

## SOME INJURIOUS NEOTROPICAL WEEVILS (CURCULIONIDAE).

By GUY A. K. MARSHALL, C.M.G., D.Sc.

(PLATES I &amp; II.)

Subfamily OTIORRHYNCHINAE.

Genus *Apodrosus*, nov.

The species for which this genus is proposed is closely allied to *Polydrusus*, Germ., and agrees with it in all its more salient characteristics; but it differs from all the species of that genus known to me in the following points:—The head bears a long, deep median furrow; the epistome forms a large bare smooth triangular area, which is well defined and in no way impressed, but even slightly convex; the elytra have a prominent posterior callus, and the ninth and tenth striae coalesce in the middle for one-third of their length.

Genotype, *Apodrosus wolcotti*, sp. n.

*Apodrosus wolcotti*, sp. n. (Plate i, fig. 7).

♂♀. Integument black or dark piceous, fairly closely covered above with small, near circular, pinkish buff scales having a distinct coppery sheen; the elytra sometimes with an indefinite narrow band of dark brown scales behind the middle between striae 3 and 6; the lower surface with coppery grey scaling along the sides of the sternum and venter, the median area with sparse short curved pale squami-form setae.

*Head* very finely and obliquely aciculate; the forehead quite flat, its least breadth about equal to the length of an eye, and with a deep median furrow extending backwards to the level of the hind margins of the eyes; the eyes elongate, longitudinal, prominent, coarsely faceted and with their greatest depth behind the middle. *Rostrum* comparatively long, a little longer than the head and much longer than its own basal width, and strongly dilated in the apical half; the dorsum very convex transversely, finely rugulose, with a broad median furrow in the basal half; the epistome comparative large, not at all impressed, but slightly convex, and shallowly punctate; the scrobes very deep, narrow and remote from the eyes. *Antennae* testaceous brown, long and slender, the distal joints of the funicle much longer than broad. *Prothorax* transverse, subparallel-sided or very slightly widening from the base to beyond the middle, and then rapidly narrowing to the apex; the dorsum with coarse subconfluent shallow punctures, which are partly concealed by the scaling, and with a broad shallow transverse depression near the apex; the scaling not so dense as to conceal the integument entirely, and interspersed with recumbent spatulate setae; the prosternum longer than usual in front of the coxae. *Scutellum* with sparse minute setae. *Elytra* broadly ovate in ♀, much narrower in ♂, much wider at the shoulders than the prothorax, with a prominent posterior callus at the apex of interval five; the striae containing large shallow punctures, the intervals (when not abraded) much broader than the striae and plane or slightly convex, each bearing a row of short curved spatulate setae. *Wings* fully developed. *Legs* piceous, with rather sparse scales and spatulate setae; the femora unarmed.

*Length*, 3.5–5 mm.; *breadth*, 1.6–2.4 mm.

PORTO RICO: Rio Piedras, iv. 1921 (*G. N. Wolcott*).

Described from ten specimens.

*Diaprepes capsicalis*, sp. nov.

♂♀. Integument black or piceous, fairly densely clothed above and below with brown or brownish grey scaling, often with a coppery reflexion; the elytra with a pale dot about the middle of interval five.

*Head* with the eyes much longer than broad, flattened, the space between the narrower than that between the antennae. *Rostrum* much longer than broad, the dorsum somewhat flattened in the middle, the edges of the flattened area converging behind and sometimes feebly costate, but always vanishing well before the base; an elongate impression on each side in front of the eye. *Antennae* with the scape scarcely reaching the base of the eye; the funicle with joint 2 distinctly longer than 1, the apical joints much longer than broad and clavate. *Prothorax* transverse, with the sides parallel (♂) or slightly converging (♀) from the base to beyond the middle, then narrowing rapidly to the apex; the postocular vibrissae consist of only three or four very short setae and sometimes apparently absent; the dorsum with rugose shallow confluent punctures, slightly flattened on the basal half of the disk, and with a very shallow median furrow on the anterior half; the scaling slightly less dense on the dorsum than on the pleurae. *Elytra* ovate, much broader at the shoulders than the prothorax, almost parallel-sided to beyond the middle, acuminate behind, with the apices usually slightly divergent, the shoulders rounded obtusangulate, the basal margin between the scutellum and shoulder gently curved; the dorsal profile rising gently from the base and highest far behind the middle, the posterior declivity with a slope of about 70°; the punctures rather coarse, the rows fairly regular in the basal half in the ♀, less so in the ♂, and mostly irregular behind the middle in both sexes; the scales very small, nearly circular and fairly closely placed, interspersed with minute recumbent setae, which are longer and form regular rows posteriorly; the punctures each containing a small, usually greenish, scale. *Legs* densely squamose and with numerous subrecumbent stout white setae; all the tibiae with widely spaced denticles on the inner edge.

*Length*, 8–12 mm.; breadth, 3.25–5.5 mm.

PORTO RICO: Rio Piedras, vii. 1917 (R. T. Cotton).

Described from 24 specimens.

In spite of the evanescent prothoracic vibrissae, this distinct species is placed in *Diaprepes* rather than in *Exophthalmodes* on account of the second joint of the funicle being distinctly longer than the first, and because the mentum bears four setae in a transverse row.

Mr. Wolcott states that the adult of this species has been observed feeding on the leaves of pepper (*Capsicum*).

### ***Exophthalmodes roseipes*, Chev.**

Chevrolat (Bull. Soc. Ent. France (5), vi, 1876, p. ccxxvii) described this species as a *Pachnaeus*, but it is unquestionably an *Exophthalmodes*.

Mr. G. N. Wolcott notes that the adults attack the leaves of cotton at Isabel, Porto Rico, but states that the species is more abundant on citrus trees.

### ***Lachnopus coffeae*, sp. nov. (Plate i, fig. 8).**

♂♀. Integument piceous, with the legs, antennae and apex of the rostrum reddish brown; clothed above and below with small, convex, shiny, subcircular or very shortly ovate, white scales, which are mostly not contiguous, but more closely set behind and there, leaving much of the integument exposed; the median area of the prothorax with very few scales, and on each side of it a more condensed but indefinite strip and a similar one just above the coxae, which continues across the mesosternum and broadens out on the metasternum; the elytra usually with three very irregular transverse subdenuded patches, sub-basal, median and postmedian, and sometimes a small one on the declivity.

Form very narrowly ovate. *Head* with sparse squamigerous punctures between the eyes, those on the forehead being more numerous, and with a shallow median

fovea. *Rostrum* about as long as the head, slightly narrowed from the base to the middle, markedly dilated at the apex, and the dorsal outline rather strongly curved; fairly closely set with non-contiguous scales, and with a short median furrow between the antennae; the rostrum of ♀ a little shorter and stouter than that of ♂. *Antennae* with the scape reaching or slightly exceeding the hind margin of the eye; joint 1 of the funicle a little longer but much stouter than 2, 3 shorter than 2 and longer than 4, and 4-7 subequal. *Prothorax* slightly broader than long, the sides very rounded, distinctly narrowed but not constricted in front, and the basal margin subtruncate and somewhat raised in the middle; the dorsum rather coarsely and more or less confluent punctate, the dorsal profile almost flat. *Elytra* very narrowly ovate, much broader than the thorax at the shoulders, which are roundly rectangular, with the sides subparallel to the middle, and the apices separately and obtusely pointed; the shallow striae with large quadrate punctures, which are as broad as the smooth intervals on the disk, but become much smaller behind; each puncture with a minute setae and a few similar ones on the intervals. *Legs* thinly clothed with oval white scales and recumbent setae; all the tibiae finely denticulate internally, the hind pair of the ♂ with the inner face flattened and clothed with long silky hairs.

*Length*, 5.5-6.25 mm.; *breadth*, 1.8-2 mm.

PORTO RICO: Rio Piedras, xi.1921 (*G. N. Wolcott, F. Sein*); Caguas (*G. N. Wolcott*).

Described from nine specimens.

***Lachnopus coffeae montanus*, subsp. nov.**

This upland race differs from the typical coast form in being somewhat larger and having the legs markedly paler; the scales on the upper surface are much sparser

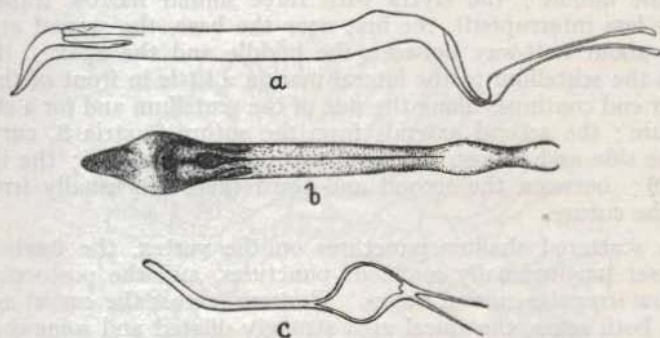


Fig. 1. *Lachnopus coffeae montanus*, subsp. n., male genitalia: a, lateral view of median lobe; b, dorsal view of same; c, tegmen.

and more evenly distributed, and they are also rather smaller and more nearly circular; most of them being very pale blue or bluish white; on the other hand the stripe of white scaling along the side of the sternum is much denser and more sharply defined. There appears, however, to be no reliable structural difference either in the external characters or in the male genitalia.

*Length*, 6-6.75 mm.; *breadth*, 2-2.5 mm.

PORTO RICO: Yauco (mountains), 16.vi.1921 (*G. N. Wolcott*).

Described from two males.

The adults of both forms are recorded as feeding on the young leaves of coffee.

The form of the male aedeagus is shown in fig. 1; the uneverted sac is contained entirely within the median lobe and is covered with asperities for about one-third

of its length; the transfer apparatus is in the form of a small bent chitinous rod the struts of the median lobe are comparatively short and unusually slender and delicate, breaking off very readily in dissection. The vagina of the female is light and irregularly chitinised; the palps are conspicuous (0.26 mm. long), and each bears one or two short setae and two that are about three-fourths the length of the palp; below each palp is a prominence bearing a seta nearly half as long again as the palp, and two very short ones. The bursa copulatrix is about as long as the vagina and twice as long as broad, very lightly and indefinitely chitinised in the anterior (proximal) half, and with irregular darker chitinous stripes in the posterior third.

#### Subfamily LIPARINAE.

##### **Anchonus suillus**, F. (Plate i, fig. 3).

Mr. G. N. Wolcott states that specimens of this species were found in a rotten stump of a castor-oil plant at Rio Piedras, Porto Rico. The attack was probably a secondary one, but as very little is known as to the habits of the species of the genus, it is perhaps worth recording.

The Cuban specimens examined differ only in having a trace of a median cost on the pronotum, which is not likely to be a reliable distinction.

#### Subfamily CHOLINAE.

##### **Cholus watsi**, sp. nov. (Plate i, fig. 5).

♂ ♀. Integument black, thinly clothed above and below with minute hair-like brownish grey scales, with the following markings of much larger narrow white scales: a narrow, rather irregular stripe on each side of the prothorax, and a similar short obliquely-transverse lateral band outside each stripe and uniting with it a little behind the middle; the elytra with three similar narrow transverse bands (often more or less interrupted), the first near the base, the second at the middle and the third about half-way between the middle and the apex; the first runs obliquely from the scutellum to the lateral margin a little in front of the hind corner and at its inner end continues along the side of the scutellum and for a short distance along the suture; the second extends from the suture to stria 8, curving slightly forwards at the side and almost, or quite, uniting with the first; the third extends to stria 8 or 9; between the second and third there are usually irregular white marks along the suture.

*Head* with scattered shallow punctures on the vertex, the forehead flattened and with coarser longitudinally confluent punctures, and the postocular area with a number of low irregular curved ridges. *Rostrum* (across the curve) as long as the front femur in both sexes, the apical area strongly dilated and somewhat flattened in the ♂, subcarinate in the basal half, with very coarse and longitudinally confluent punctures near the base, thence strongly and closely punctate to the antennae and with fine sparse punctures on the apical area; in the ♀, finely and sparsely punctate throughout, except close to the base, and with no trace of a median carina. *Antennae* black; joint one of the funicle a little shorter than 2 and 3, 4-6 as long as broad and bead-like, 7 longer and subconical. *Prothorax* much broader than long, widest near the base and very rapidly narrowed in front, the sides being strongly rounded, the gular margin very feebly sinuate and with a dense fringe of short fulvous setae, the prosternum tuberculate between the coxae; the dorsum closely set with low shiny granules, those between the longitudinal stripes being much flattened and often confluent, the lateral ones more convex. *Scutellum* cordiform, the anterior two-thirds flattened and sloping forwards, the front margin shallowly sinuate in the middle, the surface shallowly punctate and with a few short recumbent setae at the sides and apex. *Elytra* very broadly ovate and obtusely rounded at the apex, with regular rows of shallow punctures separated by transverse shining granules, each of which bears a short seta on its posterior slope; the intervals each bearing a more or less regular

row of round flattened shiny granules, the spaces between the granules dull and thinly clothed with minute hair-like scales; the posterior margin not denticulate. *Legs* with numerous short recumbent pale setae; the femora all with a sharp tooth in both sexes and closely set with flattened, transversely confluent shiny granules; the tibiae with shallow, longitudinally confluent punctures, all uncinat and mucronate at the apex in both sexes, and with a sharp median tooth on the inner edge of the front pair in the ♂ only. *Sternum* set with flattened granules; the intercoxal process of the mesosternum not tuberculate and twice as broad as that of the prosternum.

Length, 16.5–20.5 mm.; breadth, 8–10.5 mm.

LESSER ANTILLES: Grenada (*H. A. Ballou*).

Described from 21 specimens.

The nearest allies of this insect are the Brazilian species, *C. undulatus*, Gyl., and *C. parvus*, Fhs., especially the latter, which is very similar in its general form and sculpturing; but it lacks the thoracic markings and the transverse bands on the elytra, when present, are very indefinite and irregular, the basal one lying actually on the basal margin. But both these species differ, *inter alia*, in the following structural characters: the prosternum is not tuberculate between the coxae; the front femora bear no tooth in either sex; the front tibiae in the ♂ have no median internal tooth; and the front coxae in the same sex each bear a stout spur.

The species is dedicated to Sir Francis Watts, K.C.M.G., Commissioner of the Imperial Department of Agriculture for the West Indies, who forwarded specimens with the information that the insect was doing appreciable damage to pineapples in Grenada.

I am indebted to Mr. H. A. Ballou, Entomologist to the Department, for examples of the larvae (fig. 2) and for the following interesting notes on the species.

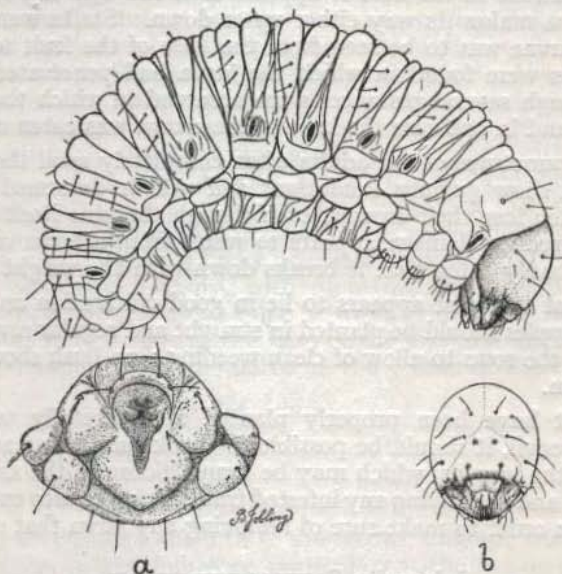


Fig. 2. Larva of *Choluta wattsi*, sp. n.; a, posterior view of anal segment; b, dorsal view of head.

"The pineapple weevil was discovered by Mr. R. O. Williams, Agricultural Superintendent, in May 1920, on a peasant holding at Grantons, St. George's,

Grenada. On the 1st May 1921, I visited the pineapples, where the weevil had been found, with Mr. Williams and Mr. Donovan, and together we got additional specimens and made observations which seem to give the main points as to the manner of attack by this insect.

"The pineapples had been planted some years ago, but for about three years had had no attention. The plants had been overgrown with weeds and bush, which had been cut, over a part of the holding, a short time before our visit. Many of the pines grew in the shade of trees of various kinds. Pineapples belonging to other peasants, where clean cultivation was practised, were examined, but no weevils or signs of their attacks were seen. It would seem a safe statement to make that the insect is not likely to attack pineapples when they are grown under conditions of clean cultivation, in open fields away from the influence of shade. This opinion, however, is based on the conditions observed on only one visit to this infested patch.

"The injury to the pine (Plate ii) is largely the result of the feeding of the larvae in the fruit stalk, in the centre of the developing fruit and in the crown. The feeding punctures of the adults in the developing fruit, the fruit-suckers and the crown, and excavations apparently made by the female for egg-laying also cause considerable injury. The adult weevils, in captivity, feed on the fruit, the stalk, the crown, and the leaves of the base of the suckers, as well as perforating the leaves of the crown and suckers. The vegetative portions of the plants, roots, root-stock, stems and leaves are not attacked.

"The feeding punctures made by the adults are small and circular, and those in the stalk and fruit may be as deep as the length of the rostrum to the eyes. The excavations believed to be made for the reception of the eggs are shallow and oval, and seem to be dug out by means of the mandibles. The excavating of these cavities and the egg-laying have not been observed.

"From observations in the field it appears that the eggs are laid in the flower stalk, and the larva makes its way either up or down. Stalks were found in which the work of the larvae was to be seen from the base of the fruit to the base of the stalk, but no cases were found in which the larva had penetrated into the centre of the plant; though several instances were observed in which the larva had gone up into the fruit, and in one case the base of the crown was eaten out.

"The feeding punctures of the adults often completely spoil the fruit. A badly attacked pine will show gummy exudations and will be deformed and undersized. Attacked pines often lose their crowns, even though the pine itself is comparatively uninjured. The greatest damage appears to result from attacks on the fruit-stalk which is often so badly eaten that it breaks down with the weight of the fruit.

"The control of this pest appears to lie in good cultivation and the absence of shade. The pineapples should be planted in straight and regular rows, with sufficient distances between the rows to allow of clean weeding; no bush should be allowed to grow amongst them.

"If pines that have been properly planted and carefully tended should be attacked by the weevil, it should be possible to check such an attack without much loss by collecting the weevils, which may be found hiding in the axils of the leaves, and by cutting out and destroying any infested fruit, taking care to cut the flower-stalk at the very base in order to make sure of removing any larva that may be there."

#### Subfamily CRYPTORHYNCHINAE.

#### **Conotrachelus psidii**, sp. n. (Plate i, fig. 1).

♂ ♀. Integument dark piceous; the pronotum with dense fulvous scaling, and usually with a large indefinite darker triangular patch in the middle of the base caused by the scaling being there much thinner, so that the integument shows through the elytra with similar dense fulvous scaling, and with a large subquadrate, ill-defined

dark discal patch extending from the base to the top of the declivity and outwardly as far as stria 4, the scaling there being dark brown slightly variegated with grey; the sternum with rather thin fulvous scaling laterally and denser paler scales in the middle; the venter with very sparse whitish setiform scales.

*Head* with coarse confluent punctation that is not obscured by the scaling, the intervals between the punctures becoming sharp and prominent on the forehead; the scales fulvous and narrow, becoming noticeably broader on the middle line; at the junction with the rostrum a shallow transverse depression containing a deep median fovea, and a faint broad impression above each eye. *Rostrum* stout, cylindrical, moderately curved, longer than the prothorax in both sexes, slightly dilated at the apex, rugosely punctate and five-carinate as far as the antennae, the outer carinae being less distinct and undulating and the apical area closely punctate in both sexes. *Antennae* inserted at about one-fourth from the apex in the ♂ and about one-third in the ♀; joint 2 of the funicle a little shorter than 1. *Prothorax* subconical, transverse, gradually narrowed from the base to beyond the middle, then more rapidly so, the sides gently rounded and shallowly constricted near the apex; the basal margin shallowly bisinuate, the median dorsal lobe broadly subtruncate at the apex; the dorsum finely coriaceous, unevenly set with large punctures, which are deepest and most numerous in the dark basal triangle and towards the sides; a low boss-like elevation in the middle of the disk, from the top of which a low carina runs to the front margin; the scales narrow and elongate, interspersed on the fulvous area with white scale-like recumbent setae, which are blackish on the dark area. *Scutellum* oval, longer than broad, with confluent shallow punctation and fulvous setiform scales. *Elytra* broad, subtriangular, broadest at the roundly angulate shoulders, with regular rows of large distant punctures, the distances between them being as long as the punctures themselves, which become much shallower on the posterior declivity; the intervals broader than the punctures and finely rugulose, 3, 5, 7 and 9 being carinate and the others flat; the carina on 3 much higher than the others and deeply interrupted before the middle and more broadly so behind the middle, the other carinae complete; the scales on the dark area rather narrower and less dense than on the fulvous parts, the intervals with a row of recumbent scale-like white setae, and each puncture containing a white seta. *Legs* rugulose, with fairly dense fulvous scales intermingled with white setae; the femora each with a single stout tooth; the front and hind tibiae rather sharply angulate externally at the apex; the tarsal claws with a rather long sharp tooth. *Sternum*: the mesosternum hollowed and with a low prominence on each side between the middle coxae, the side-pieces finely aciculate, opaque, and closely and coarsely punctate; the metasternum shiny, with numerous fine punctures and scattered large ones, and with a strong oblique ridge between the mid and hind coxae. *Venter* very shallowly punctate, except at the base of the first and apex of the last visible ventrite, the latter being longer and flatter in the ♂ than in the ♀.

*Length*, 5.75-7 mm.; *breadth*, 3.5-4 mm.

BRAZIL: Bahia (*G. Bondar*).

Described from four specimens.

This species is very closely allied to *C. dimidiatus*, Champ., from Central America but the latter differs in the following particulars:—the mesosternum is quite flattened between the middle coxae; the metasternum is as coarsely and closely punctate as the mesosternum; the middle portion of the carina on interval three is much less elevated and the carina on five is evanescent on its basal third; the shoulder are less sharply angulated, etc.

Dr. Bondar has found this insect attacking the fruits of the guava (*Psidium guajava*), though the nature of the injury is not indicated.

**Coelosternus granicollis**, Pierce (1916).

Mr. G. Bondar states that this species attacks the stems of cassava (*Manihot utilissima*) at Bahia in Brazil. The species was described (with a good figure) from four specimens found alive in quarantine in Washington, D.C., in cassava stems from an unspecified locality in Brazil.

Mr. Pierce uses the generic name *Leiomerus*, Boh., for his species, rejecting *Coelosternus*, Schh., on the ground that the name was preoccupied by Sahlberg. It is true that the latter author described a species of *Coelosternus* shortly before Schönherr's "Dispositio methodica" appeared, for, as he clearly explains, he considered it desirable to follow Schönherr's new classification (with which he was obviously acquainted) even though it had not actually been published; and moreover he takes care to cite Schönherr as the author of the name of his insect. Sahlberg did not describe the genus *Coelosternus*, nor did he cite a type, and there can be no scientific justification for using the name otherwise than in the sense clearly defined by Schönherr. Further, the name *Leiomerus* was not established by Boheman, but was a MS. name of Chevrolat's which Schönherr rejected, merely quoting it in the synonymy of *Coelosternus glabrirostris*. The name should therefore be attributed to Pierce and sink as a synonym of *Coelosternus*, Schh.

## Subfamily ZYGOPINAE.

**Piazurus papayanus**, sp. nov. (Plate i, fig. 2).

♂♀. Integument black or piceous black, rather thinly clothed with brown and grey setiform scaling, the elytra with a few small indefinite patches of suberect black scales principally on intervals 2-4; the lower surface with more sparse pale setiform scales.

*Head* with a few coarse punctures on the vertex and a line of single scales between the eyes. *Rostrum* strongly narrowed from the base to the middle and thence very slightly widening to the apex; the basal third very convex transversely, closely and strongly punctate, and with a low median ridge; the distal portion more flattened dorso-ventrally and very minutely and sparsely punctate. *Antennae* red-brown, joint 2 of the funicle nearly twice as long as 1, 3 equal to 4, and 5, 6 and 7 bead-like. *Prothorax* conical, a little shorter than its basal width, the sides straight and not constricted anteriorly; the basal margin strongly bisinuate and its median lobe shallowly sinuate; the dorsum with a very high tubercular elevation on the median line in front of the middle (Pl. i, fig. 2, a) and a very faint median cord running from it to the base; the dorsal sculpture mainly hidden by the scaling, but consisting of unevenly distributed minute punctures, which are denser towards the sides, and a few much larger punctures, which are mostly confined to the anterior half and especially on the slopes of the prominence; the supracoxal carina distinct. *Scutellum* ovate, with minute shallow punctation and very short setae. *Elytra* oval, broadly rounded behind, with the shoulders prominent, and the dorsal outline strongly convex; the deep striae containing large punctures which gradually become evanescent behind, the septa between them often subgranular, and each puncture with a horizontal setiform scale projecting from its anterior edge; the intervals rather broader than the striae, with numerous very closely placed and usually transverse granules, which become smaller behind but are absent on the basal half of intervals 7-9, and a very low transverse elevation not far from the base on intervals 2-4; each interval with a single row of short recumbent setae, which are not easily distinguished from the scaling. *Legs* finely punctate and rather thinly clothed with pale narrow scales; the anterior pairs of femora not toothed; the hind tibiae without an ante-apical spine on the inner edge. *Venter* with a large  $\Omega$ -shaped impression in the middle of the first visible ventrite.

*Length*, 9.5-10.25 mm.; *breadth*, 4.75-6 mm.

BRAZIL: Bahia (G. Bondar).

Described from four specimens.



The larvae of this insect are stated by Mr. Bondar to bore in the leaf-stems of the papaw (*Carica papaya*).

This species belongs to Dr. Heller's subgenus *Pseudopiazurus* (1906) and is very closely allied to *P. obesus*, Boh., which, however, has the granules on the elytra rather widely spaced and nearly round, and the scales are appreciably longer; the thoracic prominence is a little lower; and in the male genitalia the struts of the median lobe are broadly spatulate at the apex, whereas in *P. papayanus* they are almost linear.

In the present species the median lobe of the male aedeagus (fig. 3) is not in the form of a chitinous tube, but is entirely membranous above, the ventral portion forming a broad subquadrate shovel-shaped chitinous trough, the apex of which is broadly truncate and bears on its lower surface a large patch of long hairs on each side; the median struts are formed as a continuous extension of the thickened edges

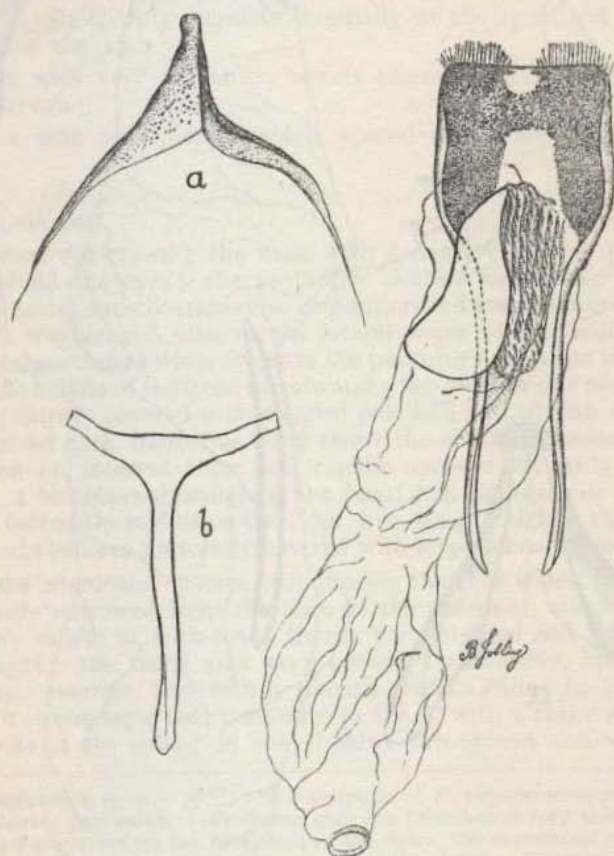


Fig. 3. *Piazurus papayanus*, sp. n., male genitalia : a, tegmen ; b, spiculum.

of the median lobe, and are rather more than half as long again as the lobe itself, being only slightly widened dorsoventrally at the apex. The unverted sac is very broad and extends for nearly half its length beyond the ends of the median struts; the portion adjoining the median lobe contains a large chitinous plate (0.5 mm. long) shaped like a bird's wing, broadest (0.2 mm.) near its internal end and

rapidly narrowing to a point in its distal half; at the terminal (functional) orifice there is a complete and conspicuous chitinous ring (0.12 mm. across). The tegmen does not form a ring, being Y-shaped and somewhat asymmetrical.

In the female genital tube (fig. 4) the vagina is comparatively short and quite membranous; the palps are elongate (0.1 mm.) and bear an oblique row of short unequal hairs at the apex, the supporting strips of chitin being 0.33 mm. long with a maximum width of 0.06 mm. The bursa copulatrix is four times as long as the

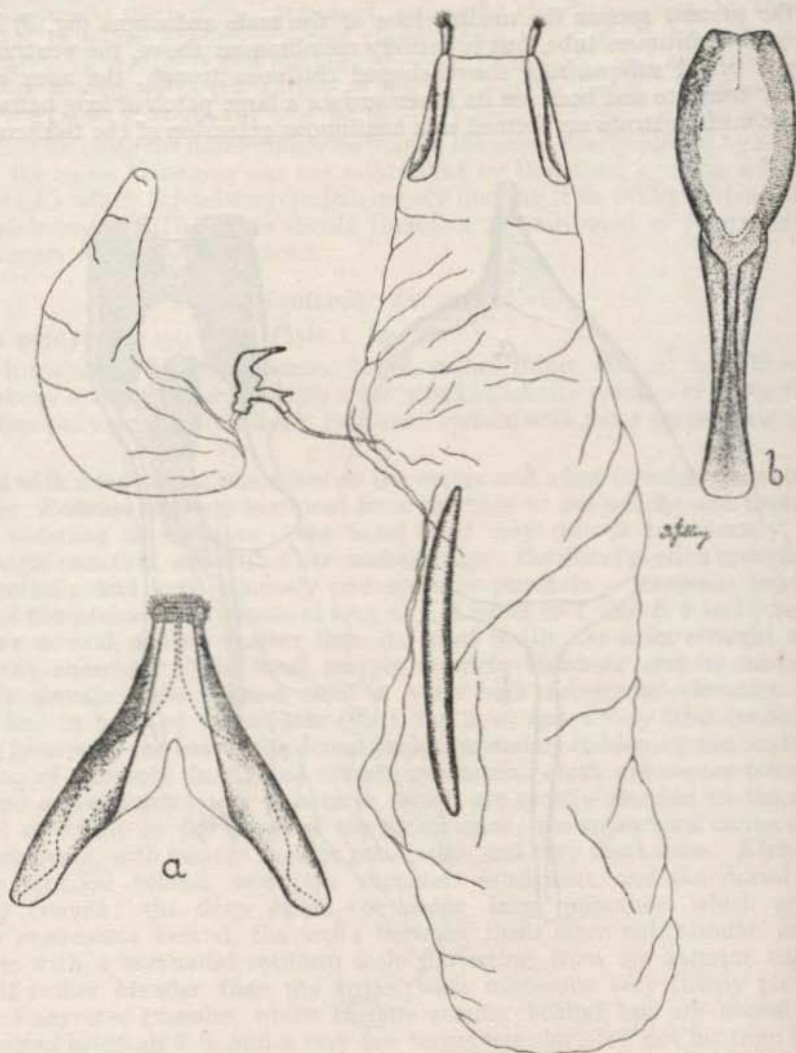


Fig. 4. *Piaurus papayanus*, sp. n., female genitalia: a, tergite 8; b, ventrite 8.

vagina (approximately 2.5 mm.), formed of thicker membrane, and contains an elongate rod of strong chitin (0.88 × 0.07 mm.). The duct to the spermatheca is unusually short, being not much longer than the spermatheca itself, which has a complicated shape (fig. 4) and a comparatively enormous retort-shaped accessary gland (about 0.75 mm. long).

The species referable to the subgenus *Pseudopiazurus* may be distinguished by the following characters:—

- 1 (6). Hind tibiae with a sharp tooth on the inner edge above the apex.
- 2 (3). Second visible ventrite with a sharp elevated tubercle in the middle of the basal margin projecting obliquely forwards. . . . . *spiniventris*, sp. n.\*
- 3 (2). Second visible ventrite normal.
- 4 (5). Elytra with a conspicuous prominence on interval three near the base, and intervals two and three costate for a short distance behind the middle; pronotum with a sharp elevation before the middle, the basal half without large punctures. . . . . *defector*, Boh.
- 5 (4). Elytra with all the intervals of even height; pronotum without any elevation and with a number of large punctures in the basal half *centraliamericanus*, Heller.
- 6 (1). Hind tibiae sharply angulate internally at the apex, but with no tooth above the apex.
- 7 (8). Elytra with very numerous, closely placed, transverse granules on the intervals . . . . . *papayanus*, sp. n.
- 8 (7). Elytra with fewer, more widely spaced and almost rounded granules *obesus*, Boh.

***Lechriops psidii*, sp. nov.**

♂♀. Integument red-brown; the head with a dense edging of pale buff scales between and behind the eyes; the prothorax clothed with rather sparse narrow brownish-yellow scales, mostly transverse in position and leaving much of the integument exposed, a few blackish ones on the lateral slopes of the median elevation, a median stripe of dense broad white scales in the posterior half, a few broad yellowish-white scales in the middle of the front margin and a few on each side near that margin; the elytra fairly densely covered with mingled pale buff and whitish scales, and with an ill-defined curved dark transverse band about the middle between striae 1 and 8, which is deepest on interval three and rapidly narrows outwards to a point on interval eight; a few blackish scales on the basal half of intervals three and five, and a few more behind the middle on two, four, five, six and eight; the mesosternum, metasternum and abdomen uniformly covered with large subcontiguous white scales.

*Head* with the interocular space a little broader than the widest part of the scape. *Rostrum* gradually narrowed from the base to the antennae, which are inserted a little behind the middle in both sexes, thence parallel-sided and somewhat dilated again at the apex; the basal area very convex transversely, opaque, shallowly punctate, thinly squamose, and with a smooth median carina in both sexes; the apical area with strong separated punctures in the ♂, with a shiny median line and somewhat opaque at the sides; in the ♀, shiny throughout and with much finer

\* *Piazurus spiniventris*, sp. n.—♂♀. The description of *P. papayanus* applies to this species except in the following particulars:—*Pyothorax* with the prominence very much lower and with a number of coarse punctures on the basal half of the disk; the supracoxal carina obsolete. *Scutellum* with the setiform scales as long as those on the elytra. *Elytra* without the patches of black scaling; the scales distinctly longer, especially along the suture; the punctures much larger, oblong, and not diminishing behind until quite close to the apex; the intervals not broader than the striae, with much larger, less numerous, but closely set and somewhat flattened granules, and with no transverse elevation near the base. *Legs*: the hind tibiae armed with a very long oblique sharp spine at one-fourth from the apex on the inner edge. *Venter* with the arch-shaped impression on the first visible ventrite much broader and deeper; the next ventrite with a sharp, obliquely prominent tubercle in the middle of its base in both sexes; the last visible ventrite with its apical margin very broadly and deeply sinuate in ♀ and shallowly bisinuate in ♂. *Length*, 10.5–11 mm.; *breadth*, 5.5–5.75 mm.—Brazil: Ega, R. Amazon (*H. W. Bates*). Described from three specimens.

punctures. *Antennae* with joint 2 of the funicle longer than 1, as long as 3-5 together. *Prothorax* much broader than long, gradually narrowed from the base to beyond the middle and then more abruptly to the apex, the apical margin shallowly sinuate throughout its width; the disk with a boss-like elevation in the middle, so that the dorsal outline is extremely convex, with the greatest height about the middle, but the posterior slope longer than the anterior one; the dorsum with coarse shallow reticulate punctation, each puncture containing a scale, and without any carina. *Elytra* broadly cordate; the striae with strong deep punctures, each containing a scale; the intervals not broader than the striae and subcostate on the disk, the suture being shallowly depressed on the basal half; the scales elliptical, much smaller than those on the pronotum and becoming shorter behind. *Legs* testaceous, the femora with dense white scaling, the tibiae with thinner hair-like scales; the femora neither toothed nor sulcate beneath, the posterior pair only with a faint carina on the external face. *Sternum* with the rostral canal not exceeding the front coxae, which are not tuberculate; the mesosternum almost perpendicular and not excavated, the mesepimera slightly ascending.

*Length*, 2 mm.; *breadth*, 0.9 mm.

PORTO RICO: Mayaguez, 1914 (*R. H. Van Zwalenburg*).

Described from a pair.

Faust erected his genus *Eulechriops* (1896) for species of *Lechriops* with no teeth or external carina on the femora, but these characters are not interdependent, and the present species has distinct traces of the carinae without having the teeth. Champion has described a species in similar case as *Eulechriops squamulatus*, but it is very distinct from *L. psidii*, having the rostral furrow extending to the mesosternum, no pronotal prominence, the two basal joints of the funicle equal, etc. The only other species known to me in which the mesosternal excavation is wanting is *Eulechriops scutulatus*, Champ., and *E. coruscus*, Champ., but these are very different coloured insects, being black with well-defined patches of white scaling, the femora are sulcate beneath, joint 2 of the funicle shorter than 1, the pronotum has a prominence, etc.

Mr. Wolcott states that the larvae of this weevil feed on the fruits of the guava (*Psidium guayava*), which shrivel up as a result of their attacks.

#### Subfamily BARIDINAE.

#### *Ampelogypter cissi*, sp. nov.

♂♀. Colour uniform dark steel-blue above, the head, rostrum and lower surface blue-black.

*Head* minutely coriaceous, with faint scattered punctures. *Rostrum* strongly curved, as long as (♂) or longer than (♀) the head and prothorax, the antennae inserted behind the middle in both sexes; the upper surface shiny and with sparse minute punctures in the ♀, finely aciculate in the ♂ and with stronger and longitudinal confluent punctures, the sides at the base with larger shallow aciculate punctures in both sexes. *Prothorax* broader than long, rounded at sides, widest at the base and rather abruptly tubulate in front; the dorsal profile distinctly convex and deep in the middle in the ♂, much flatter in the ♀; the dorsum minutely coriaceous and evenly set with small distant punctures. *Elytra* distinctly wider at the shoulder than the prothorax, oblong-ovate, with the humeral prominences well developed, the striae rather deep and containing small shallow spaced punctures; the intervals flat, extremely finely coriaceous and each with a row of minute distant punctures. *Sternum* closely and strongly punctate laterally, the punctures on the side-pieces

of the mesosternum larger and fewer than those on the metasternum. *Venter* with smaller and rather sparser punctures than on the sternum, except those on the last ventrite, which are dense.

*Length*, 2 mm. ; *breadth*, 1 mm.

PORTO RICO : Rio Piedras, vii.1921 (*F. Sein*).

Described from three specimens.

Its small size and blue colour will distinguish this species from those that have been previously described. In general form and sculpture it most resembles the North American *A. longipennis*, Casey, but in that species the punctures on the sides of the sternum are larger and closer, being subreticulate, the antennae are inserted at the middle of the rostrum in the ♂, the last visible ventrite in the ♂ is markedly elevated in the middle, etc.

The adults are stated by Mr. Wolcott to feed on the tender shoots of *Cissus ampelopsis*.