne* in some features of form and coloration, as well as the pale, very coarsely and sparsely sculptured elytra, call to mind the remarkable type of *Lissobiops* to be described below. The various species may be distinguished by the characters given in the following table: —

Basal angles of the head more or less evident, the head more oblong; elytral punctures never very coarse, always close-set and never with more than a trace of serial arrangement at any part.....	2
Basal angles of the head obsolete, the sides converging from the eyes to the neck and almost evenly arcuate; neck not more than three-fifths as wide as the head; elytral punctures extremely coarse, sparse and more or less distinctly serial in arrangement; surface polished throughout.....	13

- 2—Body black or piceous-black in color throughout. .... 3  
 Body black, the elytra bright rufous, with an oblong sutural spot of black. 12  
 3—Species of the Pacific coast. .... 4  
 Species of the Atlantic regions. .... 6  
 4—Form stout, the body large in size, with the head strongly inflated and rounded at the sides behind the eyes, black, the elytra rufo-piceous, the legs pale, the antennae fuscous; head large and well developed though distinctly narrower than the elytra, rather coarsely, closely punctate, the eyes moderate in size but convex and prominent; neck but little more than half as wide as the head; prothorax distinctly narrower, slightly elongate, the sides somewhat converging and arcuate anteriorly, widest well before the middle, the punctures moderately coarse, deep and well separated; elytra but just visibly longer than wide, parallel, nearly one-half wider and a third longer than the prothorax, not very coarsely but deeply, rather closely and confusedly punctate; abdomen slightly narrower than the elytra, more finely but very strongly and rather closely punctate. Male with the fifth ventral broadly, feebly sinuato-truncate, the sixth with an abrupt deep emargination, one-half deeper than wide, with the bottom narrowly rounded, its edges with an irregular polished bevel as usual, the surface not impressed; female with the head notably narrower and slightly less inflated posteriorly, the sixth ventral broadly rounded at tip. Length 10.0 mm.; width 1.75 mm. California (San Joaquin Co.).....*tumidum* Lec.  
 Form more slender, the size smaller, the head never notably inflated behind the eyes, the sides straight, gradually rounding basally to the neck, the latter relatively broader, three-fifths as wide as the head. .... 5  
 5—Elytra evidently longer and very much wider than the prothorax, black, the elytra sometimes feebly picescent; head rather small, always much narrower than the elytra, moderately coarsely, deeply and rather closely punctured, the eyes moderately prominent; prothorax distinctly, though not very greatly, narrower than the head, much longer than wide, parallel, the sides feebly arcuate and somewhat converging anteriorly, the punctures moderately coarse and deep, confusedly aggregated along the median smooth space and toward the sides as usual; elytra in the male slightly, and in the female more distinctly, longer than the prothorax, fully two-fifths wider, slightly longer than wide, moderately coarsely, deeply, confusedly and very closely punctured throughout; abdomen shining, finely but strongly, rather closely punctate, slightly narrower than the elytra in both sexes. Male with the apex of the fifth ventral very distinctly but broadly sinuate in the middle, the sixth with a very deep, narrowly triangular notch, twice as deep as wide, with the angle rounded; female differing but little from the male in habitus or size of the head, the sixth ventral evenly and circularly rounded at tip. Length 8.0–9.3 mm.; width 1.4–1.55 mm. California (coast regions north of San Francisco).....*pacificum* n. sp.  
 Var A—Almost similar to *pacificum* but rather smaller, somewhat more depressed and parallel and with the head relatively a little larger, almost as wide as the elytra, the punctures rather coarse, deep and perforate, well separated; prothorax large, much longer than wide, with the punctures still sparser, the sides subparallel, broadly

- arcuate, the base a little narrower than the apex; elytra rather less elongate, distinctly wider and longer than the prothorax, the punctures coarser, deeper and less close-set, partially serial in arrangement toward base especially toward the scutellum; abdomen as wide as the elytra, otherwise similar. Male with the fifth ventral feebly sinuato-truncate posteriorly, much more feebly sinuate at the middle than in *pacificum*, the notch of the sixth more parallel-sided, nearly as in *Paederus*, fully twice as deep as wide. Length 8.3 mm.; width 1.38 mm. British Columbia.....*vancouveri* n. var.  
 Elytra shorter than the prothorax and usually but little wider, the body more slender and much more parallel, black, the elytra somewhat piceous; legs pale, the antennae dusky; head longer than wide, as wide as the elytra, the eyes moderately prominent, the punctures strong, deep, moderately close-set; prothorax more or less distinctly narrower than the head, much longer than wide, the sides feebly converging toward base, broadly arcuate especially anteriorly, the punctures rather large, strongly impressed, not very close-set, aggregated as in *pacificum*, the aggregation along the smooth line usually broadly impressed posteriorly; elytra barely as long as wide, rather depressed, the sides feebly diverging as a rule, the punctures strong and close-set throughout, arranged without order; abdomen as wide as the elytra, finely but strongly, closely punctate. Male with the fifth ventral broadly, feebly sinuate toward the middle, the sixth with an abrupt and very deep triangular emargination, not quite twice as deep as wide, its angle broadly rounded; female differing but little from the male in general form, the sixth ventral very broadly, feebly arcuate at tip. Length 8.7 mm.; width 1.28 mm. Southern California and Nevada (Reno) to British Columbia.....*californicum* Lec.  
 6—Head inflated posteriorly, the sides behind the eyes parallel and distinctly arcuate; pronotum highly polished throughout, never alutaceous. .... 7  
 Head not inflated posteriorly, the sides parallel or nearly so and usually straight for some distance behind the eyes. .... 9  
 7—Male with the apex of the fifth ventral transversely and rectilinearly truncate, with a minute triangular tooth at the middle. Body moderately stout and convex, polished, black throughout, the legs pale, the antennae dusky; head but slightly longer than wide, equal in width to the elytra; the punctures coarse, deep and well separated; lateral tumid ridge strong; eyes scarcely at all prominent, almost entirely visible from above; neck wide, fully three-fifths as wide as the head; prothorax large, slightly elongate, not very much narrower than the head, parallel, the sides feebly arcuate; punctures rather coarse, impressed and somewhat close-set throughout, the median smooth area distinct; elytra but little longer than wide, only slightly wider and longer than the prothorax, parallel, not very coarsely but deeply, very closely and confusedly punctate; abdomen as wide as the elytra, finely, densely punctate, more minutely but rather less densely so beneath. Male with the fifth ventral unimpressed, the sixth with a large triangular notch much deeper than wide, with the angle finely acute and the edges broadly and gradually beveled, the adjoining surface anteriorly not much modified, nor-

mally pubescent and only very feebly impressed; female not differing much from the male, the head a trifle smaller, the sixth ventral broadly and very obtusely rounded at tip. Length 9.8 mm.; width 1.6 mm. Rhode Island to Iowa..... **pallipes** Grav.

Male with the apex of the fifth ventral truncate or feebly sinuate, not dentate..... 8

8 — Body large in size and stout, black throughout, the legs pale, the antennae dusky; head longer than wide, about as wide as the elytra, the eyes relatively small and only moderately prominent, the punctures strong and rather close-set; prothorax large, longer than wide, parallel, only slightly narrower than the head, the sides feebly arcuate: punctures rather small and moderately close, not so uneven in distribution as in the Pacific coast species; elytra quadrate, parallel, not longer than wide, equal in length to the prothorax in the male, a little longer in the female, about a fourth wider, the punctures rather small but strong, close-set and confused throughout; abdomen as wide as the elytra, finely, densely punctate above and beneath. Male with the fifth ventral feebly sinuato-truncate, the sixth with a large triangular emargination, as wide as deep, the angle acute, the surface in prolongation anteriorly broadly flattened, polished and glabrous; female differing but little, the sixth ventral broadly, feebly arcuate at apex. Length 11.0 mm.; width 1.85 mm. New York to North Carolina, Iowa and Missouri... **capito** Csy.

Body very much smaller, less stout and fusiform, rather convex, polished, the vestiture less conspicuous, black, the prothorax and elytra paler, rufo-piceous; legs and antennae pale flavous; head small, elongate, much narrower than the elytra, only slightly inflated behind the eyes, with the sides broadly arcuate, the eyes well developed but not very prominent, the punctures strong but uneven in size and well separated; neck nearly three-fourths as wide as the head; prothorax large, slightly longer than wide, very nearly as wide as the head in the male and wider than the latter in the female, parallel, with the sides broadly, evenly arcuate, the punctures sparse, moderately coarse, impressed; elytra barely as long as wide, parallel, as long as the prothorax and distinctly wider, the punctures small but strong, confused throughout and unusually well separated; abdomen as wide as the elytra, rather tapering behind the middle, finely, rather sparsely punctate throughout. Male with the fifth ventral evenly and almost rectilinearly truncate, the sixth with a large, evenly triangular emargination which, as in the two preceding species, occupies the entire width of the apex, its sides nearly straight, the angle obtuse, but not distinctly rounded, the notch more than twice as wide as deep, the surface adjoining anteriorly not impressed but with a small dull patch which is minutely and transversely rugulose; female differing but slightly, the sixth ventral narrower and obtusely rounded. Length 7.5-8.0 mm.; width 1.3-1.4 mm. New York..... **flavicornis** Lec.

9 — Pronotum alutaceous because of a very minute and regular micro-reticulation..... 10

Pronotum highly polished, without trace of minute sculpture of any kind; antennae normal..... 11

10 — Antennae evenly and gradually incrassate throughout from the end of

the first joint. Body rather stout, only moderately convex, subfusiform, black throughout, the legs pale flavate; antennae infusate, flavate at tip; head moderately small in size, much narrower than the elytra, the sides parallel behind the eyes for a short distance, the sides being almost evenly arcuate from the eyes to the neck; punctures rather coarse and close set; prothorax longer than wide, only very slightly narrower than the head, parallel, the sides feebly arcuate, the punctures small, rather feebly impressed and sparse; elytra slightly elongate, parallel, not very coarsely but strongly, confusedly and closely punctate, much longer and wider than the prothorax in both sexes; abdomen as wide as the elytra or slightly wider, the sides parallel and very feebly arcuate, the punctures strong and close-set, becoming coarse, scabrous and sometimes subconfluent toward the sides. Male with the fifth ventral unmodified, the sixth with a deep triangular notch nearly one-half deeper than wide, with the angle obtusely rounded and the opening abruptly formed and half as wide as the apex; female not differing greatly from the male, the sixth ventral narrow, obtusely rounded at tip. Length 8.8 mm.; width 1.6 mm. New York to Wisconsin, Florida and Louisiana. [= *latebricola* Nord.]..... **cinctum** Say

Antennae rather slender and only just visibly increasing in thickness from the end of the first joint to the end of the sixth, the last five joints abruptly much wider, forming a loose parallel club. Body fusiform, moderately stout, black, the legs pale flavous, the antennae slightly fuscous, gradually paler toward tip; head small, elongate as usual, very much narrower than the elytra, the sides converging and evenly, strongly arcuate from the well-developed but only moderately prominent eyes to the neck, which is three-fourths as wide as the head, the lateral foveolae very deep and conspicuous; punctures coarse and close-set; prothorax slightly elongate, about as wide as the head in the female, the sides parallel and feebly arcuate, sometimes broadly angulate at the middle, the punctures rather small but conspicuous, somewhat sparse and impressed; elytra large, somewhat longer than wide, very much longer and wider than the prothorax, the punctures rather small but very deep and close-set, confused; abdomen as wide as the elytra, nearly as in *cinctum*, but less strongly sculptured. Male unknown; female with the sixth ventral rather narrow, the tip feebly arcuate. Length 8.0 mm.; width 1.5 mm. Florida (Lake Worth).

**clavicornis** n. sp.

11 — Form moderately stout, rather convex, only slightly fusiform, polished, deep black, the legs and antennae flavate; head small, distinctly elongate, very much narrower than the elytra, the sides parallel and straight for some distance behind the moderately large and convex eyes, then converging and more arcuate to the neck, the punctures less coarse than in *cinctum*, and twice as widely separated; prothorax large, longer than wide, parallel, with the sides evenly and moderately arcuate, slightly wider than the head, the punctures rather coarse, deeply impressed and widely separated; elytra but little longer than wide, slightly longer and wider than the prothorax, the punctures rather coarse, deep and close-set, confused in arrangement; abdomen about as wide as the elytra, tapering posteriorly, finely, rather sparsely punctate throughout. Male

unknown; female with the sixth ventral narrowed at tip; the latter rather strongly, evenly arcuate. Length 8.0 mm.; width 1.4 mm. Texas (Galveston) ..... *atronitens* n. sp.

Form rather slender, feebly fusiform, rather convex, shining, black, the prothorax very faintly picescent; legs flavate, the antennae fuscous, flavate toward tip; head very narrow, parallel and elongate, very much narrower than the elytra, the sides straight and parallel for a long distance behind the eyes, then rapidly rounding to the neck; eyes well developed, moderately prominent; punctures rather coarse and close-set in basal half, the anterior half almost impunctate; prothorax distinctly elongate, as long as the head and slightly wider, the sides parallel and evenly, very distinctly arcuate, the punctures moderate in size, unusually feebly impressed and not at all conspicuous, sparse; elytra distinctly elongate, parallel, only very slightly longer but more distinctly wider than the prothorax, the punctures small but strong, close-set and confused throughout; abdomen as wide as the elytra, gradually tapering posteriorly, finely and not very closely punctate, polished. Male unknown; female with the sixth ventral as in *atronitens*. Length 6.5 mm., width 1.28 mm. Virginia (Norfolk) ..... *parviceps* n. sp.

12 — Body stout, fusiform, moderately convex, polished, black, the elytra bright rufous with an elongate parallel sutural spot of black, extending from the base to about apical fourth and slightly dilated behind; legs pale flavate; antennae black, the two basal joints rufous; head narrow and elongate, very much narrower than the elytra, the sides feebly converging behind the eyes and almost evenly, distinctly arcuate from the eyes to the neck, the latter not quite three-fourths as wide as the head; eyes moderate in size and prominence; punctures rather small and moderately close-set, the anterior half subimpunctate; prothorax distinctly elongate, only very slightly narrower than the head, the sides parallel and feebly arcuate; punctures rather coarse, impressed, sparse; elytra large, longer than wide, the sides parallel and feebly arcuate, much longer and wider than the prothorax, the punctures small but strong, close-set and confused; abdomen distinctly narrower than the elytra, finely, not very closely punctate. Male with the fifth ventral not modified at apex, the sixth with an acutely triangular notch nearly three-fourths as wide as the apex and fully as deep as wide; female with the elytra still larger, the abdomen broader and the head not wider than the prothorax, the sixth ventral obtusely rounded at tip. Length 8.4 mm.; width 1.55–1.7 mm. Indiana and Illinois ..... *sellatum* Lec.

13 — Form rather stout and convex, shining, black, the elytra rufous with the sutural bead sometimes darker especially at base; legs rufous, the antennae dusky, rufous at base; head elongate, much narrower than the elytra, the eyes rather prominent; punctures moderately coarse, rather shallow and extremely sparse; prothorax much elongated, narrower than the head, parallel, the sides feebly arcuate, the apex slightly narrower than the base; punctures moderately coarse, shallow, impressed, very sparse, with a more regular series along the smooth median area; elytra slightly elongate, parallel, scarcely longer but distinctly wider than the prothorax, the sides feebly arcuate; punctures very coarse, impressed, sparse and only partially serial; abdomen as wide as the elytra

or very nearly so, parallel, finely, rather closely punctate but shining. Male with the fifth ventral unmodified, feebly sinuato-truncate at tip, the sixth with a triangular emargination, much wider than deep, occupying three-fourths of the apex with its angle well defined and not rounded, the notch gradually formed with broadly rounding sides posteriorly; female having the narrow sixth ventral arcuato-truncate at tip. Length 8.7 mm.; width 1.5 mm. Massachusetts and New Jersey.

*cribratum* Lec.

Form similar but more slender, convex, polished throughout, black, the elytra bright and paler rufous, with a small black scutellar spot; legs pale flavate, the antennae dusky, flavous toward base and apex; head elongate, much narrower than the elytra, almost wholly impunctate toward the middle throughout the length, very sparsely punctured toward the sides; prothorax nearly as in *cribratum*, very remotely and rather feebly punctate, the sides more converging anteriorly, the apex distinctly narrower than the base; elytra but little longer than wide, as long as the prothorax but much wider, the punctures scarcely as coarse as in *cribratum* and very much sparser, rather distinctly serial throughout; abdomen slightly narrower than the elytra, finely, rather closely punctate, with the pubescence much more distinct than elsewhere as in *cribratum*. Male with the fifth ventral unmodified as in *cribratum*, the sixth with a narrower and deeper triangular incisure, about half as wide as the apex, less gradually formed and much deeper than wide, the angle at the bottom narrowly rounded. Length 7.7 mm.; width 1.3 mm. South Dakota (Volga) ..... *rubripenne* n. sp.

There may be several closely allied forms in the Pacific coast region besides the very distinct *tumidum*, but it seems best to recognize only two species as known by material already collected, one — *pacificum* — with large elytra, much longer and wider than the prothorax, and the other — *californicum* — with small elytra, about as long as the prothorax and but little wider. To the first I have attached a subspecies based upon differences of facies and slight modifications of the male sexual characters. The other also appears to have some slightly modified derivatives or subspecies, but they are not defined at the present time, it being better to leave this difficult investigation for a future study with more ample material. The last two species of the table are aberrant and suggest *Lissobiops* in certain special characters, such as the more apically narrowed prothorax and coarse, sparse sculpture. *Properum* of Horn, which is the only described species not represented before me, appears to be more closely related to *Cryptobella*, as shown by the original description;

it is a small species about 7 mm. in length and occurs in Arizona. I have never seen it.

#### *Lissobiops* n. gen.

The very fine and rather rare species named *Cryptobium serpentinum* by LeConte, is distinguished from any known form of *Hesperobium* by four characters of greater or less importance, which together appear to demand generic separation. The most important of these characters is probably the medially interrupted side-margins of the pronotum, the latter being bounded laterally by a continuous fine reflexed bead in *Hesperobium*. The second is the imperfect pleural fold of the elytra, which comes far from attaining the infra-humeral part of the inflexed sides; the third involves the narrow neck, which however is probably of less significance in this case than would seem apparent and the fourth concerns the general scheme of coloration, which is unique among our Cryptobia, and, bearing in mind the extreme constancy of the color scheme in some other parts of the Paederini, such as *Paederus* for example, this character, which so affects the general habitus of the species, is probably of considerable importance from a generic viewpoint. *Lissobiops* resembles *Hesperobium* in its bidentate mandibles, but the basal joint of the antennae is even longer than in any species of that genus. The single species known thus far may be described as follows:—

Body slender, convex and fusiform, highly polished throughout, pale testaceous in color, the anterior two-fifths of the head, the prothorax, a subquadrate spot at the scutellum and the entire first, fifth and sixth ventrals deep black; legs extremely slender, pale flavate; antennae flavo-testaceous, joints two to six black; head narrow, elongate, sub-rhomboidal, moderately narrowed before the eyes, which are moderate in size and prominence, the basal joint of the antennae rather longer than the next four combined and almost as long as the extreme width of the head; punctures small, very feeble and extremely sparse throughout; prothorax elongate, narrower than the head, rather strongly narrowed anteriorly from the middle, the sides arcuate, the apex much narrower than the base, the punctures feeble, very remote, with a more close-set series along the broad median impunctate area; elytra not quite as long as the prothorax but much wider, slightly elongate,

wider than the head, parallel, the punctures coarse, deep, sparse and serially arranged; abdomen distinctly narrower than the elytra, feebly and very sparsely punctate. Male with the fifth ventral unmodified, the sixth with a triangular, gradually formed emargination, fully half as wide as the apex and fully as deep as wide, with the angle not very obviously rounded, the surface along the sides and before the notch sometimes very feebly impressed. Length 8.0 mm.; width 1.28 mm. North Carolina (Asheville).....*serpentina* Lec.

I was fortunate enough to find two males of this species in the mountains of western North Carolina some years ago. There is undeniably a rather closer relationship in many important features between *Hesperobium cribratum* and *rubripenne* and this species than there is between those species and the normal species of *Hesperobium*, but on account of the formation of the pleural fold of the elytra and side margin of the pronotum, as stated above, the two former are attached for the present to *Hesperobium*. It may, however, ultimately be deemed more proper to consider *Lissobiops* as a subgenus of *Hesperobium* and assign to it the three species, *serpentina*, *cribrata* and *rubripennis*.

#### *Biocrypta* n. gen.

This genus is more closely related to *Gastrolobium* than to *Hesperobium*, because of the tridentate mandibles and the fact that the second or third ventral bears sexual marks, not of the same character as in the former genus, however, but distinctly different as may be seen from the description given below. These facts lead to the query whether it would not be preferable to base the generic characters of the subtribe primarily upon dentition of the mandibles, rather than upon the presence or absence of a pleural fold of the elytra. The type of *Biocrypta* differs completely in facies from any known form of *Gastrolobium*, and its fusoid form suggests rather *Hesperobium* at first glance, but in the form of the head it differs radically from either; it may be described as follows:—

Fusiform, rather stout and only feebly convex, pale and uniform reddish-brown in color throughout the body, legs and antennae, the head and



abdomen alutaceous and micro-reticulate, the elytra still duller and finely rugulose, the pronotum polished and devoid of minute sculpture; head small, scarcely longer than wide, very much narrower than the elytra, the punctures moderately large, coarser than elsewhere and well separated; basal joint of the antennae a little longer than the next three combined, the third much longer than the second or fourth, which are equal; prothorax but slightly elongate, much narrower than the head, the sides feebly arcuate, the apex much narrower than the base; punctures fine and sparse, feeble and inconspicuous; elytra slightly longer than wide, large, parallel, one-half wider and two-fifths longer than the prothorax, finely, rather feebly, very closely and confusedly punctate; abdomen nearly as wide as the elytra, rather tapering posteriorly, finely, feebly and rather closely punctulate. Male not at hand; female with the second ventral unmodified, the third with a small rounded and feebly elevated flattened tubercle before the middle, the apex simple; fifth and sixth segments each with two widely separated larger setigerous punctures on the disk behind the middle, the latter arcuato-truncate at tip. Length 8.3 mm.; width 1.45 mm. Texas.....*prospiciens* Lec.

According to Horn, the male has the third ventral lobed, but as this lobe seems to vary noticeably in form among the very few known examples, there may be several closely allied species of *Biocrypta*. As might be anticipated from its affinity in many directions with *Hesperobium*, the sixth ventral in the male is angularly emarginate, differing in this way from any known species of *Gastrolobium*.

#### *Ababactus* Shp.

The comparatively minute delicate species assigned to this genus, inhabit the warmer parts of North America and form the closest approach in our fauna to the European *Cryptobium*. At the same time they differ very much from *Cryptobium* in general habitus, and the two genera are not very closely allied. The species described by LeConte under the name *Cryptobium lepidum* is in every way congeneric with the west coast *Ababactus pallidiceps* and appears to be a typical *Ababactus*, although I have not seen the type species, but its true affinities were overlooked by Dr. Horn in his revision of *Cryptobium*. The two species represented in my cabinet may be readily identified by the following characters:—

Form slender, fusiform, rather depressed, polished, blackish-piceous in color, the head testaceous, with an infumate cloud at the centre of the vertex; legs pale flavate, the antennae dusky rufous at base; head strongly, moderately closely punctate; basal joint of the antennae as long as the next three; prothorax slender and much elongated, much narrower than the head, the sides parallel, broadly and distinctly arcuate, the apex and base subequal in width; punctures finer than those of the head, rather sparse, confused, the more regular close-set series along the median smooth space somewhat impressed; elytra fully two-fifths longer than wide, parallel and straight at the sides, fully three-fourths wider and two-fifths longer than the prothorax, the humeral angles distinct, the punctures fine, close-set and altogether confused in arrangement; abdomen slender, much narrower than the elytra, finely, not very closely punctate. Male with a small, deep, circular fovea just before the centre of the second ventral and two entirely similar foveae at basal third of the third ventral, the latter separated by an eighth or ninth of the entire width; fifth segment broadly and very feebly sinuate toward the middle, the sixth with a narrow and very deep cleft, bordered along its sides by a narrow deep gutter, the two uniting at the bottom of the cleft, forming a deep excavation which attains the base of the segment, gradually narrowing to a very fine gutter near the base, the posterior angles of the cleft rounded, the emargination nearly four times as deep as its median width, the bottom obtusely rounded; female with the fovea of the second ventral wanting, the two foveae of the third completely as in the male, the fifth arcuato-truncate, the sixth narrow but broadly arcuato-truncate and simple at apex, the abdomen a little broader than in the male and the head somewhat narrower and more elongate. Length 4.6 mm.; width 0.7 mm. California (north of San Francisco)..... *pallidiceps* Csy.

Form nearly similar but rather stouter, polished, pale brownish-testaceous throughout, the legs but little paler, the antennae scarcely at all dusky; sides of the head behind the eyes feebly converging to the broadly rounded basal angles; punctures finer, sparse; antennae longer and more slender, nearly half as long as the body, the basal joint similar; prothorax slender, elongate, much narrower than the head, the sides parallel, nearly straight, rounding and more converging anteriorly, the neck scarcely more than a third as wide as the head, the punctures fine, feeble and rather sparse, the series as in *pallidiceps*; elytra as in that species but still more finely punctate, fully four-fifths wider than the prothorax and more than two-fifths longer; abdomen relatively a little wider though much narrower than the elytra, finely but distinctly, rather more sparsely punctate. Male with the second ventral wholly devoid of any trace of fovea, the third with two foveae exactly as in *pallidiceps*, the fifth arcuato-truncate at tip, with a small shallow and much more abruptly defined median sinus, the sixth with a narrow very deep cleft surrounded by a deep gutter as in *pallidiceps*; female not at hand. Length 4.2 mm.; width 0.75 mm. Texas..... *lepidus* Lec.

The species described by Horn under the name *Ababactus nactus*, I have not seen, but would infer from the description

that it differs from *pallidiceps* in its sparser punctuation of the head, finer and denser punctures of the elytra, in its less elongate prothorax and much less elongate elytra, which are said to be scarcely longer than the prothorax; it occurs in Arizona. *Pallidiceps* is much more closely allied to *lepidus* than to *nactus*, but is a larger species with relatively narrower head and darker coloration, besides differing in the male sexual characters.

#### SPHAERONIA.

The chief characteristics of this subtribe are the extremely slender neck, formed nearly as in *Stilicus* and *Scopaeus* and the small obtuse fourth palpal joint. These features are entirely foreign to the *Cryptobia* and also to the related *Lathrobia* and are correlated with so many peculiarities of structure as to indicate the propriety of separating these minute, frail and extremely interesting forms as a distinct subtribal group, for which I would propose the above name. The group is probably peculiar to the American tropics, and, in addition to the two genera here defined, will probably include several others when those almost inexhaustible regions are more thoroughly explored. The two following genera are defined upon examples kindly given me several years ago by Dr. Sharp, by whom they were originally described: —

Body less slender, almost as in *Ababactus* but more convex, moderately shining, very minutely punctured; head elliptically rounded at base behind the eyes, which are moderate or rather small and slightly prominent, placed at the middle of the sides, the frontal part before them abruptly narrowed to a moderate degree, the antennal prominences large and pronounced; labrum short, truncate, edentate, with a semicircular median emargination; surface more coarsely and confluent sculptured in anterior half, finely and sparsely punctate posteriorly, the two post-ocular foveolae of the *Cryptobia* distinct, the surface between them feebly swollen; mentum transverse, biobliquely tumid; maxillary palpi normal in form, the third joint obconical, longer than the second, finely, closely pubescent; gular sutures narrowly separated, parallel, feebly diverging anteriorly; antennae rather stout, the joints closely joined, the first nearly as long as the next four combined, strongly sigmoid, stout and finely, closely pubescent, the second much longer than the third; prothorax long and narrow, much narrowed anteriorly to the neck; prosternum elongate before the coxae, broadly, transversely impressed

anteriorly, feebly carinate posteriorly; pronotum very convex, extremely minutely punctate, without much more than a narrow trace of a smooth median line, the surface prominent at the middle near the base and bi-impressed as in *Scopaei*; elytra much wider than the prothorax, nearly as wide as the head, closely punctate, the sutural bead evident; abdomen rather narrower than the elytra, the segments only feebly impressed at base; legs long, very slender, the tarsi long, filiform, the first and fifth joints elongate; sexual characters of the male consisting of feeble transverse folds on the second and third ventrals and apical emargination of the sixth. Amazon.....\**Scopaeodes*  
Body very slender and of remarkably specialized structure throughout, scopaeoid in form, moderately convex, shining, finely, inconspicuously punctured, the head more coarsely and sparsely so throughout but more coarsely anteriorly than posteriorly; coloration pale; head elongate-oval, not abruptly narrowed before the eyes which are before the middle, rather small, prominent and very coarsely faceted; posterior outline semicircular, the median part of the base forming an abruptly projecting collar inclosing the neck; sides without post-ocular foveolae but with a deep longitudinal groove extending along the lower margin of the eyes, and gradually becoming attenuated to the neck; upper margin of the eyes also bordered by a deep groove which does not extend behind the eye; front strongly tritumorse; labrum very short, biobliquely and rectilinearly truncate, with a feeble median sinus, edentate; mentum very small; labial palpi slender, normal; maxillary palpi strongly specialized, the second joint slender, the third strongly inflated and rounded in outline but abruptly constricted at base and obliquely joined to the second by a slender peduncle; gular sutures completely united, forming a fine median stria anteriorly becoming a broad coarsely impressed groove posteriorly; mandibles bidentate within, the left at least strongly grooved externally; antennae rather thick, submoniliform, the basal joint cylindrical, thick and not much longer than the next two combined, the second and third subequal; prothorax elongate-oval, gradually attenuate anteriorly; prosternum extremely long before the coxae, almost evenly and strongly convex; pronotum tumid in the middle near the base, the median impunctate line obvious; elytra wider but not longer than the prothorax, the sides diverging, obscurely punctulate, the surface impressed at each side of the suture toward base only; abdomen narrower than the elytra, the segments feebly impressed at base; legs moderately slender but not very long, the anterior tibiae strongly, obtusely dentate within, the intermediate slender and cylindric, the posterior gradually thicker from base to apex, the tarsi rather long, slender, the basal joint of the posterior about as long as the next two together but much shorter than the fifth; claws well developed. Amazon. [= *Sphaerinium* Shp. — nom. praecocc.]...\**Sphaeronium*

The name *Sphaeronium* was substituted for the original *Sphaerinium* by Dr. Sharp, and the genus is founded upon a species described under the specific name *pallidum* by that author. The type of *Scopaeodes* — a name somewhat unfor-

tunate in view of the lack of any real affinity with *Scopaeus*,— is *S. gracilis* Shp. The latter is 5 mm. in length, the former not much shorter but notably more slender.

#### DOLICAONES.

This subtribe combines in a remarkable manner the essential characters of the Paederi and Lathrobia, agreeing with the former in the general nature of the male sexual characters and in the peculiar compressed and pubescent fourth joint of the maxillary palpi, and with the latter in general habitus, structure of the prothorax and other features. The genera are few in number and belong wholly to the old world fauna in all probability. Those represented in my cabinet may be defined as follows:—

- Eyes normal and well developed..... 2  
 Eyes wanting, replaced by a small whitish translucent point at the posterior margin of the antennal cavity..... 3  
 2 — Body very large, rather stout and parallel, moderately convex, coarsely, rather sparsely punctate, the pronotum with only a partially defined median smooth line, the abdomen with coarse sparse punctulation; hairs long and bristling; head large, oblong, the neck very broad, nearly three-fourths as wide as the head; labrum short and transverse, with a small triangular emargination, at each side of which there are two very short obtuse denticuliform lobes; antennae filiform, rather stout, barely as long as the head, the joints feebly obconical, the basal joint cylindric, but little longer than the next two combined; gular sutures feeble, rather narrowly separated, gradually converging and obsolescent at base; ligula bilobed at tip; paraglossae compressed, fimbriate at tip; maxillary palpi moderate in length, rather slender, coarsely, sparsely setulose; prothorax large, oblong; prosternum short before the coxae; elytra very short, less than half as long as the prothorax, with rounded basal angles, the hind wings probably wanting or vestigial; abdominal segments only very feebly impressed at base; legs rather long, somewhat slender; hind tarsi nearly three-fourths as long as the tibiae, densely clothed with stiff fulvous hairs beneath, the first joint much longer than the second and subequal to the fifth; claws moderate; anterior tarsi moderately dilated. South Africa. [= *Ophiomorphus* Dej. and *Adelobium* Nord.] ..... \***Doliceon**  
 Body small in size, subparallel and slender, moderately convex, rather finely, sparsely and evenly punctate, the pronotum with a smooth median line; abdomen not densely punctulate; pubescence short and inconspicuous; head moderate, usually narrower than the pro-

thorax, oblong, the neck very wide, four-fifths as wide as the head; labrum very short, transversely truncate, with a very small rounded median sinus, at each side of which there is a small and abruptly formed tooth; antennae short, rather slender; gular sutures evenly arcuate, moderately separated, most approximate at the middle; maxillary palpi with the third joint much longer than the second, strongly obconical and compressed; prothorax oblong, the angles distinct; prosternum more developed before the coxae than in the preceding genus; elytra well developed, as long as the prothorax or longer, the basal angles distinct; hind wings probably well developed; abdominal segments not impressed at base; legs slender, the hind tarsi filiform, the joints proportioned nearly as in the preceding; anterior tarsi, rather feebly dilated. Europe..... \***Leptobium**

- 3 — Body very small in size, slender, parallel, convex, polished, distinctly, evenly and more closely punctured, the abdomen relatively finely, very sparsely punctulate; pubescence entirely inconspicuous; head about as wide as the prothorax, somewhat pyriform; labrum as in *Leptobium*, bidentate, the teeth longer and more aciculate; gular sutures well separated, converging to about the middle, thence subparallel to the base; maxillary palpi with the third joint much longer than the second, subcylindric, rapidly narrowed at base, sparsely setulose; antennae short, one-half longer than the head, slender basally, rapidly incrassate distally; neck narrower, three-fifths as wide as the head; prothorax suboval, widest anteriorly, with a narrow median smooth line; prosternum well developed before the coxae; elytra extremely short as in *Doliceon*, with rounded basal angles, the hind wings undoubtedly obsolete or vestigial; abdominal segments not impressed basally; legs slender, the hind tarsi nearly as in *Leptobium*, the anterior feebly dilated. Europe..... \***Scotonomus**

*Doliceon* Lap., is founded upon the comparatively gigantic *lathrobioides* Lap., of the regions about Cape Town. Among some 450 species of Coleoptera which I took in that vicinity, there was only this one Paederid,—the largest species of the tribe known to me,—as though the entire paederoid energy of the country had been concentrated in this single species. The diagnosis of *Leptobium* (n. gen.) given above, is taken from the *biguttulum*, of Lacordaire, and that of *Scotonomus* Fauv., from the *raymondi*, of Fauvel. The species, although very few in number, display in *Doliceon* and *Scotonomus* the greatest disparity in size observable within any of the subtribes of Paederini. In the formation of the very short elytra and probable absence of hind wings, these two genera are identical and wholly different from *Leptobium*, the European species requiring a new generic name, since both

*Ophiomorphus* and *Adelobium* refer solely to the large South African species forming the type of *Dolicaon*. Dr. Sharp describes from South America (Tr. Ent. Soc. Lond., 1876, p. 247) a small and very aberrant species, under the name *Dolicaon distans*, without however alluding to the structure of the terminal joint of the maxillary palpi, so that I cannot confirm the generic reference. The probabilities are that it is not one of the *Dolicaones* as here restricted.

#### PAEDERI.

In this unusually isolated subtribe the labrum loses a good deal of the value that it has elsewhere, and, although always rather short and broadly truncate, with a small median notch or sinus somewhat as in the *Lathrobia*, this emargination may be rather wide and shallow, evenly rounded and without flanking teeth as in the European *fuscipes* — judging from a specimen so named for me by Mr. Reitter, — or an abruptly formed semicircle, with a short broad obtuse tooth at each side, as in *femoralis*, or a true triangle with straight sides, with short lobe-like teeth adjoining, as in *riparius*, in all the cases mentioned being entirely devoid of a denticle at the bottom of the emargination. Or, the emargination may be deep, evenly rounded and with a small acute tooth at the bottom, with the apical margin adjoining only broadly and arcuately lobed, as in *littoreus*. Most of these cases refer to *Paederus* proper. In *Paederidus* Rey, probably throughout the genus, the median emargination has a more or less evident triangular tooth at the bottom, this being homologous with the median tooth in the *Lithochares*.

In general structure, especially in the form of the prosternum, labrum and strongly dilated anterior tarsi, the *Paederi* display more affinity with the *Lathrobia* than any other type of *Paederini*, and the more or less fortuitous tooth at the bottom of the labral emargination, together with the prosternal structure and the dilated anterior tarsi, prove also a relationship with the *Lithochares*. It is still more evidently related to *Lathrobia* through *Domene*, — a genus

wholly out of place in the European catalogues, — and the *Lithochares* connect it with the *Medones*, although there is evidently a closer relationship between the last two named than between the *Paederi* and *Lithochares*, as shown by general habitus. Our species will form three closely allied genera. The four genera represented before me may be distinguished as follows: —

- Head large, more or less quadrate and broadly truncate at base; prothorax very broad and strongly rounded at the sides anteriorly, strongly narrowed thence to the base; integuments coarsely and sparsely punctate and pubescent; fourth tarsal joint strongly bilobed; gular sutures distinct, moderately separated and impressed. General in distribution. [= *Paederomorphus* Gaut.]..... **Paederus**
- Head relatively small, strongly narrowed behind the eyes and narrowly truncate or rounded at base, the prothorax relatively much smaller and more evenly oval..... 2
- 2 — Punctures and pubescence coarse and sparse, the abdomen always very sparsely punctulate, with the dorsal segments more or less feebly, transversely impressed at base; gular sutures gradually converging and most narrowly — though somewhat widely — separated behind the middle of the post-oral surface, always very feeble and unimpressed and sometimes subobliterated..... 3
- Punctures and pubescence finer and close-set, the abdominal segments strongly, transversely impressed at base; first abdominal segment without basal carina..... 4
- 3 — Eyes moderate in size; abdomen obtuse; fourth tarsal joint rather wide and strongly bilobed; head and last two ventrals always black, the elytra invariably dark steel-blue in color. Entire United States..... **Paederillus**
- Eyes large; abdomen gradually narrowed toward tip; fourth tarsal joint very narrowly bilobed; color testaceous nearly throughout. Sonoran regions..... **Leucopaederus**
- 4 — Eyes moderate in size; fourth tarsal joint not wider than the preceding, small and slightly bilobed; gular sutures becoming almost completely confluent posteriorly. Europe..... **\*Paederidus**

The beetles of the present group are more highly and conspicuously colored than any others of the tribe, and, being at the same time of moderately large size, especially in the tropics, they have received considerable attention from systematic writers. Excepting the warmer parts of the new world, our representatives are less numerous and less diversified than those of Europe — an exceptional case in the *Paederini*.

**Paederus Grav.**

The secondary sexual characters of the male are but slightly diversified, either in this or the other genera of the group, and are very nearly similar throughout, the fifth ventral being virtually unmodified, the sixth having a narrow parallel-sided slit, two to four times as deep as wide. The slit sometimes has its edges beveled throughout as in *grandis*. The elytra of the male are nearly always perceptibly shorter than in the female and the head is sometimes much larger in that sex, but otherwise there is very little sexual difference in the facies. The anterior tarsi are strongly dilated in both sexes and clothed beneath with dense pads of short whitish spongiouse pubescence. The various species are confined to the warmer parts of the United States, becoming very numerous in Mexico and are larger, as a rule, and heavier in build than those of *Paederillus*. The four in my cabinet may be known by the following characters:—

Legs black, the femora pale in about basal half. Body large and rather stout, shining, the head and last two ventrals black, the elytra dark blue, prothorax rufous and abdomen flavo-testaceous; antennae black, pale toward base and apex; head in the male large, quadrate, wider than the elytra, with the basal angles very broadly rounded, the eyes only slightly prominent and at about twice their length from the base, smaller in the female, notably narrower than the elytra, with the sides converging and broadly arcuate behind the eyes to the neck; prothorax slightly longer than wide, strongly convex, ovoidal, perceptibly narrower than the head in the male but equal to the latter in the female, polished, with a very few fine impressed and widely scattered nude punctures; elytra very coarsely and deeply but not densely punctate, quadrate, slightly wider than the prothorax and equal to it in length in the male, longer than wide, slightly longer than the prothorax and just visibly wider than the latter in the female; abdomen parallel, slightly narrower than the elytra. Length 9.2–10.5 mm.; width 1.8–1.9 mm. Arizona.....**grandis** Aust.

Legs pale, the femora in rather less than outer half and the tibiae gradually, indefinitely and more nubulously toward base, black. Body otherwise nearly as in *grandis*, the head in the male large, quadrate, parallel at the sides, with the basal angles much less broadly rounded than in *grandis*; eyes nearly similar, the punctures moderately strong, few in number, widely scattered; prothorax only slightly longer than wide, strongly convex, not so greatly narrower than the head as in *grandis*, rounded at the sides anteriorly, scarcely punctured; elytra in

the male much larger, longer than wide, and distinctly longer than the prothorax, equal in width to the latter and but very slightly narrower than the head, similarly punctured. Length 10.0 mm.; width 1.8 mm.

Lower California.....**femorialis** Lec.

Legs shorter and relatively stouter, pale honey-yellow throughout, the femora abruptly black in outer third. Body much smaller than in the preceding species, stout and strongly convex, similar in coloration and polished lustre; head in the male a little wider than the prothorax or elytra, the sides converging and circularly arcuate behind the eyes to the neck, similar in the female but subequal in width to the prothorax and narrower than the elytra; eyes at one-half more than their own length from the base; prothorax scarcely longer than wide, oval, rounded at the sides, the latter strongly converging posteriorly as usual; elytra quadrate and scarcely longer than the prothorax in the male, notably longer in the female. Length 6.8 mm.; width 1.25 mm. Europe and Texas.....**riparius** Linn.

Legs nearly as in *riparius* but entirely clear honey-yellow throughout, without trace of darker ornamentation. Body similar to that of *riparius* but still smaller and slightly more slender; head with only very slight sexual differences, distinctly wider than the elytra in the male and only just visibly so in the female; eyes moderately convex and prominent, at about a third more than their own length from the base, the sides behind them strongly converging and circularly arcuate in both sexes; prothorax scarcely visibly longer than wide, obtrapezoidal, the sides broadly arcuate, a little more rounded anteriorly; elytra not quite as long as wide or as long as the prothorax in either sex, coarsely, sparsely punctate, the sides feebly diverging from the base and broadly, feebly arcuate; abdomen subequal in width to the elytra. Length 6.0 mm.; width 1.0 mm. Florida (Crescent City) and Georgia.....**littoreus** Aust.

It is rather remarkable that the European *riparius* should occur within the United States, but two males collected in the Caucasus and forwarded to me by Mr. Reitter, agree in all respects — allowing for sex — with a single female in my cabinet taken at an unrecorded locality in Texas. If it was collected in the neighborhood of Galveston, there is a strong probability of its being simply an adventitious importation, and, that it has established itself in America, is by no means proved. The Mexican *mexicanus* Er., is listed by Henshaw, but I have seen no examples taken within our borders; it has the coloration and facies of *grandis* but is much smaller, with the antennae and legs rufous, the tip of the posterior femora alone black. Our species are all alate and with distinct elytral humeri.

**Paederillus n. gen.**

This genus is much more boreal in range than *Paederus* and almost entirely replaces the latter in the United States, where it is distributed throughout from the Atlantic to the Pacific. Its species are much smaller as a rule than those of *Paederus*, and of more slender form, with little or no sexual difference in the head; the elytra are, however, frequently distinctly shorter in the male. The species are rather numerous but closely allied among themselves, having a remarkable persistency and uniformity of facies throughout. The coloration of the body is constant, being as stated in the table of genera, and the lustre is always shining, so that these characters will not be mentioned in describing the various forms below. The labrum is short and transversely truncate throughout and completely edentate, with a small abrupt sub-parabolic median sinus, devoid of medial denticle. The species are usually gregarious and therefore plentiful in individuals when discovered; those represented by material in my cabinet may be described as follows:—

- Elytra large, much wider and longer than the prothorax in both sexes... 2  
 Elytra shorter, never very much longer than the prothorax, even in the female, and occasionally much shorter except in *texanus*..... 3  
 2—Body slender, the legs pale throughout, the antennae blackish, pale toward base and slightly paler at the immediate apex; head elongate-oval, the eyes rather small but convex and prominent and at one-half more than their own length from the base; sides behind them rapidly converging, evenly, feebly and circularly rounded throughout to the neck, the angles obtuse and scarcely rounded, the base narrowly truncate; prothorax like the head subimpunctate as usual, elongate-oval, widest only slightly before the middle, narrower than the head; elytra very long, parallel, a third wider and more than a fourth longer than the prothorax in the male and distinctly wider than the head, the punctures only moderately coarse and unusually sparse; abdomen narrower than the elytra, parallel. Male with the fifth ventral very feebly sinuate-truncate at apex, the slit of the sixth narrow, parallel and very deep, the sides straight, the bottom of the slit concealed from view in specimens at hand; female not observed. Length 5.6 mm.; width 0.9 mm. Florida. .... **floridanus** Aust.

Body slender and nearly similar to the preceding throughout, except that the head is less elongate, the eyes a little larger, the sides behind them only feebly convergent and straight to the basal angles, which are rather

broadly rounded, the base very much more broadly truncate; prothorax elongate-oval, only slightly narrower than the head, widest at two-fifths from the apex; elytra in the female only slightly longer than wide, a fifth wider and longer than the prothorax, slightly wider than the head, parallel, the punctures very coarse and rather close-set; abdomen subequal in width to the elytra, the sixth segment narrowly and feebly impressed along the middle in the female; male unknown. Length 4.9 mm.; width 0.8 mm. North Carolina ..... **carolinae** n. sp.

Body stout; coloration as in the preceding, except that the femora are pale, becoming black in outer third to half, the tibiae and tarsi piceous throughout; head in the male but slightly longer than wide, the eyes rather convex and prominent, moderate in size, the sides behind them strongly convergent, straight for nearly the length of the eyes, then broadly rounding into the truncate base, which is moderately narrow; in the female nearly similar, except that the sides behind the eyes are only feebly convergent and the base more broadly truncate, the basal angles equally rounded in both sexes; prothorax rather stout but elongate-oval, about as wide as the head; widest only slightly before the middle, the sides broadly arcuate; elytra very large, parallel, deeply, moderately coarsely and rather sparsely punctate, convex, very slightly longer than wide and almost similar in the sexes, very much wider than the head and much wider and longer than the prothorax in both sexes; abdomen parallel, slightly narrower than the elytra. Male with the apex of the fifth ventral transversely truncate at apex, the slit of the sixth narrow and very deep, its sides parallel and straight posteriorly, gradually and slightly converging in less than anterior half to the narrowly rounded bottom, the surface distinctly impressed in prolongation of the slit; sixth ventral of the female impressed along the middle as usual. Length 5.3–5.7 mm.; width 1.2 mm. Texas (El Paso), — Mr. G. W. Dunn.

**saginat** n. sp.

- 3—Legs black or piceous-black, the femora pale in more than basal half.. 4  
 Legs pale throughout, never more than shaded slightly with piceous in the region of the knees..... 5  
 4—Larger species, the elytral punctures much less coarse, moderately slender, the head but little longer than wide, the eyes moderate in size, prominent in the male, less so in the female; sides behind them rather strongly convergent and feebly arcuate in the former, less convergent and more arcuate in the latter, sex; base truncate, the angles distinctly rounded in the female, more narrowly so in the male; antennae rather stout, piceous-black, pale toward base; prothorax but slightly elongate, as wide as the head in the female, relatively a little narrower in the male, broadly arcuate at the sides and widest at apical third; elytra quadrate, less convex than usual, the punctures only moderately coarse and rather close-set, distinctly wider than the prothorax, as long as the latter in the male and a little longer in the female; abdomen parallel, a little narrower than the elytra in both sexes. Male with the fifth ventral transversely truncate at apex, the notch of the sixth elongate-oval in form and only slightly more than twice as deep as wide, rather broadly rounded at the bottom, the adjoining surface of the segment not at all

impressed; sixth ventral in the female almost completely unmodified. Length 6.0-7.0 mm.; width 1.0-1.1 mm. California (Placer Co.).

**compotens** Lec.

Smaller species and rather more slender, with the elytral punctures normally coarse and deep and rather widely spaced; head small, very much narrower than the elytra in both sexes, the eyes moderate in size and prominence, at about two-thirds more than their own length from the base, the sides moderately converging behind them to the broadly rounded basal angles, without distinct sexual difference, the base rather broadly truncate; antennae nearly as in *compotens*; prothorax rather narrow and elongate-oval, fully as wide as the head in the female and nearly so in the male, widest and broadly arcuate at the sides at apical third; elytra quadrate, without much sexual difference, about as long as the prothorax in both sexes but distinctly wider; abdomen parallel, a little narrower than the elytra. Male with the apex of the fifth ventral feebly sinuate toward the middle, the slit of the sixth narrow, fully three times as deep as wide, with the sides nearly straight and parallel, the bottom rather more narrowly but evenly rounded, the adjoining surface not impressed, the sixth ventral in the female feebly impressed along the middle. Length 5.5-6.7 mm.; width 0.8-0.95 mm. New Mexico, Utah and Wyoming.....

- 5—Elytra much abbreviated, much shorter than wide, with the basal angles very broadly rounded and the sides thence diverging to the apex, the hind wings probably vestigial. Body slender, parallel, convex; head suborbicular, scarcely longer than wide and without perceptible sexual differences, the eyes of the usual size, convex and prominent, the sides behind them rather strongly converging, the basal angles very broadly arcuate and the base somewhat broadly truncate; antennae pale, piceous-black toward the middle; prothorax very slightly narrower than the head, elongate-oval, widest behind apical third; elytra without sexual differences, very much shorter than the prothorax and about equal in width to the latter, coarsely, deeply and moderately sparsely punctured; abdomen subparallel, fully as wide as the elytra. Male with the apex of the fifth ventral transversely truncate, the slit of the sixth narrow and about three times as deep as wide, with its sides parallel and nearly straight, ogivally rounding toward the bottom, the latter rather narrowly rounded and narrowly beveled, the adjoining surface apparently not impressed; sixth ventral of the female narrowly and very feebly impressed on the median line. Length 4.4-4.9 mm.; width 0.75-0.8 mm. Iowa.....

Elytra subquadrate and parallel or very nearly so, with the basal angles less broadly rounded, the hind wings developed..... 6

- 6—Elytral punctures much less coarse and deep than usual and very sparse. Body slender, subparallel, colored throughout as in the preceding, the head subsimilar in the sexes, rather small, distinctly narrower than the elytra, elongate-suboval, the eyes convex but rather small, at nearly twice their own length from the base, the sides distinctly converging behind them and broadly, feebly arcuate to the obtuse basal angles very near the neck, the angles moderately broadly rounded; prothorax elongate-oval, distinctly narrower than the head in both sexes, widest

at about two-fifths from the apex, the sides very broadly arcuate even anteriorly; elytra quadrate, much wider but barely as long as the prothorax in the male, much longer than wide, a fourth wider and very slightly longer than the prothorax in the female, the sides subparallel, very feebly arcuate, the punctures becoming subobsolete toward tip; abdomen parallel, a little narrower than the elytra in the male, equal in width to the latter in the female. Male with the apex of the fifth ventral feebly sinuate-truncate, the slit of the sixth narrow, parallel and deep, the sixth ventral of the female feebly impressed along the middle. Length 4.5-5.0 mm.; width 0.78-0.88 mm. New York (along the ocean beaches).....

- obliteratus** Lec.  
Elytral punctures coarse, deep and moderately close-set throughout ..... 7  
7—Slit of the sixth ventral in the male rounded at the bottom, the adjoining surface of the segment not very distinctly impressed..... 8  
Slit of the sixth segment acutely angulate at the bottom in its external edge, the internal edge narrowly rounded, the edge between the angle and arcuation beveled; knees generally dusky..... 11  
8—Elytra larger, distinctly wider and longer than the prothorax in both sexes. Body stouter, somewhat as in *saginitus*, the head relatively small, very much narrower than the elytra, not longer than wide, suborbicular, the eyes rather large but not very prominent, at a third more than their own length from the base, the sides behind them moderately converging and straight for a short distance, then very broadly rounded to the rather broadly arcuate-truncate base; prothorax slightly elongate, stout, fully as wide as the head, widest at about apical two-fifths, the sides very broadly rounded and only feebly converging toward base, the latter unusually broad; elytra quadrate, convex, parallel, a third wider and nearly a fourth longer than the prothorax; abdomen parallel, distinctly narrower than the elytra. Male with the apex of the fifth ventral scarcely at all modified, the slit of the sixth subparallel and straight at the sides, narrow and fully three times as deep as wide, the edges finely and strongly beaded throughout, the bottom narrowly, parabolically rounded, the adjoining surface of the segment scarcely at all impressed; female not known. Length 5.3 mm.; width 1.0 mm. Texas (exact locality not recorded).....
- texanus** n. sp.  
Elytra relatively smaller and especially narrower, subequal in length to the prothorax..... 9  
9—Elytra with the basal angles only slightly exposed at base; head obtapezoidal behind the eyes in the male; body slender. Head distinctly elongate, the eyes small, at nearly twice their own length from the base, very convex and prominent, the sides behind them rather strongly convergent and straight for the length of the eyes, then moderately rounding to the neck, the base moderately wide; antennae rufo-testaceous, dusky for some distance near the middle; prothorax rather narrow, much elongated and narrower than the head, widest before the middle, the sides broadly arcuate; elytra narrow and slightly elongate, parallel, the sides broadly, feebly arcuate, only very slightly wider than the prothorax and a little shorter than the latter, equal in width to the head; punctures less coarse and distinct than in the two following species; abdomen parallel, as wide as the elytra. Male with the fifth ventral



unmodified, the slit of the sixth very narrow and deep, nearly four times as deep as wide, its sides straight and parallel, the bottom evenly and circularly rounded, the edges finely beaded; female unknown. Length 4.8 mm.; width 0.8 mm. Iowa.....*iowensis* n. sp.

Elytra with the basal angles widely exposed at base; body stouter, the head almost semicircularly rounded behind the eyes and slightly narrower than the elytra.....10

10—Body subparallel; head very slightly longer than wide, the eyes rather well developed but only moderately prominent, at about one-half more than their own length from the base, the portion behind them semicircularly rounded from eye to eye, with feeble truncation at the neck; prothorax slightly elongate and a little narrower than the head; widest at about a third from the apex, the sides broadly arcuate; base four-fifths of the maximum width; elytra quadrate, parallel, scarcely longer than wide, equal in length to the prothorax and a fifth wider; abdomen parallel, distinctly narrower than the elytra. Male with the slit of the sixth ventral only moderately narrow, scarcely three times as deep as wide, with its sides straight and parallel but arcuately converging in anterior two-fifths, the bottom evenly, parabolically rounded; edges finely beaded throughout; sixth ventral in the female strongly impressed along the middle. Length 4.2–5.6 mm.; width 0.78–1.0 mm. New York, Virginia, North Carolina and Iowa.....*littorarius* Grav.

Body, head and eyes throughout nearly as in *littorarius*, the sides of the head behind the eyes more unevenly arcuate, becoming straighter near the eyes; prothorax narrower, smaller and relatively more elongate, much narrower than the head, the sides strongly, evenly arcuate, the base narrower, three-fourths of the maximum width, the latter at fully two-fifths from the apex; elytra slightly longer than wide, parallel, a fourth wider than the prothorax and evidently a little longer; abdomen as wide as the elytra. Male with the slit of the sixth ventral about three times as deep as wide, having the form of a very narrow deep parabola, its sides becoming almost parallel behind, the edges finely beaded and the surface of the segment adjoining anteriorly slightly flattened; female unknown. Length 5.2 mm.; width 0.9 mm. Washington State.

*pugetensis* n. sp.

11—Form slender, nearly parallel, the head rather narrow and elongate, the eyes moderate in size, at about two-thirds more than their own length from the base and only moderately prominent, the sides behind them distinctly convergent to the neck, at first nearly straight, then rather broadly rounded through the basal angles, the base moderately broadly truncate, the head similar throughout in the sexes; prothorax distinctly elongate-oval, a little narrower than the head, widest before the middle, with the sides broadly arcuate; elytra slightly wider than the head, the sides subparallel, the apex rather distinctly and angularly emarginate, not quite as long as wide and scarcely as long as the prothorax in the male, quadrate and equal in length to the latter in the female; abdomen as wide as the elytra. Male with the slit of the sixth ventral fully three times as deep as wide, parallel, its sides nearly straight but gradually and parabolically converging anteriorly, the edges finely and strongly beaded, the bead bounded externally by a fine

strong canaliculation throughout; female with the sixth ventral strongly and narrowly impressed along the middle posteriorly. Length 4.5–5.9 mm.; width 0.75–0.8 mm. Rhode Island (Boston Neck) and New York (Long Island).....*canonicus* n. sp.

The descriptions have been taken from the male unless the contrary is expressed or evident. *Texanus*, which is probably from the eastern or central parts of the state, resembles the El Paso *saginitus* considerably, but, besides the coloration of the legs, it differs in having the eyes larger and much less prominent and the part of the head behind them shorter, with less converging sides and much more broadly rounded basal angles, with certain other differences, the comparisons being made from the male. *Canonicus* may be distinguished from *littorarius* by its slightly more slender form and distinctly smaller and shorter elytra.

#### *Leucopaederus* n. gen.

This genus differs from *Paederus* and *Paederillus* in a number of characters, no one of which would perhaps be sufficient to qualify it, but which, in their summation, seem to be amply sufficient to demonstrate its generic isolation. When color alone, for example, is so constant a feature as we know it to be in *Paederillus*, this alone becomes an important and very significant distinction, but when this is supplemented by the much larger eyes, relatively small head and prothorax, with the abdomen more gradually acuminate at apex and the much larger elytra, together with the rather different form of the prothorax, there can be but little doubt of the propriety or necessity of the course here suggested. The labrum in *Leucopaederus* is truncate and wholly edentate at apex, with a small and abruptly formed, parabolically rounded and completely edentate emargination at the middle, the surface adjoining the sinus being feebly swollen. We have at present but a single species as follows:—

Form stout, moderately convex, polished, pale rufo-testaceous throughout the body and legs, the elytra more brownish in tinge and the extreme apex of the abdomen black; antennae piceous, gradually paler toward base; head small, but little longer than wide, the eyes large, prominent,

at their own length from the base, the sides behind them strongly convergent and evenly, circularly rounded to the neck, the base rather narrowly truncate; prothorax slightly narrower than the head, somewhat elongate, the sides rounded anteriorly, becoming thence parallel and straight in the male, or feebly convergent and slightly arcuate in the female, to the rounded basal angles; elytra large, quadrate in the male or very slightly longer than wide in the female, a half to three-fourths wider and two-fifths longer than the prothorax, parallel, with the sides nearly straight, the basal angles very broadly exposed at base and only narrowly rounded, the punctures only moderately coarse and unusually sparse; abdomen much narrower than the elytra in the male but nearly as wide as the latter in the female. Male with the fifth ventral unmodified, the slit of the sixth not more than twice as deep as wide, with its sides parallel and nearly straight posteriorly, becoming oval anteriorly, the edges finely beaded and the surface throughout beyond the bead narrowly and feebly impressed; sixth ventral of the female broadly and very feebly impressed along the middle. Length 4.0-5.1 mm.; width 0.9-1.0 mm. California (Yuma) and Arizona (East Bridge). *ustus* Lec.

I found this species in enormous numbers in hoof prints partially filled with decomposing vegetable matter, in the sands of the river bank on the Indian reservation opposite Yuma, Arizona. A few species of *Leucopaederus* occur also in Mexico, one of which has been described by Dr. Sharp.

#### LATHROBIA.

The distinguishing characters of this, the largest subtribe of the Paederini, are the abbreviated prosternal intercoxal piece, and the strongly dilated anterior tarsi, which it possesses in common with the Dolicaones and Paederi, and the conical and generally pointed or aciculate fourth joint of the maxillary palpi, by which it differs from both of those subtribes. Otherwise there is great variety in structure and facies, from the impunctate and polished *Dacnochilus*, to the densely and confluent sculptured *Domene*, and, in size, from the larger forms of *Glyptomerus* and *Eulathrobium* to the diminutive *Lathrolepta*. The eyes are present and generally moderately developed, except in *Glyptomerus*, where the normally faceted eye is replaced by a small whitish area in which the chitinous integument is evidently very thin, undoubtedly conveying a general impression of light to the ocephalic ganglia and homologous with the smaller whitish

sensitive spot in *Scotonomus*, of the Dolicaones. The widely dilated anterior tarsi are densely clothed beneath with large whitish pads, composed of peculiar flattened and multinucleated submembranous hairs. The gular sutures are invariably separated but vary in form and direction, affording good generic characters. The nineteen genera described below from material in my cabinet are divisible into at least four distinct groups represented by *Lathrobium*, *Lathrotaxis*, *Domene* and *Dacnochilus*, and are about equally diffused through the old and new continents:—

Labrum broadly rounded, edentate, having a broad and gradually formed angulate emargination, the angle at the bottom usually with a minute denticle as in some Paederi; integuments densely sculptured and subopaque anteriorly. Body rather slender, parallel and unusually convex, moderately large in size, the head well developed, oval, subcircularly rounded at base, the eyes moderately small, anterior; labrum short and transverse; maxillary palpi moderately long and thick, the third joint obconic, the fourth narrow, conical and acute; gular sutures arcuately converging for a short distance, then becoming straight, parallel and approximate to the base; antennae moderately long, thick, the joints rounded in outline toward base; neck about a third as wide as the head; prosternum moderately long before the coxae, carinate posteriorly; prothorax elongate-oval, the angles obliterated, the head and pronotum densely, confluent sculptured; elytra short, small, as wide as the prothorax and shorter, apparently subconnate, the sides broadly rounding to the base, the basal angles obliterated and the hind wings probably vestigial, the sculpture coarsely, confusedly punctured and shining; abdomen minutely, densely punctulate; legs rather long and slender, the hind tarsi slender, filiform, nearly as in *Linolathra*, the two basal joints each notably elongate, equal and slightly shorter than the fifth.

Europe.....\**Domene*

Labrum bilobed and edentate; integuments more or less strongly and sparsely punctate..... 2

Labrum broadly rounded, dentate or edentate, having an abruptly formed deep angulate emargination at the middle; integuments subglabrous, subimpunctate and highly polished.....23

2 — Elytra without a lateral fold..... 3

Elytra with a longitudinal fold on the deflexed flanks parallel with the side margin.....16

3 — The normal faceted eye wholly obsolete; species large, parallel; head large, broadly arcuato-truncate at base, the labrum broadly lobed, the lobes narrowly rounded laterally, the broad median angulation not attaining the base; maxillary palpi long and slender, the fourth joint evenly, conically pointed; gular sutures broadly, feebly arcuate, widely separated anteriorly but gradually convergent to the base, at and before which they became virtually confluent; eye-spots obliquely fusi-

- form; antennae long and slender, the narrowed bases or pedicels of the joints strongly compressed; neck two-fifths as wide as the head; prosternum feebly carinate almost to the apex; legs thick, the hind tarsi long and very slender, with the basal joint extremely short, the last joint much the longest; claws long and slender; integuments shining, sparsely and not very coarsely punctate, the punctures of the elytra confused and not seriate; anterior angles of the prothorax rounded and obliterated, the elytra generally shorter than the prothorax. Europe.....**\*Glyptomerus**
- The eyes normal and distinctly faceted..... 4
- 4 — Body normally convex, the fourth joint of the maxillary palpi small and acute; antennae moderate in length, with the joints not or only very feebly compressed at base..... 5
- Body strongly depressed; maxillary palpi slender, the fourth joint much larger than usual, conical, with the apex truncate; eyes small; antennae long and rather stout, the joints compressed at base.....15
- 5 — Neck broad, seldom evidently less than half as wide as the head and generally more than half..... 6
- Neck narrow, about a third as wide as the head.....13
- 6 — Hind tarsi longer and more slender, the basal joint much shorter than the second, the fifth very much shorter than the first four combined.. 7
- Hind tarsi shorter and stouter, the first and second joints subequal, the first four differing but little among themselves and together frequently but little longer than the fifth.....10
- 7 — Elytra very short, from one-half to two-thirds as long as the prothorax, with the basal angles obsolete; hind wings wanting or vestigial; abdomen more strongly, never densely punctate. Body moderately large in size, parallel and rather stout, the labrum short, broadly and angularly emarginate throughout its width at apex; maxillary palpi rather long, not inflated, the fourth joint narrowly aciculate; eyes moderately small; gular sutures rather widely separated, parallel; antennae moderate in length, very stout but with the joints obconical, the basal joint robust; prosternum moderately developed before the coxae; prothorax well developed, with the apical angles more or less distinct, the head broadly truncate at base, the angles rounded; neck wide, distinctly more than half as wide as the head. America..... **Apterallium**
- Elytra varying in length from decidedly longer to distinctly shorter than the prothorax, always having the basal angles distinct and probably never connate, the hind wings present; abdomen always very minutely punctate .... 8
- 8 — Eyes very small, the head large, much wider than the elytra, truncate at the neck which is less than half as wide, the angles very broadly rounded; labrum very nearly as in the preceding genus, the maxillary palpi moderately long, with the third joint rather inflated distally and pedunculate basally, the fourth slender and aciculate; gular sutures strongly impressed, straight, moderately widely separated anteriorly, gradually converging to the base where they are most approximate and rather narrowly separated; antennae well developed and moderately thick, the joints obconical; prosternum rather long before the coxae; legs somewhat slender; posterior tarsi filiform, with the basal joint relatively larger than in *Lathrobium*. Eastern America.... **Abletobium**

- Eyes normally developed; neck never less and frequently more than half as wide as the head; prosternum short and broad before the coxae; labrum short, rectilinearly truncate at apex, with a rounded median sinus, the lobes broad and feebly oblique at their apical margin; antennae variable, stout to rather slender; head broadly arcuato-truncate at base.. 9
- 9 — Body parallel, more or less stout, the gular sutures nearly straight, feebly converging from apex to base, near which they are most approximate, sometimes widely separated and parallel; head well developed but never wider than the elytra; prothorax oblong, with the anterior angles more or less distinct; elytra generally shorter in the male than in the female; body large to moderate in size, the sculpture rather coarse and sparse, except that of the abdomen which is minutely punctate. Cosmopolitan..... **Lathrobium**
- Body slender and fusiform, moderate in size, sculptured nearly as in *Lathrobium*; gular sutures parallel, arcuate, generally widely separated and most approximate at or slightly before the middle of the post-oral surface; head small; prothorax oblong, with the apical angles moderately distinct; elytra larger than in *Lathrobium*. America.. **Litolathra**
- 10 — Gular sutures rather widely separated, parallel and straight to the base. Body slender, normally convex, the head well developed but not as wide as the elytra, broadly arcuato-truncate at base, with broadly rounded angles, the neck a little less than half as wide, the eyes rather small but unusually convex and prominent; labrum obliquely bilobed, the lobes rather narrowly rounded at tip; maxillary palpi rather short but nearly as in *Lathrobium*, the third joint obconic; antennae moderately thin, the joints elongate, subcylindric, rather rapidly narrowed at base; prosternum rather long in front of the coxae; prothorax oblong-elongate, with the angles distinct, the elytra oblong, parallel, with prominent basal angles and feebly subserial punctures, longer and wider than the prothorax; abdomen parallel, the sides straight, the sculpture very fine and dense; legs short, moderately stout; body small in size. Europe. **\*Throbalium**
- Gular sutures parallel and arcuate, rather widely separated, most approximate at or near the middle of the post-oral surface; labrum broadly, obliquely bilobed, the apex broadly and subangularly emarginate throughout the width .....11
- Gular sutures very widely separated, most approximate anteriorly, thence gradually diverging to the base where they are most remote; labrum narrowly, deeply and angularly cleft in the middle, the lobes each subquadrate in form with its apex obliquely truncate..... 12
- 11 — Body parallel, moderately slender and decidedly depressed, small in size, the head subquadrate, rectilinearly truncate at base throughout the width, the angles right and not evidently rounded; eyes moderately developed, slightly prominent; maxillary palpi short, the third joint inflated toward tip; antennae rather long, moderately stout, the joints obconic; neck wide, three-fifths as wide as the head; prosternum short before the coxae; prothorax short and broad, with the apical angles well defined, the polished median line being defined by series of punctures; elytra oblong, longer and wider than the prothorax, with well-

defined basal angles, punctured in regular series; legs moderately short, decidedly slender; abdomen minutely sculptured. America.

#### Lathrobiopsis

Body parallel, normally convex, slender, shining, rather small in size, sculptured as in *Lathrobium*; head well developed, parallel or gradually wider toward base, the latter broadly arcuate-truncate, the angles rounded; eyes rather small to moderate in size; maxillary palpi moderately long and not very stout or decidedly inflated; antennae generally very stout and submoniliform, the basal joint thick; neck generally a little more than half as wide as the head; prosternum somewhat longer before the coxae than in *Lathrobium*; prothorax suboblong-elongate, with the apical angles moderately distinct; elytra longer or shorter than the prothorax, the punctures frequently arranged in uneven series; abdomen parallel, with the sides straight; legs thick and rather short. America.....

#### Lathrobioma

12— Body slender, parallel, moderately convex, very small in size, coarsely and sparsely sculptured, the head broadly truncate at base, with narrowly rounded angles, the eyes small and anterior; maxillary palpi short, the third joint inflated; antennae moderately long but stout and submoniliform; neck half as wide as the head; prosternum rather long in front of the coxae, the prothorax oblong-elongate, with the sides rounded at apex; elytra shorter than the prothorax, with the punctures rather confused in arrangement; legs moderate in length and thickness; abdomen parallel. America.....

#### Lathrolepta

13— Posterior tarsi larger and more elongate, with the first joint distinctly shorter than the second. Body larger, broader and more fusiform, with the head relatively small, rounded at base, the eyes more or less well developed, the antennae long, slender, filiform, not incrassate distally, the labrum short, truncate, with a small and broadly angular median emargination, the lobes usually broadly, feebly oblique posteriorly and inwardly; gular sutures widely separated, distinct; prosternum moderately developed before the coxae; neck one-third as wide as the head; abdomen minutely, densely punctate and dull; elytral punctures irregular, never serial..... 14

Posterior tarsi smaller, more slender and filiform, the first joint distinctly longer than the second, the fifth about as long as the first two combined. Body smaller, extremely slender, linear and subparallel, the head relatively larger, oblong-elongate, arcuately truncate at base, with the angles rounded, the eyes rather well developed; labrum short, truncate, much narrowed at base, with the usual small median emargination, the lobes narrowly rounded externally; maxillary palpi shorter, somewhat strongly inflated, the fourth joint strongly retractile; gular sutures moderately separated, feebly arcuate, slightly diverging toward base, effaced throughout and traceable only by the arrangement of the punctures; antennae moderately thick, distinctly incrassate distally; prosternum much elongated before the coxae; prothorax much elongated, with the angles rounded; elytral punctures disposed in coarse impressed regular lines; anterior tarsi less strongly dilated; neck rather more than a third as wide as the head; legs rather short and slender. Europe.....

#### \*Pseudobium

14— Gular sutures nearly straight, feebly converging posteriorly throughout and most approximate at or near the base of the head; maxillary palpi unusually elongate and slender, the fourth joint very slender and aciculate. Europe and America.....

#### Tetartopeus

Gular sutures arcuate, most approximate at or before the middle of the head, gradually diverging thence to the base; maxillary palpi rather less elongate and stouter; head nearly similar; species small in size. America.....

#### Deratopeus

15— Parallel, the neck wide, rather more than half as wide as the head, the latter transversely truncate at base, the labrum deeply and broadly cleft to the base, the lobes long, moderately diverging, parallel, slightly everted and evenly rounded at tip; fourth palpal joint evenly conical, not compressed; gular sutures widely separated, parallel, becoming feebly convergent toward base, where they are most approximate; antennae half as long as the body; prothorax short and broad, with the apical angles distinct, the prosternum short before the coxae as in *Lathrobium*; elytra a little wider and longer than the prothorax, with the punctures subserial in arrangement; legs rather short and stout, the hind tarsi moderately long and slender, with the first, third and fourth joints subequal, the second a little longer, the fifth as long as the preceding four combined; claws unusually long and strong. Europe.....

#### \*Achenium

Parallel and rather broad, nearly as in *Achenium*, the head, prothorax and elytra proportioned almost similarly; labrum very short, the emargination extending throughout the width, the sides not lobiform; gular sutures parallel and broadly arcuate, not very widely separated and most approximate at the middle; fourth palpal joint compressed; neck fully three-fifths as wide as the head; elytral punctures confused, not at all serial in arrangement; legs rather long, moderately stout, the hind tarsi long, slender, with the basal joint much elongated, subequal in length to the next two combined and longer than the fifth. Europe.....

#### \*Scimbalium

16— Gular sutures less separated, converging posteriorly, becoming most approximate at or near the base of the head; basal joint of the hind tarsi distinctly shorter than at the second..... 17

Gular sutures parallel, broadly arcuate to nearly straight, most approximate at or near the middle of the post-oral surface or at least distinctly before the base..... 18

Gular sutures generally more widely separated, most approximate anteriorly, gradually more or less divergent posteriorly, becoming most distant at the base..... 19

17— Body large, stout, parallel, the head arcuate-truncate at base, with very broadly rounded obsolete angles, the neck but little more than a third as wide; lobes of the labrum obliquely subquadrate; prothorax oblong-suboval, the anterior angles rounded; abdominal segments feebly impressed at base; legs and tarsi thick. Eastern America.

#### Enlathrobium

Body rather large, more slender and convex, parallel, the head circularly rounded or feebly subtruncate behind, the neck about two-fifths as wide; lobes of the labrum evenly rounded throughout their contour;

prothorax elongate-oval, the angles obliterated; abdominal segments strongly, transversely impressed at base; legs and tarsi rather slender.

Pacific coast of America..... **Lathrotropis**

- 18 — Body somewhat small in size, more or less slender and less convex, parallel, the head oval or subquadrate, with the basal angles more or less rounded; eyes rather small in size, anterior; labrum short, the lobes widely divergent, more narrowly rounded laterally; maxillary palpi slender and elongate, not inflated; antennae more or less slender and elongate, the joints obconical; neck always noticeably less than half as wide as the head; prosternum rather long before the coxae, frequently feebly carinate throughout the length; prothorax more or less narrow and elongate-oval, with the anterior angles broadly rounded or obliterated, the punctures generally dense and confused, with the median impunctate line frequently subelevated; elytra frequently longer and wider than the prothorax, the punctures generally feebly sublineate; legs rather long and slender; tarsi as in the preceding genera. Europe and America..... **Lobrathium**

Body larger in size and less punctate; posterior tarsi rather shorter but more or less slender, the first joint subequal to the second and each longer than either the third or fourth, the fifth subequal in length to the first two together; body moderately large in size, rather broad, moderately convex, the head generally distinctly narrower than the elytra, broadly arcuato-truncate at base, the angles rather distinct and more or less narrowly rounded; eyes well developed; labrum with a large triangular notch, the lobes obliquely subquadrate, each subrectilinear at apex; maxillary palpi more or less elongate, not inflated, the fourth joint conical and acutely pointed; neck broad, more than half as wide as the head; antennae rather long and slender as a rule, filiform; prosternum short before the coxae; prothorax more or less oblong or obtapezoidal, moderately elongate, with the anterior angles distinct; elytra larger than the prothorax, with the punctures generally sparse and always lineate in arrangement; legs rather long and slender. America... **Lathrotaxis**

- 19 — First and second joints of the hind tarsi equal or with the first a little longer than the second ..... 20

First joint of the hind tarsi much shorter than the second..... 22

- 20 — Hind tarsi shorter, the four basal joints short and subequal, the fifth moderate; anterior tarsi feely dilated. Body very small, slender, rather depressed, the head small, broadly arcuato-truncate at base, the labral lobes thick, subquadrate, with rounded angles; eyes rather small; maxillary palpi short and stout, the third joint somewhat inflated; gular sutures very widely separated and strongly divergent, being separated at base by about a third the width of the head; antennae rather long and thick, the joints obconic; neck half as wide at the head; prosternum short; prothorax short, oblong, the angles acutely defined, the median impunctate area defined by impressed lines; elytra well developed as a rule, longer and wider than the prothorax; abdomen generally opaque and very densely punctulate. Eastern America.

#### **Pseudolathra**

Hind tarsi long, the two basal joints more elongate..... 21

- 21 — Hind tarsi stout toward base, the fifth joint much elongated, the an-

terior strongly dilated. Body moderately small, rather stout, notably convex, the head moderately small, arcuato-truncate at base, the eyes well developed, the labral lobes somewhat large, subcircularly rounded; maxillary palpi rather long and thick but not inflated; gular sutures rather widely separated but almost parallel, very feebly diverging from near the apex to the base; antennae very long, slender and filiform; neck half as wide as the head; prosternum moderately short, the prothorax broad and short, oblong, the angles moderately defined; elytra moderate, slightly larger than the prothorax, the punctures lineate; abdomen broad, densely dull; legs rather slender, Western America.

#### **Paralathra**

Hind tarsi very slender, filiform, the two basal joints relatively much elongated, the first frequently a little longer than the second. Body small, slender, subparallel and convex, the head rather well developed though always narrower than the elytra, the eyes moderately large, the labrum short, very broadly emarginate throughout the width, the lobes broadly, obliquely truncate, narrowly rounded externally; gular sutures moderately distant, very feebly diverging posteriorly and generally obliterated, being traceable only by the punctuation; maxillary palpi rather long and stout; antennae moderate in length and generally rather thick, the joints obconic; neck distinctly less than half as wide as the head; prothorax rather small, oblong, with the angles distinct; elytra variable but always much wider than the prothorax and never shorter, the sculpture always very sparse and lineate; abdomen slender, the punctures not very dense. America, except the Pacific coast fauna.

#### **Linolathra**

- 22 — Body more or less fusiform, moderately small in size and of the usual convexity; head small, arcuato-truncate at base, the eyes generally well developed, the labral lobes wide, subcircularly rounded anteriorly; gular sutures widely separated, more or less rapidly diverging from near the apex to the base; palpi more or less short and thick; neck half as wide as the head; antennae moderately long, rather thick, the joints obconic; prothorax moderately large, oblong, the angles generally rather distinct; elytra always well developed, longer and wider than the prothorax, the punctuation linear; abdomen rather broad, minutely, very densely punctate and densely dull as a rule; legs moderately long and slender. America..... **Lathrobiella**

Body parallel and rather convex, nearly as in *Lathrobioma*, small in size, the head well developed, as wide as the elytra, broadly arcuato-truncate at base, the eyes small in size; labrum short, broadly emarginate throughout the width, the lobes rather narrowly rounded externally; palpi moderately long and thick; gular sutures widely separated, arcuate, distinctly diverging from near the apex to the base, where they are separated by a fourth or fifth of the total width; antennae moderate in length, very thick, with the joints but little longer than wide; neck half as wide as the head; prothorax rather elongate, suboblong, with the angles distinct; elytra small, shorter than the prothorax, the basal angles as usual and not rounded; abdomen not densely punctulate, the segments not at all impressed at base; legs moderate in length, somewhat slender. Eastern America..... **Microlothra**

23—Form slender, parallel, moderately convex, the tactile setae at the sides of the body small and feebly developed; head moderate, not quite as wide as the elytra, broadly arcuato-truncate at base, with the angles not rounded; front normal; eyes well developed; maxillary palpi moderately long, the third joint slightly inflated, the fourth acute and slender toward apex; gular sutures widely separated; most approximate anteriorly, before the middle strongly arcuate, diverging widely to the base; antennae rather slender but very gradually and distinctly incrassate, the joints obconic; labrum edentate; neck barely two-fifths as wide as the head; prosternum short before the coxae; prothorax short, obtrapezoidal, with the angles distinct; elytra but little longer or wider than the prothorax, with a few fine punctures arranged serially; abdomen parallel, finely, sparsely sculptured; legs rather long, slender; posterior tarsi slender, filiform, the first joint elongate, the first four decreasing in length, the fifth about as long as the first. Subtropical America..... **Dacnochilus**

Form very stout and short, broadly convex, the lateral tactile setae long and conspicuous; head very short, much wider than long, trapezoidal; eyes moderate or rather small; frontal margin somewhat advancing far above the base of the labrum, broadly rounded; labrum bidentate; maxillary palpi rather small and slender, the third joint but very feebly inflated; gular sutures as in *Dacnochilus*, widely separated, strongly arcuate, most approximate a little before the middle, thence more widely diverging to the base than to the apex; antennae rather short, slender and subfiliform; neck relatively slender, not more than a third as wide as the head; prothorax short and transverse, the angles distinct; elytra short and transverse but longer than the prothorax, impunctate; abdomen short and broad, very densely punctulate and dull, gradually narrowed posteriorly; legs relatively short and slender, the tarsi nearly as in *Dacnochilus* but shorter. Tropical and subtropical North and South America. .... **Acalophaena**

Of the genera described in the above table not occurring within the geographical limits of this study, attention might be directed to the superficial similarity between *Glyptomerus* Müll (= *Typhlobium* Kr.), *Domene* Fauv., and the American *Apteralium*, they all having short, in some cases possibly subconnate, elytra and vestigial or wholly aborted wings, judging from their external facies. *Throbalium* Rey, has the usual habitus, but the very small *Pseudobium* Rey, is of peculiar appearance, being unusually slender, with the coarse punctures of the elytra arranged in regular lines which are rather strongly impressed, more so than in any American genus; there is also a notable extension of the prosternum before the coxae. The two genera *Achenium* Curtis, and *Scimbalium* Er., are evidently related by their general characters,

although differing so radically in the structure of the labrum and hind tarsi. Their very depressed form seems to be correlated in some way with the very long antennae, and the entire facies bespeaks a habitat under the bark of trees. It is interesting to note, in this connection, the very long antennae pertaining to many other very depressed subcortical beetles — notably *Laemophloeus*, a condition brought about undoubtedly from necessities of this special environment. It is rather singular that the true affinities of *Domene* should have been overlooked by the European observers, excepting Rey, the peculiar dense sculpture having probably suggested a relationship with the Stilici, for it is evidently very close to *Lathrobium*. The genus *Dacnochilus*, although differing rather radically in the labrum and form of the prothorax, is really closely allied to *Linolathra*, as shown by the hind tarsi, gular sutures, sculpture and general facies. *Acalophaena* is a still more specialized form, of remarkably broad and compact build, with long bristling tactile setae at the sides of the body.

#### **Apteralium** n. gen.

As before remarked, this genus reminds us considerably of *Glyptomerus* and *Domene* in its very short elytra with obsolete humeral angles. The hind wings are wanting and represented by very minute vestigial fillets that are wholly inconspicuous; the elytra are however not connate. *Apteralium* differs from *Glyptomerus*, not only in the rather distinct and not obsolete anterior angles of the prothorax, but in the presence of well developed normal eyes and in the much shorter antennae, also in the relatively much less minute basal joint of the hind tarsi and more widely separated parallel gular sutures. We have two very distinctly characterized species as follows:—

Body moderately stout, dark piceo-rufous to piceous-black in color throughout, the legs and antennae rufous; head well developed, slightly wider than the elytra but only just visibly wider than the prothorax in the male, equal to the latter in the female, parallel and nearly straight at the sides, the basal angles moderately rounded; gular sutures straight; punctures coarse and very sparse, rather closer toward the sides; eyes at fully three times their own length from the base; pro-



thorax about a fifth longer than wide, a little shorter in the female, the sides distinctly converging from the slightly obtuse apical angles to the base and nearly straight, the punctures coarse, very sparse and irregularly disposed, the broad median smooth area not defined by series; elytra slightly narrower than the prothorax and half as long in the male, equal to the latter in width and three-fifths as long in the female; the sides slightly diverging posteriorly from the humeri, which are not very broadly rounded; punctures smaller than those of the prothorax and less sparse, disposed in very uneven series, sometimes irregular; abdomen parallel, equal in width to the elytra in both sexes, shining, the punctures fine and not dense. Male with ventrals two to four narrowly and very feebly impressed along the middle, the fifth having a broader deep parallel impression bounded by tumid sides and not attaining the base, the apical margin with a feeble shallow rounded sinus, the impression narrowly shining and glabrous along the median line; sixth ventral broadly, feebly lobed at tip, the lobe with a small shallow rounded sinus at its middle, the surface tumid apically and impressed basally at the middle, the lateral slopes of the tumidity more densely clothed with black pubescence; female with the sixth ventral strongly lobed at apex, the lobe evenly rounded. Length 8.0-9.6 mm.; width 1.1 mm. Iowa and Missouri.....*brevipenne* Lec.

Body shorter and much stouter, black in color throughout, the legs and antennae dark rufous; head shorter and broader in form, large, much wider than the elytra in both sexes, the eyes nearly similar, the sides behind them shorter, parallel and arcuate, the basal angles very broadly rounded; antennae stout and filiform; gular sutures feebly arcuate, the punctures coarse and less sparse; prothorax slightly longer than wide, slightly narrower than the head, only slightly narrowed from the apical angles, which are broadly rounded, to the basal angles which are also notably rounded, the punctures coarse but much more close-set, the median smooth line much narrower; elytra about three-fifths as long as the prothorax in both sexes and distinctly narrower, the sides more strongly diverging from the more broadly rounded basal angles and very feebly arcuate; punctures strong and sparse and irregularly disposed; abdomen shining, parallel, as wide as the elytra, finely and not very closely punctate. Male with ventrals two to four wholly unmodified, the fifth very feebly impressed along the middle from apex to base, gradually more narrowly to the base, the bottom not glabrous along the median line and the sides not tumid, the apex feebly sinuate along the impression in about median third; sixth segment almost unmodified, having a rather narrow and very feeble parallel impression along the middle throughout, the apex very broadly, feebly arcuate, the middle third becoming gradually very feebly sinuato-truncate; female with the sixth ventral moderately lobed at tip, the lobe rather narrowly rounded. Length 8.0 mm.; width 1.28 mm. North Carolina (Highlands).....*carolinae* n. sp.

The second species differs very greatly from *brevipenne* in its shorter and broader form, more broadly rounded angles

of the head, prothorax and elytra, radically in the sexual characters, and, to an unexpected degree, in the form of the gular sutures.

### *Abletobium* n. gen.

This genus is founded upon a rather small species, having some characters which ally it rather closely with *Apteralium*. The short elytra are flat and appear to be very closely joined along the suture, as though it also might be apterous, but the basal angles are more distinctly defined, although slightly rounded. In its large head it also reminds us of the preceding genus and the very small eyes are perhaps suggestive of *Glyptomerus*. The type and only known species may be described as follows from the male: —

Form parallel, moderately convex, the elytra depressed, uniform pale testaceous in color throughout the body, legs and antennae and shining in lustre; head large, very much wider than the prothorax or elytra, the sides behind the very small anterior eyes parallel and broadly, evenly arcuate, the basal angles very broadly rounded, the base becoming transverse along the neck; antennae rather long, though somewhat shorter than the head and prothorax, thick and filiform, the joints obconic, the basal joint moderately stout; prothorax rather narrow and distinctly elongate, the sides feebly but evidently converging from the distinct, though evenly rounded, apical angles to the similarly rounded basal angles and straight, the punctures similar to those of the head, rather small but distinct, moderately sparse and irregularly disposed, the smooth median line not defined by series; elytra as long as wide, distinctly shorter and wider than the prothorax, the sides evidently diverging from the very narrowly rounded basal angles and straight the punctures not very fine but feeble, sparse and confusedly arranged; abdomen parallel, fully as wide as the elytra, rather shining, the punctures very fine, somewhat close-set but not dense; dorsal segments not transversely impressed at base; legs rather long and slender. Male with simple secondary sexual characters, the surface of the fifth and sixth segments wholly unmodified, the apex of the sixth with a large rounded sinus in median half, the sinus about four times as wide as deep. Length 5.8 mm.; width 0.85 mm. Massachusetts, — Mr. F. Blanchard ..... *pallescens* n. sp. (Fvl. MS.)

I do not have the female before me at present, but it probably does not differ materially in general form. The pale color of the type may be partially due to immaturity.



**Lathrobium** Grav.

The general aspect of the numerous species of *Lathrobium*, when compared with the related genera below, is stout, compactly built and large or moderately large in size. There is marked uniformity in these respects, giving the species a habitus which enables us to generically identify them at once; but in many characters, even those of the gular sutures and antennae, there is notable variety. The contrast between the extremely thick antennae of *armatum* and related species, and the long slender filiform antennae of *gravidulum*, for example, is very remarkable, and, in the related genus *Litolathra*, the antennae are still longer and more slender. The gular sutures vary notably, from approximate and distinctly converging posteriorly, to widely separated and parallel; they are always straight or very nearly so however. The elytra are sometimes distinctly wider and longer than the prothorax in both sexes, but are frequently much shorter than the prothorax, in which case the wings are probably more or less curtailed or aborted. In the *armatum* group, and, in all probability to a greater or less degree throughout the genus, there is very little difference in form of the body or relative size of the elytra in the two sexes, but, as far as noted, the female is a little smaller and narrower than the male, in opposition to a somewhat general rule. The species are very abundant but have never been carefully worked out, even in the European fauna, and have never been thoroughly collected in America. They are especially abundant in the northern Atlantic districts and appear to be somewhat local in habitat.\* Those species represented by material in my cabinet may be described as follows: —

\* Of those *Lathrobia* not having a pleural fold on the elytra, I have collected 11 species in less than two weeks of August, on a small area of about 100 acres in Rhode Island, and, from Mr. F. Blanchard, have received 19 species taken in the immediate vicinity of Lowell, Mass. Only 6 species are common to these series, owing perhaps to the decidedly warmer climate of the southern New England coast, but enough can be inferred from this to prove that we hardly yet begin to know the species.

- Antennae extremely stout, attenuated toward tip, the middle joints never longer than wide, rounded at the sides and strongly constricted at base; body generally larger and stouter, the legs rather stout..... 2
- Antennae stout, with the joints not distinctly longer than wide, but obconic in form, the legs moderately stout..... 9
- Antennae stout to moderately slender, generally rather shorter than the head and prothorax, the joints distinctly elongate and obconic; legs relatively rather slender to stout in form..... 14
- 2 — Elytra bicolored, black basally and red apically..... 3
- Elytra unicolorous, black ..... 6
- 3 — Elytra distinctly longer and wider than the prothorax in both sexes, black, shining, the elytra bright rufous, becoming black in basal two-fifths; legs dark rufous, the antennae piceo-testaceous; head distinctly wider than the prothorax in both sexes, nearly as wide as the elytra in the male, evidently narrower in the female; eyes at between two and three times their length from the base, the angles well rounded; width a little before the angles slightly greater than at the eyes; neck three-fifths as wide as the head; gular sutures rather narrowly separated, feebly converging to the base; prothorax about a fourth longer than wide, the angles all obviously rounded; the sides very feebly converging and nearly straight; punctures like those of the head, rather coarse, deep, irregular in arrangement and moderately sparse, broadly sparse toward the middle of the head, the median smooth thoracic line not defined by punctured series; elytra large, parallel, slightly longer than wide, the punctures coarse, deep, moderately sparse and arranged in very irregular series; abdomen parallel, slightly narrower than the elytra, finely and only moderately closely punctulate; legs moderately stout. Male with the fourth and fifth ventrals narrowly and very feebly impressed along the median line, the sixth also similarly impressed along the middle toward base but very narrowly swollen toward apex, the latter rectilinearly truncate, with a very small median sinus wider than deep, the edges of which are callous and polished; surface of the sixth segment more finely and sparsely punctulate and pubescent, except the lateral slopes of the apical tumidity, which are clothed with stiff black hairs; sixth segment of the female rather narrowly lobed at tip. Length 10.0 mm.; width 1.5 mm. New York (Hudson Valley)..... **amplipenne**
- Elytra equal or subequal in length to the prothorax..... 4
- Elytra distinctly shorter than the prothorax..... 5
- 4 — Elytral punctures rather small, feebler and sparser and arranged in rather well defined series; body stout, parallel, shining, black, the elytra, — gradually and nubilously toward apex — and the legs throughout, rufous; antennae rufo-piceous; head large, only very slightly wider near the base than at the eyes, the latter moderate; angles not very broadly rounded; neck three-fifths as wide as the head, the punctures moderately coarse, deep and sparse toward the sides, very remotely scattered elsewhere; prothorax unusually large, scarcely visibly narrower than the head, about a fifth longer than wide, the sides very feebly converging posteriorly throughout and nearly straight, the angles narrowly rounded at apex, broadly at base; punctures coarse but not very deep,

impressed and sparse; elytra fully as long as the prothorax, at base equal in width to the latter but a little narrower than the head, the sides sensibly diverging from the basal angles to the apex and nearly straight, slightly longer than wide, the punctures impressed; abdomen broad, parallel, as wide as the elytra, minutely and not very closely punctulate; legs moderately long and stout. Male unknown, the sixth ventral of the female broadly and obtusely lobed at apex. Length (contracted) 7.8 mm.; width 1.4 mm. New Jersey.. *subaequale* n. sp.

Elytral punctures closer, more distinct and not so obviously seriate; form less stout, similar in coloration, the elytra gradually becoming rufous in apical third; head much smaller, with the basal angles more broadly rounded, equal in width to the prothorax and slightly narrower than the elytra, the sides more nearly parallel, similarly punctate; prothorax smaller but otherwise nearly similar, the punctures rather stronger and less sparse; elytra smaller, subparallel or only slightly broader behind, not quite as long as the prothorax and distinctly wider throughout, about as long as wide; abdomen as wide as the elytra, finely and moderately densely punctulate; legs nearly similar. Male with the fourth and fifth ventrals wholly unmodified, the sixth with a very narrow and feeble impression along the median line, extending to about apical third, the surface thence unmodified to the rectilinearly truncate apex, except a very small feeble narrow tumidity at the margin, the edge not distinctly modified. Length 10.0 mm.; width 1.3 mm. Illinois, New York and Ontario..... *procerum* n. sp.

5 — Form less stout than in the preceding species, rather strongly convex and almost exactly parallel, polished, piceous-black in color, the elytra rufous, becoming black near the base; legs rufous, the antennae piceous; head large, quite distinctly wider than the elytra, slightly broader near the base, the basal angles only moderately rounded; punctures sparse but deep toward the sides, very remote elsewhere; prothorax distinctly narrower than the head, a fourth longer than wide, slightly narrowed posteriorly throughout, the angles rounded, the punctures sparse, coarse and deep; elytra small, quadrate, subparallel, equal in width to the prothorax and much shorter, very coarsely, only moderately sparsely and irregularly punctate; abdomen parallel, not quite as wide as the elytral apex, minutely and not very closely punctulate; legs stout. Male unknown; female with the sixth ventral obtusely produced and roundly lobed at apex. Length 8.5 mm.; width 1.1 mm. New Jersey, — Prof. J. B. Smith..... *praelongum* n. sp.

6 — Elytra more or less obviously longer and wider than the prothorax in both sexes..... 7  
Elytra equal in length to the prothorax or a little shorter; legs rufous throughout..... 8

7 — Large species, the legs rufous in color, shining, the antennae rufopiceous; punctures of the head and pronotum coarse, deep and moderately sparse, of the elytra sensibly smaller but equally sparse, tending to serial arrangement, of the abdomen very fine and rather dense; head not quite as wide as the elytra, broader behind than at the eyes, the angles only moderately broadly rounded; gular sutures approximate, converging basally; prothorax oblong, only very slightly narrower than

the head, not more than a sixth longer than wide, the sides not distinctly converging and very feebly arcuate, the angles rounded as usual; elytra large, rather longer than wide, somewhat longer and wider than the prothorax, parallel; abdomen parallel, slightly narrower than the elytra; legs rather long and only moderately stout. Male with the fifth ventral entirely unmodified, the sixth narrowly and very feebly impressed in the middle in nearly basal two-thirds, thence longitudinally and obtusely tumid along the median line to the apex, which is truncate, with a very minute, simple and shallow median sinus, five or six times as wide as deep; female slightly more slender than the male. Length 9.5 mm.; width 1.5 mm. New York (Hudson Valley)..... *deceptivum* n. sp.

Smaller species, the legs and antennae dark piceo-rufous, the surface shining, the head and pronotum coarsely deeply and moderately sparsely punctate, the punctures sparser toward the middle of the head, with the smooth line of the pronotum as usual, those of the elytra slightly smaller and rather sparser, not very definitely lineate, of the abdomen minute and very close-set; head well developed, a little wider than the elytra in the male, subequal to the latter in the female, wider near the base than at the eyes, the angles moderately rounded; gular sutures less approximate; prothorax rather small, distinctly longer than wide and much narrower than the head, the angles somewhat distinct, the sides feebly converging and nearly straight; elytra nearly a fourth longer than wide, much wider and longer than the prothorax, parallel and nearly straight at the sides; abdomen somewhat narrower than the elytra, parallel. Male with the fifth ventral scarcely visibly flattened along the median line, the sixth rather widely but very feebly impressed throughout in continuation, the apex with a very broad shallow sinus in almost median half and fully four times as wide as deep, the bottom of the sinus transverse and with two very feeble rounded lobes, having an intermediate minute and very feeble sinus; female with the sixth ventral very broadly, obtusely lobed at apex. Length 7.0 mm.; width 1.15 mm. Massachusetts, — Mr. F. Blanchard — and Michigan (Detroit)..... *spissicorne* n. sp.

8 — Form very stout, parallel, the elytra scarcely as long as wide; legs rather short and very stout; head large, equal in width to the elytra and very slightly wider than the prothorax, formed as usual, the coarse punctures very remote except toward the sides; prothorax as usual, large, only slightly longer than wide, the punctures coarse, deep and sparse, the sides feebly converging; elytra a little shorter and slightly wider than the prothorax, coarsely and rather confusedly punctate; abdomen very broad, as wide as the elytra, parallel, finely, rather densely punctulate. Male with the fifth ventral wholly unmodified, the sixth with a narrow and very feeble impression on the median line in more than basal half, the surface very broadly and just visibly swollen thence to the rectilinearly truncate and wholly unmodified apex, the pubescence a little denser at each side of the swelling; female slightly narrower than the male, with the sixth segment feebly and broadly lobed at tip. Length 9.0 mm.; width 1.5 mm. Massachusetts, — Mr. F. Blanchard, New York (Long Island) and New Jersey (Orange)..... *nigrolucens* n. sp.  
Form narrower and more elongate, the elytra fully as long as the prothorax,

slightly longer than wide and with the sides diverging feebly from the basal angles throughout; legs stout; integuments coarsely and sparsely punctate anteriorly, the punctures of the elytra smaller, irregularly disposed, of the abdomen very fine and moderately close-set; head in the male as wide as the base of the elytra but narrower than the apex, formed as usual but with the sides more rounded toward base; prothorax subequal in width to the head and base of the elytra, distinctly longer than wide, feebly narrowed from apex to base; abdomen as wide as the elytra, parallel. Male with the fifth ventral wholly unmodified, the sixth narrowly flattened along the median line toward base, the surface feebly and narrowly prominent in the middle at apex, the latter rectilinearly truncate and unmodified throughout; female with the sixth segment feebly lobed at tip. Length 9.8 mm.; width 1.4 mm. Illinois.....*armatum* Say

- 9 — Head large, as wide as the elytra or wider; gular sutures moderately separated, straight and parallel; elytra bicolored, red, black toward base..... 10

Head small, narrower than the elytra, with more broadly rounded basal angles; elytra uniform in color throughout and concolorous..... 11

- 10 — Form rather stout, parallel, normally convex, shining, black, the elytra and legs bright rufous, the former black in rather less than basal half toward the suture and less toward the sides; antennae obscure rufous; head large, slightly wider near the base than at the eyes, the latter moderate, the sides nearly straight with the angles moderately rounded; punctures coarse, rather close-set toward the sides, almost wanting on the vertex; prothorax a fourth longer than wide, much narrower than the head, feebly narrowed posteriorly throughout, the sides nearly straight, the angles rather well rounded; punctures coarse, moderately sparse, confused, the smooth median line not defined by punctured series; elytra more depressed, slightly elongate, about as long as the prothorax and slightly wider, the sides nearly straight and feebly diverging from base to apex, the punctures less coarse than those of the prothorax, rather sparse and confused; abdomen parallel, not quite as wide as the elytral apex, the punctures minute and close-set. Male wanting; female with the apex of the sixth ventral very broadly rounded and briefly lobed. Length 7.0 mm.; width 1.1 mm. British Columbia.....*divisum* Lec.

Form nearly similar but more slender, the coloration, lustre and sculpture similar, except that the punctures throughout are somewhat sparser; head not so large, the sides parallel and nearly straight for almost twice the length of the eyes behind the latter, the angles right and moderately rounded as usual; antennae rufous, not as long as the head and prothorax, thick, filiform, the median joints very slightly longer than wide; prothorax nearly as in *divisum* but only slightly narrower than the head, very feebly narrowed from apex to base; elytra slightly wider than the prothorax, equal in length to the latter in the female, a very little shorter in the male, slightly longer than wide, the sides feebly diverging from the base; abdomen as in *divisum*. Male with the fifth and sixth ventrals unimpressed, the latter broadly arcuato-truncate at apex, the surface at the apex with two small approximate tufts of short

stiff black setae; female very nearly similar to the male, except the slightly longer elytra with more diverging sides, the sixth ventral evenly rounded and rather broadly lobed at tip. Length 6.5 mm.; width 0.9 mm. California (Mendocino and Sta. Cruz Cos.)...*franciscanum* n. sp.

- 11 — Gular sutures moderately separated and strongly converging posteriorly to the base. Body elongate and rather slender, more depressed than in the preceding species, parallel, dark and uniform piceous in color throughout, the legs and antennae rufous; surface shining; punctuation coarse, deep and sparse anteriorly, the smooth line of the pronotum sometimes subobliterated anteriorly and with its surface more or less uneven toward base; head suboval, fully as long as wide, the sides parallel and feebly arcuate, the angles broadly rounded to the neck; prothorax slightly elongate, a little wider than the head, parallel, the sides feebly arcuate, the angles rather distinct; elytra small and depressed, not quite as long as wide, distinctly shorter than the prothorax, somewhat wider than the latter at base and distinctly so at apex, the diverging sides nearly straight, the basal angles distinct, the punctures not very coarse, very sparse and confused; abdomen parallel, as wide as the elytral apex, the punctures minute and rather dense. Male unknown; female with the sixth ventral narrowly and strongly lobed at tip, the lobe narrowly rounded, the surface feebly and narrowly impressed along the middle. Length 7.5 mm.; width 1.1 mm. New Hampshire.

*picescens* n. sp.

Gular sutures widely separated, straight and parallel to the base..... 12

- 12 — Elytra very much shorter than the prothorax, with the straight sides strongly diverging from base to apex and the surface rather depressed. Body elongate, only moderately stout, shining, black throughout, the legs and antennae rufous; punctures coarse and sparse anteriorly, those of the elytra notably fine, very sparse and confused, of the abdomen minute and dense; head longer than wide, the sides parallel and nearly straight for a long distance, the basal angles only moderately broadly rounded; prothorax wider than the head, distinctly elongate, parallel, the sides broadly, feebly arcuate, the angles rather distinct, the broad median smooth area even, generally slightly impressed along the median line toward base; elytra at base as wide as the prothorax or slightly wider, at apex very distinctly wider, about as long as wide, strongly and angularly emarginate at tip; abdomen parallel, scarcely as wide as the elytral apex. Male unknown; female with the sixth ventral strongly and rather narrowly lobed at tip, the apex of the lobe rather broadly rounded, the surface feebly impressed or flattened in the middle toward tip. Length 7.8 mm.; width 1.0 mm. Wisconsin (Bayfield), Montana (Kalispell), and Idaho (Coeur d'Alène),— Mr. Wickham.....*longiventre* n. sp.

Elytra not so greatly abbreviated and rather less strongly emarginate at apex, with the sides subparallel and the surface less depressed..... 13

13 — Body rather stout, subparallel, deep black throughout, the legs and antennae dark piceo-rufous; punctures of the head and pronotum deep and distinct, sparse but only moderately coarse, of the elytra fine, sparse and confused, of the abdomen minute and close-set as in *longiventre*; head slightly elongate, the sides parallel and straight for only half the

distance to the base, then broadly rounded to the neck; prothorax slightly elongate, wider than the head, the sides parallel and scarcely arcuate; elytra scarcely as long as wide, distinctly wider than the prothorax at base and apex; abdomen as wide as the elytra. Male unknown; female with the sixth ventral strongly and rather narrowly lobed at tip, the lobe evenly and strongly rounded at apex, with its surface rather strongly convex and not at all impressed. Length 7.0 mm.; width 1.1 mm. British Columbia.....*vancoveri* n. sp.

Body smaller, parallel, moderately stout, shining, piceous-black in color, the legs and antennae pale rufous, sculptured nearly as in *vancoveri*, the punctures anteriorly fully as small and still sparser, those of the abdomen even denser; head notably elongate and oval, the sides parallel and broadly arcuate, rounding more strongly at base to the neck; prothorax distinctly wider than the head, oblong, parallel, slightly elongate; elytra distinctly longer than wide, a little wider than the prothorax throughout and only very slightly shorter; abdomen parallel, as wide as the elytra. Male unknown; female with the sixth ventral nearly as in *vancoveri*. Length 5.7 mm.; width 0.9 mm. Illinois.

*illini* n. sp.

14 — Species of the *simile* type, parallel or subparallel, rather large in size, the antennae moderate in length and frequently stout, the elytral punctures more or less fine, sparse and inconspicuous, the male ventral characters conspicuous, the fifth and sixth segments more or less strongly impressed, the latter also with a large distinct apical emargination.....15

Species of the *simplex* type, parallel, the antennae but little less stout and rather more elongate than in the preceding, rather large; ventral characters of the male inconspicuous, consisting of a very minute nick at the middle of the apex of the truncate sixth segment and generally a very fine linear impression of the disk; elytral punctures generally coarse, strong and conspicuous, the legs relatively more slender than usual..20

15 — Elytra as long as the prothorax.....16

Elytra always shorter than the prothorax in both sexes.....17

16 — Form stout, black, the elytra slightly piceous, the legs and antennae dusky testaceous, shining; head small, the sides parallel and straight or very feebly arcuate for a long distance behind the eyes, the angles broadly rounded; punctures not very coarse and extremely sparse, a little less so at the sides; antennae thick, the medial joints strongly obconic and less than one-half longer than wide; neck a little more than half as wide as the head; gular sutures widely separated, almost straight and parallel; prothorax large, but little longer than wide, distinctly wider than the head and correspondingly narrower than the elytra, gradually feebly narrowed behind from apex to base; punctures sparse, very much coarser than those of the head; elytra exactly quadrate, parallel, equal in length to the prothorax, finely, sparsely and inconspicuously punctate; abdomen not quite as wide as the elytra, minutely and very densely punctulate, dull in lustre. Male unknown; female with the sixth ventral very broadly, obtusely lobed at apex, the surface strongly convex, wholly unimpressed. Length 7.0 mm.; width 1.2 mm. Massachusetts, — Mr. Blanchard — and Canada.

*obtusum* n. sp. (Fvl. MS.)

Form very stout, shining, black throughout, the legs and antennae dull rufous; head and elytra rather finely, very sparsely punctate, the pronotum hardly more coarsely and also very sparsely, the abdomen minutely and densely punctulate; head small, longer than wide, the sides parallel and feebly arcuate, the angles broadly rounded; antennae thick, the strongly obconic medial joints one-half longer than wide; gular sutures moderately separated and feebly converging to the base; prothorax broad, much wider than the head, slightly longer than wide, the sides very nearly parallel, the angles rather rounded; elytra large, distinctly wider and a little longer than the prothorax, slightly longer than wide, subparallel, the sides feebly arcuate, the surface rather broadly impressed at each side of the suture; abdomen not quite as wide as the elytra. Male with a distinct parallel impression in about middle sixth of the fifth ventral, the sixth with a narrower, deeper and more anteriorly attenuated impression, the apex having a triangular emargination about as deep as wide, occupying the posterior part of the impression, the edges of the notch thin, pale and membranous at the bottom; female unknown. Length 7.3 mm.; width 1.4 mm. Manitoba (Winnipeg).....*sparsellum* n. sp.

17 — Elytra not wider than the prothorax and very much shorter, the form of the body more elongate and parallel.....18

Elytra slightly wider than the prothorax and only a little shorter; body stouter and less parallel.....19

18 — Elytra depressed, scarcely as long as wide, with the sides diverging from the base; body black, shining; punctures of the head and elytra rather small, sparse, those of the pronotum much coarser, only moderately sparse, of the abdomen minute and very dense, the surface dull in lustre; head moderate in size, the eyes at nearly three times their own length from the base; angles broadly rounded, the sides parallel and more or less arcuate; antennae stout, with the strongly obconic joints one-half longer than wide; prothorax large, a little wider than the head, oblong, with the sides parallel and very slightly arcuate; elytra small, barely as long as wide, depressed, the sides nearly straight and very feebly diverging from the base; abdomen fully as wide as the base of the elytra. Male with the fifth ventral impressed in less than median third, the impression wider than long, rounded anteriorly, not quite attaining the base, the apex with a rounded shallow sinus bounding the impression; sixth ventral with a narrower longitudinal impression, the apex with a large, evenly rounded sinus, slightly wider than deep and equal in width to the impression, the edges of the sinus narrowly glabrous at the bottom, the impression clothed with short, very stout spiculiform hairs. Length 8.0 mm.; width 1.1 mm. New Hampshire (White Mts.).....*washingtoni* n. sp.

Elytra normally convex, parallel, exactly quadrate; body polished, black throughout, the legs bright, and the antennae dusky, rufous; head moderate, the sides feebly arcuate, the angles broadly rounded; antennae stout as in *washingtoni*; prothorax large, slightly wider than the head, only slightly elongate, somewhat narrowed from apex to base, the punctures much coarser than those of the head and elytra, which are rather small, sparse; elytra equal in width to the prothorax and

distinctly shorter; abdomen not quite as wide as the elytra. Male with the third and fourth ventrals narrowly and very feebly impressed along the middle, the fifth more broadly and deeply so, the impression attenuate anteriorly and not attaining the base, the apex with a shallow, circularly rounded sinus in median third; sixth ventral narrowly and deeply impressed along the median line except near the base, the apical margin with a large and very deep angulate notch, the bottom of which is filled with a broad whitish submembranous area having a transverse or feebly sinuate posterior outline; impressions more coarsely pubescent or spiculose. Length 8.8 mm.; width 1.15 mm. Rhode Island (Boston Neck).....**rigidum** n. sp.

- 19 — Male with ventrals three to six impressed, the sixth with a narrow and deep emargination. Body parallel, shining, black or slightly piceous, the elytra gradually rufescent posteriorly; legs and antennae as in the preceding species; head parallel and broadly arcuate at the sides, the latter merging gradually into the broadly rounded basal angles, the punctures fine but deep and very sparse; strongly obconic medial joints of the antennae but little more than one-half longer than wide; prothorax broad, but slightly elongate, a little wider than the head, subparallel, the sides becoming straight in the middle; punctures very sparse and only moderately coarse; elytra fully as long as wide, parallel and feebly arcuate at the sides, slightly wider and shorter than the prothorax, the punctures like those of the head, fine and very sparse; abdomen nearly as wide as the elytra. Male with the impression of the third and fourth ventrals narrow and feeble, of the fifth wider, deeper and elongate-oval, the apex feebly, broadly sinuate in the middle, the sixth with a large deep triangular emargination about as deep as wide, with its edges glabrous anteriorly, the impressions spiculose as usual; female with the sixth ventral rather small, feebly lobed at tip. Length 8.5 mm.; width 1.2 mm. Rhode Island (Boston Neck).

**postremum** n. sp.

Male with ventrals three and four wholly unmodified; five and six impressed, the sixth with a very broad sinus much wider than deep. Body parallel, stouter in form than *postremum*, polished, black, the elytra gradually rufo-piceous posteriorly as a rule; head subquadrate, the sides parallel and feebly arcuate, the angles rather broadly rounded, the punctures fine and very sparse; antennae stout, the strongly obconic joints one-half longer than wide; prothorax large, oblong, distinctly wider than the head, but little longer than wide, very feebly narrowed posteriorly from the rounded apical angles, the punctures coarse and very sparse; elytra subquadrate, parallel, slightly shorter and wider than the prothorax, normally convex, rather finely, very sparsely and confusedly punctate; abdomen as wide as the elytra, minutely and densely punctulate. Male with the fifth ventral narrowly and deeply impressed along the middle except near the base, the apex broadly, feebly sinuate toward the middle; sixth with a broader, deep, more anteriorly narrowed impression throughout, the apex with a broad and rather shallow sinus, three or four times as wide as deep, its bottom broadly, very obtusely angulate, the sinus fully half as wide as the segment; female with the sixth ventral obtusely, lobed at tip,

unimpressed. Length 7.5–9.0 mm.; width 1.15–1.25 mm. Massachusetts (Lowell), Rhode Island (Boston Neck — a slightly larger and more vigorous variety), New York (near the city) and New Jersey.

**simile** Lec.

- 20 — Sinus at the tip of the sixth ventral in the male larger, about a fifth as wide as the segmental apex.....21  
Sinus extremely minute.....22  
21 — Body larger and stouter, parallel, black and polished throughout, the legs and antennae rufo-piceous; head rather well developed, the sides parallel for half the distance behind the eyes, then broadly rounded to the neck, becoming almost transverse just before attaining the latter, the punctures rather coarse and sparse; antennae longer than in the *simile* group, the obconic joints almost twice as long as wide; prothorax oblong, parallel, only slightly elongate and but little wider than the head, the angles well rounded, the punctures coarse, rather sparse and confused; elytra slightly wider than the prothorax and distinctly shorter, barely as long as wide, with the sides very feebly diverging from base to apex in the male, subequal in length to the prothorax, fully as long as wide and more parallel in the female, the punctures coarse, uneven and sparse; abdomen as wide as the elytra, minutely and relatively sparsely punctulate, polished. Male with the fifth ventral unmodified, the sixth rectilinearly truncate at tip, with the evenly rounded sinus wider than deep and a fifth as wide as the apex, the surface not obviously impressed along the middle; female with the sixth ventral broadly, obtusely rounded at tip. Length (extended) 8.0 mm.; width 1.15 mm. Rhode Island (Boston Neck).

**neglectum** n. sp.

Body smaller and less stout, parallel, shining, black throughout, the legs and antennae dusky testaceous; head as in *neglectum*, but more narrowly ovoidal, the sides more gradually approaching the neck and not becoming transverse, the punctures less coarse and still sparser and the antennae somewhat shorter, the medial joints obviously less than twice as long as wide; prothorax smaller, narrower and just visibly wider than the head, the sides slightly converging from the less broadly rounded anterior angles to the basal angles, the punctures equally coarse and sparse; elytra obviously wider than the prothorax, subparallel, a little longer than wide and about as long as the prothorax in both sexes, the punctures coarse, uneven and only moderately sparse; abdomen broad, fully as wide as the elytra, minutely and not very closely punctulate. Male with the fifth ventral unmodified, the sixth rectilinearly truncate at apex, with a rounded sinus, wider than deep and about a fifth as wide as the apex, the surface narrowly and distinctly impressed along the median line from before the middle to the apical sinus; female as in *neglectum*. Length (contracted) 6.5 mm.; width 1.0 mm. Michigan (Marquette).....**innocens** n. sp.

- 22 — Form relatively larger and more elongate, parallel, black and shining throughout, the elytra sometimes piceous, the legs and antennae dusky rufous; head and antennae nearly as in *innocens* but larger; prothorax broad, only very slightly elongate, very much wider than the head, the sides distinctly converging posteriorly from the arcuation at apical

third or fourth, the punctures notably coarse, confused and moderately sparse, the median smooth line even; elytra in the male short, barely as long as wide, not wider than the prothorax at base and only slightly wider at apex, the sides diverging noticeably; in the female much larger, fully as long as wide, nearly as long as the prothorax and much wider, slightly wider at apex than at base, the prothorax relatively narrower in that sex; punctures notably coarse, uneven and moderately sparse; abdomen not quite as wide as the elytra, minutely and not very closely punctulate. Male with the sixth ventral very narrowly, linearly and distinctly impressed along the middle in posterior two-thirds, the apex rectilinearly truncate, with the median sinus very small, rounded, wider than deep as usual and only about a ninth or tenth as wide as the apex. Length 7.5 mm.; width 1.1 mm. Lake Superior, — LeConte; Wisconsin (Bayfield), — Mr. Wickham. [= *fauveli* Duviv.].....*simplex* Lec.

Form relatively stouter, polished, black throughout, the legs and antennae dusky testaceous; head as in *simplex* but relatively larger, the punctures coarse, rather close-set toward the sides, very sparse medially, the antennae rather longer than in any of the other species of this group, the medial joints in the male being scarcely less than twice as long as wide, a little shorter in the female; prothorax oblong, scarcely narrowed posteriorly, distinctly longer than wide and subequal in width to the head in both sexes, coarsely, sparsely punctured; elytra similar in the sexes, parallel, distinctly longer than wide, much wider than the prothorax and equal in length to the latter, the punctures moderately coarse and rather feeble, sparse; abdomen broad, fully as wide as the elytra, the fine punctures less sparse than usual in this group. Male with the sixth ventral distinctly, linearly impressed along the median line in apical two-thirds, the apex as in *simplex*, the median sinus still more minute and only about a twelfth as wide as the apex. Length (contracted) 6.5 mm.; width 1.15 mm. Massachusetts (Lowell), — Mr. F. Blanchard.....*gravidulum* n. sp.

The under surface of the first joint of the hind tarsi, in many of the *Lathrobia* having this joint very short, and especially in *Lathrobium* and its immediate allies, is obliquely prolonged beneath the second, slightly expanded and has a flattened sole, as though to aid in the use of the tarsus. This sole does not exist on any of the other joints, leading to the presumption that, in motion, this short basal joint may be the only one in contact with the ground, the remainder of the tarsus being elevated or resting on the tips of the claws.

The species of the *armatum* group, having peculiarly thick and submoniliform antennae, slightly attenuated at the tip, are difficult to discriminate, and it is possible that a few of the forms here announced may have less than full specific value. Of *amplipenne* I have a good series of about a dozen

specimens, in which the coloration of the elytra is perfectly constant, except in one individual, where the red is replaced by a piceous-black; as the other specimens are constant, this dark coloration may be accidental.

There is no group of species known to me, showing more plainly the subgeneric value of types of male secondary sexual characters, than these components of *Lathrobium*, for we have successions of what are without doubt distinct, though closely related, species, having throughout the same type of sexual modifications, which types are abruptly limited in extent and without intermediates, as shown by the above table.

The name *simplex* was replaced by *fauveli* by M. Duvivier, (Cat. 1883) on the ground of preoccupation, but I am by no means certain that the older *simplex* is really a *Lathrobium*, and therefore have not made the change of name.

There are four described species of *Lathrobium* which are not before me at present; these are appended below with short descriptions which I drew up some years ago from the original unique types. They are all very distinct species and will undoubtedly have to be removed from the restricted genus *Lathrobium*, but having failed to record any observations upon the elytral flanks, gular sutures or structure of the hind tarsi, I am unable to dispose of them among the other genera at present, and indeed some of them are so isolated as to indicate new genera. For the present however they may be attached to *Lathrobium*:—

Form moderately slender, parallel, head gradually and slightly narrowed behind the eyes to the neck, which is broad, the surface coarsely and remotely punctate; antennae not very thick, as long as the head and prothorax, the latter about as long as wide, equal in width to the head, the punctures coarse, sparse and rather feebly impressed; elytra about as long and wide as the prothorax, the punctures very coarse, not close-set and rather feebly impressed, arranged in series throughout; abdomen finely and sparsely punctulate. Male having a feeble, transversely oval medial impression on the fourth ventral — possibly accidental, — the fifth very minutely, feebly sinuate and extremely feebly impressed at apex, the sixth with a broad angular emargination, occupying the entire apex and at least five times as wide as deep. Length 5.7 mm.; width 0.9 mm. North Carolina.....*seriatum* Lec.

Form subparallel and rather stout, convex, dark rufo-testaceous, the head blackish; elytra rufous, with a large median blackish cloud extending



from the base, where it is nearly as wide as the elytra, to the apex, where it has gradually become narrower; head parallel, very coarsely and remotely punctate; prothorax as long as wide, equal in width to the head, the punctures rather large, sparse and irregularly disposed, except single series along the median smooth line; elytra just visibly wider than the prothorax and distinctly longer, nearly as long as wide, the punctures not fine, rather sparse and partially arranged in series almost throughout; abdomen finely and sparsely punctulate. Male unknown. Length 6.4 mm.; width 1.1 mm. Florida.....**parcum** Lec.

Form rather stout, parallel; head large, wider than prothorax, parallel, not very coarsely but deeply, rather closely punctate, the antennae thick, submoniliform, almost as long as the head and prothorax, the latter about a fifth longer than wide, distinctly narrower and a little shorter than the elytra, the sides feebly convergent and nearly straight from apex to base, the punctures small, feeble, rather close-set and irregularly arranged throughout, with a wide median impunctate line; elytra somewhat longer than wide, the punctures fine, feeble, sparse and confused; abdomen very finely, rather densely punctulate; legs pale. Male with the fifth and sixth ventrals wholly unmodified on the disk, the apex of former very broadly, angularly emarginate, the latter somewhat more deeply and angularly emarginate, both throughout the entire width, the latter emargination apparently about six times as wide as deep. Length 8.0 mm.; width 1.25 mm. Louisiana.....**pedale** Lec.

Form slender but convex; sides of the head slightly converging behind the eyes, the basal angles broadly rounded, the punctures very fine, feeble and remotely scattered; antennae slender, distinctly longer than the head and prothorax, the latter wider than the head, just visibly longer than wide, convex, parallel, finely, very feebly, indistinctly, sparsely and irregularly punctate; elytra not wider than the prothorax and distinctly shorter, quadrate, feebly, sparsely and irregularly punctate; abdomen darker in color, finely and extremely densely punctulate, dull in lustre. Male having a rounded discal impression in apical half of the fifth ventral, the apical margin not modified, the sixth segment with a small acutely cuspidiform emargination at tip, the surface not modified. Length 4.5 mm.; width 0.7 mm. Michigan....**bicolor** Lec.

The narrowing of the head behind the eyes in *seriatum*, the peculiar coloration of *parcum* and the sexual characters of *pedale* and *bicolor*, make any definite generic assignment of these species impossible in the absence of the types; it is hoped, however, that enough characters are given to allow of identification in case they should be rediscovered. *Bicolor* is a preoccupied name in *Lobrathium*, but the sculpture of the body is very unlike that prevailing in Rey's genus, where the punctures are especially coarse and close-set throughout in all the species known to me; so the name should stand.

### **Litolathra** n. gen.

This genus, while closely allied to *Lathrobium*, differs in the arcuate form of the gular sutures, which are always widely separated and more remotely so at base than at the middle of the post-oral part of the head. The species are moderately numerous and are much smaller in average size than those of *Lathrobium*; they also have a type of male secondary sexual characters — uniform throughout — differing from anything known in that genus. In addition, the antennae are longer, thinner and more filiform, and the abdomen is rather more tapering toward tip and always very densely punctulate and dull, — characters which also distinguish them from *Lathrobium*. The general build of the body in species of the *concolor* type, suggests more rapid motion in running than in those of the *confusa* type, or in *Lathrobium* or *Lathrobioma*, these being relatively slow in their movements. The species represented by material in my cabinet may be distinguished by the following characters: —

- Form elongate, fusoid, the elytra always much longer as well as wider than the prothorax, the legs rather slender; antennae not longer than the head and prothorax, moderately slender, the medial joints less than twice as long as wide..... 2
- Form subparallel, the elytra subequal in length to the prothorax or shorter; legs stouter, sometimes very stout in the male..... 5
- 2 — Gular sutures distinctly arcuate, gradually diverging posteriorly from near the middle; head smaller, distinctly narrower than the prothorax..... 3
- Gular sutures almost straight, diverging only very near the base; head almost as wide as the prothorax..... 4
- 3 — Color black throughout, the legs and antennae rufous, polished, the abdomen dull; form very slender, the punctures of the head and elytra small, sparse, of the pronotum only moderately coarse and very sparse; head parallel, the basal angles very broadly rounded, beginning at one length of the eye behind the latter; neck fully half as wide as the head; prothorax distinctly elongate, about a fifth longer than wide, the sides parallel, arcuate anteriorly and posteriorly, the angles rather distinct; elytra distinctly longer than wide, parallel, almost a third wider than the prothorax and distinctly longer in both sexes; abdomen slightly narrower than the elytra, tapering behind. Male with the fifth ventral wholly unmodified, the sixth narrow, broadly rounded at tip, with a simple rounded sinus about a third as wide as the apex and between



two and three times as wide as deep, the surface very feebly impressed along the median line except toward base; female with the sixth ventral evenly rounded and feebly lobed at tip. Length 6.4 mm.; width 0.95 mm. Rhode Island (Boston Neck), Massachusetts (Lowell) and New York (near the city).....*rhodeana* n. sp.

Color piceous-black, the elytra dull rufous, blackish toward base, the legs and antennae pale testaceous; form and sculpture similar to the preceding, the elytral punctures more evenly serial in arrangement and the pronotal punctures decidedly coarser and less sparse; head rather less distinctly narrower than the prothorax, with the basal angles similarly very broadly rounded; prothorax a little broader and less elongate; elytra but little longer than wide, about a fourth wider and distinctly longer than the prothorax; abdomen distinctly narrower than the elytra. Male with the sixth ventral narrow, more strongly rounded at tip, with the median sinus similar, the surface not impressed except very obsoletely and in posterior half. Length 5.7 mm.; width 0.85 mm. Rhode Island (Boston Neck).....*semirubida* n. sp.

4 — Body somewhat stouter, less fusiform and more parallel, piceous-black throughout, the legs and antennae pale; punctures nearly as in *semirubida*, those of the pronotum sparser; head parallel, the basal angles less broadly rounded than in the preceding species; prothorax only very slightly longer than wide, the sides sensibly converging from apex to base and almost straight; elytra slightly longer than wide, much wider and longer than the prothorax; abdomen narrower than the elytra. Male not at hand; female with the sixth ventral as in *rhodeana*. Length 6.4 mm.; width 1.05 mm. Indiana and westward.....*concolor* Lec.

5 — Elytra large, equal in length to the prothorax in the female and but just visibly shorter in the male. Body large and stout, moderately convex, parallel, black throughout, the legs and antennae pale ferruginous; punctures of the head rather coarse, sparse, almost wanting broadly toward the middle, of the pronotum rather smaller and very sparse, irregular, of the elytra still smaller, fine, sparse, partially subserial, the abdomen dull, densely punctulate; head slightly smaller than the prothorax, more distinctly so in the female, parallel and feebly arcuate at the sides, the angles obtuse and narrowly rounded, rather distinct; antennae unusually long and slender, filiform, longer than the head and prothorax, the medial joints obconic and fully twice as long as wide; prothorax large, but little longer than wide, sides distinctly converging from apex to base, the angles moderately rounded; elytra large, distinctly wider than the prothorax, slightly longer than wide and parallel; abdomen broad, as wide as the elytra. Male with the fifth ventral rather broadly and strongly impressed along the middle except toward base, the apical margin broadly, feebly sinuate in more than middle third; sixth segment without impression, the apex rounded, with a large, narrowly rounded parabolic sinus, nearly a third as wide as the segment and nearly as deep as wide; legs throughout very stout; female a little smaller and more slender than the male, the sixth ventral distinctly lobed at apex, the lobe evenly rounded, the legs obviously less stout. Length 6.7-7.5 mm.; width 1.1-1.15 mm. New Jersey, Ohio (Ross Co.) and Iowa.....*cruralis* n. sp.

Elytra relatively smaller, always shorter than the prothorax in both sexes; smaller species..... 6

6 — Elytra equal in width to the prothorax; body deep black throughout, the legs and antennae pale ferruginous; form parallel, the integuments thicker; head much narrower than the prothorax, parallel and feebly arcuate at the sides, the angles broadly rounded; neck half as wide, the punctures rather fine, very sparse; antennae relatively thicker than in *cruralis*, although longer than the head and prothorax, the medial joints strongly obconic and somewhat less than twice as long as wide; prothorax only very slightly longer than wide, the sides just visibly converging from apex to base and very feebly arcuate; angles rather broadly rounded; punctures not very coarse but larger than those of the head, very sparse; elytra very nearly as long as wide, at base equal in width to the prothorax, just visibly wider at apex, the punctures fine and rather sparse, not definitely subserial; abdomen as wide as the elytra, dull; legs moderately stout in the male. Male with the fifth ventral unimpressed, the apex very feebly sinuate toward the middle, the sixth segment rounded at tip, with the usual parabolic sinus about a third as wide as the apex and but little wider than deep; female not known. Length 5.6 mm.; width 0.9 mm. Iowa (Iowa City), — Mr. Wickham.

*convictor* n. sp.

Elytra obviously wider than the prothorax; body more or less pale piceous in color throughout, the legs and antennae paler and ferruginous, the former notably stout in the male and less so in the female; surface polished, the abdomen dull; form parallel and moderately convex... 7

7 — Elytra in the female distinctly shorter than wide, very much shorter than the prothorax; head much narrower than the prothorax, finely and very remotely punctate, nearly as in the preceding form throughout, the antennae similar, the neck rather wider, a little more than half as wide as the head; prothorax distinctly longer than wide, the sides obviously converging from apex to base, the angles rounded, the punctures noticeably coarse, confused and only moderately sparse; elytra rather depressed, the sides distinctly diverging from the base, the punctures somewhat fine, sparse and confused, but with the surface rather coarsely rugose by oblique light; abdomen not quite as wide as the elytra. Male unknown. Length 5.5 mm.; width 0.8 mm. Iowa....*amputans* n. sp.

Elytra in the female fully as long as wide and but just visibly shorter in the male..... 8

8 — Male with the emargination of the sixth ventral smaller, much shallower, broadly rounded at the bottom, less than a third as wide as the segmental apex and between three and four times as wide as deep; fifth and sixth segments not distinctly modified on the disk, the former rectilinearly truncate at apex..... 9

Male with the emargination of the sixth ventral larger and deeper, but little wider than deep, triangular in form, with the anterior angle narrowly rounded..... 10

9 — Body moderately stout, the head as in *amputans* but with the basal angles rather less broadly rounded, the antennae longer and somewhat thicker, filiform, distinctly longer than the head and prothorax, with the medial joints almost twice as long as wide; punctures rather fine,

very remote, less sparse on the sides; prothorax more distinctly elongate, the sides feebly converging, the surface notably convex and unusually coarsely, deeply and conspicuously punctate, the punctures moderately sparse; elytra distinctly wider than the prothorax and but little, though distinctly, shorter, almost as long as wide, the sides very feebly diverging from the base and slightly arcuate throughout, the punctures fine, sparse and partially sublineate; abdomen broader than in *amputans*, as wide as the elytra. Female not known. Length 5.5 mm.; width 0.9. District of Columbia.....*inornata* n. sp.

Body nearly similar in form and coloration but decidedly less slender, the head nearly similar in form and sculpture but only just visibly narrower than the prothorax, the antennae distinctly shorter and relatively thicker, not as long as the head and prothorax, the medial joints scarcely more than a half longer than wide; prothorax notably narrower and more elongate; fully a fourth longer than wide, the punctures very sparse and less coarse; elytra relatively much smaller, fully as long as wide, with the sides feebly diverging, much shorter but only very little wider than the prothorax, similarly sculptured; abdomen a little narrower, fully as wide as the elytra. Male with the emargination of the sixth ventral similar in general form but still shallower and more gradually formed. Length 5.4 mm.; width 0.8 mm. New York (Dundee).

*subgracilis* n. sp.

10—Form moderately stout, the head only very slightly narrower than the prothorax, parallel and feebly arcuate at the sides, the basal angles broadly rounded, the punctures small and very sparse; antennae longer than the head and prothorax, stouter, the strongly obconic medial joints distinctly less than twice as long as wide; prothorax less elongate, a fifth or sixth longer than wide, the sides just visibly converging, the punctures rather fine and very sparse; elytra in the male much wider and distinctly shorter than the prothorax, not quite as long as wide, the sides rather strongly diverging throughout, the punctures fine and moderately sparse; in the female less distinctly wider and shorter than the prothorax, as long as wide, with the sides only very slightly diverging; abdomen not quite as wide as the prothorax in either sex. Male with the fifth and sixth ventrals wholly unmodified on the disk, the former rectilinearly truncate at apex, the sixth rounded at apex as usual, the triangular notch larger, nearly half as wide as the segmental apex and distinctly wider than deep; female rather smaller and more slender than the male. Length 5.3–5.8 mm.; width 0.8–0.9 mm. Massachusetts (Lowell).....*confusa* Lec.

Form rather stouter, the head relatively more elongate, distinctly narrower than the prothorax, the sides longer and less arcuate and the angles somewhat less broadly rounded; antennae shorter and less stout, not longer than the head and prothorax, the medial joints less strongly obconic but less than twice as long as wide; punctures moderately sparse and distinct toward the sides; prothorax more elongate, a fourth longer than wide, the sides feebly converging and nearly straight, the punctures only moderately coarse and sparse; elytra in the male rather large, much wider and not very much, though distinctly, shorter than the prothorax, fully as long as wide, the sides distinctly diverging;

punctures fine and sparse; abdomen nearly as wide as the elytra. Male with the secondary sexual characters as in *confusa*, except that the apex of the sixth ventral is much more broadly and feebly rounded, with the triangular notch smaller, being about a third as wide as the apex and but little wider than deep. Length 5.6 mm.; width 0.9 mm. New York (near the city) and District of Columbia.....*suspecta* n. sp.

The three distinct groups of species in the above table are represented by *concolor*, *cruralis* and *confusa*, the first two, composed of larger species, having the elytra large, the last, with the elytra small, being composed of a considerable number of much smaller species. The fact stated of certain species of *Lathrobium*, that the female is smaller and more slender than the male, is still more obvious in this genus, being strikingly apparent in *cruralis* and *confusa*.

*Lathrobiopsis* n. gen.

We begin in this genus a series of groups, well distinguished from those which precede by the longer basal joint of the hind tarsi, this being as long as the second in the present genus and both slightly elongate. In addition to this, the first joint is similar to the second beneath and not swollen into a flattened sole. *Lathrobiopsis* differs very greatly from *Lathrobioma*, which has more the facies of *Lathrobium*, in its depressed form and small prothorax, with the median smooth line partially delimited by impressed series of punctures, large flattened elytra, with regular series of punctures and in other characters as shown in the table; our single representative at present is the following:—

Body slender, distinctly depressed, dark testaceous, the head dusky, the abdomen piceous-black; legs pale flavo-testaceous, the antennae dusky rufous; head quadrate, the sides long, parallel and nearly straight, the basal angles very distinctly right and but very slightly rounded; punctures rather coarse, deep, moderately sparse, a small vertexal space impunctate; antennae stout, longer than the head and prothorax, the medial joints one-half longer than wide, inflated and rounded at the sides and pedunculate at base; prothorax very slightly narrower than the head, not longer than wide, the sides evidently converging from apex to base and nearly straight, the apical angles distinct and not rounded, the punctures not quite as coarse as those of the head, confused and moderately sparse except along the broad impunctate

median area in basal three-fifths, where they are linear; elytra large, parallel, distinctly elongate, a third wider and one-half longer than the prothorax, the punctures similar in size to those of the pronotum but feebler, close-set in rather even unimpressed series throughout; basal angles not rounded; abdomen parallel, narrow, straight at the sides, only three-fourths as wide as the elytra, the fine punctulation not dense; legs slender. Male with the surface of the fifth and sixth segments wholly unmodified, the apex of the fifth rectilinearly truncate, becoming very feebly sinuate in the median third or fourth, the sixth narrow, broadly rounded at tip, with a deep sinus about a third as wide as the apex, apparently rather deeper than wide and parabolic in form; female not known. Length 4.6 mm.; width 0.75 mm. Texas.

*texana* n. sp.

I have seen but a single specimen of this very delicate species and it is from an unrecorded part of the state.

#### *Lathrobioma* n. gen.

The species of this genus in their dense integuments, general form of the body, large head, and, especially, in their thick submoniliform antennae, greatly resemble *Lathrobium*, but the formation of the posterior tarsus prohibits any such association, the tarsi being shorter and more compact, with the four basal joints subequal and mutually similar, each having in general two long oblique setae projecting anteriorly from the anterior margin beneath, the fourth joint sometimes a little smaller, the first about as long as the second and not elongate, not obliquely produced beneath the base of the second and without trace of the expanded sole characterizing *Lathrobium*; the fifth joint is frequently nearly as long as the first four combined. The species are smaller than those of *Lathrobium*, comprising some of the more minute of the *Lathrobia*, have smaller eyes and are more slender as a rule. They extend over the same geographical range in America, to which region they may possibly be confined, and are moderately numerous, those represented in my cabinet being distinguishable as follows:—

Elytra larger, as long as the prothorax or longer and notably wider, the body broader and less convex; elytral punctures more or less irregularly lineate in arrangement..... 2

Elytra small, never much wider and always distinctly shorter than the prothorax, the body more slender and rather more convex..... 6  
 2—Head as wide as the elytra—probably in both sexes..... 3  
 Head much narrower than the elytra in the female, possibly less obviously so in the male..... 4  
 3—Body rather stout, parallel, shining, black throughout, the sutural margin and line of the apex rufescent; legs and antennae dark testaceous; head large, sparsely punctured, much wider at base than across the eyes, the sides straight, the angles narrowly rounded; neck barely half as wide; antennae thick, not quite as long as the head and prothorax, joints two and three equal, about one-half longer than wide, the fourth a little shorter, the outer joints not longer than wide, rounded; prothorax three-fourths as wide as the head, distinctly elongate, subparallel, the sides just visibly converging, the angles rather distinct and but little rounded, the punctures larger than those of the head, coarse and only moderately sparse; elytra fully a fourth wider and a fifth longer than the prothorax, parallel, distinctly longer than wide, the punctures coarse, moderately sparse and only very obscurely and partially sublineate; abdomen distinctly narrower than the elytra, parallel and straight at the sides, finely, not closely punctulate, shining; legs moderately slender, the hind tarsi three-fourths as long as the tibiae. Male unknown; female with the sixth ventral broadly, evenly rounded, scarcely lobed. Length 5.8 mm.; width 0.97 mm. Virginia (Grafton).

*virginica* n. sp.

Body more slender, parallel, deep polished black throughout, the legs piceous-black, the antennae fuscous; head narrower and more oval, parallel and broadly arcuate at the sides, the basal angles rather broadly rounded, the neck rather more than half as wide, the eyes moderately developed, at about three times their own length from the base; punctures moderately coarse, deep and sparse; antennae thick, nearly as in *virginica*; prothorax four-fifths as wide as the head, distinctly elongate, subparallel, the sides nearly straight, the punctures but little larger than those of the head, rather feeble and very sparse, deeper and more closely aggregated along the median smooth line but not lineate; elytra rather finely, sparsely punctate, longer than wide, parallel, about a fifth wider than the prothorax but not quite as long in the male, probably fully as long in the female; abdomen parallel, straight at the sides, nearly as wide as the elytra, convex, finely, sparsely punctulate. Male with the fifth ventral moderately impressed and subglabrous in the middle, except toward base, the apical margin very feebly and gradually sinuate in the middle; sixth with a declivous parallel polished impunctate and deep excavation in median fourth or more, beginning near the base, the apex with a quadrate emargination as wide as the impression, the sides of which are parallel and formed in part by dentiform prolongations of the sides of the excavation, the bottom transversely sinuate; female unknown. Length 5.9 mm.; width 0.85 mm. Oregon.

*shoshonica* n. sp.

4—Elytra equal in length to the prothorax; species very small in size. Body moderately stout, subparallel, deep black throughout, the legs and antennae piceo-rufous; head quadrate, as long as wide, parallel and

straight at the sides, the angles rather narrowly rounded, the eyes moderately small and rather convex; punctures coarse and only moderately sparse; antennae thick, distinctly shorter than the head and prothorax, gradually thicker distally, the outer joints not quite as long as wide; prothorax subparallel, distinctly longer than wide, obviously narrower than the head, the punctures coarse, deep, moderately sparse and evenly, though irregularly, distributed; elytra subparallel, longer than wide, a fourth wider than the prothorax, the punctures fine, sparse and sublineate; abdomen slightly narrower than the elytra, parallel, minutely and rather closely punctulate. Male not at hand; female broadly rounded and feebly lobed at tip of the sixth ventral. Length 4.1 mm.; width 0.75 mm. Massachusetts (Lowell), — Mr. F. Blanchard.

*nanula* n. sp.

Elytra much longer and wider than the prothorax..... 5  
5 — Form rather stout and only moderately convex, pale brownish-flavate in the body and legs, the head, antennae, and, to a less extent, the prothorax, slightly infuscate — the type probably somewhat immature; surface shining; head rather longer than wide, parallel and nearly straight at the sides, the angles rather broadly rounded, the neck more than half as wide; punctures moderately coarse and rather sparse; antennae thick but not enlarged distally, obviously shorter than the head and prothorax, the outer joints shorter than wide; prothorax about a fifth longer than wide, only very slightly narrower than the head, the sides distinctly converging; punctures only moderately coarse, equal to those of the head but sparser; elytra unusually large, parallel, longer than wide, a third wider and a fourth longer than the prothorax, the somewhat coarse punctures arranged in nearly even series; abdomen distinctly narrower than the elytra, straight and parallel at the sides, rather closely, finely punctulate; legs moderately stout, the hind tarsi scarcely three-fourths as long as the tibiae. Male unknown, the sixth ventral of the female evenly and broadly rounded behind. Length 5.5 mm.; width 0.9 mm. Dakota (Bismarck).....*dakotana* n. sp.

Form similar but rather less stout, deep shining black throughout, the legs and antennae piceous-black; head narrower and more elongate, parallel and straight at the sides, the angles broadly rounded; eyes at between three and four times their own length from the base; antennae thick, much shorter than the head and prothorax, the outer joints wider than long; prothorax much narrower, distinctly narrower than the head and longer than wide, subparallel, the punctures moderately coarse, deep and sparse; elytra longer than wide, parallel, two-fifths wider and nearly a third longer than the prothorax, the punctures moderately fine and sparse and less distinctly serial than in *dakotana*; abdomen almost as wide as the elytra, straight at the sides, finely and rather closely punctulate; legs moderately stout. Male unknown; female with the sixth ventral convex, broadly rounded at tip. Length 5.4 mm.; width 0.85 mm. British Columbia.....*hespera* n. sp.

6 — Head parallel at the sides in both sexes..... 7  
Head broadest near the base, at least in the male, sometimes parallel in the female..... 8  
7 — Body slender, convex, parallel, deep shining black throughout, the legs

ferruginous; antennae dusky; head oblong, slightly elongate, the sides very feebly arcuate; angles moderately broadly rounded; neck much more than half as wide, the punctures moderately coarse and sparse; antennae moderately stout, not enlarged distally, not as long as the head and prothorax, the outer joints nearly as long as wide; prothorax nearly a fourth longer than wide, rather narrow, much narrower than the head, subparallel, the punctures coarse and not very sparse; elytra slightly wider than the prothorax and but little shorter, not quite as wide as the head, slightly longer than wide, the sides very feebly diverging, the punctures rather small and sparse but distinct, subserial; abdomen at base as wide as the elytra, a little wider at the apex of the fourth segment, shining, minutely and not densely punctate. Male with the fifth ventral feebly impressed in the middle toward tip, the apex transverse and unmodified, the sixth with a deep, slightly diverging excavation in rather more than median fourth, beginning near the base, the bottom polished and rapidly declivous to the emargination, which is somewhat wider than deep, the lateral projections, partially forming the latter, obtuse and bearing each a small fringe of spiculiform hairs; female with the elytra fully as long as the prothorax and distinctly wider, the sixth ventral obtusely rounded. Length 4.8–5.8 mm.; width 0.78 mm. Massachusetts (Lowell), Rhode Island (Boston Neck), New Jersey and Iowa.....*othoides* Lec.

8 — Elytra only slightly shorter than the prothorax; body deep shining black in color throughout..... 9  
Elytra very much shorter than the prothorax in both sexes; body blackish-piceous to paler in color when mature..... 11

9 — Processes of the sixth ventral in the male diverging posteriorly. Body very slender, parallel, the tip of the abdomen feebly rufescent; legs rather bright rufous, the antennae somewhat dusky; head rather longer than wide and distinctly wider than the elytra, only slightly broader toward base, the sides feebly arcuate, the angles broadly rounded; punctures moderately coarse and sparse; eyes notably small, the antennae thick, slightly enlarged distally; prothorax much elongated, parallel, distinctly narrower than the head, fully a fourth longer than wide, the punctures somewhat coarse, uneven in distribution, rather more densely aggregated along the median smooth line; elytra in the male but little longer than wide, just visibly wider than the prothorax and about four-fifths as long, in the female distinctly wider than the prothorax, very nearly as long and fully as wide as the head; punctures moderately fine and sparse but distinct and scarcely lineate; abdomen parallel, not quite as wide as the elytra, shining, the fine sculpture not dense. Male with the fifth ventral feebly impressed in the middle in apical half, the apex transverse, the sixth with the usual narrow deep excavation not extending to the base, more broadly expanding posteriorly than in the preceding species, the processes more angulate and separated at tip by nearly half the width of the segment, the emargination much wider than deep, the bottom evenly rounded; declivous floor of the excavation broadly thinner and translucent posteriorly. Length 5.0 mm.; width 0.7 mm. Rhode Island (Boston Neck).....*fenuis* Lec.

Processes of the sixth ventral in the male inflexed toward tip; legs and antennae darker, piceo-rufous in color.....10

- 10 — Body smaller and more slender; head but little longer than wide, the sides nearly straight and distinctly diverging posteriorly from the moderately small eyes to the basal angles, which are not very broadly rounded; punctures sparse, not very coarse; antennae short and very stout, much shorter than the head and prothorax, slightly enlarged distally, the outer joints wider than long; prothorax about a fifth longer than wide, very slightly narrower than the head, the sides slightly converging, the punctures moderately coarse and sparse; elytra in the male fully as wide as the head, much wider than the prothorax and very nearly as long, subparallel and a little longer than wide; in the female proportioned almost similarly but relatively more elongate in form; punctures rather small and sparse; abdomen subparallel, not quite as wide as the elytra. Male with a narrow deep subglabrous impression at the middle of the fifth ventral in more than apical half, the apex very feebly sinuato-truncate; sixth with the usual deep parallel excavation with declivous glabrous floor, the apical emargination deep, parallel, circularly rounded at the bottom, the processes forming part of its sides acute and slightly flexed toward each other; female slightly more slender than the male. Length 5.0 mm.; width 0.7 mm. Manitoba (Winnipeg).....*nigrolinea* n. sp.

Body larger and rather stouter in form, parallel; head larger but only very slightly enlarged posteriorly, the sides more or less distinctly arcuate and the basal angles more broadly rounded; punctures moderately coarse and rather close-set; antennae moderately stout, not sensibly enlarged distally; prothorax nearly as in *nigrolinea* but broader and less elongate, distinctly narrower than the head, strongly, moderately sparsely punctured; elytra finely, sparsely, sublinearly punctate in the male, distinctly longer than wide, parallel, slightly wider and a little shorter than the prothorax, not as wide as the head; in the female similar but very slightly more elongate and only just visibly shorter than the prothorax; abdomen parallel, not quite as wide as the elytra, minutely, not closely punctulate. Male with secondary sexual characters nearly as in the preceding species, the excavation of the sixth ventral not extending quite so far toward the base of the segment; female nearly similar to the male but with the head a little smaller and not wider than the elytra. Length 6.0 mm.; width 0.88 mm. Oregon (Portland), — Mr. H. F. Wickham.....*oregona* n. sp.

- 11 — Body moderately slender, shining, dark rufo-piceous, the abdomen black, becoming rufescent at tip, the legs ferruginous; antennae dusky; head longer than wide, obviously wider than the elytra in both sexes, very slightly wider toward base, the sides feebly arcuate and the angles broadly rounded, eyes moderate; antennae very stout, slightly enlarged distally; punctures strong, moderately sparse; prothorax very slightly narrower than the head, not quite a fourth longer than wide, the sides only just perceptibly converging, the punctures strong, coarse and somewhat closer than usual; elytra in the male parallel, slightly longer than wide, equal in width to the prothorax and scarcely more than three-fourths as long, the surface rather more uneven than usual,

sparsely, not very coarsely punctate; in the female quadrate, distinctly wider than the prothorax though much shorter; abdomen nearly as wide as the elytra, minutely and more closely punctured than usual. Male with the fifth ventral rather narrowly and feebly impressed along the middle, the impression beginning near the base and extending, slightly broadening, to the apex, the latter rectilinearly truncate; sixth ventral with a large oval shallow and clearly limited impression, clothed with sparse spiculiform hairs and extending from near the base to the apex, where there is a small emargination, slightly wider than deep, narrower than the impression — which is a third as wide as the segment — and enclosed between very short projecting processes. Length 5.5 mm.; width 0.82 mm. Massachusetts (Lowell), — Mr. F. Blanchard.....*scolopacea* n. sp.

Body nearly similar to the preceding but a little larger and more slender, pale brownish-testaceous throughout, the abdomen blackish except toward tip; antennae dusky; head suboval, slightly wider than the elytra in the male, equal thereto in the female, very feebly enlarged toward base in the male, parallel in the female, the sides very feebly arcuate; basal angles less rounded than in *scolopacea*; antennae nearly similar; punctures rather sparser; prothorax narrower and more elongate, distinctly narrower than the head in both sexes, less strongly punctured; elytra similar in the sexes, barely as long as wide, with the sides obviously diverging, very slightly wider and much shorter than the prothorax, feebly and sparsely punctate; abdomen subparallel, a little narrower than the elytra, minutely, not very closely punctulate. Male with the fifth ventral broadly, feebly impressed in more than median fourth from a little before the middle to the apex, the latter truncate; sixth with a shallow oval impression and apical emargination nearly as in *scolopacea*. Length 5.8 mm.; width, 0.78 mm. Lake Superior.....*inops* Csy.

It will be observed that the secondary sexual characters of the male remain virtually constant in type throughout and constitute as valid a generic character as any other structural modification. These characters are modified to some extent, as a matter of course, giving such forms as described under *othiodides*, *nigrolinea* and *scolopacea*. The form of the modification of the sixth ventral in the *nigrolinea* group, reminds us of the form assumed in certain Scopaei, notably *Scopaeoma*. *Inops* was united with *othiodides* some years ago, as a synonym of that species, but there is no close resemblance between them.

#### *Lathrolepta* n. gen.

This genus is well distinguished from any of the preceding by the form of the gular sutures, the narrow, deep, acutely

angulate notch of the labrum, dividing the latter into two quadrate lobes and the less strongly dilated anterior tarsi. It differs from *Lathrobium* and allied genera, also in the form of the hind tarsi, which have the four basal joints small and subequal. It is represented at present by a single very small species, having the general facies of *Lathrobioma*, and of wide distribution, which may be readily recognized by the following characters:—

Parallel, slender, convex, shining, dark piceous or blackish in color, the legs and antennae fusco-testaceous, the abdomen darker than the anterior parts; head as wide as the elytra, parallel at the sides, the angles somewhat narrowly rounded, the punctures rather strong and sparse; antennae thick, scarcely as long as the head and prothorax, submoniliform, distinctly incrassate distally, with the outer joints a little wider than long; prothorax narrow and elongate, parallel, distinctly narrower than the head and still more coarsely and strongly punctate, the punctures not very sparse and not serial; elytra short, scarcely as long as wide, much shorter than the prothorax, at base a little wider than the latter, at apex more obviously wider, the sides diverging from the base; punctures smaller, sparse and rather confused; abdomen at base as wide as the elytra, slightly wider behind, finely, not densely punctate; legs moderately stout. Male with the third and fourth ventrals narrowly and feebly impressed along the middle, the fifth more widely and strongly impressed throughout in median fifth or sixth, the apex broadly sinuato-truncate, the sixth not obviously impressed, though broadly, indefinitely so toward base, but with a large discal patch of short black spicular hairs at each side of the median line, the apex broadly subtruncate, with a gradually formed, broadly rounded, shallow median sinus, about a third as wide as the segment and five times as wide as deep; female somewhat stouter than the male, the sixth ventral with a broad feeble and broadly rounded lobe at tip, unimpressed. Length 3.3 mm.; width 0.5 mm. New York (near the city), Massachusetts (Lowell) and Iowa; Michigan, — LeConte.. *debilis* Lec.

The type is one of the smallest known species of the *Lathrobia*; it does not seem to be rare and varies considerably in shade of color, possibly due to immaturity. It will be noticed that the female is stouter than the male—and not more slender, as is evidently the case with many of our larger *Lathrobia*.

#### *Tetartopeus* Czwl.

We arrive here at a succession of forms, the chief distinguishing character of which is the narrow neck—similar

to that of *Domene*. They are of more or less robust form, of small to moderately large size and are gradually pointed anteriorly, being widest at the elytra, with the prothorax and head decreasing in width, giving them a somewhat fusiform outline. The maxillary palpi are long and notably slender in the present genus, the fourth joint being unusually slender and aciculate, the antennae more or less long, slender and filiform, with the hind tarsi as in *Lathrobium*. The elytra are always larger and more closely punctate than in that genus, without trace of linear arrangement. The slender neck is undoubtedly a most significant and conclusive generic character and *Tetartopeus* should in no wise be considered a sub-genus of *Lathrobium*. The species are rather numerous and very widely distributed over the holarctic regions of the earth, extending as far south in North America as Florida and Texas, but most abundant in the colder sections of the northern continents. Those represented by material in my cabinet may be readily known as follows:—

- Elytra at least as long as the prothorax, and, in all but very rare cases, decidedly longer..... 2
- Elytra shorter than the prothorax, the body more parallel.....16
- 2—Elytra red or piceous, sometimes clouded with blackish toward base or near the suture, never abruptly paler at apex or at the external apical angles..... 3
- Elytra black or blackish, with the external apical angles more or less abruptly pale, the pale tint sometimes extending across the apex.... 9
- Elytra intense black throughout; the entire body black, the legs dark.... 14
- 3—Prothorax deep black..... 4
- Prothorax pale testaceous, similar in color to the elytra..... 8
- 4—Head parallel or only very feebly and gradually narrowed behind the eyes and then only in the female..... 5
- Head very obviously narrowed behind the eyes in both sexes..... 7
- 5—Prothorax not very coarsely and unusually sparsely punctate. Body moderately stout and convex, polished black, the elytra dark piceous-rufous; head parallel at the sides behind the eyes, the base semicircularly rounded; eyes at three-fourths more than their own length from the base, measured on the median line as usual; antennae scarcely as long as the head and prothorax and rather thicker than usual, the medial joints about two-thirds longer than wide; prothorax very much wider than the head, oblong, broad, only slightly longer than wide, highly polished, very sparsely and somewhat inconspicuously punctured; elytra quadrate, parallel, a third wider and about a fourth longer than the prothorax, fully as long as wide, the punctures rather close-set

and unusually coarse and deep; legs moderately long, not very stout. Male with ventrals two to four feebly impressed along the middle, the impression of the fifth subobsolete; sixth broadly arcuato-truncate at tip, with a very small deep and acutely angulate notch, deeper than wide and not more than a tenth or twelfth as wide as the apex, partially concealed by the pubescence as usual; disk not distinctly modified. Length 6.8 mm.; width 1.25 mm. Montana (Kalispell), — Mr. Wickham

Wickham ..... *captiosus* n. sp.

Prothorax strongly and more coarsely punctate, the punctures more or less close-set.....6

6 — Antennae of the male very slender, rather longer than the head and prothorax, with the medial joints rather more than twice as long as wide, shorter and relatively thicker in the female, with the medial joints distinctly less than twice as long as wide. Body rather stout, the head semicircularly rounded, the eyes well developed, the surface more finely and closely punctured than in *captiosus*, a little narrower in the female than in the male and with the sides feebly converging behind the eyes; prothorax oblong, broad, only slightly longer than wide, much wider than the head, the median impunctate line narrow; elytra in the male quadrate, a third wider and a fifth longer than the prothorax; in the female slightly longer than wide, two-fifths wider and more than a fourth longer than the prothorax; punctures close-set and only moderately coarse, similar in size to those of the pronotum. Male with ventrals two to five subequally and feebly impressed along the middle, the sixth with a small deep and acutely angular notch as in the preceding species; female with the sixth ventral greatly produced in an obtusely rounded lobe, unimpressed, the body smaller and less stout than in the male. Length 6.0–7.0 mm.; width 1.2–1.26 mm. Massachusetts, Canada, New York, New Jersey, Iowa and North Dakota (Devil's Lake). — *punctulatus* Lec.

Antennae of the male thicker, longer than the head and prothorax but with the medial joints somewhat less than twice as long as wide; in the female still thicker, barely as long as the head and prothorax, with the medial joints about one-half longer than wide. Body resembling *punctulatus* throughout in color and sculpture, but a little stouter, with slightly smaller eyes, and with the male and female similar in form and very nearly so in size, the head in the female being somewhat narrower but not noticeably narrowed behind the eyes. Male with the second and third ventrals unimpressed, the fourth and fifth rather broadly and very feebly impressed along the middle, the sixth with a very small triangular notch, deeper than wide, nearly as in the preceding species but a little less deep and rather broader at the opening, the surface with the pubescence denser in the region of the notch as usual. Length 7.0 mm.; width 1.3 mm. Idaho (Priest River), — Mr. Wickham.

hebes n. sp.

7 — Body smaller in size than the preceding and obviously more slender, black, with the elytra bright rufous; head small, longer than wide, finely, not densely punctate, the sides converging for some distance behind the eyes, then circularly rounded at base; eyes well developed, the antennae somewhat longer than the head and prothorax, moderately slender, the medial joints fully twice as long as wide; prothorax

rather narrow, parallel and elongate, much wider than the head, moderately closely and coarsely punctured; elytra parallel, slightly elongate, two-fifths wider and one-fifth longer than the prothorax in the male, the punctures rather small but strong and close-set. Male with the second ventral unmodified, the third narrowly and moderately impressed along the middle, more strongly behind; fourth narrowly and rather strongly impressed throughout, the fifth also strongly and less narrowly, the impression transversely divided in the middle; sixth with a broad and shallow cuspidiform emargination, much wider than deep, the apical lobes very broadly rounded, the surface densely pubescent in the region of the emargination; female differing but little from the male, the antennae slightly thicker but equally elongate, the prothorax relatively shorter. Length 6.0 mm.; width 1.05 mm. Massachusetts to Iowa.....

Body somewhat similar to the preceding in size and form, the prothorax notably larger and broader; elytra pale piceo-rufous in color; head slightly broader, finely, not densely punctate, the eyes well developed; antennae still longer, equally slender, longer than the head and prothorax, the medial joints somewhat more than twice as long as wide in the male; prothorax broad, but slightly longer than wide, very much wider than the head, parallel, the sides feebly arcuate, the angles broadly rounded; punctures not very coarse and moderately close-set; elytra slightly longer than wide, parallel, about a third wider and more than a fourth longer than the prothorax; punctures rather coarse and close-set. Male with the third ventral not distinctly impressed, the fourth narrowly and rather strongly so along the middle, the fifth less narrowly, deeply and subovally so throughout the length, the impression faintly divided transversely at the middle; sixth with a narrow very deep angular notch, much larger in size than that of *punctulatus* and allies, fully twice as deep as wide, with its opening an eighth or ninth as wide as the segmental apex, the notch rendered obscure to low amplification by reason of the dense obtruding pubescence; female unknown. Length 6.7 mm.; width 1.2 mm. Indiana? Cab. Levette.

callidus n. sp.

8 — Form narrower and more parallel than usual, black, the prothorax and elytra rufous, the latter clouded with blackish toward suture and base; head orbicular, rather longer than wide, finely, very sparsely punctate, closely so at the sides, the eyes moderate; antennae long and very slender, much longer than the head and prothorax, the medial joints distinctly more than twice as long as wide; prothorax oblong, distinctly wider than the head, a fifth or sixth longer than wide, the punctures rather coarse and uneven, not very close-set; elytra quadrate, a fourth wider but only very slightly longer than the prothorax, rather coarsely unevenly and moderately closely punctate. Male with the fourth and fifth ventrals narrowly and just visibly flattened along the middle, not impressed, the sixth with a very minute sharply angulate median notch, much deeper than wide and narrower than in *punctulatus*, almost concealed by the dense vestiture clothing the surface toward the notch; female unknown. Length 7.5 mm.; width 1.15 mm. Iowa.

semiruber n. sp.



- 9 — Head not distinctly narrowed behind the eyes in the male; antennae long, more or less slender, much longer than the head and prothorax. 10 Head obviously narrowed gradually from the eyes to the rounded base; legs pale; antennae infusate, paler toward base and apex.....12
- 10 — Small species, unusually slender in form, dark piceous in color, the head and abdomen black, the elytral apex narrowly, more broadly externally, and legs, very pale; antennae fuscous, pale toward base and apex; head a little longer than wide, the sides subparallel and feebly arcuate for a long distance behind the eyes, the base broadly, subcircularly rounded; eyes moderate, at fully twice their own length from the base; punctures fine and rather sparse laterally, broadly wanting in the middle; antennae long and slender, nearly half as long as the body, the medial joints twice as long as wide; prothorax distinctly elongate, parallel and feebly arcuate at the sides, the angles broadly rounded, just visibly wider than the head, rather coarsely but feebly and somewhat sparsely punctate, the median impunctate line unusually wide; elytra well developed, parallel, slightly elongate, one-half wider and a fourth longer than the prothorax, rather finely feebly and sparsely punctate; abdomen distinctly narrower than the elytra, densely punctulate and dull as usual. Male unknown; female with the sixth ventral obtusely rounded at tip, unimpressed. Length 4.5 mm.; width 0.78 mm. Florida (Capron) ..... *floridanus* n. sp.
- Species larger in size and stouter, not less than 6 mm. in length.....11
- 11 — Antennae in the male longer, the medial joints nearly two and one-half times as long as wide. Body rather stout, deep black throughout, the external apical angles of the elytra abruptly and clearly pale flavo-testaceous; legs very pale; antennae blackish, except the pale first and eleventh joints; head rather well developed, not much longer than wide, subparallel and feebly arcuate for about one length behind the eyes, the base thence semicircular or feebly subtruncate toward the middle; punctures minute and rather close-set, wanting at the middle of the vertex; eyes well developed; antennae longer than the head and prothorax, moderately slender; prothorax large and broad, only very slightly longer than wide, not very coarsely but strongly, rather sparsely punctate, much wider than the head, the sides broadly arcuate, the median smooth line rather ill-defined at the sides; elytra quadrate, not at all longer than wide, parallel, a third wider but only just visibly longer than the prothorax in the male, a little longer than wide and distinctly longer than the prothorax in the female, the punctures small, rather sparse and feeble; abdomen but little narrower than the elytra. Male with the second ventral slightly flattened, the third and fourth rather broadly and very feebly impressed along the middle, the fifth rather less broadly but less feebly impressed, the apex feebly sinuate at the middle; sixth with a small, acutely triangular notch, deeper than wide, about an eighth or ninth as wide as the apex, the surface somewhat elevated gradually — and more pubescent — toward the notch, not impressed, the apex truncate; female nearly as large but less stout throughout than the male, the sixth ventral with a narrowly rounded produced apical lobe. Length 7.0-7.7 mm.; width 1.2-1.25 mm. Massachusetts (Lowell) and Rhode Island..... *angularis* Lec.

Antennae in the male less elongate, about equally slender, the medial joints not quite twice as long as wide. Body less stout, black, the elytra slightly piceous, the pale spot at the outer angles broader and rather less abruptly defined; legs very pale, the antennae fuscous; head nearly as in the preceding species but smaller and narrower, less finely punctate and more evenly semicircular at the base; antennae scarcely longer than the head and prothorax, the latter narrower and more distinctly elongate, much wider than the head, the sides parallel and distinctly arcuate, the punctures equally strong and coarse and rather less sparse; elytra slightly elongate, parallel, similarly, though less sparsely, punctate, two-fifths wider and a fourth longer than the prothorax; abdomen but little narrower than the elytra. Male with the second and third ventrals unmodified, the fourth very feebly impressed toward apex only, the fifth equally feebly impressed throughout the length, the apex feebly sinuate at the middle, the sixth with a very narrow and acutely angulate notch, much deeper than wide, not more than a twelfth as wide as the apex, the latter inwardly and anteriorly oblique and truncate at each side of the notch and not transverse as in *angularis*, the surface as in that species; female nearly similar to the male, except that the sides of the head are obviously converging behind the eyes. Length 6.4 mm.; width 1.15 mm. Massachusetts (locality unknown).

*furvulus* n. sp.

- 12 — Median smooth line of the pronotum normally wide and distinct. Body rather small in size and of less stout form, deep black, the prothorax and elytra with a scarcely discernible piceous tinge, the outer angles of the latter pale; head rather finely and sparsely punctate, the eyes rather smaller and more prominent than in the two following, the sides behind them strongly converging and nearly straight, then broadly, circularly rounded at the base; prothorax oblong, parallel, rather distinctly elongate, with the sides broadly arcuate, only very slightly wider than the head, the punctures notably coarse, deep and moderately sparse; elytra slightly elongate, parallel, a third wider and a fifth longer than the prothorax, less coarsely but rather strongly and about equally sparsely punctate, somewhat rugose by oblique reflection as usual; abdomen as wide as the elytra. Male not known; female with the sixth ventral briefly lobed, the lobe arcuately truncate at tip; surface not at all impressed. Length 6.0 mm.; width 1.0 mm. Pennsylvania (near Philadelphia)..... *negrescens* n. sp.

Median smooth line of the pronotum narrow and generally subeffaced; species larger and stouter, black, sometimes with a feebly piceous tinge.....13

- 13 — Body moderately stout, the pale spot at the outer elytral angles large; head narrow, longer than wide, minutely, rather closely punctate laterally, subimpunctate toward the middle, the sides behind the eyes rapidly converging and nearly straight almost to the base, which is arcuately subtruncate; antennae slender, much longer than the head and prothorax, the medial joints more than twice as long as wide in the male; prothorax moderately broad, distinctly wider than the head and longer than wide, the sides parallel and broadly arcuate, the punctures rather coarse, deep and close-set, gradually becoming fine and sparse

toward the sides as usual; elytra quadrate, a third wider and a fifth longer than the prothorax, the punctures rather fine but distinct and somewhat close-set. Male with sexual characters nearly as in *rubripennis*, the third ventral narrowly and just visibly impressed along the middle, the fourth less narrowly and more strongly, the fifth still more strongly though not deeply, the sixth convex, more densely pubescent as usual toward the middle and apex, the latter very broadly and obtusely bilobed, the lobes separated by a broad shallow and acutely cuspidiform emargination; female not known. Length 6.8 mm.; width 1.2 mm. New York (near the city).....*agitans* n. sp.

Body nearly similar in form but larger; head longer than wide, finely, rather closely punctate toward the sides, the latter converging and nearly straight for only the length of the large eyes behind them, then broadly arcuate across the base; antennae in the female as long as the head and prothorax, moderately slender, the medial joints fully twice as long as wide; prothorax rather broad, much wider than the head, about a fifth longer than wide, the sides parallel and broadly arcuate, the punctures only moderately coarse but deep and rather close-set; elytra quadrate, fully as long as wide, parallel, about a third wider but only very slightly longer than the prothorax, the punctures fine, rather feeble and closer than usual; abdomen slightly narrower than the elytra. Male unknown; female with a narrow produced and evenly rounded apical lobe of the sixth ventral, the surface with a distinct narrow impression along the median line just behind the middle, extending only to the base of the lobe. Length 7.5 mm.; width 1.25 mm. Texas (Austin).....*tetricus* n. sp.

14 — Head in the female broadly truncate and arcuate at base, subequal in width to the prothorax. Body moderately slender, deep black throughout the body, legs and antennae, the tarsi slightly paler; head broad, barely as long as wide, the sides parallel and nearly straight for the length of the eye behind the latter, then moderately broadly rounded through the basal angles, the base feebly arcuate; eyes moderate, at nearly twice their own length from the base, the punctures very fine; antennae longer than the head and prothorax, the medial joints about two-thirds longer than wide; prothorax rather small and broad, but little longer than wide, just visibly wider than the head, parallel and feebly arcuate at the sides, the punctures moderately coarse, strong and somewhat close-set; elytra parallel, slightly elongate, rather strongly and moderately closely punctate, two-fifths wider and two-fifths longer than the prothorax; abdomen distinctly narrower than the elytra. Male not at hand; female with the sixth ventral broadly rounded and feebly lobed at tip, not impressed. Length 6.0 mm.; width 1.05 mm. Vancouver Island.....*finitimus* Lec.

Head in both sexes semicircularly rounded at base, the species smaller and narrower in form.....15

15 — Eyes smaller, situated at about twice their own length from the base — measured on the median line. Body rather narrow, intense black throughout, the legs and antennae concolorous, the tarsi piceous-black; head slightly elongate, broadly arcuate from the eyes through the base, becoming nearly parallel for fully the length of the eye be-

hind the latter, finely, rather closely punctured laterally; antennae moderately slender, about as long as the head and prothorax in the female, the medial joints distinctly less than twice as long as wide; prothorax much wider than the head, distinctly elongate, being longer and narrower than in *finitimus*, parallel and almost perfectly straight at the sides, strongly and rather closely punctate; elytra parallel, much elongated, strongly, somewhat closely punctate, about two-fifths longer and wider than the prothorax; abdomen slightly narrower than the elytra. Male unknown; female with the sixth ventral unimpressed, distinctly lobed at tip, the lobe moderately broadly rounded at apex. Length 6.0 mm.; width 0.95 mm. Montana (Kalispell).....*stibium* n. sp.

Eyes larger, well developed, at distinctly less than twice their own length from the base. Head nearly as in *stibium*, the antennae rather distinctly longer than the head and prothorax, moderately slender, the medial joints slightly less than twice as long as wide in the female but very nearly that in the male; prothorax a little broader and less elongate, parallel and sensibly arcuate at the sides, distinctly wider than the head in the female and much wider in the male, strongly, somewhat closely punctured, the smooth median line narrow and sometimes almost obliterated; elytra much broader in both sexes, but little longer than wide, a third wider and a fourth longer than the prothorax in the male, two-fifths wider and a fourth longer in the female, the punctures fine but distinct, moderately close-set; abdomen obviously narrower than the elytra in both sexes; body black throughout, the legs black when mature, with the tarsi slightly paler, the hind tarsi four-fifths as long as the tibiae. Male with ventrals one to four unmodified, the fifth narrowly and rather strongly impressed along the median line throughout; sixth transversely truncate at tip, with a small and very narrow, acutely angulate notch, much deeper than wide and not more than a twelfth or fourteenth as wide as the apex; pubescence not materially denser in the neighborhood of the notch; female with the sixth ventral broadly and obtusely lobed at apex. Length 5.8 mm.; width 1.1 mm. Massachusetts, Michigan and Wisconsin (Bayfield).....*niger* Lec.

16 — Body parallel, deep black throughout, the legs pale, the antennae infusate, slightly paler toward base; head small, rather longer than wide, arcuately subtruncate at base, not very finely and somewhat sparsely punctate toward the sides, the latter parallel and slightly arcuate; basal angles broadly rounded; eyes rather smaller than usual, the antennae relatively stout, fully as long as the head and prothorax, the medial joints but little more than one-half longer than wide; prothorax large and greatly developed, unusually convex, very much wider than the head, distinctly elongate, the sides parallel and feebly arcuate; anterior angles moderately rounded, the punctures coarse, deep and unusually sparse, gradually finer laterally as usual, the median smooth line well defined; elytra very slightly wider than the prothorax and about four-fifths as long, not quite as long as wide, depressed, the sides feebly diverging from the basal angles, the surface rugose but polished, rather finely but strongly, sparsely punctured; abdomen about as wide as the elytra, dull as usual. Male with the fourth ventral just visibly, the fifth more distinctly but feebly, impressed along the middle, the

sixth with a small and acutely angulate incisure, much deeper than wide and a ninth or tenth as wide as the apex, the latter at each side inwardly and anteriorly oblique and rectilinearly truncate, with the edge beveled, becoming very thin and translucent, the surface with longer hairs along the margins of the notch; female unknown. Length 4.7 mm.; width 0.82 mm. Canada (Toronto).....*lacustris* n. sp.

In the third supplement to the Henshaw catalogue it is stated on page 10, that No. 2514 (*niger* Lec.), is a synonym of the European *quadratus* Payk. This must surely be in error for No. 2512 (*punctulatus* Lec.), as specimens of *quadratus* sent me by Mr. Reitter, strongly resemble the latter but bear no likeness at all to *niger*; *quadratus* is, however, not the same as *punctulatus*, having the male impressions of the venter very much deeper and differing besides in its denser sculpture, smaller eyes, more circularly rounded base of the head and other characters. In this supplement No. 2512 (*punctulatus* Lec.) is said to be the same as the European *terminatus* Grav. I do not have *terminatus* before me at present, but the chances are very greatly against the accuracy of any such identification.

#### *Deratopeus* n. gen.

The species of this genus greatly resemble *Tetartopeus*, differing principally in the form of the gular sutures and rather shorter and stouter palpi and tarsi, small size, more slender form and some other structural features. They are few in number at present, those in my cabinet being readily separable by the following characters — taken in both instances from the male: —

Body deep black throughout, the elytra testaceous in apical fifth or sixth, somewhat more broadly toward the sides; legs pale ferruginous, the antennae blackish, slightly paler at tip and notably so toward base; head small, longer than wide, parallel and nearly straight at the sides to the broadly rounded basal angles, the base arcuato-truncate; eyes moderately small; antennae rather thick but filiform, as long as the head and prothorax, the medial joints barely one-half longer than wide, the punctures strong but very sparse; prothorax distinctly elongate, much wider than the head, the sides very feebly converging and nearly straight, the punctures coarse, deep and sparse; elytra quadrate, parallel, a third

wider than the prothorax but only very slightly longer, strongly though not very coarsely, moderately sparsely punctate, distinctly impressed along the suture; abdomen parallel, straight at the sides, distinctly narrower than the elytra. Male with the third and fourth ventrals just visibly impressed along the middle; fifth with a very deep elongate-oval, glabrous impression, not attaining the base, the apex feebly sinuate at the middle; sixth not impressed, transversely, rectilinearly truncate at tip, with a small and acutely triangular notch, only slightly deeper than wide and an eighth or ninth as wide as the apex; female not at hand. Length 4.0 mm.; width 0.8 mm. Massachusetts (Lowell), — Mr. F. Blanchard; [Florida — LeConte].....*nitidulus* Lec.

Body colored as in the preceding, the elytra pale testaceous throughout, except a piceous-black cloud toward the suture and not quite extending to the apex; head nearly as in *nitidulus* throughout, the antennae more slender, with the medial joints fully one-half longer than wide; prothorax but slightly elongate, much wider than the head, a little broader and shorter than in the preceding species, parallel and feebly arcuate at the sides, the strong punctures rather less sparse; elytra small and depressed, not as long as wide, very slightly wider than the prothorax and much shorter, the sides diverging from the base, the punctures rather fine but strong, somewhat sparse; abdomen parallel and straight at the sides, fully as wide as the elytral apex, dull in lustre and densely punctulate as in the preceding species. Male with the third ventral unmodified, the fourth very feebly impressed near the apex only, the fifth with a small and very deep subglabrous pit, rounded in outline, extending from a little before the middle to the apex, the latter feebly sinuato-truncate; sixth with an acutely angulate triangular incisure, deeper than wide, larger and deeper than in *nitidulus* and a seventh or eighth as wide as the apex, the latter anteriorly and outwardly truncate at each side; female not known. Length 4.5 mm.; width 0.75 mm. Massachusetts (Lowell), — Mr. Blanchard.....*parvipennis* n. sp.

The difference in general facies between the large-winged and short-winged species in all these genera of the *Lathrobia* being so pronounced, with most other characters so similar, has suggested the presence of dimorphism, but I have been unable to prove this in any one instance, and, indeed, the only useful evidence will be that gained by actual observation of the life history of the species. The normal sexual differences in the elytra are not great, although nearly always observable, the elytra of the female being a little larger than those of the male, but, as can be seen in this genus, as well as in *Tetartopeus lacustris*, the presence of short winged forms, if not indicative of specific difference, must be due to perfectly asexual dimorphism, — a matter impossible to prove without careful biological study.

**Eulathrobium** n. gen.

We begin here a series of genera differing radically from those which precede in having a strong cariniform line on the flanks of the elytra, parallel to and not far from the lower edge. This very important character has been referred to previously by several authors, notably Dr. Sharp, in expounding the Amazonian and Mexican Paederini, but I am not aware that it has been employed hitherto in defining genera. The genera without this line are more boreal in habitat and equally characteristic of the old and new world subarctic faunas, but those possessing the line are more southern in habitat, as a rule, and probably originated in America; only one genus — *Lobrathium* Rey, — is common to the nearctic and palaearctic regions of the globe, and this is more northern in its range than any other, probably crossing from America to Asia by way of Bering Strait. The genus *Eulathrobium* consists at present of a single species, one of the largest and finest of our Lathrobia; it may be described as follows:—

Form broad, parallel and somewhat feebly convex, deep black throughout the legs dark brownish-rufous, the antennae and palpi black, with the joints rufous at base; lustre shining; head well developed, wider than long, broadly arcuate-truncate at base, the angles very broadly rounded, the sides becoming parallel and broadly arcuate behind the eyes, which are moderately large, the punctures rather coarse and close-set throughout, excepting a small smooth area on the vertex; antennae filiform, moderately stout, about as long as the head and prothorax, the medial joints three-fourths longer than wide, obconic, a little shorter in the female; prothorax not quite as wide as the head and only very slightly longer than wide, broadly suboval, the sides feebly converging and arcuate posteriorly from the very broadly rounded and obsolete apical angles, the punctures coarse, deep and not very sparse, the median smooth line distinct, narrow, not defined by series; elytra large, quadrate, parallel, distinctly wider than the head especially in the female, about a third wider than the prothorax and a fourth longer in the male, nearly a third longer than the prothorax in the female, the punctures moderately coarse, strong, unusually close-set and arranged without trace of order, the surface shining; abdomen parallel and straight at the sides, but little narrower than the elytra, finely, rather closely punctured but somewhat shining; legs rather long, only moderately stout. Male with the fifth ventral somewhat broadly and feebly

flattened along the middle throughout, the apex truncate; sixth unimpressed, the apex broadly sinuato-truncate, with a small, broadly triangular tooth projecting from the middle; female as large as the male but rather less stout, the sixth ventral with a very short arcuate-truncate lobe at tip, the surface not at all impressed. Length 11.0 mm.; width 1.8 mm. Rhode Island (Boston Neck), New Jersey, Pennsylvania and Michigan (Port Huron).....**grande** Lec.

This species is not the longest but is by far the stoutest Lathrobiid known to me; it has rather an extended range and is not rare.

**Lathrotropis** n. gen.

This genus is probably peculiar to the true Pacific coast fauna, representing there the eastern *Eulathrobium*, the species resembling *grande* in their broadly rounded angles of the head and prothorax and close-set coarse punctures, but differing in their smaller size and much more slender and generally more convex form; they also have the basal joint of the hind tarsi longer, although distinctly shorter than the second, and the antennae stouter. The species are moderately numerous and generally abundant in individuals, those before me being characterized as follows:—

- Head moderate in size, always narrower than the elytra; elytral punctures usually irregular in arrangement..... 2  
 Head large, equal in width to the elytra or wider; species smaller in size, the elytral punctures always serial in arrangement..... 5  
 2 — Head extremely densely, moderately coarsely punctured and dull. Body large in size, rather stout, parallel, very dark rufo-piceous in color throughout, the antennae fuscous, the legs paler, rufous; head but little longer than wide, slightly narrower than the elytra, more distinctly in the female, the sides parallel and straight for some distance behind the eyes, which are moderate in size, rather convex and prominent and between two and three times their own length from the base; angles very broadly rounded, the base arcuate-truncate; antennae very stout, nearly as long as the head and prothorax, gradually incrassate distally, the medial joints about one-half longer than wide in the male; prothorax elongate-oval, much narrower than the head, moderately coarsely, somewhat closely punctured, the median smooth line distinct but not more elevated and not defined by punctured series; elytra longer than wide, parallel, about a third wider and a fourth longer than the prothorax, coarsely, deeply and very closely punctate, the punctures without trace of serial order; abdomen parallel, distinctly narrower than the elytra, the segments strongly impressed at base, finely, closely punctate and but feebly shining. Male with a small feeble rounded impression at

the apex of the fifth ventral, the apex broadly and feebly sinuato-truncate; sixth segment with a large triangular emargination at tip, generally not quite a third as wide as the apex and nearly as deep as wide, the surface narrowly elevated along the median line toward the notch, the ridge clothed with short stiff black spicules, some of the latter also present at the apices of the segment at each side of the notch; female with the sixth ventral not lobed, broadly rounded at tip and unimpressed. Length 8.0-9.0 mm.; width 1.1-1.3 mm. California (Sta. Clara to Humboldt). [= *lecontei* Duviv.].....**puncticeps** Lec.

Head less densely punctate, the interspaces always shining, the surface not dull in lustre..... 3

3— Head densely dull beneath, the micro-reticulation very strong. Body smaller, rather stout, parallel, colored as in *puncticeps*; head well developed, not very greatly though distinctly narrower than the elytra, somewhat swollen toward base, the sides straight for some distance behind the moderately small and rather prominent eyes, the angles very broadly rounded, the base broadly rounded and feebly subtruncate, the punctures coarse and rather close-set; antennae very stout, not as long as the head and prothorax, the medial joints about a fourth longer than wide; prothorax rather small, elongate-oval, much narrower than the head, rather coarsely and closely punctate, the smooth median line wide and distinct; elytra parallel, slightly elongate, two-fifths wider and a third longer than the prothorax, coarsely closely and irregularly punctate; abdomen parallel, distinctly narrower than the elytra, finely, rather densely punctulate and somewhat dull. Male with a small and very faint oval impression at the apex of the fifth ventral, the sixth with a broadly parabolic, shallow, gradually formed apical sinus, about a third as wide as the segment, and six times as wide as deep, the surface adjoining extremely feebly impressed, the impression having a small patch of black spicules anteriorly; female unknown. Length 7.2 mm.; width 1.15 mm. California, (Sta. Ana Cañon), — Mr. Wickham.....**relicta** n. sp.

Head shining beneath, the micro-reticulation feeble..... 4

4— Elytral punctures confused in arrangement, except toward base, where they become unevenly serial. Body moderately stout, piceous-black, the elytra dark rufous, the abdomen deep black; legs ferruginous, the antennae dusky; head but little longer than wide, the sides parallel and straight for a short distance behind the eyes, the angles very broadly rounded thence to the neck, the punctures coarse, deep, separated by more than their own diameters, the vertex impunctate in the middle; antennae stout, the medial joints much longer than the subapical; prothorax elongate-oval, much narrower than the head, coarsely, rather sparsely punctate; elytra distinctly elongate, parallel, coarsely and rather closely punctate, about two-fifths wider and a fourth longer than the prothorax; abdomen finely, closely punctulate, narrower than the elytra. Male with a small unimpressed glabrous area at the middle at apex of the fifth ventral, the sixth with a triangular impression, the apex broadly, parabolically sinuate; female with the sixth ventral obtusely rounded at tip, not lobed or impressed. Length 6.3-8.5 mm.; width 1.0-1.35 mm. California (San Diego to Humboldt) and Nevada (Reno).....**jacobina** Lec.

Elytral punctures distinctly, though somewhat unevenly, serial in arrangement throughout. Body similar in form and coloration to the preceding but smaller in size and more coarsely and closely sculptured; head well developed, parallel at the sides, the angles very broadly rounded to the neck; eyes unusually small, at more than three times their own length from the base; punctures very coarse and close-set, becoming somewhat sparser on the vertex; antennae less stout than usual, very feebly incrassate distally, the medial joints equal in length to the subapical; prothorax narrow and strongly elongate-oval, much narrower than the head, coarsely and rather closely punctured; elytra much elongated, parallel, two-fifths wider and a third longer than the prothorax, very coarsely but not so closely punctate; abdomen slightly narrower than the elytra, less finely and rather closely punctate, somewhat shining. Male with a small oval glabrous pit on the median line at apex of the fifth ventral, the sixth with a small shallow, broadly rounded sinus at apex, the adjoining surface very feebly, triangularly impressed and with short black spiculiform hairs as in the preceding species; female with the sixth ventral very broadly, obtusely rounded at tip. Length 6.7-7.5 mm.; width 1.05 mm. California (Hoopa Valley, — Humboldt Co.).....**gnoma** n. sp.

5— Head equal in width to the elytra. Body rather stout, parallel, convex, shining, pale testaceous in color throughout, the legs and antennae concolorous—probably immature; head well developed, the sides parallel, broadly, evenly rounded at base to the neck; eyes rather small, at more than three times their own length from the base; punctures notably coarse but well separated throughout; antennae not very stout, rather short, the medial joints but little longer than wide in the female; prothorax oblong, slightly longer than wide, much narrower than the head, the sides parallel and straight in the middle, the angles broadly rounded, the anterior much more broadly than the posterior, the punctures similar to those of the head, coarse and rather widely separated, the median smooth line wide; elytra quadrate, parallel, barely as long as wide, equal in length to the prothorax and a third wider, the punctures very coarse, not close-set, arranged in rather uneven series throughout; abdomen parallel, fully as wide as the elytra, rather finely but not very closely punctate, shining. Male unknown; female with the sixth ventral broadly rounded at tip. Length 6.0 mm.; width 1.0 mm. California (Lake Co.).....**validiceps** n. sp.

Head wider than the elytra; body more slender; elytra shorter than the prothorax except in *subseriata*..... 6

6— Form moderately slender, dark rufo-piceous, the elytra and legs brighter rufous, the abdomen black, the antennae infusate; head oval, somewhat longer than wide, parallel, the basal angles very broadly rounded to the neck; eyes rather small; antennae stout, distinctly incrassate distally, the medial joints about a third longer than wide, the punctures coarse and deep but well separated; prothorax narrow, elongate-oval, very much narrower than the head, the anterior angles very broadly rounded and wholly obsolete, the punctures coarse, deep and rather close-set; elytra parallel, slightly longer than wide, about a fifth wider than the prothorax and equal in length to the latter, the

punctures only moderately coarse, uneven and very obscurely lineate in arrangement; abdomen fully as wide as the elytra, parallel, somewhat finely but not closely punctate and shining. Male with a deep narrow impression in apical half of the median line of the fifth ventral, the sixth with a broad shallow apical sinus and adjoining triangular impression, the latter with short spiculose hairs much as in *jacobina* and allied species; female not at hand. Length 6.0 mm.; width 0.85 mm. Vancouver Island.....*subseriata* Lec.

Form more slender and elongate and rather more depressed, the entire body and legs bright testaceous, the abdomen piceous-black, the antennae fuscous; head oblong, somewhat longer than wide, the sides parallel and feebly arcuate, the basal angles moderately broadly rounded to the neck; eyes unusually small, anterior; punctures moderately coarse, deep, well separated; antennae moderately stout, very distinctly incrassate distally; prothorax narrow, much elongated, very much narrower than the head, the sides subparallel, the apical angles less broadly rounded and obliterated than in *subseriata*, the punctures coarse and rather sparse; elytra parallel, somewhat longer than wide, about a fifth wider than the prothorax and slightly, though obviously, shorter, the punctures coarse, uneven and close-set, arranged in very uneven series; abdomen as wide as the elytra, finely, rather closely punctate and only feebly shining. Male with a rather larger rounded impressed and glabrous pit in apical half of the fifth ventral, the sixth very nearly as in *subseriata* and other species; female unknown. Length 6.7 mm.; width 0.8 mm. California (San Francisco).....*vafra* n. sp.

Form very slender, smaller in size, dark piceo-rufous, the elytra and legs rather brighter rufous, the abdomen more blackish; head subquadrate, about as wide as long, the sides parallel and nearly straight; basal angles broadly rounded to the neck; eyes small and but slightly convex; punctures moderately coarse, rather close-set toward the sides and base; antennae very stout, distinctly incrassate distally, the medial joints but slightly longer than wide in the female; prothorax very much narrower than the head, elongate-oval, the sides straight in the middle, the anterior angles very broadly rounded and obliterated, the punctures coarse but well separated; elytra parallel, rather longer than wide, about a fourth wider and slightly, though obviously, shorter than the prothorax, the punctures moderately coarse, deep, close-set and arranged in even and broadly impressed series, becoming confused toward the inner apical angles; abdomen as wide as the elytra, finely, not densely punctate and rather shining. Male unknown; female with the sixth ventral evenly rounded behind, not lobed. Length 6.0 mm.; width 0.77 mm. British Columbia.....*ustulata* n. sp.

The species described by Le Conte under the name *jacobina*, is the commonest Lathrobiid in California, occurring abundantly almost everywhere and varying greatly in size; one specimen was given me by Mr. Jülich, who stated that he took it near New York City; further questioning failed to

shake the positiveness of Mr. Jülich that he himself had captured it and was confident of the locality. In a similar case a specimen of *gnoma* was sent to me many years ago by a correspondent, who stated that he had collected it at Keokuk, in Iowa. Having no reason to doubt the accuracy of either of these assertions, we must conclude that the species mentioned, as well as many other California beetles, are annually transported across the continent in earth about the roots of plants, in straw, among packed fruit or in other ways, but fail to establish themselves in the east because of the cold winters. *Ustulata* differs from *subseriata* in its more slender form and shorter elytra, with the punctures more evenly serial; as the elytra of the male are shorter than those of the female, upon which sex *ustulata* is founded, the abbreviation of the elytra in the male must be still more notable when compared with the male of *subseriata*. *Puncticeps* Lec. belongs to a very different genus from *puncticeps* Sharp, and the change of name of the former to *lecontei* by Duvivier (Cat., 1883), is not necessary.

### Lobrathium Rey.

This genus and the two preceding form a rather natural group, having the basal angles of the head and the anterior angles of the prothorax very broadly rounded or obliterated. In the present genus the gular sutures differ more than is usually the case from species to species, but, although sometimes almost straight and approaching each other gradually posteriorly, they always diverge before attaining the base and are usually most approximate just behind the middle. The species are smaller, more depressed and with longer antennae than in the preceding genus, with the punctures less coarse as a rule, those of the pronotum being generally rather dense, in such manner that the smooth median line seems to be somewhat elevated or more convex than the rest of the surface. *Lobrathium* is more boreal than any of our other genera having an epipleural fold and is doubtless well represented in the great Canadian northwest, as well as in

northern Asia and Europe; it descends along the mountains in America as far south as Colorado. It is not at all closely related to *Lathrotaxis*, which follows, although classified under the same head in the table on account of the form of the gular sutures, but, as before stated, belongs with *Lathrotropis* and *Eulathrobium*. The few species thus far brought to light within our territories may be briefly described as follows: —

Body broader and stouter, the prothorax but slightly elongate; pale rufo-testaceous throughout, the antennae and abdomen dusky; head large, fully as wide as long, parallel and nearly straight at the sides, the base broadly arcuate-truncate, the angles moderately broadly rounded; eyes moderate, the punctures rather small and close-set, sparse on the vertex; antennae but little longer than the head and prothorax, rather slender, the medial joints decidedly longer than the subapical and fully twice as long as wide; prothorax distinctly narrower than the head, widest anteriorly, the sides distinctly converging to the base and nearly straight, a fourth or fifth longer than wide, the anterior angles moderately broadly rounded, the punctures rather small but deep, irregular, close-set near the subelevated median line, the latter narrowly impressed behind the middle for a short distance; elytra slightly elongate, as wide as the head, subparallel with the sides feebly arcuate, scarcely longer than the prothorax and about a fourth wider, coarsely, very closely and sublinearly punctate; abdomen parallel, about as wide as the elytra, finely, closely punctate. Male with ventrals two to five strongly, not very broadly impressed along the median line throughout, the fifth with a broadly rounded shallow sinus as wide as the attendant impression; sixth broadly impressed throughout in median third in continuation of the preceding impressions, the apex with a narrower and abruptly formed sinus nearly as deep as wide and widely rounded at the bottom; impression anteriorly with a large patch of short black spiculiiform hairs narrowly divided along the middle; female unknown. Length 7.0 mm.; width 1.1 mm. Washington State (Thurston Co.).....*facomae* n. sp.

Body narrow and slender, the prothorax narrow and notably elongate; medial joints of the antennae about equal in length to the subapical and much less than twice as long as wide..... 2

2 — Sides of the prothorax feebly converging from apex to base, broadly and almost evenly arcuate throughout; dark fusco-testaceous, the elytra flavo-testaceous, gradually blackish-piceous in basal half; abdomen piceous-black, the legs dark ferruginous, the antennae dusky, longer than the head and prothorax, rather stout, feebly incrassate distally; head rather longer than wide, parallel and broadly arcuate at the sides, the base broadly arcuate-truncate, somewhat wider than the elytra, with the basal angles moderately broadly rounded, the punctures rather fine but deep and close-set toward the sides and base; prothorax much narrower than the head, a third longer than wide, the apical angles

moderately broadly rounded, the basal very small, the punctures rather fine but deep, unevenly disposed, dense internally, the median line not elevated; elytra much elongated, subparallel, a fourth wider and a fifth longer than the prothorax, coarsely, closely, very unevenly and subrugosely punctured, generally with feebly sublineate arrangement, especially toward base; abdomen parallel, as wide as the elytra, finely, rather closely punctulate and feebly shining. Male unknown; female with the sixth ventral pale in color and broadly rounded at tip. Length 5.8 mm.; width 0.9 mm. Montana (Kalispell), — Mr. Wickham.....*montanicum* n. sp.

Sides of the prothorax broadly and evenly rounded anteriorly, thence distinctly converging and nearly straight to the base..... 3

3 — Body and legs rufo-testaceous in color, the elytra faintly darker in basal half, the abdomen piceous-black, the antennae dusky; head slightly elongate, the sides parallel and feebly arcuate; base truncate, the angles moderately rounded, the punctures fine but strong, close-set, nearly wanting at the middle of the vertex; antennae rather thick, much longer than the head and prothorax, distinctly incrassate distally; prothorax small, much narrower than the head, fully a third longer than wide, not very coarsely but deeply and closely punctate, the median smooth line well defined and somewhat elevated; elytra rather small, slightly elongate, subparallel and feebly arcuate at the sides, about equal in length to the prothorax in both sexes and a third or fourth wider, coarsely, closely, unevenly and subrugosely punctate; abdomen as wide as the elytra, finely but rather strongly, moderately closely punctulate and somewhat shining. Male with ventrals two to four wholly unmodified, the fifth narrowly and just visibly flattened along the middle, the apex broadly sinuato-truncate; sixth with a feeble parallel and slightly oval impression, a third as wide as the segment and extending throughout the length, the bottom densely covered with short black spiculiiform hairs which are slightly parted along the middle, the apex with a small abruptly formed, circularly rounded sinus, a third as wide as the apex and nearly twice as wide as deep; female with the sixth ventral more convex, broadly rounded at tip. Length 5.5–6.0 mm.; width 0.8 mm. Colorado (Ouray — 7500 feet elevation), — Mr. Wickham.....*coloradense* n. sp.

Body dark rufo-piceous in color, the elytra bright rufous in apical half, the abdomen black; legs and antennae rather pale, rufous; head not quite as wide as the elytra in the female, with the antennae stout, longer than the head and prothorax and evidently incrassate distally; sides parallel and feebly arcuate, the base subtruncate, the angles broadly rounded; eyes at two and one-half times their own length from the base; punctures rather small, deep and close-set, sparse on the vertex; prothorax small, much narrower than the head, nearly a third longer than wide, less finely but deeply and densely punctate, especially toward the smooth median line, which appears to be slightly elevated; elytra but slightly longer than wide, the sides parallel and feebly arcuate, two-fifths wider than the prothorax but only very slightly longer, the punctures only moderately coarse and not very close-set but uneven, subrugose and much confused; abdomen not quite as wide as the



elytra, finely, closely punctate and slightly shining. Male unknown; female with the sixth ventral abruptly pale in color, more convex and broadly rounded at tip. Length 5.6 mm.; width 0.8 mm. Washington State..... *bipartitum* n. sp.

European species, such as *bicolor* Er. and *picipes* Er., have the head much more rounded at base, the eyes smaller and the antennae very much more slender and elongate than any of these American forms, and it is possible that the latter may be generically or subgenerically separated at some time in the future; at present they seem most fittingly placed in *Lobrathium*, which is not by any means a subgenus of *Lathrobium*.

#### *Lathrotaxis* n. gen.

The species of this genus are of larger size than any of those which follow in the *Lathrobia*, comparing well in stature with the less numerous and far more localized *Lathrotropis*. The body is parallel and rather depressed, the coarse punctures always very sparse, except on the abdomen, where they are fine and close-set but not so dense as to give the dull and lustreless appearance characterizing most of the subsequent genera and resembling *Linolathra* more in this respect. The strongly marked anterior angles of the prothorax, in connection with the broad depressed form, shining surface and sparse, coarse sculpture, give to the members of *Lathrotaxis* a peculiar and pronounced habitus, differing greatly from the three genera immediately preceding but imitated in the minute forms constituting the genera *Pseudolathra*, *Linolathra* and others of this group. The thirteen species in my cabinet are distributed over the entire region north of Mexico and below the Canadian boundary, but are notably more abundant in the south and represented by only one or two species in the northeastern states, where *Lathrobium* and *Lathrobioma* are so abundant; they may be readily identified by the following outline descriptions:—

Body black or piceous-black, with the elytra and sometimes also the prothorax, paler..... 2  
Body black throughout..... 11

- 2 — Head widest near the base, the sides diverging posteriorly from the eyes. Body very large in size, polished, black, the elytra bright rufous, with a black scutellar cloud, the abdomen toward tip, legs and antennae pale ferruginous; head large, rather wider than long, very coarsely and sparsely punctate, the sides broadly arcuate; angles rather narrowly rounded, the base broadly arcuate-truncate; eyes moderate; antennae long and slender, filiform, not at all incrassate distally, longer than the head and prothorax, the medial joints more than twice as long as wide and much longer than the subapical; prothorax only very slightly longer than wide and somewhat wider than the head, strongly obtrapezoidal, the sides straight; punctures rather coarse, very sparse, irregular, excepting a single close-set series at each side of the broad median smooth line; elytra quadrate, parallel, very slightly wider and longer than the prothorax, the punctures rather fine and arranged in uneven series; abdomen narrower than the elytra, shining. Male with the surface of the fifth and sixth ventrals wholly unmodified, the apex of the former with a broad and very shallow cuspidiform emargination, the latter with a large triangular apical notch but little wider than deep, one-half as wide as the apex, with its anterior angle slightly blunt; female unknown. Length 10.4 mm.; width 1.4 mm. Arizona (Williams), — Mr. Wickham..... *centurio* n. sp.
- Head parallel at the sides..... 3
- 3 — Head and prothorax black or blackish, always darker than the elytra. 4  
Head black, the prothorax rufous and concolorous with the elytra..... 7  
Head and prothorax rufous and concolorous with the elytra..... 10
- 4 — Abdomen not rufous at tip..... 5  
Abdomen distinctly rufous at tip..... 6
- 5 — Body polished, black, the prothorax slightly picescent, the elytra dark though clear rufous, with a feeble piceous scutellar cloud; legs and antennae ferruginous; head subquadrate, as long as wide, the sides straight, the angles rounded for a short distance to the neck, which is three-fourths as wide as the head, the punctures coarse, uneven in size as usual and very sparse; antennae a little longer than the head and prothorax, moderately slender, feebly incrassate distally, the medial joints barely twice as long as wide and shorter than the subapical; prothorax oblong, only slightly longer than wide, slightly wider than the head, the sides straight and only just visibly converging throughout, the punctures moderately coarse, very sparse and irregularly distributed, the median smooth line bounded by a narrow closer aggregation of punctures, not regularly serial; elytra quadrate or slightly elongate, parallel, slightly longer than the prothorax and about a fourth wider, the punctures only moderately coarse but strong, arranged in regular and feebly impressed series; abdomen slightly narrower than the elytra. Male with the fifth ventral gradually, very feebly sinuate at the middle of the apex, the adjoining surface glabrous and shining but not impressed, the sixth with a broad shallow, gradually formed, broadly rounded sinus, about two-fifths as wide as the apex and six or seven times as wide as deep, the surface with a large median patch of dense and slightly stouter black hairs; female with the sixth ventral abruptly

much narrower than the preceding, rounded at tip. Length 7.5 mm.; width 1.18 mm. New York to Iowa and Texas (Galveston).

**longiuscula** Grav.

- 6—Form rather stout, polished, black, the rufous elytra with a black basal cloud, the legs and antennae pale; head quadrate, as long as wide, the sides straight; angles moderately rounded, the neck very wide as usual, the punctures coarse, very sparse; antennae long and rather stout, much longer than the head and prothorax, feebly incrassate distally, the medial joints rather more than twice as long as wide and longer than the subapical; prothorax nearly as in *longiuscula*, a little longer than wide, the sides more converging from apex to base, just visibly wider than the head, the punctures somewhat coarser and still sparser; elytra elongate, parallel, a fourth wider and longer than the prothorax, the punctures moderate, impressed, arranged in regular, scarcely impressed series, except near apex, where they are finer and confused; abdomen but little narrower than the elytra, finely, closely punctulate. Male with the fifth and sixth ventrals wholly unmodified on the surface, the former with a small shallow and gradually formed median sinus at apex, the emargination in the form of a feeble cusp with broadly rounded point, the sixth with a very large subcircularly rounded emargination, occupying the entire apex and fully twice as wide as deep. Length 7.0 mm.; width 1.27 mm. Texas.....**soror** n. sp.

Form more slender, the elytra bright red, without a distinct basal cloud, the legs pale, the antennae slightly infuscate; head as in *soror* but smaller, the antennae rather thick, scarcely as long as the head and prothorax, barely at all incrassate distally, the medial joints about two-thirds longer than wide and longer than the subapical; prothorax rather distinctly elongate, equal in width to the head, slightly narrowed posteriorly, the sides nearly straight; basal angles more broadly rounded than the apical as usual, the punctures not coarse but deep, distinct, irregularly and sparsely distributed, more closely aggregated along the median smooth line; elytra parallel, but little longer than wide, very slightly longer than the prothorax and about a fifth wider, the punctures small and very feebly impressed, arranged serially, except toward apex, where they are broadly confused and still smaller; abdomen much narrower than the elytra, finely and not very closely punctate. Male with the fifth ventral broadly, subconically impressed in apical two-thirds, the impression clothed with short coarse black hairs extending obliquely outward from the glabrous median line, the apical margin sinuate across the end of the impression, the sinus as wide as the latter, evenly, circularly rounded and very shallow; sixth with a very deep and acutely ogival incisure, twice as deep as wide, the notch abruptly formed, with its opening two-fifths as wide as the apex, the surface not modified. Length 7.8 mm.; width 1.12 mm. Texas (Austin and Waco).....**fallaciosa** n. sp. (Fvl. MS.)

- 7—Abdomen not rufous at tip. Body moderately large and unusually stout, the head and abdomen black, the remainder, including the legs, pale and rufous; antennae ferruginous; head moderate, subquadrate, the angles rounded as usual, not very coarsely, rather feebly and very sparsely punctate; antennae well developed, longer than the head and

prothorax, rather stout, feebly incrassate distally, the medial joints somewhat more than twice as long as wide and distinctly longer than the subapical; prothorax rather distinctly wider than the head, but little longer than wide, obtrapezoidal, the sides strongly converging and straight, the punctures small, very sparse and unevenly disposed, subserial along the smooth line; elytra slightly elongate, large, parallel, a fourth wider and longer than the prothorax, the punctures fine, very feeble, arranged in wholly unimpressed and somewhat regular series, except toward apex; abdomen distinctly narrower than the elytra, finely, closely punctulate. Male with the fifth and sixth ventrals wholly unmodified on the surface, the former scarcely visibly sinuato-truncate toward the middle at apex, the latter with a gradually formed sinus, slightly wider than deep, one-third as wide as the apex, the emargination broadly rounded at the bottom, with its sides at first feebly diverging posteriorly. Length 8.0 mm.; width 1.28 mm. Arizona (Winslow), — Mr. Wickham.

Abdomen rufous at tip.....**praeceps** n. sp.

- 8—Antennae shorter, the medial joints but slightly elongated. Body small and unusually slender, parallel, rufous in color, the head and abdomen — except toward tip — black, the legs and antennae pale testaceous; head rather longer than wide, coarsely, very sparsely punctate, the sides nearly straight and just visibly converging from the eyes to the broadly rounded basal angles; eyes well developed, at about one-half more than their own length from the base; antennae moderately thick, scarcely as long as the head and prothorax, but slightly incrassate distally, the medial joints scarcely one-half longer than wide, longer than the subapical; prothorax only very slightly longer than wide, just visibly wider than the head, the sides parallel and very feebly arcuate, the basal angles broadly rounded, the apical not at all rounded; punctures coarse and irregular along the smooth median line, small and very sparse elsewhere; elytra slightly elongate, parallel, a fifth wider and a fourth longer than the prothorax, the punctures coarse, arranged in regular and broadly impressed series; abdomen decidedly narrower than the elytra, minutely and rather sparsely punctulate. Male unknown; female with the sixth ventral narrow, evenly rounded at tip. Length 6.4 mm.; width 0.95 mm. New Mexico (Albuquerque).

Antennae more elongate, longer than the head and prothorax, very feebly incrassate distally, with the medial joints almost twice as long as wide.....**angusta** n. sp.

- 9—Form somewhat stout, rather dark rufo-testaceous throughout, the head piceous-black, the abdomen — except toward tip — black; head fully as long as wide, coarsely, very sparsely punctate, subimpunctate toward the middle as usual, the sides straight and parallel, the angles well rounded; eyes at three-fourths more than their own length from the base; prothorax distinctly wider than the head, but little longer than wide, the sides parallel and nearly straight, rounding toward base, the punctures rather coarse and very sparse throughout but serial and close-set along the median smooth space; elytra but slightly longer than wide, parallel, a fifth wider and a fourth longer than the pro-

thorax, the punctures coarse, arranged in scarcely impressed regular series; abdomen but slightly narrower than the elytra, finely, rather closely punctulate. Male with the surface of the fifth and sixth ventrals wholly unmodified, the apex of the former broadly, very feebly sinuate toward the middle; sixth with a broadly rounded, shallow, gradually formed parabolic sinus, half as wide as the apex and about four times as wide as deep; female not differing greatly, the antennae nearly similar in structure. Length 7.3 mm.; width 1.22 mm. Texas (El Paso),—Mr. G. W. Dunn — and New Mexico..... *acomana* n. sp.

Form rather less stout and more elongate, similar in coloration, the testaceous parts brighter; head similar, the eyes a little larger, at barely one-half more than their own length from the base; prothorax narrower and more elongate, nearly a fifth longer than wide, not evidently wider than the head, the sides straight and parallel, the basal angles broadly rounded, the anterior right, scarcely more than blunt, the punctures only moderately coarse, feeble and very sparse, larger and closer but confused along the median smooth space; elytra distinctly elongate, parallel, a fifth wider and almost a fourth longer than the prothorax, the punctures rather small, impressed, arranged in regular and broadly impressed lines, except toward apex, where they are confused; abdomen somewhat narrower than the elytra, the punctures minute and not very close-set. Male with sexual characters similar to the preceding, the fifth ventral feebly sinuate-truncate throughout the width, the sinus of the sixth similar in form, three-fifths as wide as the apex. Length 7.5 mm.; width 1.15 mm. Montana (western), Utah (Provo) and Arizona (Winslow and East Bridge), — Mr. Wickham..... *rubricollis* n. sp.

- 10 — Body rather stout, parallel and less depressed than usual, moderately convex, shining, rufo-testaceous, the legs and antennae concolorous, the abdomen uniform in color throughout and rather pale piceo-rufous; head as wide as long, parallel and straight at the sides, the angles well rounded, the punctures coarse and rather close-set, the eyes unusually small, at much more than twice their own length from the base; antennae fully as long as the head and prothorax, moderately slender, very gradually and strongly incrassate distally, the medial joints two-thirds longer than wide; prothorax oblong, distinctly elongate, not quite as wide as the head, the sides subparallel and nearly straight, broadly rounding toward base, the punctures rather coarse and only moderately sparse, slightly more aggregated narrowly along the median smooth space; elytra but little longer than wide, parallel, about a fifth wider and longer than the prothorax, somewhat wider than the head, the punctures rather coarse, only moderately sparse and very uneven, only partially arranged in uneven series; abdomen distinctly narrower than the elytra, the punctures much coarser than usual above and beneath and rather close-set. Male with the surface of the fifth and sixth ventrals wholly unmodified, except a narrow impunctate and glabrous unimpressed line along the middle of each throughout, the apex of the former broadly, very feebly sinuate toward the middle, the sixth with a deep angulate notch at apex, the notch with straight sides rounding outwardly toward tip, a little deeper than wide, half as wide as the

segmental apex and with its anterior angle narrowly rounded. Length 6.7 mm.; width 1.15 mm. Middle States..... *polita* Grav. Body similar to the preceding but still stouter, parallel, scarcely so convex, bright rufo-testaceous throughout and shining, the abdomen blackish-piceous, paler and rufescent at apex; head similar but broader, the basal angles more broadly rounded, the eyes sensibly larger, at barely twice their own length from the base, the punctures almost as coarse but denser toward the sides and sparser medially, the antennae nearly similar but with the medial joints rather more elongate; prothorax smaller and shorter, distinctly narrower than the head, not obviously longer than wide, the sides feebly converging from apex to base and broadly arcuate throughout, the punctures moderately coarse and sparse, not more densely aggregated near the median smooth space; elytra rather more elongate, parallel, a fourth wider than the prothorax and nearly a third longer, less coarsely, rather more sparsely and still less serially punctured; abdomen broader, nearly as wide as the elytra, rather less coarsely but almost as closely punctulate. Male with the surface of the fifth and sixth ventrals nearly as in *polita*, having a narrow glabrous median line throughout, but the fifth is less distinctly sinuate toward the middle of the apex and the surface is feebly impressed along the glabrous area near the apex; the notch of the sixth is more equilateral, fully three-fifths as wide as the apex, distinctly wider than deep, with its anterior angle slightly blunt. Length 6.4 mm.; width 1.18 mm. Florida (Crescent City)..... *floridæ* n. sp.

- 11 — Body very depressed, the legs black with the tarsi paler; antennae very long and slender, with the medial joints much more than twice as long as wide; surface shining; head small, coarsely, very sparsely punctate laterally, broadly subimpunctate medially, rather wider than long, the sides nearly straight, feebly converging from the eyes to the basal angles, which are obtuse but only slightly rounded; eyes well developed; antennae black, almost half as long as the body, scarcely perceptibly incrassate toward tip; prothorax much wider than the head, only slightly longer than wide, the sides feebly converging from the apex and very slightly arcuate, broadly arcuate toward base, the punctures fine but distinct, very sparse, narrowly more aggregated along the median smooth line; elytra but little longer than wide, parallel, a third wider and longer than the prothorax, the punctures fine, rather sparse, partially serial in arrangement; abdomen distinctly narrower than the elytra, finely and closely punctulate. Male with the fifth ventral wholly unmodified, the apex rectilinearly truncate throughout, the sixth evenly and rather strongly rounded at tip, with a small triangular and rather abruptly formed emargination, about a sixth as wide as the base of the segment and rather deeper than wide, with its anterior angle slightly blunt, the surface with a narrow and simple glabrous cylindric impression along the median line throughout, the edges of the impression obtusely rounded; female with the sixth ventral broadly angulate at tip. Length 6.5 mm.; width 1.18 mm. California (Lake and Siskiyou Cos.)..... *californica* Lec. Body normally convex, the legs and antennae pale; antennae shorter, less slender and more incrassate, not longer than the head and prothorax,

- with the medial joints less than twice as long as wide; lustre polished.....12
- 12—Form stouter; head well developed, fully as wide as long, the sides parallel and straight, the angles broadly rounded; eyes well developed, at less than twice their own length from the base, the punctures coarse, moderately sparse, wanting at the middle of the vertex; prothorax distinctly elongate, just visibly wider than the head, the sides parallel, nearly straight, the basal angles broadly rounded, the punctures only moderately coarse but less sparse than usual; elytra longer than wide, parallel, a fifth wider and barely a fourth longer than the prothorax, the punctures fine, arranged in rather regular and feebly impressed series almost throughout; abdomen distinctly narrower than the elytra, minutely, not very closely punctulate and somewhat shining. Male unknown; female with the sixth ventral conical, convex, rather narrowly but obtusely rounded at tip. Length 6.8 mm.; width 1.18 mm. California (Yuma).....*atronitens* n. sp.

Form somewhat more slender and elongate; head very nearly as long as wide, coarsely and sparsely punctate, the sides behind the eyes nearly straight and just visibly converging to the broadly rounded basal angles; eyes at one-half more than their own length from the base; antennae rather thick, not quite as long as the head and prothorax, the latter distinctly elongate, very slightly wider than the head, the sides subparallel and nearly straight, broadly rounding toward base, the punctures rather coarse, sparse, narrowly aggregated along the median smooth area; elytra unusually elongate, parallel, fully a fourth longer than wide, about a fourth or fifth wider and a third longer than the prothorax, the punctures rather small but distinct, arranged in regular and broadly impressed series nearly throughout; abdomen obviously narrower than the elytra, minutely and rather sparsely punctulate and shining, black above, the under surface feebly rufescent throughout. Male unknown; female with the sixth ventral rather broadly rounded at tip. Length 7.0 mm.; width 1.05 mm. Texas (Galveston).....*galvestonica* n. sp.

The representatives of more distinct structural types, among the species above described, are *californica*, which stands alone, *polita* and *floridae*, which form an isolated group, and *longiuscula* and all the other species, which form a natural aggregate, although, as may be inferred, there are marked differences in coloration. The sexual characters of *fallaciosa* are remarkably different from those of any other species, the contrast between the very narrow deep ogival notch of the sixth ventral in that species, and the large, broadly rounded emargination of the same segment characterizing *soror*, for example, being very remarkable. It is probable that the *Lathrobium seriatum*, of LeConte, previously referred to,

belongs to this genus, but it differs from any of the above forms in its more parallel sides, relatively smaller elytra and more converging sides of the head behind the eyes — among other characters. The Munich catalogue places *castanea* Grav., as a variety of *longiuscula*, but I have no means of confirming this at present.

### *Pseudolathra* n. gen.

The two species at present comprising this genus are among the smallest known Lathrobiids; they have a peculiarly depressed form and extremely separated gular sutures, short hind tarsi, with the four basal joints very short and subequal, and other characters as stated in the table. They may be described as follows:—

Form slender, subparallel, shining, the abdomen dull and very densely punctulate; body pale rufo-testaceous, the head blackish-piceous, the elytra sometimes piceous near the scutellum, the abdomen blackish, gradually rufescent toward the tip, the legs and antennae pale; head rather small, not coarsely, very sparsely punctate, slightly wider than long, parallel and straight at the sides, arcuato-truncate at base throughout the width, the angles obtuse but only very slightly rounded; eyes rather well developed, somewhat prominent, at scarcely twice their own length from the base; antennae rather thick, feebly incrassate distally, nearly one-half as long as the body, the medial joints about one-half longer than wide; prothorax distinctly wider than the head in the male, less obviously so in the female, oblong, only slightly longer than wide, the sides distinctly converging from the strongly marked apical, to the broadly rounded basal, angles, and straight, the punctures fine and very sparse, except a close-set subimpressed series along the median smooth line, which are coarser; elytra slightly longer than wide, a fourth wider and a fifth longer than the prothorax, the sides straight and distinctly diverging throughout, the punctures rather sparse, fine, arranged in unimpressed series, confused toward tip; surface narrowly, deeply impressed along the sutural bead; abdomen nearly as wide as the elytra, minutely, very densely punctulate. Male with the fifth ventral unmodified, the sixth broadly rounded at tip, with a very shallow emargination in the form of a broad cusp, the adjacent surface with a small simple impression slightly longer than wide. Length 3.4 mm.; width 0.63 mm. Texas (Austin, Waco, Houston and Galveston), Louisiana (Morgan City) and Iowa. [=Americana Duviv.].....*analisis* Lec.

Form and lustre somewhat similar to the preceding but larger, dark piceous in color, the head and abdomen black, the latter only feebly paler at the immediate tip; legs and antennae pale; head small, nearly as long