

**Notes on some genera of CERAMBYCIDÆ with descriptions of new species.**

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The following pages contain the results of a study of several parts of the Cerambycide series which have been at all times troublesome, more from the scattered and inadequate descriptions than from the number of the species. In the first few pages the tribe Acanthoderini as defined by Dr. Leconte, (Classif. p. 336), is considered in a synoptic manner with tables of the genera and species with descriptions of those only which are believed to be new, the tables being full enough to enable the others to be readily distinguished. Following this part are several isolated genera with descriptions of new species.

The tribe Acanthoderini is divided into two sub-tribes in the following manner:

Scape of antennæ clavate.....ACANTHODERINI.  
Scape of antennæ nearly cylindrical.....ACANTHOCININI.

**Sub-tribe I.—ACANTHODERINI.**

Scape of antennæ short, clavate, the entire member not longer or very little than the body and not differing notably in the sexes, fringed beneath. Anterior tarsi of ♂ broader than in the ♀, fringed at the sides with moderately long hair.

After a careful examination of our species I see no reason for differing from the view expressed by Dr. Leconte, (Classif. p. 337), that they constitute but one genus. It is true that *quadrigibba* has subcostate elytra so that the sutural region appears broadly grooved and the tarsi are more dilated than the other species, but these characters seem hardly to have generic value. Lacordaire has placed this in the genus *Psapharochrus* Thoms., to which he has also erroneously added *decipiens*. Our species are all considered to belong to

**ACANTHODERES** Serv.

Four species occur in our fauna which are known by the following differences:

Sutural region of elytra vaguely grooved, the groove limited on each elytron by a feeble costa.

Elytra with moderately broad transverse band of white in front of middle broadly interrupted at the suture.....**quadrigibba** Say.

Sutural region not grooved.

Elytra with moderately broad oblique space of whitish pubescence extending from the humeri to suture.....**peninsularis** n. sp.

Elytra without whitish space but with a distinct M-shaped black mark behind the middle on each.

Base of elytra irregular, an oblong obtuse umbone at middle of base.

Smaller species.....**decipiens** Hald.

Base of elytra regularly convex, without umbone. Large species.

**Morrisii** Uhler.

These belong to the Atlantic fauna except *peninsularis* which is from Lower California.

**A. peninsularis** n. sp.—Form moderately robust as in *Morrisii*, piceous, clothed with brownish pubescence. Head coarsely but very distantly punctate, clothed with brownish pubescence, on the occiput very much paler. Antennæ brownish, each joint with two rings of cinereous pubescence. Thorax twice as wide as long, strongly angulate at the sides, surface coarsely and deeply punctured clothed with variegated brownish pubescence, disc bituberculate and a carina extending from apical margin to middle. Elytra with coarse deep punctures near the base which become more distant and less deep posteriorly, surface clothed with brownish pubescence variegated with darker and paler spaces, and with a broad oblique cinereous spot extending from the humeri toward the suture and two slightly oblique dark spaces behind the middle. Body beneath and femora sparsely clothed with cinereous pubescence, tibiæ annulate. Length .48—.64 inch; 12—16 mm.

This species has nearly the form of *Morrisii* but is even more robust, its markings approaching those of *quadrigibba*. It belongs to a group of species occurring along the west coast of Mexico, many examples of which I saw in the collection of Mr. H. W. Bates, but differs from them all. I cannot, however, suggest any comparisons and leave further remarks to Mr. Bates to whom the species is known.

Occurs in the Peninsula of Lower California.

#### Sub-tribe II.—ACANTHOCININI.

The scape of the antenna is in the form of a very elongated cone, very little broader externally.

The genera form the following groups:

Lateral tubercle of thorax at the middle. Tarsi broad.....LAGOCHIRI.

Lateral tubercle behind the middle. Tarsi slender except in *Mecotetartus*.

Females without elongated ovipositor.....LIOPI.

Females with elongated ovipositor.....ACANTHOCINI.

The group *Dectes* has been united with the *Liopi*.

#### Group I.—*Lagochiri*.

In this group the lateral tubercle of the thorax is at the middle. The females without ovipositor. The pro- and mesosternum are moderately broad, the former channeled, the latter truncate at tip.

The tarsi on all the feet are broad, the first joint of hind tarsus not quite as long as the next two. The antennæ are not ciliate.

The above remarks, it may be needless to say, are applicable to the genera of our fauna only. These are known as follows:

Lateral spine of thorax very prominent, the disc tuberculate, antennæ much longer than the body ..... **Lagochirus**.

Lateral spine obtuse, disc not tuberculate, antennæ not longer than the body in either sex..... **Cænopæus**.

In the males of both genera the sixth joint of the antennæ is prolonged inwards and with a brush of hairs in *Lagochirus*, which has also the anterior tarsi dilated and fimbriate and the same tibia fimbriate within near the tip.

*Cænopæus* is founded on *Leptostylus Palmeri* Lec., the reasons for its position will be found further on.

#### **LAGOCHIRUS** Erichs.

A genus composed of species of moderately large size, represented in our fauna by two forms occurring on our sub-tropical borders, the one in Florida the other in Lower California, distinguished in the following manner:

Punctures of elytra barely attaining the middle, humeral region submuricate, disc with very evident rows of short, erect scale-like hairs.

**araneiformis** Linn.

Punctures extending to apical fourth, humeral region simply punctured, disc with feeble traces of tufts..... **obsoletus** Thoms.

#### **CÆNOPÆUS** n. g.

Allied to *Lagochirus* differing as follows: Antennæ as long as the body ♀, a little longer ♂, not ciliate beneath, first joint extending to the middle of the thorax, second small, third equal to first, joints 4—10 gradually decreasing in length, joints 3—4 together a little shorter than 5—6—7 together, joint six prolonged inwards at its tip, without brush of hairs. Thorax transverse, hexagonal, moderately convex, surface irregular but not tuberculate, sides angulate at middle but not acutely spinous. Elytra oblong, moderately convex, slightly narrowing posteriorly, apices obtusely rounded. Legs robust, femora strongly clavate, pedunculate at base, the anterior a little shorter than the middle, the posterior shorter than the elytra. Tarsi moderately dilated, a little broader in the male but not fringed with hairs, the first joint a little shorter than the next two united. Last abdominal segment moderate, subtruncate ♂, very little longer ♀. Prosternum moderate between the coxæ, mesosternum broad, gradually declivous, nearly flat. Body finely pubescent, without erect hairs.

This genus is founded on *Leptostylus Palmeri* Lec., an insect very nearly as large but a little more convex than *Lagochirus araneiformis*. It has been removed from association with *Leptostylus* by its thorax being angulate at middle and by the structure of the tarsi. The antennal character of the male adds weight to its position near

*Lagochirus*. From the latter it especially differs in the thorax less strongly angulate and not tuberculate, and by the antennæ being very little longer than the body even in the male. The form of the mesosternum also differs as well as the relative size of the femora.

In the female of the present genus the femora are less clavate and the thorax less transverse, and the angulation reduced to a feeble tuberosity.

**C. Palmeri** Lec., *New Species*, 1873, p. 233.—Antennæ black, each joint annulate with cinereous at base. Thorax sparsely coarsely punctured, surface irregularly clothed with very fine ochreous pubescence. Elytra about twice as long as wide at base, punctures moderately coarse, distant and irregular, surface without costæ or tubercles, piceous black with a large discal saddle-shaped space of ochreous pubescence extending a little behind the middle, behind which are large irregular spots of similar pubescence. Body beneath with extremely fine ochreous pubescence. Legs black with very fine black pubescence, tibiæ with a cinereous band at middle. Length .70 ♀—1.00 ♂ inch; 18—25mm. (Pl. II, fig. 1).

The elytral markings are described in somewhat different manner by Dr. Leconte but the meaning is the same, the fact being that the pattern is of the same type as in *Lagochirus*. In the one female I have seen the markings are suffused and the pattern indistinct.

Three specimens, Arizona.

#### Group II.—*Liopi*.

From the *Lagochiri* this group differs in having the thorax angulate, if at all, behind the middle and the tarsi slender.

The lateral tubercle of the thorax as observed by Dr. Leconte, varies in position from sub-median to sub-basal.

The table of the genera of this tribe as defined by Dr. Leconte, (Classification p. 338), requires some modification by the omission of *Lophopæum*? and *Sternidius*, and the introduction of *Mecotetartus*, (Eutessus Lec.).

The species placed provisionally in *Lophopæum* seems rather a *Pogonocherus* allied to *P. oregonus*, but with the lateral spine of the thorax as strong as in *P. crinitus*.

*Sternidius* is the equivalent of *Liopus* and those species formerly under the latter name are added to *Lepturges*.

*Mecotetartus* Bates, (Eutessus Lec.), is added from the next group, in which it had been doubtfully placed by Dr. Leconte, he knowing the males only, while the description by Mr. Bates published but a few months before had not yet reached this country.

*Dectes* is also added to the group as its characters do not warrant a wider separation.

The genera now known are as follows:

- Thorax feebly tuberculate or angulate at the sides a little behind the middle.  
 Mesosternum broad, first joint of hind tarsi not longer, if as long, as the next two.....**Leptostylus.**
- Thorax distinctly angulate, usually acutely tuberculate, or with a short spine behind the middle. Mesosternum triangular or narrow.
- Antennæ without traces of ciliæ beneath, first joint of hind tarsus as long as the next two.
- Prosternum narrow but not linear, body without erect hairs.....**Liopus.**
- Prosternum linear, form cylindrical, elytra with erect hairs.....**Dectes.**
- Antennæ distinctly ciliate beneath.
- Hind tarsi short, first joint not as long as 2—3. Antennæ ♂ very long, the fourth joint longer than the entire body.....**Mecotetartus.**
- Hind tarsi slender, first joint as long as the next three. Antennæ normal.
- Pro- and mesosternum very narrow.
- Elytra without lateral carina.....**Lepturges.**
- Elytra with distinct lateral carina.....**Hyperplatys.**

#### LEPTOSTYLUS Lec.

Under the remarks on *Liopus* I have given what seem to be the only characters separating these two genera. Among the species several characters have been observed which will serve to group them in a very natural manner.

In the male of *L. Palmeri* as observed by Dr. Leconte, the sixth joint of the antenna is prolonged inwards at the tip after the manner of our species of *Acanthocinus*. The pubescence of its surface is very fine and without trace of erect hairs. The elytra are not at all roughened and the punctuation coarse but very sparse, their apices obtuse. The legs are so very finely pubescent that they may be described as nearly naked, the tarsi are short and broad and finally the thorax is angulate at middle so that its form is hexagonal, resembling *Lagochirus*, without however being as strongly angulate as in that genus. That it is not a *Leptostylus* seems to me very evident from its characters, facies and size, and the only course is its removal from the genus to form a new one near *Lagochirus*.

*L. albidus* Lec., is remarkable in being the only species with short, erect pale hairs on the elytra. The legs are also fimbriate, the femora as well as the tibiæ and the antennæ are ciliate beneath on the first four joints. According to the table given by Lacordaire this species would form a new genus near *PROBATIUS* Thoms., but its general resemblance to *L. biustus* Lec., is such that I retain it here in preference to increasing the already too numerous genera of *Cerambycidae*.

The remaining species are quite homogeneous in their relationship and present little of note beyond the ordinary specific differences. They divide naturally into two unequal sets by the sculpture and ornamentation of the surface of the elytra. The larger number have the elytra more or less roughened with acute asperities or smaller tubercles which bear at their summits groups of short, black, scale-like hairs very nearly erect, while three of the species have no tubercles and no scale-like hairs.

The antennæ are longer than the body in both sexes in all the species except *aculifer* and *macula*, in these the third joint of the antenna is very plainly longer than the fourth, while in all the other species the difference between these two joints is very small. The sexual character observed in the males of *aculifer* and *planidorsus* has not been noticed in any other species.

No changes in synonymy are proposed except that *interruptus* Hald. is *collaris* and not *macula*.

I think there is very little doubt that Say's *Lamia sexguttata* (Journ. Acad. v, 1825, p. 269), is the same as *commixtus* Hald.

*Exocentrus biustus* Chev., Ann. Ent. Soc. Fr. 1862, p. 249, for which that author quotes *Leptost. biustus* Lec. as a synonym, is probably not the same species.

*L. fascicularis* Harris, Trans. Bost. Soc. Nat. Hist. i, 1836, p. 88, pl. 1, fig. 9, placed under *Leptostylus* in the "Catalogus," is *Liopus xanthoxyli* Shimer.

Reduced to tabular form these sections are as follows:

Elytra with asperities or tubercles bearing at their summits short, black, scale-like hairs.....	Section <b>A</b> .
Elytra without asperities and scale-like hairs.....	Section <b>B</b> .

The latter being the smaller section the species will be first considered. They form the nearest approach to LIOPUS. The numbers give what seems a proper cabinet arrangement.

Prosternum as wide between the coxæ as the width of a coxal cavity. Elytra obliquely truncate at tip.....13. **macula** Say.

Prosternum narrower than a coxal cavity. Tips of elytra separately rounded.

Thorax sparsely punctured, the flanks at middle without punctures.

12. **perplexus** Hald.

Thorax moderately densely punctured, the flanks as densely punctured as the disc.....11. **collaris** Hald.

Section A contains a larger number of species which are also more troublesome to separate in a tabular form; in their arrangement not only the size but also the roughness of sculpture has been held in

view, so that as we proceed from *commixtus* to *aculifer* the species become larger and may be assumed to be more perfect representatives of the genus, they are as follows:

Thorax densely punctured, elytra with densely placed coarse deep punctures.....10. **commixtus** Hald.

Thorax not densely punctured, elytral punctures not closely placed, often inconspicuous or concealed.

Legs hairy, antennæ slightly pilose beneath.....9. **albidus** Lec.

Legs not hairy, antennæ not pilose.

Surface of thorax not tuberculate, even, punctures regularly placed.

Elytra very indistinctly punctured especially at apex, the disc with angulate fascia behind the middle, the apices feebly obliquely truncate.....8. **biustus** Lec.

Elytra distinctly punctured over the entire surface, disc with acutely angulated fascia, apices slightly prolonged not obliquely truncate.....7. **parvus** Lec.

Elytra more distinctly punctured near the apex than at base, apices very obliquely truncate, disc with arcuate fascia at the declivity.....6. **arcuatus** Lec.

Surface of thorax more or less tuberculate and with the punctures irregularly placed and sparse.

Elytra feebly or not roughened with acute tubercles, antennæ in both sexes longer than the body, the joints three and four together not longer than 5—7 taken together.

Tips of elytra not prolonged, apices separately rounded, thorax with rather strong discal tubercles.....5. **nebulosus** n. sp.

Tips of elytra obliquely prolonged, apices obliquely truncate, thorax with very flat tubercles.

Elytra without rows of tubercles, a few only near the base, post-humeral oblique impression very feeble. Hind trochanters of ♂ slightly acutely prolonged.....4. **planidorsus** Lec.

Elytra with four distinct discal series of obtuse tubercles, post-humeral oblique impression well marked. Hind trochanters of ♂ not prolonged.

Thorax irregular but without denuded spaces or lines.

3. **terræcolor** n. sp.

Thorax with median fine carina denuded at apex, a short oblique line on each side at apical margin, often denuded.

2. **argentatus** Duval.

Elytra with asperities well marked, either as acute tubercles or ridges; antennæ scarcely longer than the body even in the male, joints three and four together equal in length to 5—8 together.

Hind trochanters of ♂ prolonged into a short but acute spine.

1. **aculifer** Say.

**L. parvus** Lec., New Species, 1873, p. 234.—Antennæ in both sexes longer than the body, joints 3—4 together about equal to the following three. Thorax subangulate behind the middle, the sides oblique in front, the apex slightly constricted, surface moderately densely punctured, with faint evidences of flat tubercles which are also punctured. Elytra moderately coarsely punctured

from base to apex, a distinct oblique impression from the humeri, disc vaguely costulate, the costæ tuberculiferous, the tubercles with short, erect, black scales; surface clothed with dark cinereous pubescence, with a narrow, white, band acutely angulate to the front behind the middle; apices not obliquely truncate. Length .16—.24 inch; 4—6 mm.

These notes are intended to supplement the original description and are made from two finely marked specimens collected in Kansas and Texas. The general outline resembles *Hyperplatys*.

**L. nebulosus** n. sp.—Form moderately robust as in *aculifer* but more convex, surface with dark cinereous pubescence, elytra with a rather broad but indistinct, angulate band of paler pubescence at the middle and a dark spot each side. Antennæ ♂ a little longer than the body, joints 3—4 a little longer than the next three. Thorax about one-fourth wider than long, not narrowed at apex, sides slightly behind the middle with an obtuse tubercle limited in front and behind by a slight lateral constriction of the thorax, disc coarsely punctured, sparsely pubescent and with five moderately prominent tubercles, that at the centre being larger and more prominent. Elytra gradually arcuately narrowed at apical third only, apices separately rounded, disc moderately convex, not densely punctured, the punctures finer near the apex, surface finely tricostate, the costæ with distant tubercles with erect scale-like hairs, pubescence of surface not very dense, dark cinereous vaguely clouded, the basal fourth slightly paler and a moderately broad paler band angulate to the front at middle, and an irregular sooty spot in front of the outer ends of this band. Body beneath with cinereous pubescence, maculate. Femora cinereous, maculate, tibiae at middle and tip annulate with black, tarsi cinereous, last two joints black. Length .50 inch; 12.5 mm.

This species is remarkable in having the middle umbone of the thorax quite strongly marked and the thorax less transverse than usual. The antennæ are less elongate than in *planidorsus* but more so than *aculifer*. The hind trochanters are simple.

One ♂, western Nevada, collected by H. K. Morrison.

**L. terræcolor** n. sp.—Form of *aculifer*, densely clothed with luteous pubescence, elytra with faint darker cloud at the side and a common, narrow, arcuate fascia slightly behind the middle. Front nearly flat. Antennæ ♂ a little more than half longer than the body, joints maculate and annulate at the articulations. Thorax twice as wide as long, truncate at apex and base, sides very obtusely subangulate, disc moderately convex, the tuberosities scarcely evident, the central umbone indicated by a circle of large punctures, a row of coarse punctures along the apex and base and a few near the side. Elytra formed as in *aculifer*, apices obliquely truncate, disc with four rows of feeble tubercles which are larger near the base, a distinct oblique impression behind the humeral umbone, surface densely pubescent, sparsely punctate, the punctures a little coarser toward the sides. Body beneath very densely finely punctulate and densely clothed with cinereous pubescence with small denuded spots. Legs similarly pubescent. Length .34—.46 inch; 9—12 mm.

This species might be mistaken for an *aculifer* in which the asperities are feebly developed, but the thorax is differently tubercu-



late, the antennæ of the male are much longer, the hind trochanters ♂ are not produced and the arcuate fascia of the elytra in a different position. I have adopted Newman's unpublished name for a Florida species which doubtless belongs to this, which I am by no means satisfied was properly referred to *transversatus* Chev., (Lec. Proc. Am. Philos. Soc. 1878, p. 414).

Three specimens ♂, Florida.

**L. argentatus** Duval.—Form narrower and less depressed than *aculifer*, surface densely clothed with greyish white pubescence, elytra with a slight cloud at the sides and a short transverse nearly black fascia crossing the suture at the declivity. Antennæ one and a half times the length of body ♂ and nearly as long ♀. Thorax distinctly subangulate at the sides, an obtuse tubercle above the angulation, disc with five flat tubercles, median line slightly elevated and denuded, surface densely clothed with greyish white pubescence and a short brown line on each side of middle beginning at apical margin sometimes denuded. Elytra with four rows of feeble tubercles, an oblique post-humeral impression, apices obliquely truncate. Body beneath less densely clothed than above. Length .38 inch; 9.5 mm.

Resembles *aculifer* but is more elongate as well as more convex. It differs in the less asperate surface, the longer antennæ and by the hind trochanter of ♂ not spiniform.

This species was originally described from Cuba. It occurs in Florida and also at Nassau, N. P.

#### **LIOPUS** Serv.

To this genus must be referred those species now included in our lists in *Sternidius* Lec. The vague manner in which Lacordaire describes the form of the mesosternum is misleading and caused the separation of this portion of the genus under a new name.

All the species referred to *Liopus* in the "Classification" and "Check List" should be placed in *Lepturges*, excepting *L. biguttatus* Lec., which is *Graphisurus pusillus* Kby., concerning which remarks will be found elsewhere.

*Liopus* is closely related to *Leptostylus*, but after a careful study of all the species in our fauna I find that *Liopus* has always an acute thoracic spine always behind the middle, the prosternum is usually narrow, the mesosternum gradually narrowed behind, truncate at tip and not dilated; the antennæ are always longer than the body and the joints from 5—11 are very nearly equal in length. *Leptostylus* has never more than a very obtuse tubercle on the side of the thorax a little behind the middle, the prosternum is broad and channeled, the mesosternum broader than long, more or less emarginate at tip and slightly dilated behind the coxæ; the antennæ are less slender

and shorter than in *Liopus*, the outer joints becoming rapidly shorter than the third and fourth. The two genera are however very closely allied and very little would be required to close the gap between them.

*L. Haldemani* Lec., is remarkable for having the lateral tooth of the thorax very close to the base. The sixth and seventh joints of the antennæ are not only shorter than the fifth, but also a little shorter than the eighth and ninth.

The following table will enable our species to be distinguished:

Front flat, mouth in the same plane as the front.

Antennal joints 6—10 equal; elytra without angular mark posteriorly; sides of thorax arcuate, the spine small and acute. Elytra without erect scales.....**variegatus** Hald.

Front convex, mouth slightly retracted.

Antennal joints 6—10 equal; lateral spine of thorax at a distance from the base.

Elytra with distinct tufts of small, black, erect scales.

Sides of thorax in front of spine arcuate, the spine small, acute and abruptly formed.....**Wiltii** n. sp.

Sides of thorax oblique from the anterior angles to the tip of the lateral spine.

Form robust, pubescence pale cinereous, elytra with one broadly angulate band, (resembles *Leptost. biustus*).....**crassulus** Lec.

Form slender, pubescence brown, elytra with one band forming a broad angle and with a second band less distinct posteriorly.

**fascicularis** Harris.

Elytra without tufts of erect scales.

Elytra with an acutely angular band behind the middle.

Surface finely punctured and behind the band almost impunctured.....**alpha** Say.

Surface more coarsely punctured, behind the band very distinctly so.....**cinereus** Lec.

Elytra without angular dark band, a feebly marked transverse band of whitish pubescence.....**punctatus** Hald.

Antennal joints 6—7 shorter than 8—9, lateral spine of thorax close to the base.

Elytra not densely punctured, surface with a moderately dense, dark cinereous pubescence variegated with lines of ochraceous.

**Haldemani** Lec.

By the above scheme *variegatus* approaches *Leptostylus* and *Haldemani* Lepturges.

**L. Wiltii** n. sp.—Form moderately robust, as in *variegatus*, surface moderately densely clothed with cinereous pubescence, elytra maculate with small black spots and two narrow fasciæ behind the middle. Head cinereous with small black spots, front slightly convex. Antennæ one-third longer than the body ♂, maculate, tips of the joints annulate with black. Thorax broader than long, surface moderately densely punctured but concealed by a mixed

cinereous and brownish pubescence, sides arcuate before the spine which is small, acute and abruptly formed. Elytra densely clothed with grey pubescence, surface very distinctly but not densely punctured, and with five regular series of small black spots which are slightly tuberculate and bear small tufts of scale-like hairs, a larger black space at the side in front of middle and two fasciæ, one slightly behind the middle forming at the suture an acute angle, the other posterior and less oblique not attaining the suture. Body beneath and legs with whitish pubescence, the latter maculate. Length .36 inch; 9 mm.

Resembles *variegatus* in form but the elytra are a little more convex, it differs especially in the more convex front and the presence of erect scales on the elytra. The characters of the table will distinguish it from those which follow.

One specimen ♂, Texas, kindly given me by Mr. Chas. Wilt to whom it is dedicated, whose many kind donations to my cabinet have been of great assistance in the prosecution of my studies.

**L. crassulus** Lec., New Species, 1873, p. 235.

I have referred to this species some forms collected in Texas by Mr. Schwarz, which are as follows:

Elytra with faint oblique discal impression, surface clothed with cinereous pubescence and with moderately coarse punctures which gradually become effaced toward the tip which is feebly obliquely truncate, disc very faintly tricostate, the costæ with distant faint tubercles which bear on their summits scale-like hairs, external to the faint costæ are two other rows of distant darker tubercles, the sutural elevation also tuberculate, at the apical third is a common, arcuate, narrow, black fascia convex to the front, exterior to which is a short oblique line. Length .26 inch; 6.5 mm.

The type specimen of this species from Lower California is somewhat shorter and the surface slightly abraded. The costæ are very much feebler and the darker spots less evident. The arcuate fascia exists in a feeble trace but its position is sufficiently well marked. Either form bears a considerable resemblance to *Leptostylus biustus*, and they approach that genus in having a wider pro- and mesosternum than is usual in *Liopus*.

With this note of the differences I leave for future collections in the Peninsula the settlement of the question of the identity or not of the two forms.

**L. dorsalis** White, Brit. Mus. Catal. 1855, p. 382.—Pale cinereous brown; eyes above considerably separated, at the base of the antennæ and behind them two impressed lines forming a cross; thorax above varied with cinereous; elytra very thickly punctured; a large ash-colored squarish irregular mark before the middle and with projecting corners, a spear-shaped cinereous mark near the tip; the tip notched on each side near the suture. Length 4 lines.

New York, (Salem).

I reproduce the description given by White. I am unable to recognize it either specifically or generically. It may be a *Pogonocherus*.

**MECOTETARTUS** Bates.

**M. antennatus** Bates, Trans. Ent. Soc. London, 1872, p. 213; *Eutessus asper* Lec., Classif. 1873, p. 339; New Species, pp. 235—236.

Occurs from the Peninsula of California to Chontales, Nicaragua.

**DECTES** Lec.

**D. spinosus** (Say).

I place *Dectes* here in preference to making it a distinct group as the prosternum is not narrower than in several *Lepturges*, and the only characters remaining are the cylindrical form and erect hairs on the elytra which seem too feeble to separate it in a group by itself. It is therefore placed where *Lacordaire* left it, but I am unable in our species to see the carina on the outer side of the antenna of which he speaks.

*D. texanus* Lec., is not sufficiently different from *spinosus* to be retained as a distinct species.

**LEPTURGES** Bates.

The species here included are those in which the antennæ are fimbriate beneath with very short hair, and the sides of the thorax angulate near or in front of the base. The pro- and mesosternum are both very narrow, linear and barely wide enough to separate the coxæ. The fimbriæ on the lower face of the antennæ are, at most, short and inconspicuous, and in some specimens I have seen are almost entirely wanting. The tarsi are slender, the first joint of the posterior pair being as long as the following joints united.

As thus defined the genus contains not only those referred here by Dr. Leconte, (Classif. p. 338), but also those considered *Liopus*, (see also Check List, p. 91), *L. biguttatus* Lec., is however a *Graphisurus*.

The species of the Amazons are divided by Mr. H. W. Bates in two sections, which apply equally to those of our fauna, these are:

Section A, lateral prominence of the thorax rather broad and very close to the base.

Section B, lateral prominence more slender and acute, the tip recurved, distant from the base.

In A the posterior border of the lateral tooth slopes obliquely to the basal margin of the thorax.

In this section I find one species belonging, **SYMMETRICUS** Hald., to which must be referred as synonyms *pictus* (Pl. II, fig. 2), and *angulatus* Lec., the former being a very perfectly marked specimen, the latter contains those with the markings suffused.

In B the tooth is acute, spiniform at tip and recurved, the thorax rather suddenly constricted behind it so that the posterior border of the tooth does not approach the base obliquely.

The species are more numerous than in A and in this respect reverse the condition of the Amazon forms.

Elytra fasciate.

The fascia behind the middle, incomplete, broadly interrupted by the suture.

(Pl. II, fig. 3).....**signatus** Lec.

The fascia broad, black and entire, oblique on each elytron, tip not black.

(Pl. II, fig. 4).....**querci** Fitch.

The fascia broad, black and entire, transverse, the apex also black.

(Pl. II, fig. 5).....**facetus** Say.

Elytra cinereous, maculate on each with six round black spots, thorax with four spots. (Pl. II, fig. 6).....**regularis** Lec.

*L. symmetricus* Hald., makes the nearest approach to *Liopus*. The other species, *querci* and *facetus* particularly, lead to *Hyperplatys*.

### **HYPERPLATYS** Hald.

In well preserved specimens the antennæ are distinctly fimbriate beneath. The pro- and mesosternum are narrow as in *Lepturges*. The elytra are flattened on the disc, the sides abruptly declivous and limited by an acute ridge, the tip is obliquely emarginate, the outer angle of the emargination more or less spiniform. The first joint of the hind tarsi is as long as the three following together.

This genus is more closely related to *Lepturges* than to *Liopus* near which Lacordaire places it, and whether *Lepturges* is really distinct can only be determined by a study of Mr. Bates species.

The species as at present known are distinguished in the following manner:

Body above maculate.

Elytra twice as long as wide at base. Antennæ in both sexes twice (or more), as long as the entire body.....**aspersus** Say.

Elytra broader, not twice as long as wide. Antennæ even in ♂ not twice as long as the body.....**maculatus** Hald.

Body above black.

Elytra as in *maculatus*, the outer angle of the tip prolonged in a longer spine.

Antennæ not twice as long as the body.....**femoralis** Hald.

The last may possibly be a variety of *maculatus*.

### Group III.—*Acanthocini*.

There is no character separating this group from the *Liopi* except the presence of an ovipositor in the female.

The genera here admitted do not differ from those given in the "Classification" (p. 339), except the removal of *Mecotetartus* (*Eutesus*) and the division of *Graphisurus*.

They may be known as follows:

Body above with erect hairs beside the pubescence.

Mesosternum broad; antennæ not much longer than the body and not ciliate beneath except feebly on the scape.....**Urographis** n. g.

Mesosternum narrow; antennæ twice as long as the body and very slender, ciliate beneath.....**Graphisurus**.

Body above without erect hairs.

Mesosternum moderate; antennæ very long, joints 3—4 at least, densely fringed beneath with short hairs.....**Acanthocinus**.

The first two genera belong to the Atlantic region, the last has representation on both sides of the Continent.

#### **UROGRAPHIS** n. g.

The species here included are those which form the genus *Graphisurus* as defined by Lacordaire and all authors who have preceded him since the time of Kirby. Many of the differences between this and the true Kirbyan genus have already been given, others are as follows:

Antennæ moderately robust, nearly equal in the sexes, very little longer than the body, joints 3—11 gradually decreasing in length, the first and third with a few ciliæ beneath. Prosternum moderate in width, channeled, mesosternum broad, slightly dilated at tip and emarginate. Elytra emarginate at tip. Thorax angulate at the sides a little behind the middle, not prolonged in a spine.

Females with a moderately long ovipositor, the fifth ventral segment also prolonged to an extent nearly equal to the ovipositor and deeply cleft (*fasciata*), or triangularly emarginate (*triangulifera*).

The males of *fasciata* have the anterior and middle tarsi broader than in the female and ciliate at the sides, while the tarsi do not especially differ in *triangulifera*.

**U. triangulifera** Hald., Trans. Am. Phil. Soc. x, p. 45; Lec. Journ. Acad. 1852, ii, p. 174.

Ohio to Missouri, Georgia and Texas.

**U. fasciata** De Geer, Mém. v, p. 114, pl. 14, fig. 7; Lec. loc. cit. p. 175; *despectus* Lec. Agass. Lake Superior, p. 234; *pusillus* ‡ Lec. Journ. Acad. 1852, ii, p. 175.

The form known as *despectus* (*pusillus* ‡), is the smaller form with the anterior oblique dark band wanting.

Very widely distributed.

#### **GRAPHISURUS** Kby.

There is no genus in the present tribe about which there is as much misconception and real error as the present. The mistake has doubtless arisen from an erroneous determination of Kirby's typical species and to make further remarks clear I copy his description:

224. ACANTHOCINUS (*Graphisurus*) PUSILLUS Kirby. Length of body  $4\frac{1}{2}$  lines. A single specimen taken in the journey from New York to Cumberland House. This species is one of the most minute of the Capricorn tribes. Body linear, black, but covered with a coat of whitish decumbent hairs, which appears more or less sprinkled with black dots. Head longitudinally channeled; antennæ mutilated in the specimen but those joints that remain are white at the base; prothorax short, armed on each side towards the base with a short sharp spine, punctured with scattered punctures; elytra punctured especially towards the base, mottled and speckled with brown, with an oblique band a little beyond the middle, apex of the elytra rounded; podex and hypopygium, or last dorsal and ventral segments of the abdomen elongated, so as to defend the base of the ovipositor which is exerted, causing the insect to appear as if it had a tail; the hypopygium is emarginate; thighs much incrassated at the apex.

The size of the above described insect, the armature of the thorax, the oblique mark posteriorly, and the entire apices of the elytra and the ovipositor exerted, are all characters to which but one species in our fauna responds, *Liopus biguttatus* Lec., and this would have been referred to its correct position had Dr. Leconte known the female.

Accepting this as Kirby's type of the genus, the other species must be known by a new generic name and Lacordaire's description must be taken to apply to the latter.

In brief GRAPHISURUS is in all respects a *Lepturges* in which the lateral spine of the thorax is at a distance from the base, sharp and recurved, the elytra with sparsely placed erect hairs, and the female with an ovipositor about one-third the length of the body.

The antennæ are ciliate beneath, the pro- and mesosternum narrow and the first joint of hind tarsus elongate. In the male the antennæ are fully twice the length of the body, joints 3—7 equal in length, 8—11 gradually increasing, while in the female the antennæ are one and a half times the length of the body, the joints 3—11 equal in length. The male femora are also more clavate than in the female.

In the other two species until now included in *Graphisurus*, the antennæ are but little longer than the body in either sex and with few ciliæ on the first and third joints beneath, the joints 3—11 gradually decreasing in length as in *Leptostylus*, and from the comparative feebleness of the thoracic spine I consider these as forming a genus in this group parallel with *Leptostylus*, while *Graphisurus* is the parallel of *Lepturges*, in the *Liopi*.

**G. pusillus** Kby., Fauna Boreali-Americana iv, p. 169; *biguttatus* (*Liopus*) Lec. Journ. Acad. 1852, ii, p. 172.

Occurs from Canada to Pennsylvania, not common.

**ACANTHOCINUS** Steph.

This genus reproduces the characters of *Urographis* in great part but differs in the following :

Antennæ one-half longer than the body ♀, three times as long in the ♂ or even longer, joints 3—4 and in some the next two hairy beneath. Thorax with a moderately strong spine at the side a little behind the middle. Elytra without erect hairs, clothed with the usual recumbent pubescence.

The males have an additional, exsert, dorsal, abdominal segment, valve-like, broader at tip and emarginate, the normal fifth segment is triangularly emarginate as in the other genera of this group. This additional segment is less exsert in *nodosus*. In the other two genera the segment may be seen but is always retracted.

The antennæ of the male present two forms, the one in which the joints are simple, the other with the fourth (*nodosus*), or fifth (*spectabilis*), joint dilated within at its tip. In the female the joints 3—11 are nearly equal in length but there is a great variation in the males. In some of the latter, although the antennæ may be much longer than the body, the joints 3—11 are also nearly equal, but in others, particularly those with very long antennæ, the four outer joints are much longer. This is especially observable in *nodosus* and *spectabilis*.

As already observed by Dr. Leconte our species seem to tend toward *Eutrypanus*. In fact one of them has been re-described under that name.

Our species are four in number and separate very easily in the following manner :

Elytra punctured beyond the middle. Antennæ of ♂ not nodose.

Elytra not distinctly costulate.....**obsoletus** Oliv.

Elytra distinctly tricostulate.....**obliquus** Lec.

Elytra scarcely at all punctured beyond the middle. Antennæ ♂ nodose.

Elytra coarsely punctured at base, surface with three dark oblique bands.

**spectabilis** Lec.

Elytra feebly punctured at base, surface with linear and arrow-shaped velvety spaces.....**nodosus** Fab.

The first two are smaller species, the last two large.

Their distribution is as follows :

A. **OBSOLETUS** widely distributed in the northern part of the Atlantic region.

A. **NODOSUS**, Middle States to Florida.

A. **OBLIQUUS**, Kansas, New Mexico, Utah and California.

A. **SPECTABILIS**, New Mexico to Oregon and Vancouver.



This last follows the distribution of *Melanophila miranda*, *Asida elata* and several *Eleodes*; *Eutrypanus princeps* Walker, Nat. in Vanc. ii, p. 331, is synonymous with it.

In consequence of the changes in synonymy caused by the preceding review, it has been thought best to place the species in the clearest possible light by a complete synonymical list which gives at a glance the result of the study. Certain errors have been observed in the "Catalogus" of Gemminger and Harold, which are noted in the proper places.

### Bibliography and Synonymy.

#### ACANTHODERES Serv.

- A. quadrigibba** Say, (*Acanth.*), Bost. Jrn. 1835, p. 195; Lec. Jrn. Ac. ser. 2, ii, p. 175.  
**A. peninsularis** n. sp.  
**A. decipiens** Hald. (*Ægomorphus*), Tr. Am. Phil. Soc. x, 1847, p. 45; Lec. l. c. p. 176.  
**A. Morrisi** Uhler, Proc. Acad. 1855, p. 417.  
*leucogenus* Thoms. (*Æthiopoctines*), Physis. i, 6, p. 148.

#### LAGOCHIRUS Erichs.

- L. araneiformis** Linn. (*Cerambyx*), Syst. Nat. ed. xii, p. 625.  
**L. obsoletus** Thoms. Class. Longic. 1860, p. 10.

#### CÆNOPEUS n. g.

- C. Palmeri** Lec. (*Leptostylus*), New Species, 1873, p. 233.

#### LEPTOSTYLUS Lec.

- L. aculifer** Say, (*Lamia*), Jour. Ac. 1823, p. 329; Lec. Jour. Ac. ser. 2, ii, p. 168.  
*tuberculatus* Fröhlich, Naturf. 29, 1832, p. 123, pl. 3, fig. 13.  
*transversus* Gyll. Schönh. Syn. Ins. i, 3, p. 164.  
*asperatus* Hald. Trans. Am. Philos. Soc. x, p. 47.  
*albescens* Hald. loc. cit. p. 46, (a white form).  
*marginellus* Hald. loc. cit. p. 47.  
**L. argentatus** Duval, Hist. de Cuba vii, 273; Chev. Ann. Ent. Soc. Fr. 1862, 247.  
**L. terræcolor** n. sp. (Newm. *in litt.*)  
**L. planidorsus** Lec. New Species, 1873, p. 233.  
**L. nebulosus** n. sp.  
**L. arcuatus** Lec. Proc. Am. Philos. Soc. 1878, p. 414.  
**L. parvus** Lec. New Species, 1873, p. 234.  
**L. biustus** Lec. Journ. Acad. ser. 2, ii, p. 169.  
**L. albidus** Lec. loc. cit. p. 168.  
**L. commixtus** Hald. (*Amniscus*), loc. cit. p. 47; Lec. loc. cit. p. 169.  
*? sexquittata* Say, (*Lamia*), Journ. Acad. v, 1825, p. 269.  
**L. collaris** Hald. (*Amniscus*), loc. cit. p. 46.  
*interruptus* Hald. loc. cit. p. 48.  
**L. perplexus** Hald. (*Amniscus*), loc. cit. p. 46; Lec. loc. cit. p. 169.  
**L. macula** Say, (*Lamia*), Journ. Acad. v, 1827, p. 268; Lec. loc. cit. p. 169.  
*sticticus* Hald. loc. cit. p. 48.

#### LIOPUS Serv.

- L. variegatus** Hald. (*Amniscus*), loc. cit. p. 47; Lec. loc. cit. p. 172.  
*v. obscurus* Hald. et *v. trifasciatus* Hald. loc. cit.  
**L. Wiltii** n. sp.

- L. crassulus** Lec. (*Sternidius*), New Species, 1873, p. 235.  
**L. fasciularis** Harris, (*Lamia*), Trans. Hartf. Soc. Nat. Hist. i, p. 88.  
*xanthoxyli* Shimer, Trans. Am. Ent. Soc. ii, p. 7, (incorrectly quoted in Catalogus p. 3155).  
**L. alpha** Say, (*Lamia*), Journ. Acad. v, 1827, p. 270; Lec. Journ. Acad. 1852, p. 172.  
*lateralis* Hald. (*Amniscus*), loc. cit. p. 48.  
*vicinus* Hald. loc. cit. p. 49.  
*divergens* Hald. loc. cit. p. 47.  
*misellus* Lec. *rusticus* Lec. loc. cit. p. 173.  
**L. cinereus** Lec. loc. cit. p. 173.  
**L. punctatus** Hald. (*Amniscus*), loc. cit. p. 49, (incorrectly quoted in Catalogus p. 3152).  
**L. Haldemani** Lec. loc. cit. p. 173.  
**L. ? dorsalis** White, Brit. Mus. Catal. 1855, p. 382, (doubtful).

**MECOTETARTUS** Bates.

- M. antennatus** Bates, Trans. Ent. Soc. London, 1872, p. 213.  
*asper* Lec. (*Eutessus*), New Species, 1873, p. 235—236.

**DECTES** Lec.

- D. spinosus** Say, (*Lamia*), Journ. Acad. 1827, p. 271; Lec. Journ. Acad. 1852, p. 144, (quoted under *Liopus* also in Catalogus p. 3155).  
*texanus* Lec. Proc. Acad. 1862, p. 39.

**LEPTURGES** Bates.

- L. symmetricus** Hald. (*Liopus*), loc. cit. p. 50; Lec. Journ. Acad. 1852, p. 171.  
*v. confluens* Hald. loc. cit. p. 50.  
*v. pictus* Lec. *v. angulatus* Lec. loc. cit. p. 172.  
**L. signatus** Lec. (*Liopus*), loc. cit. p. 171.  
**L. querci** Fitch, Trans. N. Y. State Agric. Society, 1858, p. 796.  
**L. facetus** Say, (*Lamia*), Journ. Acad. v, 1827, p. 271; Lec. loc. cit. p. 171.  
**L. regularis** Lec. (*Liopus*), Proc. Acad. 1862, p. 39.

**HYPERPLATYS** Hald.

- H. aspersus** Say, (*Lamia*), Journ. Acad. iii, 1823, p. 330; Lec. Journ. Acad. 1852, p. 171.  
**H. maculatus** Hald. loc. cit. p. 49; Lec. loc. cit. p. 170.  
*v. nigrellus* Hald. loc. cit. p. 49.  
**H. femoralis** Hald. loc. cit. p. 49; Lec. loc. cit. p. 171.

**UROGRAPHIS** n. g.

- U. triangulifera** Hald. (*Acanthoderes*), loc. cit. p. 45; Lec. (*Graphisurus*), loc. cit. p. 174.  
**U. fasciata** De Geer, (*Cerambyx*), Mem. v, 1775, p. 114, pl. 14, fig. 7; Lec. (*Graphisurus*), loc. cit. p. 175.  
*mixtus* Fab. Ent. Syst. Suppl. p. 144.  
*pensylvanicus* Gmel. ed. Linn. i, 4, p. 1863.  
*despectus* Lec. Agassiz Lake Super. p. 234.  
*pusillus* ‡ Lec. Journ. Acad. 1852, p. 175.

**GRAPHISURUS** Kby.

- G. pusillus** Kby. Fauna Bor. Am. iv, p. 169.  
*biguttatus* Lec. (*Liopus*), loc. cit. p. 172.

**ACANTHOCINUS** Steph.

- A. obsoletus** Oliv. (*Lamia*), Ent. iv, 67, p. 130, pl. 13, fig. 90; Lec. (*Aedilis*), loc. cit. p. 174, (quoted in *Graphisurus* in Catalogus p. 3160).  
**A. obliquus** Lec. (*Aedilis*), Proc. Acad. 1862, p. 39.  
**A. spectabilis** Lec. (*Aedilis*), Pr. Ac. 1854, p. 82; Col. Ks. 1859, p. 22, pl. 2, fig. 16. *princeps* Walker, (*Eutrypanus*), Nat. in Vanc. 1866, ii, p. 331.  
**A. nodosus** Fab. (*Lamia*), Syst. Ent. p. 164; Ol. Ent. iv, 67, p. 75, pl. 14, fig. 103; Lec. (*Aedilis*), Journ. Acad. 1852, p. 174.  
*bifidator* ♀ Fab. Syst. El. ii, p. 286.

**CEME** Newm.

**O. striangulata** n. sp.—Piceous, subopaque, pubescence very short and inconspicuous. Head densely punctured, thorax a little wider than long, sides divergent from the apex, and at apical fourth suddenly tubularly constricted, the angles in front of constriction broadly rounded, disc feebly convex, a very short median line in front terminating in a transverse impression in front of the middle which is limited behind by a transverse plica, surface densely punctured. Elytra not wider than the thorax, surface with three feebly elevated lines on each and densely finely punctured. Body beneath moderately densely punctured. Length .76 inch; 19 mm. (Pl. II, fig. 7).

The specimen before me is a male, the antennæ are a little longer than the body, the scape is moderately stout and finely tuberculate, joints 3—6 are armed beneath with small acute spines although very small on the sixth joint. The abdomen is very small and much retracted, the last segment broadly emarginate.

One specimen, Parowan, Utah; Dr. Edward Palmer.

The thoracic sculpture, as well as its form, distinguishes the species of *Ceme*, as follows:

**O. RIGIDA** Say, has the thorax densely punctured, a moderately impressed median line.

**O. COSTATA** Lec., has the thorax punctured and with a smooth median vitta.

**O. STRANGULATA** Horn, has the thorax very much more suddenly constricted, and a transverse impression and plica on the disc.

**ÆTHECERUS** Chev.

The type of this genus is the species described by me as *Arhopalus Wilsonii*, (Proc. Acad. 1860, p. 570, pl. viii, fig. 4), to which Lacordaire (Genera ix, p. 184), has added a second, while a third remains to be described. They are as follows:

Thorax broader than long, elytra truncate at tip.

Elytra feebly shining, the punctures near the apex not densely placed.

Thorax not maculate..... **Wilsonii** Horn.

Elytra opaque, punctures near the apex very fine and very densely placed.

Thorax with two discal black spots..... **Hornii** Lac.

Thorax as long as broad, elytra rounded at tip..... **latecinctus** n. sp.

The first two species resemble each other very closely but the second has the bands narrower, the posterior more oblique and rather widely bordered with very dark brown or nearly black. In both the antennæ are pale brown. They are best distinguished by the characters given in the table. It may also be noticed that the antennal tubercles are strong in *Wilsonii*, and almost wanting in *latecinctus*, and very feeble in *Hornii*.

**Æ. latecinctus** n. sp.—Dark brown, sparsely clothed with fine pubescence, elytra with a broad basal and a median transverse band yellow. Antennæ slender, brownish, each joint darker at tip. Thorax globose, truncate at apex and base, as long as wide, densely punctured. Elytra obtusely rounded at tip, rather coarsely and densely punctured, a broad yellow basal band, sometimes interrupted by the suture, usually joining the epipleuræ and extending backward, a second broad band at middle, transverse and usually narrowed at the suture. Body beneath paler than above and sparsely pubescent. Legs brownish ♀ or piceous ♂. Length .40—.42 inch; 10—10.5 mm.

Much smaller than the other species. The male has very slender twelve-jointed antennæ which are more than twice the length of the body, those of the female are eleven-jointed and not longer than the body.

Collected at Tucson, Arizona, and given me by Mr. Henry Edwards.

*A. Wilsonii* Horn, occurs in Texas; *Hornii* Lac., in Florida.

#### CYLLENE Newm.

Antennæ with joints 3—5 spinous at tip.

Thorax and abdomen uniformly pubescent. Prosternum wide between the coxæ but not prolonged. Tip of elytra acutely spinous...**antennatus**.

Antennæ not spinous. Thorax black with yellow bands. Abdomen more densely pubescent at sides, feebly at middle.

Prosternum wide between the coxæ, dilated at tip and more or less emarginate, prolonged and meeting the mesosternum and slightly overlapping it. (Pl. II, fig. 8 e).

Elytra acutely prolonged at tip.....**crinicornis**.

Prosternum moderate, not prolonged, the tip truncate.

Second joint of hind tarsus glabrous at middle, antennæ of male longer than the body.

Prosternum between the coxæ longer than wide. (Pl. II, fig. 8 g).

**pictus**.

Second joint of hind tarsus densely pubescent, antennæ not longer than the body.

Prosternum rather widely separating the coxæ, being as broad as long and as wide as the coxal cavity. (Pl. II, fig. 8 f)....**robiniae**.

Prosternum longer than wide, not as wide at its middle as the coxal cavity. (Pl. II, fig. 8 g).....**decorus**.

The above table is the result of a study of the species known to inhabit our territory.

**C. antennatus** White = *eurystethus* Lec.

This is easily known by the spinous antennæ and the uniform pubescence of the thorax. The elytra are obliquely truncate at tip, the outer angle prolonged in a slender spine, the markings of the surface are a modification of that of the other species in which the W-shaped band and the second behind it are preserved, the others are either feebly indicated or entirely wanting. The under surface is densely clothed like the thorax. The prosternum is broader than long and slightly prolonged at tip meeting the mesosternum but not overlapping it. The third joint of the posterior tarsi is densely pubescent beneath.

This species occurs in Arizona, and lives in Mesquit wood.

**C. crinicornis** Chev.—Black, antennæ and feet rufous. Head with yellowish pubescence on the front and line at the occiput, front obtusely carinate. Thorax broader than long, sides arcuate and gradually broader behind, suddenly narrowed at base, the hind angles very distinct, surface black with narrow yellow lines, the first at apex, two at middle, one basal and a short line on each side at the hind angles which join the basal. Elytra gradually attenuate behind, tip obliquely truncate, the outer angle very acute, surface black with yellow transverse bands very much as in *robinæ* which are broken forming small spots. Body beneath pubescent at sides only, abdomen sparsely punctured and glabrous at middle. Prosternum prolonged and dilated behind the coxæ, broadly emarginate at tip, meeting and slightly overlapping the mesosternum which is abruptly vertical in front. Length .48—.84 inch.

This species reproduces exactly the markings of *C. erythropus* Chev., but differs in the form of the prosternum. In the latter species the prosternum is truncate at the posterior margin of the coxæ and not at all prolonged. It may however be synonymous with one of the other species described from Mexico, or with *difficilis* Chev., from Cuba, but no mention is made of the remarkable character above named except by Lacordaire, (Genera vol. ix, p. 62, note), who observed it in *C. proximus* L. et G. from Chili, with which ours is not likely to be identical. Supposing it new I had given it a name calling attention to this character, but its identity was made known to me by Mr. Sallé.

Occurs in California (southeast), Sonora, Arizona, Texas, Louisiana and Nassau N. P.

*C. erythropus* Chev., is not yet known to me as an inhabitant of our fauna. It has the thorax suddenly constricted as in *crinicornis* but the prosternum is as in *pictus*.

**C. pictus** Drury.

The prosternum is longer than wide, truncate at tip and not prolonged. The second joint of hind tarsus glabrous at middle. The elytra are obliquely truncate at tip but not prolonged. The antennæ

of the male are always longer than the body resembling in this respect *antennatus*.

Lives in Hickory wood and appears early in the Spring, and is abundant wherever that tree occurs and is often very destructive.

**C. robiniae** Forst.

Closely resembles *pictus* in form and coloration but differs in the antennal characters of the male and the structure of the hind tarsi. The prosternum is as broad as long being wider than in *pictus* and also truncate at tip. The legs are also shorter than in that species, the hind thighs not reaching the tip of the abdomen in the male.

Infests Locust wood (*Robinia pseud-acacia*), and appears in the Autumn. I have seen a variety of this species with the W-shaped band entirely obliterated.

**C. decorus** Oliv., *charus* Say, *infaustus* Lec., *brevipennis* Lec.  
*var. lutosus* Lec.

An extremely variable species which, with the mass of material before me, is not capable of division.

In the above synonymy *brevipennis* is doubtless a specimen captured immediately after its emergence from the wood, its abdomen is soft and elongate and from the markings belongs to the *infaustus* type; *lutosus* seems to be an *infaustus* in which the yellow bands cover the entire surface and have no black.

Two forms remain which, for convenience in description, may be considered varieties although not specifically separable.

Var. *infaustus* Lec.—The elytra are fasciate after the type of *pictus*, but the yellow bands are all wider and are arranged in the following manner: (1) base of elytra narrowly yellow, (2) a subbasal transverse band, these two very narrowly separated and sometimes confluent, behind these (3) a W-shaped band, then (4) a transverse band of irregular outline extending forward along the suture, behind this a broader (5) transverse band, then at apex two (6—7) others narrowly separated. (Pl. II, fig. 8 a, is a feebly marked form).

These bands often become confluent by becoming gradually broader, so that bands 1—2—3 form a broad basal yellow space. Band four then disappears and we have the variety *charus*. Again the first three bands remain separated with the fourth absent, or bands 1—4 may become confluent and from this the entire surface becomes yellow as in *lutosus*.

This species extends from the Southern States to Kansas and Colorado, in both varieties.

**SICYOBIUS** n. g.

Head subretractile, front slightly convex, vertex nearly flat, antenniferous tubercles not prominent. Eyes moderately granulated, entirely divided, the two portions joined by a dark line without lenses, upper division broadly crescentic, the lower larger, as broad as long. Antennæ very little longer than half the body, pubescent but not ciliate, first joint conical constricted at base, second about one-third the length of the first, third a very little longer than the first two together, fourth one-third shorter than the preceding, joints 5—10 very gradually decreasing, eleventh acute not longer than the tenth, joints 5—11 together a little longer than three and four together. Thorax cylindrical, sides slightly arcuate. Scutellum transverse. Elytra a little wider than the thorax, humeri obtuse, form elongate, apices obliquely truncate. Anterior coxæ subglobular, moderately separated by the prosternum the tip of which is not prominent, the coxal cavities not angulate externally. Mesosternum moderately broad, convex in front, the coxal cavities open externally. Metasternal episterna very narrow. Femora slightly thickened, the posterior not longer than the first two abdominal segments. Middle tibiæ sinuate externally. Tarsi nearly as long as the tibiæ, the first joint nearly as long as the next two together. Claws divergent.

With these characters a genus is defined possessing all the essential characters of the group *Apomecynides* of the true *Lamiæ*, excepting that the anterior coxæ are not angulate externally and differs from all the genera of that group by the eyes being entirely divided. In the arrangement proposed by Dr. Leconte it would enter the tribe *Hippopsini*, from all of the genera of which it differs by the short antennæ and divided eyes.

**S. Brousi** n. sp.—Cylindrical moderately elongate. Thorax a little longer than wide, cylindrical, slightly expanded at middle, apical margin slightly arcuate, disc coarsely and deeply punctured. Elytra a little wider than the thorax, humeri obtuse, sides feebly arcuately narrowed to apex which is obliquely truncate, surface with rows of punctures which are all rather coarse but alternating in size. Body beneath and legs clothed with cinereous pubescence, denuded forming small black spots. Body above clothed with pale ochreous pubescence, denser at the sides of the thorax and on the elytra with small spots of white, two patches of which are somewhat larger and form slight oblique bands one between the middle and base, the other behind the middle. Length .26—.40 inch; 6.5—10 mm. (Pl. II, fig. 9).

The general form of this insect is that of *Ataxia crypta*, without the thoracic spines.

Several specimens from western Kansas, taken on the Wild Gourd (*Cucumis perennis*), by Dr. H. A. Brous, after whom I take great pleasure in naming it. To him we are indebted for our first knowledge of the habits of *Amblychila*.

**IDCEMEA** n. g.

Eyes coarsely granulated, narrowly separated on the vertex widely beneath, deeply emarginate, the upper portion much smaller. Front vertical broader above, vertex deeply impressed forming two antennal tubercles. Antennæ ♂

a little longer than the body, slender, eleven-jointed, above and beneath hairy, first joint moderately stout, cylindrical, suddenly constricted at base, a small dentiform process in front at tip, second joint very short, joint three moderately long, one-third longer than the first, 4—11 gradually shorter and more slender. Labrum distinct, short, transverse. Mandibles short, obtuse at tip. Palpi unequal, maxillary longer, last joint of both oval and pointed. Thorax cylindrical, slightly stouter at middle. Anterior coxæ prominent, conical, contiguous, the cavities open behind, middle coxæ conical, contiguous, posterior coxæ slightly separated. Anterior tibiæ obliquely sulcate, middle and posterior simple. Tarsi slightly dilated, clothed with silken pubescence beneath, first joint as long as the next two together. Claws divaricate. Ventral segments cylindrical, gradually decreasing in length. Elytra nearly as long as the abdomen.

The above generic name is proposed for a species of gigantic size for the tribe allied to *Styloxus* Lec., with which it agrees in most of its characters, but differs in the longer and more vertical front more deeply impressed on the vertex, terminating above in obtusely conical tuberosities from which the antennæ arise. The eyes are also smaller being very evidently separated on the vertex and rather widely separated on the under side. The parts of the mouth are also better developed than in the other genera of the tribe although by no means large.

**I. Fulleri** n. sp.—Brownish testaceous, elongate, subcylindrical, sparsely clothed with pale brownish pubescence. Thorax cylindrical, slightly dilated at middle, one-fourth longer than wide, a slight oblique impression on each side near the base, vague traces of three smooth discal lines, surface coarsely punctured. Elytra wider than the thorax, coarsely punctured, gradually narrowed to apex, apices separately rounded. Body beneath and legs piceous, femora paler at base. Length .66 inch; 16.5 mm. (Pl. II, fig. 10).

One specimen from Texas, kindly given me by Mr. A. S. Fuller, to whom I take great pleasure in dedicating it.

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## EXPLANATION OF PLATE II.

- 1.—*Cænopæus Palmeri* Lec.
- 2.—*Lepturges symmetricus* Hald., var. *pictus* Lec.
- 3.— “ *signatus* Lec.
- 4.— “ *querci* Fitch.
- 5.— “ *facetus* Say.
- 6.— “ *regularis* Lec.
- 7.—*Æme strangulata* Horn.
- 8.—*Cyllene decorus* Oliv., var. *a*, *infaustus* Lec.; *c*, *charus* Say; *e*, prothorax beneath of *crinicornis*; *f*, *robinia*; *g*, *pictus* and *decorus*.
- 9.—*Sicyobius Brousi* Horn.
- 10.—*Idæmea Fulleri* Horn.

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*Erratum.*—On page 133, for **O. striangulata** read **O. strangulata**.



