

Ædeagus. — Sides strongly, continuously rounded and narrowed towards apex; parameres gaping, strongly divided, with the apex sharply pointed, inclined inwards and strongly bent ventrad; penis obtuse apically.

Dimensions. — Length $7\frac{1}{2}$ -8 mm, width $3\frac{1}{4}$ - $3\frac{3}{4}$ mm.

Subspecies : —

a) rotundicollis s. str. — Body dark to reddish brown, with brownish, transparent lateral margin of pronotum; the legs constantly of a pale reddish brown to almost testaceous tint. Lateral punctation on pronotum only slightly tending to become confluent. Elytra less shiny, with sharply carinate base; primary rows with moderately dense punctures; apart from the sutural interval, all other inner intervals obtusely, but distinctly carinate also on disc.

Distribution. — Central part of the Southern Cape Province. — Willowmore, H. BRAUNS (1♂, 2♀, types T.M.).

b) elizabethensis n. subsp. — Body black; the legs blackish brown, with the exception of the reddish brown tarsi. Lateral punctation on pronotum distinctly and longitudinally confluent. Elytra strongly shiny, with obtusely carinate base; primary rows with very dense punctures; only the four outer intervals sharply costate, the inner ones on disc more or less convex, becoming flattened towards suture.

Distribution. — Central part of the Southern Cape Province. — Van Staaden's River, 20 m E of Port Elizabeth, II.1933, R. F. LAWRENCE (2♂♂, holotype S.A.M.).

- The punctures of primary rows of elytra fine, about as strong as the discal punctures on pronotum, or slightly finer. In the ♂ the inner contours of posterior tibiæ with a small, obtuse premedian dilation and a few fine squarrose hairs.

[**Zadenos (Euzadenos) monticola** n. sp.]

(Pl. XXVI, fig. 3; Fig. 193.)

Very closely related to *Z. rotundicollis*, but of larger size, shiny, black, the legs blackish to dark reddish brown, the pronotum with very broad, sulcate submarginal depression of sides, and the elytra with basal margination only laterally. In the ♂ the formation of legs as in *rotundicollis*, except for the posterior tibiæ (fig. 193) and the more strongly dilated anterior tarsi.

Dimensions. — Length $9\frac{1}{4}$ to $9\frac{3}{4}$ mm, width 4 to $4\frac{3}{4}$ mm.

Subspecies : —

a) monticola s. str. — Head with round punctures on vertex; eyes convex, their outlines distinctly projecting beyond genæ. Pronotum

narrower, about one and a half times as broad as long, less strongly rounded and dilated behind middle, with slightly wavy and reflected lateral carina, very broad submarginal depression, weakly convex disc and much denser punctation on the latter, enclosing a fine, smooth median line. Elytra much more slender, with slightly obtuse, but not prominent humeral angles; apart from the flat sutural interval, all intervals sharply to obtusely costate also on disc; the seventh costa evanescent apically and not in contact with the two coalescent third costæ; the discal portion of the inner primary rows only slightly narrower than the intervening costæ.

Distribution. — South-eastern part of the South-western Cape Province. — Seven Weeks Poort Berg, 5,500 to 7,000 ft., XII.1928, K. H. BARNARD (1♂, holotype S.A.M.).

b) dilatatus n. subsp. — Head with longitudinally rugose sculpture on vertex; eyes flat, their outlines continuous with those of genæ. Pronotum much broader, about one and two thirds times as broad as long, very strongly rounded and dilated behind middle, with thick, evenly rounded and not reflected lateral carina, narrower submarginal depression, rather strongly convex disc, less densely punctured and without smooth median line. Elytra very broad, with dentiform projecting humeral angle; only the five outer intervals clearly costate, all the other inner intervals slightly convex to flat on disc; the apex of the seventh costa obtuse but in contact with the two coalescent third costæ; the discal portion of the inner primary rows several times narrower than the broad intervening intervals.

Distribution. — South-eastern part of the South-western Cape Province. — Seven Weeks Poort, II.1932, K. H. BARNARD (1♀, holotype S.A.M.).

16. Elytra with sharply costate outer intervals. Sides of pronotum posteriorly subparallel, slightly narrowed or dilated, or briefly sinuate in front of posterior angles. Upper surface of body bare or with only microscopically short bristles 17
- Elytra, with the exception of the marginal carina on ninth interval, not costate, with plane intervals. Sides of pronotum almost as strongly rounded and narrowed towards base as to the anterior margin. Upper surface of body with conspicuous, yellowish bristles.

[*Zadenos (Euzadenos) incostatus* n. sp.]

(Pl. XXVI, fig. 4.)

Among all the other *Zadenos* readily recognizable by the absence of dorsal costæ. Related to *Z. bistriatus*, but differing by the less deep, rather shallow emargination of epistome, the slender antennæ, the more strongly convex pronotum, exhibiting a finer punctation

but no submarginal depression of sides, as well as by the shoulderless, laterally rounded elytra. ♂ unknown.

Dimensions. — Length $5 \frac{1}{2}$ to $5 \frac{3}{4}$ mm, width $2 \frac{3}{4}$ to $3 \frac{1}{4}$ mm.

Distribution. — Southern Portuguese East Africa. — Masiene, XII.1923, R. F. LAWRENCE (3 ♀ ♀, holotype S.A.M.).

17. The second and third elytral costæ abbreviated apically, ending at short distance from apex of elytra, but neither reaching the latter nor in contact with the apex of suture. Sides of pronotum posteriorly subparallel or slightly narrowed or dilated towards base. Head with coarse, rugose punctures on vertex, and with the two clypeal foveæ grown together to a continuous, transverse impression, dividing frons from epistome 18
- Either the second or the third elytral costa prolonged apically, reaching the extreme apex of elytra and there bent towards, and in contact with, the suture. Sides of pronotum either briefly sinuate in front of posterior angles or subparallel posteriorly, but in this case the head with fine, well separated, round punctures, and the two clypeal foveæ widely separated one from another 19
18. Body moderately convex above. Sides of pronotum posteriorly subparallel to slightly narrowed, including the greatest width on middle; discal punctures rather coarse, only slightly finer than punctures on head. Base of elytra a little broader than pronotal base; intervals densely to almost rugosely punctured; apart from the three sharply costate outer intervals also the third to fifth intervals subcostate to strongly convex.

[*Zadenos (Euzadenos) bistriatus* (FAIRMAIRE).]

(Pl. XXVII, fig. 1.)

*1899, *Oncotus bistriatus* FAIRMAIRE, p. 180. — 1910 b, GEBIEN, p. 271. — 1938-1942, GEBIEN, p. 393, n° 5137. — 1954 a, KOCH, p. 92.
1953 a, *Zadenos bistriatus* KOCH, p. 274.

Original description. — «Long. 5 mm. — Oblongo-ovatus, modice convexus, niger, nitidus, antennis, palpis pedibusque piceis; capite dense sat subtiliter punctato-ruguloso, inter antennæ transversim impresso, clypeo antice piceo et sat late arcuatim emarginato; antennis sat crassis, prothoracis basin haud attingentibus; prothorace transverse, elytris vix angustiore, antice a medio arcuatim angustato, dorso sat dense ruguloso-punctato, postice utrinque stria parum impressa signato, margine postico ante angulos sat fortiter sinuato, his sat acutis, anticis obtusis; elytris ovatis, ad humeros sat angulatis, apice angustatis et obtuse angulatis, dorso cum sutura sat acute costatis, interstitiis latis, grosse punctatis, suturam versus tenuibus; epipleuris seriatim punctatis; pectore punctato, abdomine fere lævi. — Ressemble assez à l'*O. tardus* SOLIER, mais plus petit, avec la tête

et le corselet bien plus fortement ponctués, ce dernier plus court, marqué de deux stries basilaires, les antennes plus épaisses, les élytres à côtés assez tranchants, les intervalles très grossièrement ponctués.»

Remarks. — *Z. bistriatus* resembles slightly the *Oncotin Capidium tardum* (SOLIER), but is clearly defined as a *Litoborin* by the structure of ædeagus, the non-stridulatory gula and the many other tribal particulars.

Body oval, moderately shiny. Eyes convex. Pronotum broadest at about middle, about one and a half times as broad as long or more slender, with narrow submarginal depression of sides, strongly rounded and narrowed towards anterior margin, posteriorly not quite subparallel, but very slightly rounded and narrowed towards base. Base considerably broader than anterior margin, bi-sinuate, with rectangular to slightly obtuse posterior angles. Punctures with microscopically short bristles. Elytra rounded laterally, with coarsely punctured primary rows and costate outer intervals. Abdomen with uniform, rather strong, setiferous punctation. In the ♂ the anterior tarsi moderately dilated, with transverse second and third segments; the underside of anterior tibiæ with median excavation, but straight inner contours, with very fine and short bristles along middle; the intermediate and posterior legs simple.

Ædeagus. — The lateral contours of ædeagal tegmen strongly narrowed in a straight line from about middle to the briefly pointed apex; parameres closely attached to one another, not gaping apically and divided only by a very fine median suture.

Dimensions. — Length 5 to 5 $\frac{3}{4}$ mm, width 2 $\frac{1}{2}$ to 2 $\frac{3}{4}$ mm.

Subspecies: —

a) *bistriatus* s. str. — Apart from the five sharply costate outer intervals of elytra also the third and fourth of the inner intervals less sharply but distinctly costate; the sutural and the second intervals flat.

Type locality. — «Delagoa». Type probably in Museum Paris.

Distribution. — Southern Portuguese East Africa. — Lourenço Marques, IV and XI.1951, A. J. BARBOSA (2 ♂ ♂, 1 ♀, C.I.C.A. and T.M.); Rikatla, Delagoa (1 ♀, probably paratype, S.A.M.). — Zululand — Gollel, VII.1938, R. F. LAWRENCE (1 ♀, S.A.M.).

b) *paucicosta* n. subsp. — Elytra with three sharply costate outer intervals, obtusely costate fifth and sixth intervals, and with the third and fourth intervals convex, but not distinctly carinate, at the best slightly tectiform basally; sutural and second intervals flat.

Distribution. — Southern Portuguese East Africa. — Inhambane, I.1924, R. F. LAWRENCE (1 ♀, holotype S.A.M.).

c) pluricosta n. subsp. (Pl. XXVII, fig. 1) — All intervals on elytra sharply costate; the sutural interval strongly convex, subtectiform, with the basal portion sharply carinate, running obliquely outwards towards base.

Distribution. — Eastern Transvaal. — Nelspruit, I.1939, R. F. LAWRENCE (1♀, holotype S.A.M.).

- Body depressed above. Sides of pronotum gradually dilated posteriorly, including the greatest width of pronotum between posterior angles; discal punctures fine, considerably finer than punctures on head. Base of elytra rather much broader than pronotal base, with the humeral angles strongly projecting outwards beyond lateral outlines of pronotum; intervals with very fine, scattered punctures; apart from the three sharply costate outer intervals only the fifth and sixth intervals finely carinate, but the four inner intervals entirely flat.

[**Zadenos (Euzadenos) externus** n. sp.]

(Pl. XXXI, fig. 1; Fig. 194) ⁽¹⁾.

A peculiar species, in the shape of the externally costate elytra resembling the Stizopin *Blenosia costimargo* KOCH from Great Namaqualand. Related to *Z. bistriatus*, but showing somewhat allied also to *Z. omeri* on account of the fine punctation on pronotum and elytra. Differing from *bistriatus* by the more strongly dilated, securiform apical segment of maxillary palpi, more prominent eyes, but with the same coarse punctation on upper surface of head. Pronotum broadest at base, there slightly more than one and a half times as broad as long, uniformly covered with fine and well separated punctures, becoming stronger on lateral portions. The flattened elytra much broader than anterior body, with entirely flat four inner intervals, but sharply and strongly raised outer costæ; primary rows with rather coarse punctures, finer than in *bistriatus*. Punctation on abdomen finer. In the ♂ the anterior tarsi dilated, with transverse second and third segments; the anterior tibiæ (fig. 194) with deep, smooth, elongate excavation on median two-quarters, the inner contours strongly dilated in front of middle, thence subparallel and bearing a few fine, squarrose hairs; the intermediate and posterior legs simple.

Dimensions. — Length 5 to 5 ¼ mm, width 2 ¾ to 3 mm.

Distribution. — Zululand. — St. Lucia Bay, XI.1920, H. W. BELL-MARLEY (2♂♂, holotype T.M.).

⁽¹⁾ Instead of the erroneous caption to fig. 1 on Plate XXXI (*Minorus sculpticeps* n. sp.) read correctly: *Zadenos (Euzadenos) externus* n. sp.

19. Head above with round and well separated punctures; frons with two conspicuous clypeal impressions. Pronotum uniformly covered with round, rather fine and well separated punctures, also on lateral portions; sides posteriorly subparallel, with simple rectangular posterior angles; anterior margin shallowly emarginated, with faintly produced and slightly obtuse anterior angles. Elytra weakly shiny, with fine punctation on intervals and strongly impressed, sublineate, regularly punctured primary rows; the costæ on intervals continuous and smooth; on apical declivity the second interval costate, its costa prolonged, reaching the extreme apex and there approximated to, and in contact with, the sutural angle, as well as coalescent with the apex of eighth costa.

[**Zadenos (Euzadenos) omeri** n. sp.]

(Pl. XXVII, fig. 3; Fig. 195.)

Owing to the subparallel shape of body, the round, uniform and separated punctation on the shiny pronotum, as well as by the similar structure of ædeagus clearly related to *Z. algoensis*, but of the small size of the species of *bistriatus*-group. Differing from *algoensis* by the wider head, the short antennæ, the third segment of which is only one and a half times as long as broad (about twice as long as broad in *algoensis*), with the fourth segment being only a little longer than broad and just a trifle longer than the knob-like, square fifth segment (in *algoensis* the fourth segment is almost two-thirds longer than broad and considerably longer than the elongate fifth segment), the sides of pronotum which become narrowed at the anterior third (at about middle in *algoensis*), the coarser punctures of primary rows on elytra, the apically costate second interval (flat in *algoensis*), and by the formation of the legs in the ♂.

Z. omeri is easily recognized from *Z. bistriatus* by the slender, subparallel and bare body, the sculpture on upper surface of head, the subsquare shape of pronotum the sides of which are parallel on basal two-thirds, becoming weakly narrowed only on anterior third, the base of pronotum therefore only moderately broader than anterior margin, the fine, well separated and bare punctures on pronotum, the formation of elytral intervals which are all costate on apical declivity, with the second costa extending to sutural angle of apex, and by the formation of the legs in the ♂.

The elytra are about as broad as pronotum, with minutely and dentiform prominent humeral angle; the four outer intervals are sharply costate, the fourth and fifth intervals strongly convex to sub-tectiform discally, whereas the sutural and second intervals are flat, becoming raised and costate towards apex. Legs red to testaceous. In the ♂ (fig. 195) the anterior tarsi well dilated, with transverse

second and third segments; the anterior tibiæ excavate underneath, with the inner contours rather strongly dilated in front of middle and then very faintly emarginated; the intermediate tibiæ distinctly curved on proximal half, with the inner contours rather strongly dilated on distal half; the posterior tibiæ straight, but with a fringe of fine, dense and squarrose hairs on underside; and the underside of posterior femora with a subtomentose stripe of fine hairs on either of the lateral edges of underside.

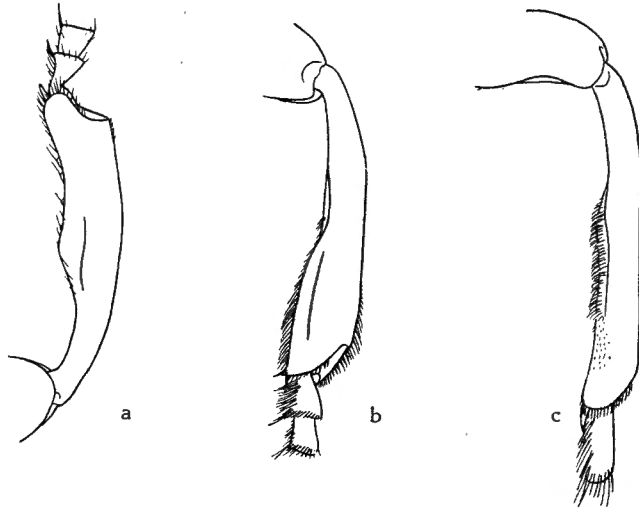


FIG. 195. — *Zadenos (Euzadenos) omeri* n. sp.

a : anterior tibia of ♂; b : intermediate tibia of ♂; c : posterior tibia of ♂.

Ædeagus. — Parameres strongly narrowed in a straight line to apical portion, deeply divided, with subparallel, gaping, obtuse apices which are strongly bent ventrad.

Dimensions. — Length $4 \frac{3}{4}$ to 5 mm, width ca. 2 mm.

Distribution. — Central part of the Southern Cape Province. — Algoa Bay, H. BRAUNS (4♂♂, holotype T.M.).

Dedication. — Named in honour of Prof. J. OMER-COOPER, Rhodes University, Grahamstown.

- Head above with very dense, rugosely confluent, coarse punctation; frons almost plane, with very shallow, scarcely discernible and transverse epistomal impression. Pronotum with very dense, fine and slightly elongate punctures on disc, becoming longitudinally confluent on lateral

portions; sides posteriorly rounded, distinctly narrowed and briefly sinuate in front of the well demarcated, sharply rectangular posterior angles; anterior margin strongly emarginated, with produced and sharply rectangular, pointed anterior angles. Elytra strongly shiny, with rather strong, irregular punctures on intervals, slightly intermixed with the shallow, less well arranged, in part badly defined, coarser punctures of primary rows; the latter not sublineate; the costæ on outer intervals continuous, but crenulate, on inner intervals resolved to widely separated, fine granules or elongate tubercles; on apical declivity the second interval flat, but the third interval costate, approximated to, and reaching, the sutural apex, there coalescent with the seventh costa.

[**Zadenos (Euzadenos) acutangulus** n. sp.]

Closely related to *Z. omeri*, and, apart from the above mentioned characters, differing by the less subparallel shape of body, the slender and elongate antennæ (in this regard rather well agreeing with *algoensis*), shape and sculpture of elytra. The latter with the same, minutely prominent humeral angle as in *omeri*, but their sides are rounded and narrowed towards base; the five outer intervals are distinctly costate, with the crest of costæ becoming gradually more densely and intensely crenulate to subtuberculate towards disc; inner intervals tectiform, with sparse, fine granules or tubercles, particularly on apical third. In the ♂ the anterior tarsi moderately dilated, with transverse second and third segments; the anterior tibiæ with slightly curved outer contours, but with the inner contours straight and furnished with a fringe of fine, sparse, squarrose hairs; intermediate legs simple; the posterior tibiæ straight, with a fringe of fine hairs, as can be observed also on underside of posterior femora.

Dimensions. — Length 5 to 5 $\frac{1}{4}$ mm, width 2 $\frac{1}{4}$ mm.

Distribution. — Central part of the Southern Cape Province. — Keurbooms River, Knysna District, I.1931, K. H. BARNARD (1 ♂, holotype S.A.M.).

20. Size of body larger, 6 $\frac{1}{2}$ to 12 mm long. The apical construction of elytral costæ variable, but the eighth costa always strongly abbreviate, posteriorly ending at considerable distance from elytral apex and much shorter than the ninth or seventh costæ posteriorly 21
- Side of body small, only 5 $\frac{1}{4}$ mm long. On apical declivity of elytra the eighth costa complete and prolonged, much longer than the ninth and seventh costæ; reaching the sutural angle of apex and there the eighth costæ of both elytra practically coalescent.

[Zadenos (Euzadenos) gnophotoides n. sp.]

(Pl. XXVII, fig. 4.)

A peculiar species which, morphologically and geographically, is sharply separated from all the other species of genus. Strongly shiny, bare, black, the maxillary palpi testaceous, legs and antennæ of a more or less pale reddish brown colour. Head above coarsely, densely punctured. Clypeal impressions foveolate. Lateral portions of epistome not separated from outer contours of genæ. The latter short and slightly narrowed towards eyes. Eyes barely constricted by genal canthus, strongly convex, with the outer contours considerably projecting beyond lateral outlines of head. Mentum cordiform and concave. Maxillary palpi with securiform apical segment. Antennæ long, extending to base of pronotum, moderately accrescent towards apex, with fine, yellowish hairs; third segment rather short, barely longer than the thickened basal segment and not quite one and a half times as long as the second segment; the fourth segment only a little shorter than the third one; the ninth segment triangular, a trifle longer than broad; the tenth segment roundish to slightly transverse. Pronotum strongly transverse, broadest at about middle, more than three-quarters broader than long, slightly broader than elytra, with the sides very strongly rounded and deeply sinuate in front of the sharply rectangular, prominent posterior angles. Disc rather strongly convex, submarginal depression broad. Integument with extremely dense, coarse, substriolate sculpture, becoming resolved to a dense, coarse, round punctation on lateral portions, separated from the lateral carina by a narrow, smoothed submarginal canaliculation. Anterior emargination moderately strong, with slightly arcuate median portion. Base distinctly carinate only laterally, almost-straight, but with sharply produced posterior angles. Episternum of prosternum with dense, coarse, longitudinally confluent, substriolate sculpture on the sloping inner portion, with shallow, transverse wrinkles on the rather broad, flattened lateral portion; prosternal apophysis bent towards foramen behind coxal cavities. Elytra strongly shiny, basally not broader than pronotal base, with very weakly rounded sides and rectangular humeral angle which is demarcated from sides by a rather deep sinuosity. Primary rows with coarse and regular punctures; all intervals, the sutural interval included, sharply costate; the third and seventh costæ coalescent at considerable distance from apex; the ninth costa strongly abbreviated posteriorly, not in contact with the pseudopleural carina. The two coarsely punctured primary rows on reflected lateral portion of elytra separated from each other by a very fine, rudimentary costula on anterior half of tenth interval. Pseudopleura with a row

of very coarse punctures. Abdomen with rather strong, moderately dense and setiferous punctures which are much finer than the foveolate punctures of pseudopleura and become fine and scattered on apical half of anal sternite. In the ♂ the anterior tarsi rather weakly dilated, but with strongly transverse second and third segments; all tibiæ straight, the underside of anterior tibiæ shallowly concave and smooth, that of posterior tibiæ with a fringe of fine hairs, as can be observed also on the underside of posterior femora.

Dimensions. — Length 5 to 5 $\frac{1}{4}$ mm, width 2 $\frac{1}{2}$ mm.

Distribution. — Northern Transvaal. — Louis Trichardt, Zoutpansberg, 4,500 ft., II.1928, R. F. LAWRENCE (1♂, holotype S.A.M.).

21. The tenth interval on reflected lateral portion of elytra plane and not costate 22
 — The tenth interval on reflected lateral portion of elytra with a finely carinate costula which is often briefly interrupted.

[**Zadenos (Euzadenos) lightfooti** n. sp.]

Belonging to the *bohemani* group and agreeing with the species of this group in the identical construction of the apical portion of elytral costæ, the not costate sutural interval, and the similar shape of body. Readily distinguished by the supplementary costula on reflected portion of elytra, the intensely dull upper surface of body and the very dense, subrugose sculpture on upper surface of intermediate and posterior tibiæ. Head above covered with an extremely dense, rugosely confluent punctation. Eyes not projecting beyond the subparallel genæ. Antennæ rather slender, but strongly accrescent towards apex, with moderately transverse two penultimate segments. Pronotum slender, broadest behind middle, one and a third (♂) to one and a half times (♀) as broad as long, covered with extremely dense, short, longitudinal rugosities. Sides moderately rounded, shallowly sinuate in front of posterior angles and followed by a rather shallow submarginal depression. Anterior emargination strong, base strongly bi-sinuate. Prosteronum as in *bohemani*. Elytra very dull, scarcely (♂) to distinctly (♀) broader than pronotum, with weakly rounded sides, almost subparallel in the ♂. Humeral angle minutely demarcated in the ♂, obtuse and in line with elytral sides in the ♀. Primary rows with fine punctures which are much finer than those on pronotal disc. Intervals without conspicuous punctation, sharply costate, but the costæ becoming very fine, crenulate to subgranulate towards the suture; sutural interval finely carinate to subgranulate posteriorly; apical construction of costæ as in *bohemani*. Abdomen densely punctured, with the punctures becoming finer but concentrated on posterior half

of anal sternite. Upper surface of tibiae rugosely sculptured, but not opaque, that of anterior tibiae uniformly convex and not edged. In the ♂ the anterior tarsi dilated, with transverse second and third segments; the underside of all tibiae and femora with a fringe of squarrose hairs; the anterior tibiae slightly curved, the intermediate and posterior ones straight.

Dimensions. — Length $8 \frac{1}{2}$ to $8 \frac{3}{4}$ mm, width $3 \frac{1}{2}$ to $3 \frac{3}{4}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Malmesbury, R. LIGHTFOOT (1♂ ♀, types S.A.M.).

22. Inner intervals on elytra with scattered, fine tubercles at least on posterior third. Pronotum strongly cordiform, with the sides strongly rounded and deeply sinuate in front of posterior angles; the latter sharp, slightly acute to rectangular 23
- Inner intervals on elytra convex or costate, in the latter case the crest of costae smooth, crenulate or subgranulate. Pronotum of variable shape, but not strongly cordiform, with the sides rounded, narrowed or shallowly sinuate posteriorly; posterior angles obtuse to rectangular, not prominent 24
23. Sexual dimorphism in shape and sculpture of elytra scarcely pronounced : the sides in both sexes rounded and narrowed towards the humeral tooth, dilated towards middle and there the elytra considerably broader than pronotum; primary rows fine, with their punctures badly demarcated from the rather dense and stronger punctures of intervals; the inner intervals with well separated tubercles also on anterior half.

[**Zadenos (Euzadenos) tuberculatus** n. sp.]

(Pl. XXVIII, fig. 1.)

Head above and pronotum shiny, the elytra opaque, with shiny secondary elements of sculpture. Head above rugosely punctured, with shallow, transverse epistomal impression. Genae parallel; eyes very slightly projecting outwards. Antennae long, extending to pronotal base; segments elongate, with the exception of the slightly transverse two preapical segments. Pronotum broadest behind middle, strongly transverse, about one and two thirds times as broad as long, weakly convex, with narrow submarginal depression, bare, uniformly covered with an extremely dense, longitudinally confluent rugose sculpture. Anterior margin deeply emarginate, with produced and sharp anterior angles. Base scarcely bi-sinuate, straight, with the posterior angles considerably produced backwards. Prosternal apophysis horizontally produced, with obtusely pointed apex. Elytra broader than pronotum, rather strongly convex, rounded laterally, with prominent and dentiform humeral angle.

On apical declivity the two third costæ angularly bent towards suture in front of apex and in contact with sutural angle apically. Abdomen with uniform, rather scattered, fine punctures on proximal four sternites, there between punctures densely and longitudinally wrinkled on disc; anal sternite with concentrated punctation on posterior half. In the ♂ the anterior tarsi strongly dilated, with the second and third segments about twice as broad as long; the anterior tibiæ excavate underneath and with the inner contours slightly dilated and pilose on distal half; the intermediate tarsi likewise rather strongly dilated and the intermediate tibiæ simple, with slightly curved inner angle of apex; the posterior tibiæ with a dense brush of yellowish hairs on underside, the inner contours shallowly emarginate on distal two-thirds (with the outer contours following the course of the inner contours, therefore being slightly curved) and the inner apical angle distinctly curved inwards and bearing a minute, sharply pointed, transversely prominent spinula on extreme apex, inserted very close to tibial calcaria; posterior femora with a fine stripe of squarrose, dense hairs on underside.

Ædeagus. — The lateral contours of apical portion not demarcated from basal portion, strongly narrowed in a straight line towards apex, bent ventrad on distal half. Parameres deeply divided, only weakly gaping, with sharply pointed, angularly bent extreme apices.

Remarks. — On account of the tuberculate elytra resembling *Hadroderus tuberculiferus*, as well as *Z. natalensis*. From the latter readily distinguished by the strongly cordiform, bare and substriolate pronotum, the strongly prominent, large humeral tooth, the two apically coalescent third costæ on elytra, the bare abdomen, and the formation of legs in the ♂. Very characteristic for this species are the apically deeply emarginated, almost bi-lobate third segments on anterior and intermediate tarsi, partially enclosing the small penultimate segments.

Dimensions. — Length $8\frac{1}{2}$ to $9\frac{3}{4}$ mm, width $3\frac{3}{4}$ to $4\frac{1}{2}$ mm.

Distribution. — Central part of the Southern Cape Province. — George, XI.1913, H. BRAUNS (1♂, holotype T.M.); Knysna, X.1949, B. MALKIN (1♀, allotype T.M.); Keurbooms River, Knysna District, I.1931, K. H. BARNARD (3♀ ♀, S.A.M.).

- Sexual dimorphism in shape and sculpture of elytra strongly pronounced: the sides in the ♀ more strongly rounded and dilated towards middle than in the ♂, in the latter the elytra only a trifle broader than pronotum; primary rows rather strong, well demarcated; intervals in the ♀ with scattered and very fine punctation, in the ♂ appearing as if impunctate; the inner intervals finely and continuously costate on anterior half.

[**Zadenos (Euzadenos) georgensis** n. sp.]

(Pl. XXVIII, fig. 2.)

Very closely related to *Z. tuberculatus*, but of smaller size, the elytra in the ♂ narrower, more shiny, the sutural interval strongly convex and all the other intervals continuously costate on anterior half, with the crest of costæ more or less distinctly crenulate to subtuberculate. In the ♂ the legs identically shaped, but the underside of posterior femora with fringe of long, fine and sparse hairs. *Ædeagus* similar to *tuberculatus*; the apex of apical portion, in dorsal view, appearing as if subtruncate, as the extremely fine apices of parameres are strongly bent ventrad and inwards, forming sharp hooks.

Dimensions. — Length $7\frac{3}{4}$ to $8\frac{1}{4}$ mm, width $3\frac{1}{4}$ to $3\frac{3}{4}$ mm.

Distribution. — Central part of the Southern Cape Province. — George District, VIII.1931, C. THORNE (3 ♂ ♂, 1 ♀, types S.A.M.).

24. Body small, $6\frac{1}{2}$ to 7 mm long 25
 — Body larger, $8\frac{1}{2}$ to 12 mm long 26
25. Upper surface of body dull. Antennæ stout, very strongly accrescent towards apex, with transverse three penultimate segments. Pronotum broadest in front of middle, with very shallow anterior emargination and the posterior portion of sides slightly narrowed in a straight line towards base; submarginal depression of sides very narrow, subcanaliculate; punctation very dense, rugose, but not longitudinally confluent. All intervals of elytra, the sutural interval included, sharply and completely costate, but only inconspicuously punctured. Penultimate segment of anterior tarsi very small, considerably shorter than the preceding segment along midline.

[**Zadenos (Euzadenos) bevisi** n. sp.]

Well characterized by having all elytral intervals provided with sharp, continuous and smooth costæ. Very closely related to *Z. lawrencei* and differing only by the shorter and stouter antennæ, the very dense, roundish but rugose punctation on pronotum, the practically impunctate intervals on elytra, the costate sutural interval, as well as by the very opaque upper surface of body. In the ♂ the legs as in *lawrencei*.

Dimensions. — Length $6\frac{1}{2}$ mm, width 3 mm.

Distribution. — Natal. — Durban, C. N. BARK (1 ♂, holotype S.A.M.).

Dedication. — Named in honour of Mr. L. BEVIS, Entomologist to the Museum and Art Gallery, Durban.

- Upper surface of body shiny. Antennæ slender, faintly accrescent towards apex, with only the preapical segment distinctly transverse. Pronotum broadest at about middle, with very deep anterior emargination and strongly produced anterior angles; sides rounded and narrowed towards base, shallowly sinuate in front of posterior angles, and with broad submarginal depression; punctation longitudinally confluent, particularly on submarginal depression. Sutural interval on elytra not costate; of the remaining intervals the crest of the inner costæ very fine, crenulate to slightly subtuberculate; punctation on intervals dense and conspicuous. Penultimate segment of anterior tarsi rather large, about as long as the preceding segment along midline.

[**Zadenos (Euzadenos) visseri** n. sp.]

(Pl. XXVIII, fig. 3.)

Belonging to the *bohemani* group, but readily distinguished by the small size of body. Black; the maxillary palpi, tarsi and the distal portion of antennæ reddish brown to testaceous, the femora and tibiæ of a dark reddish brown tint. Head above densely and coarsely punctured, with shallow clypeal impressions on frons. Eyes not projecting outwards, with their straight outlines continuous with the subparallel contours of genæ and tempora. Pronotum slender, flat, a little less than one and a half times as broad as long, with rather strongly rounded, distinctly reflected and thickly marginate sides, and carinate, strongly bi-sinuate base. Prosternal apophysis obtusely narrowed apically. Elytra depressed, only slightly broader than pronotum, with the sides faintly rounded in the ♀, almost subparallel in the ♂. Humeral angle neither prominent nor demarcated, slightly obtuse to rectangular. Sutural interval plane, all the remaining intervals costate, but the inner costæ finer and with crenulate to subtuberculate crest; the third costa strengthened on basal third; on apical declivity both the third costæ angularly bent towards suture in front of apex, generally coalescent with the apex of seventh costa and in contact with the sutural angle apically. Reflected portion, together with pseudo-pleura densely punctured. Punctation on abdomen very dense, coarse, becoming finer on anal sternite. Tibiæ subcylindrical, the upper surface of intermediate and posterior tibiæ very densely covered with setiferous punctures. In the ♂ the anterior tarsi dilated, with transverse second and third segments; the underside of anterior tibiæ with the usual excavation, but with almost straight inner contours; the underside of anterior femora and of all tibiæ with fine, short hairs, concentrated only on distal half of intermediate tibiæ.

Ædeagus. — Apical portion not demarcated from basal portion, narrowed in a straight line towards apex, slightly bent ventrad on

apical third. Parameres thick, deeply divided, but scarcely gaping apically; the apices, in dorsal view, appearing as if subtruncate, as the short and pointed portion of extreme apex is angularly bent ventrad, forming a fine, transversely projecting hook (lateral aspect).

Dimensions. — Length 6 ¼ to 7 mm, width 3 to 3 ½ mm.

Distribution. — Southern part of the South-western Cape Province. — Cape Town, 1896, F. W. PURCELL (3 ♂ ♂, 2 ♀ ♀, types S.A.M.); same locality, 1.1887, L. PÉRINGUEY (2 ♂ ♂, 1 ♀, S.A.M.); Kalk Bay, 1.1907 (1 ♂, S.A.M.); Saldanha Bay, IX.1918, L. PÉRINGUEY (1 ♀, S.A.M.).

Dedication. — Named in honour of Mr. G. VISSER, of the Mountain Club of South Africa, Cape Town.

26. On apical declivity of elytra the apex of seventh costa distinctly, often widely separated from third costa; the third costæ of both elytra angularly bent towards suture in front of apex and coalescent with sutural angle apically; intervals more or less distinctly shiny, the sutural interval plane, only exceptionally subcostate, when the entire elytra are strongly shiny; primary rows always well marked. Upper surface of tibiæ more or less shiny, that of anterior tibiæ not or only obsoletely edged 27
- On apical declivity of elytra either the apex of seventh costa coalescent with the prolonged third costa (in which case the third costæ of both elytra are in contact with each other at sutural angle of apex), or the seventh costæ of both elytra are prolonged in a straight line to the apex of elytra, where they meet at the sutural angle (in which case often the third costa is abbreviated, ending just in front of the prolonged seventh costa and does not clearly coalesce with the latter); intervals always very opaque; the sutural interval sharply costate, but sometimes the sutural costa extremely fine and scarcely discernible, when the primary rows are obsolescent. Upper surface of tibiæ opaque, in exceptional cases shiny, but then the body exhibiting clearly the preceding characters and the upper surface of anterior tibiæ with distinct fine edge, separating the upper surface from outer lateral one 32
27. Pronotum with very broad and strong submarginal depression of sides, with distinctly upwardly bent lateral margination; the submarginal depression about a third the width of discal convexity (best examinable in caudal aspect). Sutural interval on elytra plane, flat to convex, only exceptionally tectiform or subcostate 28
- Pronotum with narrow and very weak submarginal depression of sides, with the strong lateral carina at about level with submarginal depression and not bent upwards; the submarginal depression about a fifth the width of discal convexity (best examinable in caudal aspect). Sutural interval on elytra distinctly costate.

[*Zadenos (Euzadenos) riversdalensis* n. sp.]

Although exhibiting the main characters of the *ruficornis-bohemani* group, this species resembles much *Z. costifer* because of the shape of pronotum.

Black, antennæ and tarsi reddish brown. Head as in *bohemani*, but the antennæ slightly shorter. Pronotum shaped and sculptured

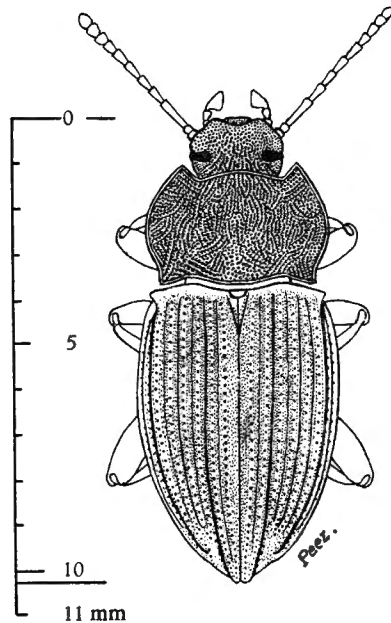


FIG. 196. — *Zadenos (Euzadenos) bohemani* (MULSANT & REY).

as in *costifer*, but the sides strongly sinuate in front of posterior angles. Elytra shiny, only slightly broader than pronotum, with weakly projecting humeral angles and moderately rounded sides. Primary rows with rather coarse punctures; intervals with inconspicuous punctation and strongly shiny costæ, sharply raised on outer intervals, becoming weaker and slightly obtuse on inner intervals. Abdomen with strong and rather dense punctures, concentrated but finer on anal sternite, longitudinally wrinkled between punctures on proximal sternites. Upper surface of tibiæ shiny, densely, but not rugosely punctured. ♂ unknown.

Dimensions. — Length $9 \frac{3}{4}$ to $10 \frac{1}{4}$ mm, width $4 \frac{1}{4}$ to $4 \frac{1}{2}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Riversdale Mountains, X.1926, K. H. BARNARD (3 ♀♀, holotype S.A.M.).

28. Upper surface of posterior tibiæ strongly shiny, with scattered to moderately dense, round and separated punctures. Either the inner costæ on elytra with more or less distinctly crenulate crest or the broad submarginal depression of pronotal sides with rather scattered, round and scarcely confluent punctures. In the ♂ the anterior femora simple, without brush 29
- Upper surface of posterior tibiæ moderately to weakly shiny, with partially very dense, subrugose to longitudinally confluent punctures. All the elytral costæ with smooth crest and the submarginal depression of pronotal sides with extremely dense, rugosely confluent sculpture. In the ♂ the anterior femora with brush 30
29. Submarginal depression of sides of pronotum less broad and weaker, with extremely dense, rugose sculpture; sides shallowly sinuate in front of posterior angles. Elytra with sericeous sheen, the inner costæ sharp, but with more or less crenulate to subgranulate crest.

[**Zadenos (Euzadenos) bohemani** (MULSANT & REY).]

(Pl. XXVIII, fig. 4; Fig. 196.)

*1854 a, *Eurynotus (Zadenos) bohemani* MULSANT & REY, pp. 178, 180. — 1854 b, MULSANT & REY, p. 36.

1870, *Eurynotus bohemani* GEMMINGER & DE HAROLD, p. 1914. — 1910 b, GEBIEN, p. 275. — 1938-1942, GEBIEN, p. 414, n° 5542.

Original description. — «Long. 9 mm, larg. 3,9 mm — Corps oblong; obtusément arqué longitudinalement, c'est-à-dire presque plan depuis les quatre-septièmes du prothorax jusqu'à la moitié des élytres; très faiblement convexe transversalement; d'un noir mat. Antennes d'un brun rouge. Prothorax arqué sur les côtés, sensiblement sinué près des angles postérieurs qui sont un peu dirigés en dehors; bisinué à la base; faiblement convexe en dessus, sur les deux-tiers médiaires de sa surface, médiocrement relevé sur les côtés, et formant par là, entre ceux-ci et la partie médiane, une gouttière large et peu profonde, dont le centre semble dirigé vers le point du bord postérieur formant à peu près les trois-cinquièmes de l'espace existant entre chaque sinuosité basilaire et l'angle de derrière; offrant les traces plus ou moins apparentes d'une ligne longitudinale médiane ou d'un sillon léger un peu plus déprimé ou formant une très légère fossette au-devant de la base; présentant les traces moins distinctes de deux fossettes à peine apparentes, situées chacune près de la base, entre la ligne médiane et chaque sinuosité basilaire. Elytres obtusément arrondies à l'extrémité et à peine sinuées latéralement près de celle-ci: la troisième au moins aussi saillante en

devant que la septième, aboutissant à l'angle sutural, en s'incurvant vers celui-ci : la septième non liée postérieurement à la troisième : les sillons ruguleusement et finement ponctués, et marqués chacun d'une rangée longitudinale de points moins petits. Prosternum rétréci en pointe et relevé à son extrémité. Tibias antérieurs presque cylindriques. ♂ Jambes antérieures et postérieures et plus brièvement les cuisses de derrière, ciliées. Trois premiers articles des tarses antérieurs garnis en dessous d'une brosse serrée ou de sortes de ventouses : le deuxième et troisième articles dilatés. ♀ Jambes glabres. Tarses sans ventouses ni brosse; non dilatés.»

Remarks. — Head above densely and rugosely punctured. Clypeal sutures arcuate and deeply impressed. Genæ straight and subparallel. The lateral outlines of eyes only minutely prominent. Antennæ elongate, accrescent towards apex, with moderately transverse two penultimate segments. Pronotum broadest behind middle, one and a half (♂) to one and two thirds times (♀) as broad as long, with deeply emarginate anterior margin and strongly produced, sharply rectangular anterior angles, uniformly covered with an extremely dense, in part longitudinally confluent rugose sculpture. Elytra broader than pronotum, with prominent humeral angle, subcarinate base and with the sides more strongly dilated towards the middle in the ♀ than in the ♂. The four to five outer costæ sharply raised, the inner ones weaker, often obtuse, the sutural interval convex to slightly tectiform. Abdomen with scattered punctation on proximal four sternites, longitudinally wrinkled between punctures; the anal sternite with uniform, very dense and finer punctation. In the ♂ the anterior tarsi strongly dilated, with transverse second and third sternites; the anterior tibiæ slightly curved, excavate below and there pilose; the intermediate and posterior tibiæ straight, but the inner apical angle briefly curved inwards and with a minute spine at extreme apex; the underside of posterior tibiæ and femora with a fine, subtomentose stripe of very short, yellowish, depressed hairs.

Ædeagus. — Lateral contours of apical portion not demarcated from basal one, strongly narrowed in a straight line towards apex; parameres deeply divided, with sharply pointed apices which are briefly bent ventrad and form a short hook. Penis with elongately oval apical portion; lacinia about as broad as penis, with the obtusely rounded apices bent outwards.

Dimensions. — Length $8 \frac{1}{4}$ to $10 \frac{3}{4}$ mm, width 4 to $5 \frac{1}{4}$ mm.

Type locality. — « Le Cap de Bonne-Espérance », type probably in Museum Paris.

Distribution. — Cape Peninsula. — Table Mountain (T.M., S.A.M.); Blinkwater Ravine (T.M., M.C.A.); Orange Kloof, Wynberg (S.A.M.); Rondebosch (S.A.M.); Karbonkelberg, Hout Bay (S.A.M.); Noordhoek (S.A.M.).

- Submarginal depression of sides of pronotum very broad, deep, abruptly demarcated from discal convexity, covered with coarse, round only slightly rugose punctures; sides deeply sinuate in front of the sharp posterior angles. Elytra shiny, the inner costæ weak and tending to become flattened, but with smooth crest.

[*Zadenos (Euzadenos) sulcimargo* n. sp.]

(Pl. XXIX, fig. 1.)

Very closely related to *Z. bohemani*, but the upper surface shiny and the body more elongate, also in the ♀ with subparallel to weakly rounded sides of elytra. Head as in *bohemani*, but the anterior margin of labrum not carinate, the lateral contours of epistome more distinctly demarcated from genæ and the eyes rather strongly prominent. Pronotum strongly transverse, about two-thirds broader than long, with slightly wavy lateral carina, covered with a much less dense punctation which is roundish and moderately confluent on disc, scattered on a smoothed median patch close to anterior margin. Elytral intervals densely punctured; only the three outer costæ strongly raised, all the remaining inner costæ weak, becoming obtuse and flattened towards suture. The punctation on upper surface of intermediate and posterior tibiæ fine, scattered, much less dense than in *bohemani*. ♂ unknown.

Dimensions. — Length $10 \frac{3}{4}$ to 12 mm, width $4 \frac{3}{4}$ to 5 mm.

Distribution. — Southern part of South-western Cape Province. — Swellendam, XI.1925, Mus. Exped. (1♀, holotype S.A.M.), same locality (1♀, S.A.M.).

- 30. Pronotum moderately transverse, in the ♂ about one and a half times, in the ♀ one and two thirds times as broad as long, in both sexes narrower than elytra; sides moderately rounded and elongately sinuate in front of posterior angles; submarginal depression from moderately strong to rather weak, with black background of cuticle and the lateral margination moderately reflected. In the ♂ the anterior tarsi normally dilated, with distinctly transverse second segment and strongly transverse third one 31
- Pronotum very strongly transverse, in both sexes about twice as broad as long, but in the ♂ about as broad as elytra or even slightly broader; sides very strongly rounded, with obtuse or briefly demarcated rectangular posterior angles; submarginal depression very strong, deep and

of a transparent brownish tint; the lateral margination strongly bent upwards. In the ♂ the anterior tarsi dilated as well as prolonged; the second segment long, distinctly longer than broad, the third segment only square.

[**Zadenos (Euzadenos) ruficornis** (GERMAR).]

(Pl. XXIX, fig. 2.)

*1824, *Pedinus ruficornis* GERMAR, pp. 141, 236.

1854 a, *Eurynotus (Zadenos) ruficornis* MULSANT & REY, p. 178. — 1854 b, MULSANT & REY, p. 34.

1870, *Eurynotus ruficornis* GEMMINGER & DE HAROLD, p. 276. — 1910 b, GEBIEN, p. 276.

Description (according to MULSANT & REY, 1854a, based on GERMAR's type). — « Long. 11,7 mm to 12,3 mm, larg. 4,5 to 5,4 mm. — Corps oblong; longitudinalement arqué; très-faiblement convexe; noir brun, d'un brun rougeâtre ou d'un rouge brun. Tête ponctuée, d'une manière râpeuse entre les yeux, et chargée entre ceux-ci d'une saillie transversale. Antennes à peine aussi longuement prolongées que les angles postérieurs du prothorax; le deuxième article, une fois plus long que le cinquième: les troisième à septième, plus longs que larges, presque filiformes: le huitième, obconique: les neuvième et dixième, moniliformes, plus larges que longs; le onzième, de moitié plus grand que le dixième. Prothorax arqué sur les côtés, offrant vers la moitié ou les quatre-septièmes de sa longueur sa plus grande largeur; sans sinuosité bien sensible près des angles postérieurs; d'un tiers environ plus large à la base qu'aux angles de devant; de deux-tiers au moins plus large à celle-là que long dans son milieu; bisinué à son bord postérieur, avec les trois-cinquièmes médiaires de celui-ci, légèrement arqués en arrière, et les angles postérieurs un peu prolongés en forme de large dent; muni d'un rebord étroit à la base; faiblement convexe sur les trois-cinquièmes médiaires de sa surface, relevé sur les côtés et formant par là entre ceux-ci et sa partie médiaire, une large gouttière dont le centre aboutit vers le point du bord postérieur intermédiaire entre la sinuosité et l'angle de derrière; réticuleusement ponctué; sans trace de sillon médiaire. Ecusson transverse. Elytres un peu plus larges en devant que le prothorax; munies à l'angle huméral d'une petite dent dirigée en dehors; élargies en ligne sensiblement courbe jusqu'à la moitié, en ogive un peu étroit et non sinuée près de l'extrémité, dans leur seconde moitié; faiblement convexes; subconvexe-ment déclives longitudinalement à partir de la moitié de leur longueur; offrant en dessus huit sillons et neuf arêtes (y comprises les juxta-saturale et marginale): les sillons finement et légèrement ponctués et marqués chacun d'une rangée longitudinale de points moins

petits : les cinquième et septième arêtes et la majeure partie de la troisième, un peu plus saillantes que les autres : la troisième, affaiblie en devant moins saillante que la septième, postérieurement recourbée vers l'angle sutural, au-devant duquel elle s'unit à sa pareille de l'autre étui : la deuxième, presque aussi longue que la troisième : la septième, à peine moins longue, non liée à la troisième à son extrémité, aboutissant en devant à l'angle huméral en se courbant en dehors : la cinquième, prolongée jusqu'aux quatre-cinquièmes ou un peu plus : les quatrième, sixième, huitième, un peu plus courtes, affaiblies à leur extrémité : les deux intervalles voisins du repli paraissant n'en former qu'un; non séparés par une arête. Dessous du corps souvent moins obscur ou plus rougeâtre que le dessus; marqué de gros points sur les parties pectorales; ponctué plus finement sur le ventre. Prosternum tronqué et offrant sa plus grande largeur à son extrémité; souvent relevé en pointe ou chargé d'un tubercule vers le milieu de celle-ci. Pieds grêles; simples. ♂ Cuisses de devant, jambes antérieures et postérieures ciliées en dessous : les antérieures moins grêles que les autres. Trois premiers articles des tarsi antérieurs garnis de brosses ou de ventouses en dessous : les deuxième et troisième, dilatés. ♀ Cuisses et jambes glabres en dessous : les antérieures à peu près aussi grêles que les autres. Tarsi non pourvus de brosse ou de sortes de ventouses en dessous; à articles non dilatés.»

Remarks. — Closely related to *Z. bohemani* and occurring at the same localities. Readily distinguished from this species by the larger size of body, the partially brownish tint of upper surface, the less dense punctation on head and pronotum, the peculiar shape of the latter, the more strongly costate elytral intervals, the much denser, slightly confluent punctation on the only weakly shiny upper surface of posterior tibiae, and finally by the different formation of the anterior tarsi in the ♂. The structure of aedeagus is almost identical.

Dimensions. — Length $10 \frac{1}{4}$ to $12 \frac{1}{2}$ mm, width $4 \frac{1}{2}$ to $5 \frac{3}{4}$ mm.

Distribution. — Cape Peninsula. — Cape Town (S.A.M.); Cape Flats (S.A.M.).

31. In the ♂ the anterior tarsi strongly dilated, the anterior tibiae distinctly curved, the apical portion of intermediate and posterior tibiae curved inwards, the underside of posterior tibiae with broad and complete sub-tomentose stripe, and the underside of posterior femora with strongly developed brush of hairs.

[**Zadenos (Euzadenos) caledonicus** n. sp.]

(Pl. XXIX, fig. 3.)

Very closely related to *Z. bohemani*, but body more elongate, the pronotum strongly sinuate in front of posterior angles, with coarser sculpture and much narrower submarginal depression, the elytra with sharply costate inner intervals, the tibiae thicker and their upper surface only weakly shiny and more densely punctured; in the ♂ the formation of legs quite different.

Dimensions. — Length 11 $\frac{1}{4}$ mm, width 4 $\frac{1}{2}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Hermanus, Caledon District, 1902, R. LIGHTFOOT (1 ♂, holotype S.A.M.).

- In the ♂ the anterior tarsi weakly dilated, all tibiae straight, the underside of the posterior tibiae with fine, subtomentose stripe which is abbreviate at both ends, and the underside of posterior femora with fine brush of hairs.

[**Zadenos (Euzadenos) babylomontis** n. sp.]

(Pl. XXIX, fig. 4.)

Very closely related to *Z. caledonicus*, but differing by the following characters. Body shorter, in the shape of elytra similar to *bohemani*. Antennae slightly shorter. Pronotum of similar shape, but the sides only shallowly sinuate in front of posterior angles or simply rounded and narrowed towards the latter; submarginal depression broad and deep; punctation less dense, rather scattered on middle of disc. Elytra shiny (sericeous in *caledonicus*), with similarly costate intervals, but coarser punctures of primary rows. Abdomen with less dense punctation, the anal sternite included. Punctation on upper surface of tibiae very dense, similar to that in *caledonicus*. Aedeagus similar to that of the species of the *bohemani* group, but the extreme apices of parameres straight and not bent ventrad.

Dimensions. — Length 10 $\frac{1}{4}$ to 10 $\frac{1}{2}$ mm, width 4 $\frac{1}{4}$ to 4 $\frac{3}{4}$ mm.

Distribution. — Southern part of the South-western Cape Province — Babylons Tower, III.1939, Mus. Staff (3 ♂ ♂, 1 ♀, types S.A.M.).

32. Body larger, 8 $\frac{1}{4}$ to 10 $\frac{1}{2}$ mm long. Eyes moderately convex, their outlines not projecting outwards, but in line with genal contours; the latter subparallel or slightly narrowed towards eyes. The sutural costa on elytra strong, its diameter about equal to the diameter of the third costa; the second, fourth and sixth intervals very variable, from sharply costate to practically plane 33

- Body smaller, $6 \frac{3}{4}$ to $8 \frac{1}{2}$ mm long. Eyes strongly convex, their outlines distinctly projecting outwards and demarcated from genal contours; the latter strongly narrowed in a straight line towards eyes. The sutural costa on elytra from very fine to evanescent or absent, if developed its diameter much smaller than the diameter of the third costa; the second, fourth and sixth intervals with very fine, inconspicuous, sometimes rudimentary to evanescent costulae, in the latter case practically plane.

[**Zadenos (Euzadenos) acutus** (WIEDEMANN).]

(Figs. 197, 198.)

*1823, *Opatrum acutum* WIEDEMANN, p. 33.

1870, *Eurynotus acutus* GEMMINGER & DE HAROLD, p. 1914. — 1910 b, GEBIEN, p. 275.
— 1938-1942, GEBIEN, p. 414, n° 5540.

Original description. — « Nigrum, antennis ochraceis, elytris triporcatis, interstitiis linea longitudinali rugulisque transversis. Longit. lin. $3-3 \frac{1}{2}$. — Der ganzen Gestalt nach nähert sich diese Art dem portugiesischen *O. angulatum* ILL., welches in FABRICIUS' Sammlung unter dem Namen *O. purpurascens* steckt, und sich auch von den übrigen durch die hinten spitz auslaufenden Deckschilde unterscheidet. Die Taster ragen wie bei *O. longipalpe* unter dem Kopfe hervor. Die Bildung des Kopfes ist ganz wie bei *O. longipalpe*. Fühler ockerbraun. Halsschild narbig, ohne Längsvertiefung, Seitenränder breit, aber wenig aufgebogen, convex, vorn mehr als hinten convergierend, Vorderrand breit ausgeschnitten, so dass er in der Mitte ziemlich gerade, an den Seiten aber schnell vor- und auswärts läuft, wodurch die vordern Ecken wie dreieckige Lappen vorragen. Hinterrand mitten flach convex, zu beiden Seiten unter einem sehr stumpfen Winkel rückwärts laufend, Flügeldecken jede mit drei scharf erhabenen Längslinien, zwischen denen eine sehr wenig erhabene feine Längslinie liegt, von der an jeder Seite Querfältchen abgehen; dieser feinen Längslinien sind vier, die innerste zwischen der Naht und der innern scharferhabenen Linie, die äusserste zwischen dem Aussenrande und der äusseren erhabenen Linie. Obere Fläche ohne Glanz; untere Fläche grob punktiert, wenig glänzend. Beine feiner punktiert, von Farbe bräunlich, an den Fusswurzeln ockerbraun. »

Remarks. — *Z. acutus* is very well characterized among the allies of *Z. bohemani* by the small size of body, the very opaque upper surface, the extremely dense, rugose and subgranular sculpture on pronotum, the convex eyes, the very long antennae, and the peculiar sculpture on elytra. The latter exhibit three sharply costate outer intervals, whereas of the inner intervals only the third and

fifth ones are sharply costate; the sutural interval is often very finely carinate, but the second, fourth and sixth intervals show only very fine traces of carinæ or rows of fine granules; the seventh costæ of both elytra are prolonged in a straight line as far as the sutural angle of apex, where they are in contact with each other, forming a sharp, right angle apically; the apex of third costa usually in contact with the seventh costa, but often ending just in front of the

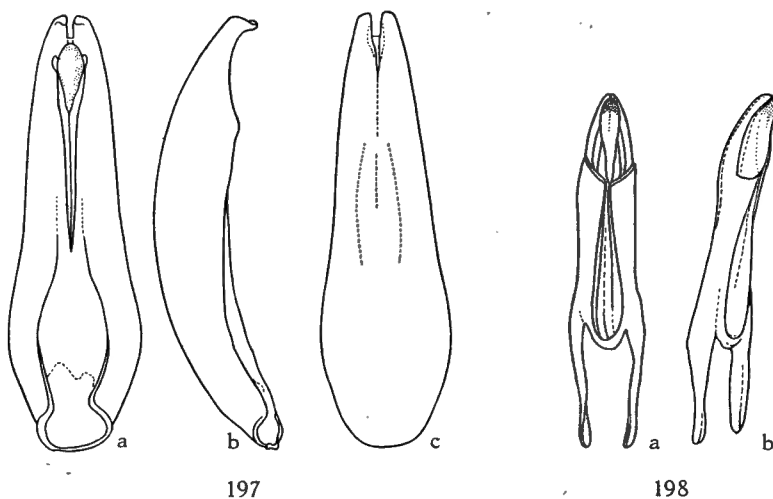


FIG. 197. — *Ædeagus* of *Zadenos* (*Euzadenos*) *acutus* (WIEDEMANN) (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 198. — The extracted penis plus lacinia of the *ædeagus* of *Zadenos* (*Euzadenos*) *acutus* (WIEDEMANN) (a: outer surface; b: diagonal view).

latter. Intervals with fine and dense granular sculpture and more or less distinct to obsolescent primary rows of punctures. Abdomen shiny, rather coarsely and densely punctured, with very dense punctation on anal sternite. Legs reddish brown to red; in the ♂ the anterior tarsi moderately dilated, with transverse second and third segments; the underside of anterior tibiæ with rather deep, elongately pilose median excavation; the intermediate and posterior tibiæ straight, the underside of the latter, as well as the underside of anterior and posterior femora with a fringe of fine hairs.

Ædeagus (figs. 197, 198). — Apical portion narrowed in a straight line to apex; the parameres deeply divided, gaping distally, with obtusely pointed apices which are moderately bent ventrad.

Dimensions. — Length $6 \frac{3}{4}$ to $8 \frac{1}{2}$ mm, width 3 to 4 mm.

Type locality. — « Prom. bon. sp. ». Type probably in Museum Berlin.

Distribution. — Cape Peninsula. — Cape Town (S.A.M.); Constantia (S.A.M.); Strandfontein near Cape Town (T.M.).

33. Pronotum narrower than elytra, broadest distinctly behind middle, with the sides rather strongly sinuate in front of posterior angles. Second, fourth and sixth intervals on elytra with strong to fine costa, the latter usually with continuous and smooth crest. Abdomen with fine to moderately coarse punctation, the punctures never foveolate nor rugosely confluent, with their diameter only slightly or not larger than that of punctures on posterior femora. In the ♂ the anterior tarsi strongly dilated, the second and third segments considerably broader than the penultimate segment of antennæ 34

— Pronotum, at least in the ♂, not narrower than elytra, broadest at about middle, with the sides either simply rounded and narrowed towards base or the posterior angles briefly and rectangularly demarcated. Second, fourth and sixth intervals on elytra with only rudimentary traces of carinulæ or rows of granules. Abdomen with very coarse, subfoveate and often rugosely confluent punctation; the diameter of punctures considerably larger than that of punctures on posterior femora. In the ♂ the anterior tarsi weakly dilated, the second and third segments scarcely broader than the penultimate segment of antennæ.

[*Zadenos (Euzadenos) mulsanti* n. nom.]

(Pl. XXX, fig. 1; Fig. 199.)

*1854 a, *Eurynotus (Solenopistoma) acutus* MULSANT & REY, pp. 173, 175. — 1854 b, MULSANT & REY, p. 31 (nec *acutus* WIEDEMANN).

Original description. — « Long. 9,5 mm, larg. 3,9 mm — Corps oblong; presque plan; d'un noir mat. Tête rugueusement et assez grossièrement ponctuée; marquée sur la suture frontale, d'un sillon en demi-hexagone; transversalement sillonnée après les yeux. Antennes à peine aussi longuement prolongées que les trois-quarts des côtés du prothorax; d'un rouge brun ou brunâtre; à deuxième article une fois au moins plus long que le cinquième: les sixième et septième, presque filiformes, faiblement obconiques, plus longs que larges: les huitième à dixième plus larges que longs: les huitième et neuvième, moniliformes: le dixième cupiforme: le onzième plus large que long. Prothorax arqué sur les côtés, offrant ordinairement vers les deux-tiers ou un peu moins sa plus grande largeur, plus faiblement rétrécie ensuite; presque en ligne droite ou à peine arqué en arrière sur les trois-cinquièmes médiales de la base, avec les

angles postérieurs prolongés en espèce de dent; faiblement convexe sur les trois-cinquièmes médiaires de sa largeur, et comme largement en gouttière entre cette partie discale et les bords latéraux qui sont relevés et à peine rebordés; un peu réticuleusement ponctué. Ecusson transverse; en triangle ou en arc dirigé en arrière; une fois au moins plus large que long. Elytres munies d'une petite dent dirigée de côté à l'angle huméral; faiblement élargies en ligne courbe jusqu'à la moitié ou un peu moins, rétrécies ensuite et d'une manière sensiblement sinuée avant l'extrémité, qui est tronquée; presque planes ou très faiblement convexes; chargées en dessus (y comprises les suturale et marginale) de cinq lames ou arêtes comprimées, très étroites et unies sur leur tranche: la première ou suturale, commençant à diverger en devant à partir du cinquième antérieur, enclosant ainsi avec sa pareille l'écusson, lequel est suivi d'une très-courte carène postscutellaire: la quatrième aboutissant à l'angle sutural en se courbant faiblement en dehors: la deuxième ou juxta-suturale, liée à son extrémité à la quatrième, qui se prolonge jusqu'à l'angle sutural: la troisième, à peine prolongée au-delà des quatre-cinquièmes; offrant, entre les quatrième et cinquième carènes, une tranche plus faible, à peine prolongée jusqu'à la moitié. Intervalles marqués d'une double rangée de points liés par de fortes rides transverses. Dessous du corps entièrement marqué de gros points: ceux de l'antépectus, réticuleux ou un peu unis en sillons. Prosternum rayé de trois stries non prolongées jusqu'à l'extrémité. Pieds bruns; ponctués, un peu râpeux. Cuisses antérieures un peu plus grosses. ♂ Cuisses antérieures et postérieures, ciliées en dessous, ainsi que toutes les jambes: les cuisses postérieures et les jambes de devant et de derrière plus longuement. Trois premiers articles des tarses antérieurs, garnis de brosses en dessous: les deuxième et troisième dilatés: les mêmes articles des tarses intermédiaires à peine plus larges que les autres. ♀ Cuisses et jambes glabres en dessous. Deuxième et troisième articles des tarses antérieurs à peine plus larges que les autres.»

Remarks. — This species, which MULSANT & REY erroneously referred to WIEDEMANN's *acutus*, agrees with the latter in the peculiar character of the almost incostate second, fourth and sixth intervals on elytra, but differs strongly by the following particulars. The body is of larger size. The antennæ are considerably shorter and less strongly accrescent towards apex. The eyes are not prominent. The pronotum of very similar shape, with identical, rather strong and broad submarginal depression and bi-sinuate base, but the greatest width is situated at about middle, and the dense sculpture is slightly resolved to longitudinally confluent, and not subgranular, punctures on disc. The elytra are distinctly more elongate, subparallel in the

♂ and only weakly rounded laterally in the ♀; the three outer intervals, as well as the sutural, third and fifth intervals are very strongly costate, whereas the even inner intervals are almost plane, with only slight traces of longitudinal rows of granules or carinulæ; the apical construction of costæ is similar to that in *acutus*, but the apex of the third costa is constantly coalescent with the seventh costa. The primary rows are generally composed of very coarse, transverse punctures, arranged in double rows between the sharp odd inner

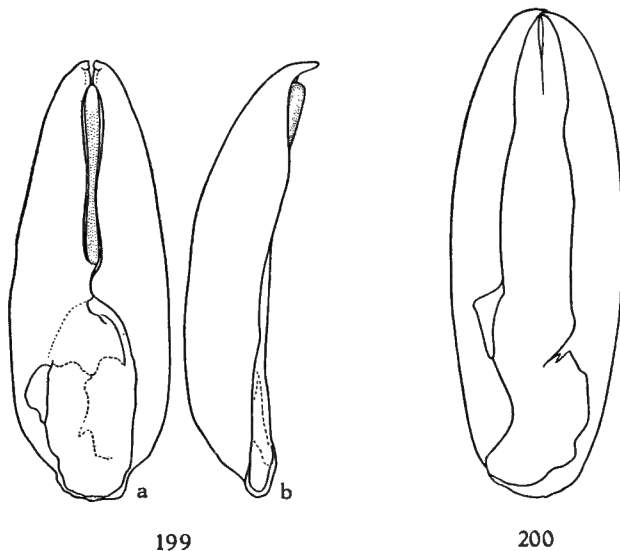


FIG. 199. — Aedeagus of *Zadenos* (*Euzadenos*) *mulsanti* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right). — FIG. 200. — The dissected and emptied aedeagal tegmen of *Zadenos* (s. str.) *longipalpus* (WIEDEMANN).

costæ; sometimes these punctures are less conspicuous, when they are badly demarcated from the dense and granular sculpture of intervals. Punctuation on abdomen much denser and coarser than in *acutus*. Upper surface of tibiæ with much more concentrated, rugose and opaque sculpture. In the ♂ the anterior tarsi moderately dilated, as in *acutus*; the underside of anterior tibiæ with elongately pilose, median excavation; the underside of posterior tibiæ and femora with a dense brush of rather long, testaceous bristles.

Aedeagus (fig. 199). — Apical portion narrowing in a straight line towards apex; parameres strongly divided, with the apices pointed and sharply bent ventrad. Ventral groove strongly constricted by the broad inflexed alæ, but penis exposed. Penis narrow, with weakly dilated, spoon-shaped apical orifice; lacinia strongly sclerotized, curved inwards, slender, shorter than penis.

Dimensions. — Length $8\frac{3}{4}$ to $10\frac{1}{2}$ mm, width $3\frac{1}{2}$ to $4\frac{1}{2}$ mm.

Type locality. — « Cap de Bonne Espérance », type probably in Museum Paris.

Distribution. — Southern part of the South-western Cape Province. — Houw Hoek (S.A.M.); Rivier Zonder End (S.A.M.); Bredasdorp (S.A.M.); Hermanus (S.A.M.); Swellendam (S.A.M.); Palmiet Rivier (S.A.M.); Rondebosch (S.A.M.); Ashton (S.A.M.); Mossel Bay (S.A.M.).

34. Primary rows of elytra with very coarse punctures; the latter considerably coarser than the discal punctation on pronotum, their diameter broader than the width of secondary costæ, almost occupying the entire intervening space between secondary costæ, often with transversely raised, subrugose margins; the odd inner costæ always strongly elevated, much more strongly raised than the alternating even inner costulæ which, in one case, are absent on fourth and sixth intervals 35
- Primary rows of elytra with very fine to moderately strong punctures; the latter about as large as the diameter of the discal punctation on pronotum, the width of the diameter of secondary costæ or narrower, being situated on midline of the intervening spaces between secondary costæ and well separated from the latter on each side; the punctures always flat, without forming transversely ridged margins; the alternating even inner costæ variable, sometimes almost as strongly raised as the odd costæ, sometimes much weaker and finer, but always well indicated.

[*Zadenos (Euzadenos) costifer* n. sp.]

(Pl. XXX, fig. 2; Figs. 201, 202.)

Closely related to *Z. riversdalensis*, but with all the main characters of the *acutus - mulsanti* group. Head above with dense, strong punctures; eyes not prominent, their outlines continuous with the subparallel contours of genæ. Mentum fig. 177a. Antennæ slender; the preapical segment roundish to slightly transverse. Pronotum uniformly covered with very dense, rugose, partially confluent punctures, and with narrow, weak submarginal depression. Elytra dull, with all the intervals shiny and variously costate; the apical construction of costæ similar to that in *mulsanti*; humeral angle dentiform and prominent. Punctation on abdomen rather fine, concentrated on anal sternite. Upper surface of intermediate and posterior tibiæ dull, with dense to rugosely confluent sculpture. In the ♂ the anterior tarsi strongly dilated, the second and third segments transverse and much broader than the penultimate segment of antennæ; with a more or less developed fringe of hairs on underside of anterior and posterior tibiæ and posterior femora; the shape of intermediate and posterior tibiæ variable, straight to slightly curved.

Ædeagus (figs. 201, 202). — Similar to *Z. mulsanti*; the penis not spoon-shaped, but subparallel also apically and the lacinia not shorter than penis

Dimensions. — Length $8\frac{1}{2}$ to $10\frac{1}{4}$ mm, width $4\frac{1}{4}$ to $4\frac{3}{4}$ mm.

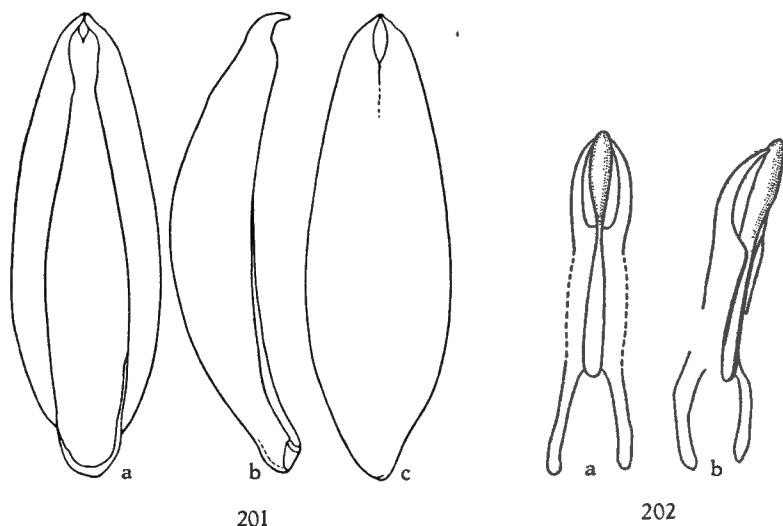


FIG. 201. — The dissected and emptied aedeagal tegmen of *Zadenos (Euzadenos) costifer* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 202. — The extracted penis plus lacinia of *Zadenos (Euzadenos) costifer* n. sp (a: outer surface; b: diagonal view).

Subspecies: —

a) costifer s. str. — The costæ on inner even intervals of elytra continuous, not abbreviated posteriorly, not much finer and weaker than the alternating odd costæ; each elytron therefore discally with the six inner primary rows clearly divided into six sections by the costæ on intervening secondary intervals.

Distribution. — Central and western part of the Southern Cape Province. — Bredasdorp, H. FRY (1♂, 2♀♀, types S.A.M.); Mossel Bay, VII.1886 (1♂, S.A.M.); same locality, 1913, BRO. POWER (1♂, S.A.M.); George District, VIII.1931, C. THORNE (1♂, 2♀♀, S.A.M.); Laingsburg, F. W. PURCELL (1♀, S.A.M.).

b) intercostulatus n. subsp. — The costæ on inner even intervals of elytra very fine, often interrupted, abbreviated posteriorly, much finer and weaker than the alternating odd costæ; each elytron discally appearing as if divided into three sections only, with each section composed of two primary rows.

Remarks. — On account of the similar development of elytral costæ, this form slightly resembles *Z. mulsanti*, from which it is readily distinguished by the fine punctation of primary rows on elytra and on abdomen, the broad elytra, the different shape of pronotum, and the less dense, not rugosely confluent sculpture on upper surface of intermediate and posterior tibiæ.

Distribution. — Southern part of the South-western Cape Province. — Rivier Zonder End, Oudebosch, 1,500 ft., XI to XII.1928, K. H. BARNARD (2♀♀, holotype S.A.M.).

35. Antennæ slender; the ninth segment distinctly longer than broad, the tenth segment roundish to slightly transverse. The even inner costæ on elytra fine, but readily visible on disc. Lateral carina of pronotum sharp and fine. The upper surface of anterior tibiæ gradually dilated behind middle, thence slightly narrowed towards apex, edged only on apical third.

[*Zadenos (Euzadenos) sculptus* n. sp.]

On account of the fine, even inner costæ on elytra very similar to *Z. mulsanti*, but the pronotum broadest behind middle and also in the ♂ narrower than elytra, the even inner costæ on elytra fine but well marked, the punctation on abdomen much finer, and the anterior tarsi strongly dilated in the ♂. In this sex the underside of anterior and posterior tibiæ, as well as that of anterior and posterior femora with a more or less developed fringe of hairs.

Ædeagus. — Similar to *costifer*, but the inflexed alæ very broad and subparallel on posterior three-quarters, more strongly constricting the narrow ventral groove; penis similar, the lacinia, however, with the apices bent into a direction which runs subparallel with penis.

Dimensions. — Length $8\frac{3}{4}$ to $9\frac{3}{4}$ mm, width 4 to $4\frac{1}{2}$ mm.

Distribution. — Central part of the Southern Cape Province. — George, H. BRAUNS (1♂, holotype T.M.); Robinson's Pass, X.1922, H. BRAUNS (1♂, T.M.); Mossel Bay, VII.1886 (1♂, S.A.M.); Rivier Zonder End, Oudebosch, 1,500 ft., XI-XII.1928, K. H. BARNARD (1♂, S.A.M.).

- Antennæ stout, strongly accrescent towards the apex; both the ninth and tenth segments strongly transverse. The even inner costæ on elytra rudimentary, very fine, weakly indicated on second interval, practically absent on the fourth and sixth intervals. Lateral carina of pronotum thick and obtuse. The upper surface of anterior tibiæ gradually dilated in a straight line to apex, not constricted in front of the latter, with the rather sharp and prolonged edge almost reaching the base of tibia.

[**Zadenos (Euzadenos) crassicornis** n. sp.]

In the sculpture of elytra almost identical with *Z. mulsanti*, but the pronotum strongly sinuate in front of posterior angles and broadest decidedly behind middle, the antennæ stout and the punctures on abdomen rather coarse, but much less concentrated and not foveate. Closely related also to *Z. sculptus*, from which it is distinguished by the larger size of body, the much more coarsely sculptured pronotum which is broadest quite behind middle and exhibits strongly produced posterior angles, the rudimentary even inner costulæ on elytra and the coarser, less clearly marked and transversely rugose punctures of primary rows. ♂ unknown.

Dimensions. — Length 10 $\frac{1}{2}$ mm, width 4 $\frac{3}{4}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Riversdale, XII.1932, T. G. JOUBERT (1♀, holotype T.M.).

36. Elytra very opaque, with serrate-denticulate outer contours; at least the outer costæ serrate to denticulate, the sutural interval sharply costate, the inner even intervals with well separated round tubercles or granules at least posteriorly; intervals with barely indicated punctures. The proximal sternites of abdomen with very coarse, subfoveate and rugosely confluent punctures which are much coarser than the punctures on pseudopleura; anal sternite strongly convex or bunched up on basal half. Femora with a few long, erect bristles. In the ♂ the anterior tarsi not or weakly dilated, only inconspicuously to slightly broader than in the ♀, the underside of intermediate and posterior tibiæ and of posterior femora with long and dense brush of yellowish hairs.

ZADENOS subg. **SERRIDENOS** nov. 37

Type species: *Zadenos (Serridenos) solenopistoma* n. sp.

- Elytra distinctly shiny, with smooth outer contours; all costæ with smooth crest which is sometimes minutely crenulate on posterior portion of outer costæ; the sutural interval slightly tectiform to obtusely costate, the inner even intervals with fine, continuous costæ which are only slightly less raised than the alternating odd costæ; intervals with conspicuous, very dense to rugose punctation. The proximal sternites of abdomen with fine, very dense, slightly confluent punctures which are scarcely stronger than punctures on pseudopleura; anal sternite uniformly flat. Femora with the usual, fine, microscopical pubescence, but without long bristles. In the ♂ the anterior tarsi rather strongly dilated, considerably broader than in the ♀, the underside of femora and tibiæ with variously developed, fine, submentose stripes of short hairs.

ZADENOS subg. **ZADENOS** s. str.

Monotypical.

[**Zadenos** (s. str.) **longipalpus** (WIEDEMANN).]

(Pl. XXX. fig. 3; Figs. 200, 203, 204.)

*1823, *Opatrum longipalpe* WIEDEMANN, p. 32.1840, *Pedinus (Zadenos) longipalpus* LAPORTE DE CASTELNAU, p. 210.1938-1942, *Eurynotus longipalpus* GEBIEN, p. 414, n° 5541.

Original description. — « Rubido-fuscum; thorace cicatricoso, elytris porcatis, interstitiis punctatis. Longit. lin. 5. — Obwohl die Kinnladentaster weit über den Kopf hinausragen, muss diese Art doch unbezweifelt zur Gattung *Opatrum* gezählt werden. Die Farbe der ganzen oberen Fläche ist ein rötliches braun, welches an der untern Fläche an den Fusswurzeln, ja schon an den Fühlern stark mit gelb gemischt ist. Lefze äusserst wenig ausgerandet, Kopfschild aber sehr stark, dieser vom Kopfe selbst durch einen randförmigen oder nach vorn concav gebogenen deutlichen Streif geschieden, beide ziemlich grobnarbig. Hasschild breit viereckig, Seitenränder breit, aber wenig aufgebogen, etwas uneben convex, vorn mehr als hinten convergierend, Vorderrand ausgeschnitten, in der Mitte mit einer kleinen Vertiefung. Wurzelrand sehr flach geschweift, Oberfläche narbig, in der Mitte kaum die Spur einer Längsfurche. Flügeldecken jede mit sieben scharf erhabenen Streifen, die äussersten am schärfsten, Zwischenräume flach rinnenförmig und deutlich punctiert, so dass neben einer Hauptreihe von Punkten noch mehrere kleinere Punkte stehen. Untere Fläche und Beine deutlich punctiert, die Punkte durch Längsstreifen verbunden. »

Remarks. — *Z. longipalpus* is very well characterized by the sulcate upper surface of intermediate and posterior tibiae, the strongly developed and prolonged genal canthus and the presence of a fine costa on the tenth interval of the reflected lateral portion of elytra. The head is large, densely and rugosely punctured on vertex. Lateral portions of epistome not demarcated from genae. Clypeal impressions oblique. Genae large, strongly produced beyond contours of eyes and narrowed in a straight line towards the latter, with the canthus constricting the two anterior thirds of eye and leaving exposed only one to two transverse rows of corneal facets posteriorly. Mentum (fig. 177b) depressed on apical half. Maxillary palpi long, with slender and elongate first segment and securiform apical segment. Antennae slender, distinctly compressed and accrescent towards apex; the two penultimate segments transverse. Pronotum transverse, uniformly covered with an extremely dense, longitudinally confluent and rugose sculpture, with strong, subsulcate and rather broad submarginal

depression, and with the sides equally rounded and narrowed towards anterior margin, as well as towards base, rarely very shallowly sinuate in front of posterior angles. Prosternal apophysis horizontally produced. Elytra scarcely (σ) to slightly (♀) broader than pronotum, with almost subparallel (σ) to slightly rounded (♀) sides. Humeral angle minutely demarcated. Apical construction of costæ

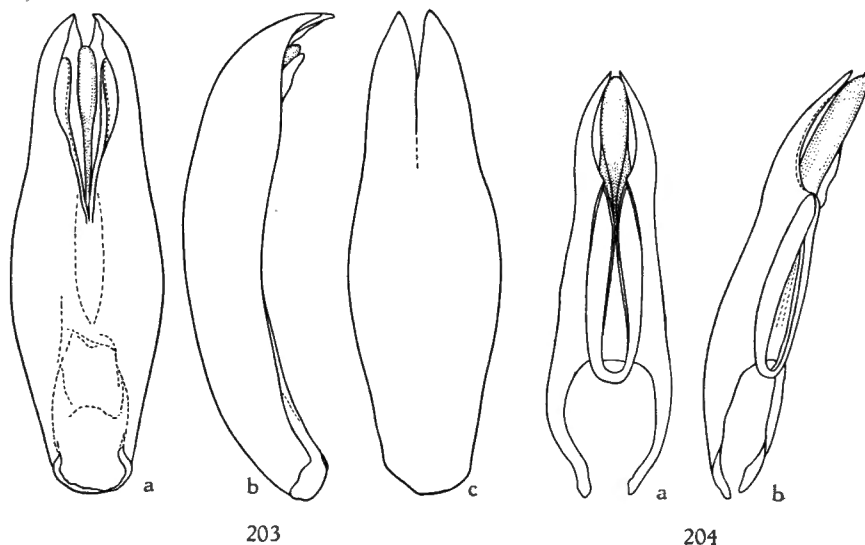


FIG. 203. — *Ædeagus* of *Zadenos* (s. str.) *longipalpus* (WIEDEMANN) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 204. — The extracted penis plus lacinia of *Zadenos* (s. str.) *longipalpus* (WIEDEMANN) (a : outer surface; b : diagonal view).

very similar to that in *Z. bohemani*, but often the eighth costa prolonged and then ending only at very short distance from apical angle of suture.

Ædeagus (figs. 200, 203, 204). — Broad and short, moderately converging distally. Parameres deeply divided, with the apices strongly gaping, sharply pointed and abruptly bent ventrad. Ventral groove very broad, with distally reduced inflexed alae and entirely exposed penis and lacinia; penis thin, subparallel; lacinia compressed and foliaceous proximally, only slightly thinner than penis, with the apical portion curved into a position which is subparallel with penis.

Dimensions. — Length $9\frac{1}{2}$ to 11 mm, width $3\frac{3}{4}$ to 5 mm.

Type locality. — « Prom. bon. sp. ». Type probably in Museum Berlin.

Distribution. — Central and eastern part of the Southern Cape Province. — Port Elizabeth (S.A.M.); Grahamstown (Rh.U.); Port Alfred, Kowie River (S.A.M.).

37. Elytra with the seventh, eighth and ninth costæ sharply serrate-denticulate; the three odd inner intervals with strongly raised costæ which are smooth to finely crenulate on basal half, denticulate on apical half; the three even inner intervals with a longitudinal row of widely separated, roundish tubercles; the tenth interval on reflected lateral portion plane, not costate, but coarsely and irregularly punctured. Pronotum scarcely narrowed posteriorly, there with practically subparallel sides. In the ♂ the anterior tarsi inconspicuously broader than in the ♀.

[**Zadenos (Serridenos) solenopistoma** n. sp.]

(Pl. XXX, fig. 4; Figs. 177 c, 187, 205 to 207.)

This species is remarkable by the peculiar sculpture of elytra, strikingly similar to the *Oncotin Eurynotus (Solenopistoma) denticosta* MULSANT & REY (fig. 206). — Head (fig. 187) very similar to *Z. longipalpus*, but the sculpture on upper surface very coarse and rugose, the genæ still more strongly projecting beyond eyes and the supra-orbital edges subcarinate. The underside of head bare, with dense, very coarse and subfoveate punctation. Mentum fig. 177c. Antennæ as in *longipalpus*. Pronotum broadest at about middle, one and a half to one and two thirds times as broad as long, only slightly narrower than elytra, covered with an extremely dense, rugose sculpture, becoming very coarse, longitudinally confluent and substriolate on disc. Anterior emargination deep, with produced and sharp anterior angles. Sides moderately rounded, in front of posterior angles from subparallel to weakly narrowed; submarginal depression broad and strong. Base shallowly bi-sinuate, with rectangular to faintly obtuse posterior angles. Prosternum together with episternum very coarsely and densely punctured, the lateral area of the latter obsoletely and transversely wrinkled; intercoxal apophysis horizontally produced and pointed apically. Elytra with subparallel to weakly rounded sides, minutely prominent and sharp humeral angles and carinate base. Primary rows with rather coarse, but shallow and often transversely rugose punctures. Intervals without discernible punctation, with very strongly raised costæ on outer and odd inner intervals, the sutural interval included; on apical declivity the seventh costa prolonged to the sutural angle of apex and there in contact with the third costa, the eighth costa abbreviated and ending at considerable distance from apex. Underside of hind body, the legs included, with very coarse and dense punctation; the punctures on anal sternite much finer than those on proximal sternites.

Ædeagus (fig. 207). — The apical portion sharply demarcated from basal one by a lateral constriction and a shallow, transverse impression on dorsal surface. Ventral groove very broad, restricting the inflexed alæ to narrow lateral margins and leaving entirely

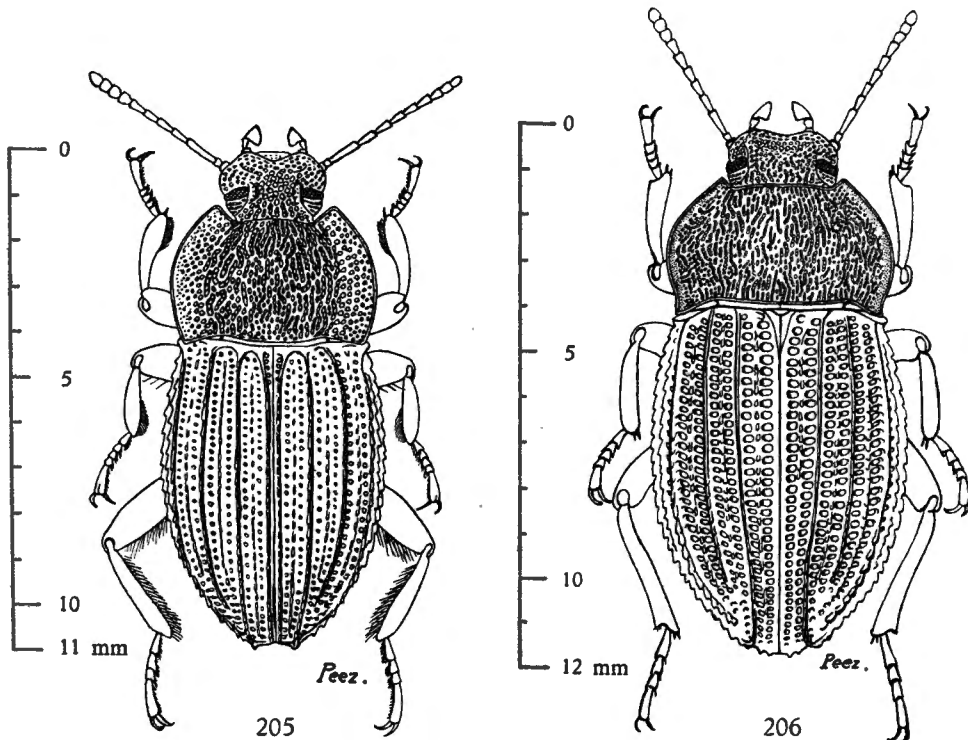


FIG. 205. — *Zadenos (Serridenos) solenopistoma* n. sp. (*Litoborini*).

FIG. 206. — *Eurynotus (Solenopistoma) denticosta* MULSANT & REY (*Oncotini*). Both species, the representatives of two different tribes, occur in the same area, demonstrating a striking case of converging parallel development of shape and sculpture of body.

exposed the penis and lacinia. Parameres gradually narrowed towards apex, deeply divided and gaping on distal portion, with sharply pointed, but weakly curved apices. Penis with minutely bifid apex, very strongly dilated towards base, there forming a peculiar, roundish and shallowly concave sclerite which is separated from the distal portion by a strongly raised, transverse ridge. Lacinia large, almost the length of penis, complanate and foliaceous, with very fine, sharply pointed, hook-like apices which are subangularly bent outwards.

Dimensions. — Length $9\frac{1}{2}$ to $12\frac{1}{2}$ mm, width $4\frac{1}{4}$ to $5\frac{3}{4}$ mm.

Distribution. — Central part of the Southern Cape Province. — Willowmore, X.1918, H. BRAUNS (18 spec., types T.M.).

- Elytra with the ninth costa serrate-denticulate, the crest of the eighth costa tuberculate and that of the seventh costa finely crenulate on anterior half, denticulate on posterior half; the three inner even intervals very similar to the alternating, inner, odd intervals, viz. provided with con-

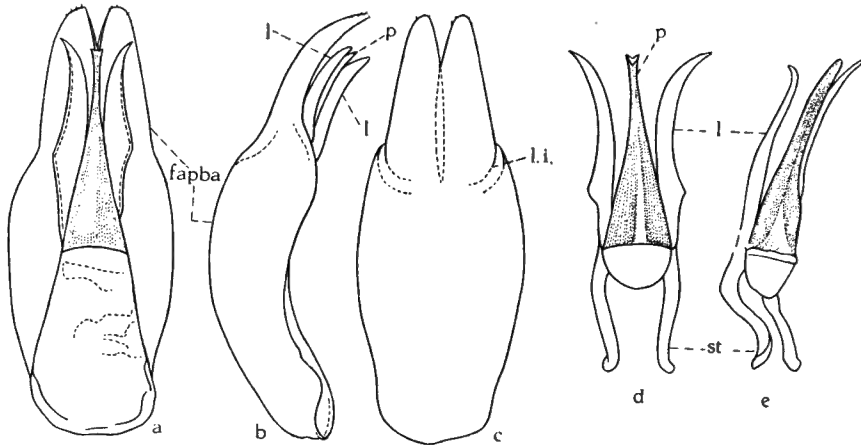


FIG. 207. — Aedeagus of *Zadenos (Serridenos) solenopistoma* n. sp. (fapba : the fused apical and basale of aedeagal tegmen; l : lacinia; l.i. : lateral impression; p : penis; st : struts of inner sclerites).
a : ventral surface; b : lateral aspect, with the ventral surface at right; c : dorsal surface; d : the extracted penis and lacinia, outer surface; e : ditto, diagonal view.

tinuous, slightly wavy to weakly crenulate costæ which are only less strongly raised than the odd costæ; the tenth interval on reflected lateral portion with extremely fine, granular but continuous carina. Pronotum almost as strongly rounded and narrowed towards the base as towards the anterior margin. In the ♂ the anterior tarsi distinctly dilated and broader than in the ♀.

[***Zadenos (Serridenos) XX-costatus*** n. sp.]

This species, the largest Southern African *Litoborin*, is closely related to *Z. solenopistoma*, but readily distinguished by the above mentioned and following characters. The sculpture on upper surface of head is denser, finer, forming a regular, extremely dense reticulation. The mandibular teeth on postgenal margin are longer and sharply pointed. The pronotum with strongly rounded sides, a much

more strongly demarcated submarginal depression, but an extremely fine lateral carina (which is rather thick and shiny in *solenopistoma*); its sculpture is much finer, but extremely dense, forming a kind of fine reticulation, similar to that on head. The elytra are similar to *solenopistoma*, but the lateral outlines are less strongly serrate and on apical declivity it is not the seventh costa, which is prolonged, but the third costa; the latter angularly bent towards suture in front of apex and coalescent with the sutural angle apically; the apex of the seventh costa not in contact with the third costa. In the ♂ the legs as in *solenopistoma*, but the anterior tarsi with distinctly dilated, transverse second and third segments. Ædeagus almost identical with that of *solenopistoma*.

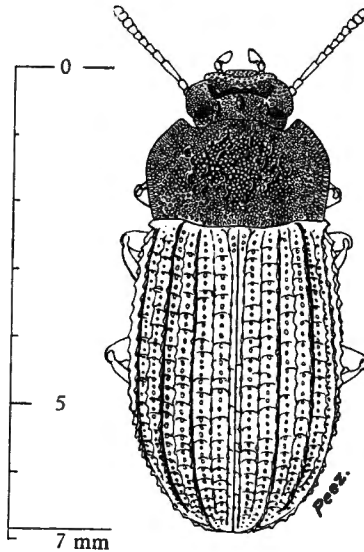
Dimensions. — Length $12 \frac{1}{4}$ to $13 \frac{1}{4}$ mm, width $4 \frac{3}{4}$ to $5 \frac{1}{2}$ mm.

Distribution. — Eastern-central part of the Southern Cape Province. — Farm Resolution, near Fort Brown, Albany District, VI.1928, A. WALTON (1♂ ♀, types T.M.).

- 38.** Genal canthus completely dividing eyes and in contact with tempora **39**
- Genal canthus very strongly constricting eyes, but its apex separated from tempora, leaving exposed at least one transverse row of corneal facets **41**
- 39.** Upper surface of head plane; supra-orbital edge weak; the outer contours of genæ and tempora forming a continuous, straight line; lateral outlines of epistome straight. Pronotum covered uniformly with a fine, very dense reticulation. Elytral costæ smooth. Anterior tibiæ rather strongly dilated towards apex, with the latter about as broad as the length of unguis segment of anterior tarsi **40**
- Upper surface of head with deeply impressed epistomal sulcus, a short, cariniform elevation along midline of vertex and strongly raised supra-orbital edges; the outer contours of genæ and tempora interrupted by a minute incision; lateral contours of epistome sinuate. Pronotum with strongly raised, sharp, irregular rugosities on disc. Elytral costæ serrate-denticulate. Anterior tibiæ faintly dilated towards apex, with the latter considerably narrower than the length of unguis segment of anterior tarsi.

[*Minorus sculpticeps* n. sp.](Pl. XXVII, fig. 2; Figs. 188, 208 to 210) ⁽¹⁾.

Reddish brown to black, very opaque, as all the other species of the *rugicollis* group. Head (fig. 188) above densely rugose. The epistomal sulcus very deep, of variable shape, sometimes running across the entire width of frons and reaching the eyes; the median carinula on vertex more or less strongly developed, sometimes

FIG. 208. — *Minorus sculpticeps* n. sp.

produced anteriorly and forming a triangular elevation, the anterior margin of which is in contact with the anteriorly curved supra-orbital edges; sometimes also divided anteriorly and there with a transverse ridge on each side, reaching the supra-orbital edge. Pronotum in shape similar to *rugicollis*, but broadest in front of middle, the posterior half of sides subparallel or very slightly narrowed in a straight line towards base, the submarginal depression stronger and the discal convexity weak. Elytra more elongate, subparallel, distinctly broader than pronotum, with carinate base and serrate outlines. Primary rows distinct; all costæ serrate-denticulate, in dorsal view appearing as if tuberculate; on apical declivity

(¹) Instead of the erroneous caption to fig. 2 on Plate XXVII [*Zadenos (Euzadenos) externus* n. sp.] read correctly: *Minorus sculpticeps* n. sp.

the third, seventh and sutural costæ coalescent apically; the eighth costa abbreviate; the tenth costula on reflected lateral portion very fine. Pseudopleura complete, but very narrow around anal sternite. Abdomen sparsely punctured. Legs and antennæ more slender than in *rugicollis*. The upper surface of all tibiæ narrowly sulcate, with sharp lateral edges; femora densely punctured.

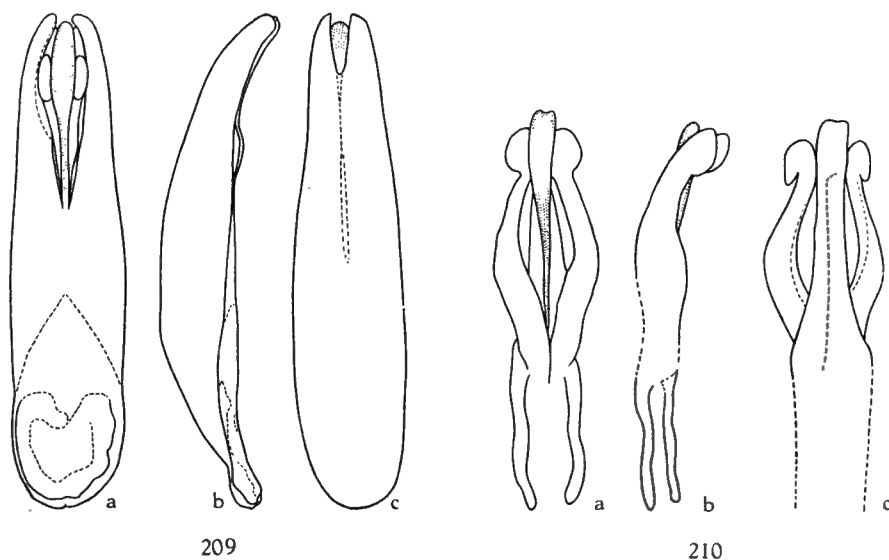


FIG. 209. — *Ædeagus* of *Minorus sculpticeps* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface. — FIG. 210. — The extracted penis plus lacinia of the *ædeagus* of *Minorus sculpticeps* n. sp. (a: outer surface; b: lateral view; c: inner surface).

Ædeagus (figs. 209, 210). — Slender and small; sides of apical portion gradually narrowed towards apex. Parameres deeply divided, slender, with scarcely curved, slightly gaping, rather obtuse apices. Ventral groove broad, leaving exposed the penis and a small portion of lacinia; penis subparallel; lacinia of peculiar shape, as long as penis, «S»-shaped and strongly curved, with dilated and rounded apices.

Dimensions. — Length $6\frac{3}{4}$ to 8 mm, width $3\frac{1}{4}$ to $3\frac{3}{4}$ mm.

Distribution. — Western part of the North-western Cape Province. — Garies, XI.1949, C. KOCH (3 spec., types T.M.); 15 m W of Garies, XI.1948, Univ. California — Transv. Mus. Exped. (1 spec., M.C.A.); Spectakel, XI.1885, L. PÉRINGUEY (5 spec., S.A.M.); Kleinzee, III.1935, Mus. Staff (30 spec., S.A.M.); Kamieskroon, IX.1930, Mus. Staff (4 spec., S.A.M.).

40. Genæ moderately narrowed towards eyes, forming a widely obtuse angle with the lateral portions of epistome. Antennæ distinctly longer than the head is broad, with slender segments, of which only the three penultimate segments are transverse. Pronotum less broad, about two-thirds broader than long, with strongly produced and sharp anterior angles. Elytra considerably longer than broad; the seventh costa usually separated from the third costa apically; all costæ less strongly raised and the sculpture on primary rows and intervals finer. Abdomen with dense and rather fine, somewhat asperous punctation.

[*Minorus rugicollis* (MULSANT & REY).]

(Pl. XXXI, fig. 2; Fig. 177 d.)

*1854 a, *Eurynotus (Minorus) rugicollis* MULSANT & REY, p. 185. — 1854 b, MULSANT & REY, p. 41.

1870, *Eurynotus rugicollis* GEMMINGER & DE HAROLD, p. 1914. — 1910 b, GEBIEN, p. 276. — 1938-1924, GEBIEN, p. 414, n° 5546.

Original description. — « Long. 6,7 mm, lat. 3 mm — Corps ovulaire ou ovale oblong; assez faiblement convexe; brun ou d'un noir-brun mat. Tête ponctuée d'une manière finement rugueuse ou réticuleuse. Épistome et palpes d'un rouge-brun ou brunâtre. Antennes de même couleur ou à peu près; à peine prolongées au-delà des trois-cinquièmes des côtés du prothorax; à troisième article près d'une fois plus grand que le cinquième : les trois derniers renflés en forme de massue oblongue. Prothorax élargi en ligne courbe jusqu'aux angles postérieurs; bisinué à la base, avec le tiers médiaire de celle-ci, presque en ligne droite et un peu plus prolongée en arrière que les angles; assez faiblement ou très-médiocrement convexe, avec ses bords sensiblement relevés et formant par là une gouttière peu profonde à leur côté interne; réticuleux ou marqué de gros points séparés par des intervalles tranchants. Ecusson transverse. Elytres à peu près aussi larges ou à peine plus larges en devant que le prothorax à ses angles postérieurs; un peu obliquement coupées dans la moitié externe de leur base; non munies d'une petite dent dirigée en dehors à l'angle huméral; faiblement élargies à partir de l'angle huméral jusqu'à la moitié, en ogive étroite postérieurement; assez faiblement ou très-médiocrement convexes; à dix sillons : huit visibles en dessus, profonds, marqués chacun dans le fond d'une rangée longitudinale de saillies transverses faisant paraître ces sillons ridés transversalement; notés en outre d'une rangée latérale de petits points : les neuvième et dixième sillons plans ou à peine convexes, visibles seulement en dessus. Intervalles des sillons de la partie supérieure étroits, en forme de tranche : le sutural divergeant en devant pour enclore l'écusson : le troisième prolongé jusqu'à l'angle sutural, en s'incurvant vers celui-ci : le septième, non lié postérieure-

ment au troisième : ces deux sillons enclosant les quatrième à sixième : le cinquième plus long que les deux autres. Dessous du corps brun ou d'un noir-brun; marqué de points grossiers et un peu râpeux sur les parties latérales et antérieures de l'antépectus; marqué de points ronds et un peu moins gros sur le ventre. Prosternum rugueusement ponctué; sans traces de sillon. Pieds d'un rouge-brun; tibias antérieurs un peu dilatés, plans râpeux, en dessous, (au moins chez la ♀, la seule que nous ayons vue). ♀ Tibias glabres en dessous. Tarses antérieurs non dilatés. »

Remarks. — *M. rugicollis* appears to be very variable as to the elytral sculpture. The primary rows are often conspicuous and the granular punctation of intervals distinct, but there are many specimens, in which the punctures of primary rows become more and more obsolescent, often transversely rugose and not demarcated from the irregular and granular sculpture on intervals. The apex of the seventh costa is usually separated from that of third costa, but sometimes, and particularly in small specimens, both are in contact with each other. The tenth costa on reflected lateral portion is sharp and well developed. The pseudopleura are complete, reaching the extreme apex of elytra. The upper surface of all tibiae is sulcate, with rather sharp edges on sides. Mentum fig. 177d.

Ædeagus. — Of peculiar shape. Apical portion of tegmen strongly narrowed towards apex, but abruptly constricted at the elongate, thin, subparallel and spiniform, parameral apical third. Parameres deeply and elongately divided, slightly gaping, with very long, entirely straight and narrowly rounded apices. Ventral groove very narrow, strongly constricted by the broadened but compressed inflexed alæ, leaving exposed just a narrow median portion of penis; the latter peculiar, strongly dilated proximally, but very thin, entirely compressed and laminiform on apical third, there carinate ventrally and with the rounded apex forming a sharply pointed hook, directed proximad and well visible in lateral aspect; lacinia considerably shorter than penis, much narrower than the proximally dilated portion of the latter, compressed, moderately curved and with rounded apices.

Dimensions. — Length $5 \frac{1}{4}$ to 8 mm, width $2 \frac{1}{2}$ to $3 \frac{3}{4}$ mm.

Type locality. — «Le Cap de Bonne Espérance». Type probably in Museum Lyon or Paris (coll. DEYROLLE).

Distribution. — Central part of the Southern Cape Province. — Willowmore (T.M., M.C.A.); gorge 5 m. W of Willowmore (T.M., M.C.A.); 40 m. W of Willowmore (T.M., M.C.A.); btwn. Klipplaat and Miller (T.M.); Aberdeen (T.M.); Meirings Poort (S.A.M.); Algoa Bay (T.M.).

- Genæ strongly narrowed towards eyes, forming an almost right angle with the lateral portions of epistome. Antennæ only as long as the head is broad, with very short segments, of which the five penultimate segments are transverse. Pronotum strongly transverse, about twice as broad as long, with moderately produced and less sharp anterior angles. Elytra only a little longer than broad; the seventh costa always

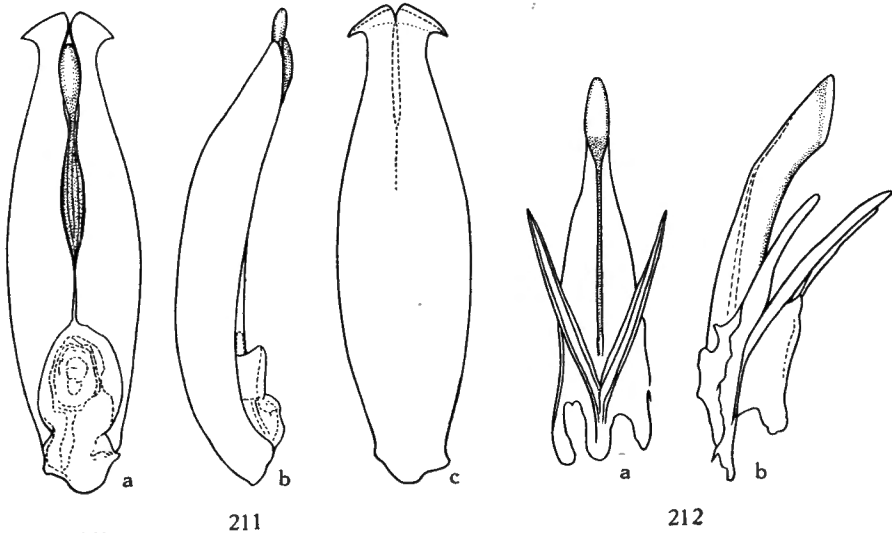


FIG. 211. — Aedeagus of *Minorus curtus* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 212. — The extracted penis plus lacinia of the aedeagus of *Minorus curtus* n. sp. (a : outer surface; b : diagonal view).

coalescent with the third costa apically; all costæ very strongly raised and the sculpture on primary rows and intervals strong. Abdomen with coarse, flat and rather scattered punctures.

[*Minorus curtus* n. sp.]

(Figs. 211, 212.)

Closely related to *M. rugicollis*, but specifically differing by the above mentioned characters, as well as by the formation of apices of parameres of aedeagus. Head more strongly amplexed in the prothorax than in *rugicollis*, with less deep epistomal emargination. Antennæ strikingly short; the third segment not quite twice as long as broad and only one-third longer than the second segment. Pronotum with more strongly rounded sides, in front of posterior angles

subparallel or more often distinctly rounded and narrowed; under-side of prothorax with very dense and coarse punctation. The intervals on the short elytra densely and rather sharply granulate. Tibiæ shorter, the anterior ones more strongly dilated towards apex.

Ædeagus (figs. 211, 212). — Strongly differentiated from *M. rugicollis*. The apical portion of tegmen with converging sides, but sinuate in front of the peculiarly shaped apex of parameres. The latter strongly divided, with the apices straight, dilated, obliquely cut, with minutely prominent, sharply dentiform lateral angles, directed dorsad and projecting beyond dorsal contours of parameres in lateral aspect. Ventral groove broader than in *rugicollis*, leaving the penis exposed; penis very strongly dilated as is the case in *rugicollis*, but the apical orifice elongately spoon-shaped and minutely dilated, strongly compressed and with obtuse angle (lateral aspect); lacinia similar to *rugicollis* but entirely straight and their apices, in ventral view, sharply pointed (rounded, however, in lateral view).

Distribution. — Central part of the Southern Cape Province. — Willowmore, H. BRAUNS (8 spec., types T.M.).

Remarks. — This species and *Z. rugicollis* occur at Willowmore, but they do not seem to live together, as the many specimens, collected by the University of California-Transvaal Museum Expedition belong all to *rugicollis*, whereas all specimens, found by the late Dr. H. BRAUNS, are *curtus*.

41. The tenth interval on reflected lateral portion of elytra more or less distinctly costate 42
- The tenth interval on reflected lateral portion of elytra plane and without any trace of a costula 48
42. Elytral costæ more or less distinctly serrate to denticulate, their lateral contours widely serrate at least on posterior half. The fine, uniformly reticulate sculpture on pronotal disc intermixed with scattered, fine and roundish granules 43
- Elytral costæ and lateral outlines smooth. Pronotal disc either with coarsely reticulate sculpture, or densely rugose, but without supplementary granules 44
43. Antennæ stout, with transverse five penultimate segments. Pronotum with strongly produced, very sharp, almost acute anterior angles. Elytra with more strongly serrate costæ, densely sculptured intervals and badly defined to obsolescent punctures of primary rows; the lateral contours distinctly serrate from base to apex.

[*Minorus namaquanus* n. sp.]

(Pl. XXXI, fig. 3.)

On account of the serrate-denticulate elytral costæ very similar to *M. sculpticeps* and agreeing with the latter in the arrangement of costal elements of elytral sculpture. Readily recognizable by the following characters. Body shorter and broader. Head smaller, with much finer sculpture and plane upper surface, exhibiting only very shallow clypeal impressions. Genæ broadly rounded and produced beyond ocular outlines; genal canthus abbreviate posteriorly and not entirely dividing eyes. Antennæ stout and much shorter, with transverse five penultimate segments. Pronotum less transverse, more distinctly rounded laterally, with very fine, uniform reticulation, without irregular and coarse rugosities on disc, but with scattered, small, roundish granules. Anterior angles of pronotum strongly produced and very sharp. Elytra with rounded sides, distinctly broader than pronotum, with less strongly serrate costæ, immarginate base and densely, irregularly sculptured intervals. Abdomen with finer, but denser punctation. Tibiæ more slender, their upper surface not or only obsoletely sulcate.

Ædeagus. — Stout and of simple shape. The apical portion strongly narrowed towards apex. Parameres deeply divided, not gaping apically, with practically straight and obtuse, but narrowed apices, closely attached to one another. Ventral groove very narrow, reduced to a narrow slit between the dilated inflexed alæ; penis stout, subparallel, with broadly rounded, non-compressed apical orifice; lacinia slightly shorter than penis, moderately narrower than the latter, subcylindrical and strongly curved outwards.

Dimensions. — Length 6 ½ to 7 mm, width 3 to 3 ¼ mm.

Distribution. — South-western part of the North-western Cape Province. — Strandfontein, near the mouth of the Olifants River, XI.1949, C. KOCH & B. MALKIN (24 spec., types T.M.); near Klaver, XI.1948, Univ. California — Transv. Mus. Exped. (1 spec., M.C.A.).

- Antennæ slender, with only one or two transverse penultimate segments. Pronotum with moderately produced and less sharp anterior angles. Elytra with very weakly serrate costæ, only obsoletely punctured intervals, but with regularly and conspicuously punctured primary rows; the lateral contours finely and widely serrate only on posterior half.

[*Minorus gracilicornis* n. sp.]

Extremely closely related to *M. namaquanus* and agreeing with the latter in all the remaining characters, with the exception of the broader, laterally more strongly narrowed elytra which are considerably broader than the pronotum.

Dimensions. — Length $7 \frac{1}{2}$ to 8 mm, width 3 to $3 \frac{1}{2}$ mm.

Distribution. — North-western Cape Province. — Garies, VI.1930, Mus. Staff (6 spec., types S.A.M.).

44. Genæ distinctly to strongly projecting beyond ocular outlines, their lateral contours narrowed towards eyes and including with the contours of the latter a strong angle 45
- Genæ not projecting beyond ocular outlines, but their lateral contours subparallel and continuous with the likewise subparallel contours of eyes plus tempora 47
45. Head above with only a shallow and small clypeal impression on each side; genal-epistomal angle broadly rounded and moderately projecting beyond ocular outlines. Antennæ distinctly longer than the head is broad, stout and, as usually, gradually accrescent towards apex; at least the two penultimate segments transverse; the tenth segment not different in shape from the ninth segment and only a little broader than the latter; the apical segment longer than the preceding segment, but hardly narrower, pedunculate and loosely attached to the latter, as are all the other segments. Disc of pronotum densely and irregularly rugose. Pseudopleura abbreviated apically 46
- Head above with a very deep, rather broad, straight, transverse epistomal sulcus, running across frons, but ending on both sides at a point, where usually the clypeal impression is situated. Genal-epistomal angle very strongly projecting beyond ocular outlines, forming an almost right angle. Antennæ scarcely longer than the head is broad, fine, with suddenly dilated apical and preapical segments, the latter forming a kind of club; only the preapical segment transverse and much larger than all the other segments; the apical segment closely jointed to the preapical segment, not pendunculate, about as long as the latter, but considerably narrower. Disc of pronotum with coarse, but uniform reticulation. Pseudopleura complete and reaching the extreme apex of elytra.

[*Minorus hessei* n. sp.]

A peculiar species which is easily distinguished from all the related species by the differentiated head and antennæ. Body very opaque, black, the appendages reddish brown and often the marginal portions of underside, head and pronotum paler. Head strongly transverse, densely and coarsely reticulate above. Pronotum about two-thirds broader than long, broadest at about middle, thence strongly rounded and narrowed to the sharply produced anterior angles, but straight and subparallel posteriorly. Submarginal depression of sides confined to a very narrow canaliculation along lateral carina. Base broadly bi-sinuate, with a transverse impression just in front of lateral sinuosities. Underside of prothorax

densely and coarsely punctured. Prosternal apophysis horizontally produced. Elytra exactly as broad as pronotum, with straight and subparallel sides which are broadly rounded posteriorly. Base immarginate, not broader than the pronotal base; humeral angles rectangular. All intervals sharply costate, with smooth crest, the sutural and tenth intervals included; all dorsal costæ reaching the base and coalescent with the basal carina (which, usually, is concealed by the overlapping base of pronotum); on apical declivity the third costa prolonged and in contact with the sutural angle of apex, but not always coalescent with the seventh costa; the eighth costa approximated to apex of elytra. Primary rows with coarse and regular punctures. Abdomen with coarse, very dense punctures, becoming longitudinally confluent on the basal portion of the second and third sternites. Anterior tibiæ rather strongly dilated towards apex, there about as broad as the length of the unguis segment of anterior tarsi; upper surface of tibiæ edged laterally, but only obsoletely sulcate. Tarsi slender.

Ædeagus. — *Ædeagal tegmen* as in *M. namaquanus*, of simple shape, but smaller and slender.

Dimensions. — Length $5 \frac{3}{4}$ to $6 \frac{1}{2}$ mm, width $2 \frac{3}{4}$ to 3 mm.

Distribution. — Southern part of the South-western Cape Province. — Somerset West, III.1930, A. J. HESSE (7 spec., types S.A.M.).

Dedication. — Named in honour of Dr. A. J. HESSE, entomologist to the South African Museum, Cape Town.

46. Abdomen almost dull, owing to an extremely dense, coarse, rugosely confluent punctation on entire surface; punctures with rather long, adherent yellowish bristles, becoming short towards apex. Primary rows on elytra, the reflected lateral portion included, absent, but the intervals with irregular sculpture.

[*Minorus rugiventris* n. sp.]

Related to *M. jouberti*, but of smaller size, the antennæ stouter, strongly accrescent towards apex and with transverse four penultimate segments, the genæ projecting beyond ocular outlines, the pronotum coarsely rugose on disc and with very sharply produced anterior angles, the elytra subparallel, with prominent humeral angles, strong costæ, irregular punctures on reflected lateral portion and without primary rows. The abdomen pilose as in *jouberti*, but the sculpture extremely dense and rugose. Legs shorter, the anterior tibiæ slightly more strongly dilated towards apex, the tarsi considerably shorter, the basal segment of posterior tarsi shorter than the unguis segment.

Dimensions. — Length $7 \frac{3}{4}$ mm, width $3 \frac{1}{2}$ mm.

Distribution. — Central part of the South-western Cape Province. — Top of Skurweberg, Cold Bokkeveld, Ceres District, X.1934, M. VERSFELD (1 spec., sex not determined, holotype S.A.M.).

- Abdomen shiny, with strong, but very well separated round punctures; the latter practically bare, as the bristles are microscopically short. Primary rows on elytra, the reflected lateral portion included, well indicated; the intervals with rather scattered, fine punctures.

[*Minorus lucigaster* n. sp.]

In size, shape and sculpture of body almost identical with *M. rugiventris* and differing from the latter as follows: — Genæ less prominent. Antennæ slightly more slender, with less dense vestiture, with strongly dilated and transverse ninth and tenth segments, but only slightly transverse eighth segment. Pronotum shaped and sculptured exactly as in *rugiventris*, except for the finer lateral carina. Elytra a little broader, with less distinctly subparallel sides, only minutely demarcated humeral angles, but with the costal arrangement as in *rugiventris*. Legs slightly more slender, the tarsi of identical proportions.

Dimensions. — Length $7 \frac{1}{2}$ mm, width $3 \frac{1}{2}$ mm.

Distribution. — Central part of the South-western Cape Province. — Clanwilliam, R. LIGHTFOOT (1 spec., sex not determined, holotype S.A.M.).

47. Clypeal sutures absent, but the lateral portion of epistome demarcated from outlines of genæ by a strong sinuosity. Antennæ rather stout, extending to about middle of pronotum; the ninth and tenth segments strongly transverse, the eighth segment triangular, distinctly broader than long. Elytra with the eighth costa prolonged and almost reaching the apex; tenth costa on reflected lateral portion complete and sharp. Abdominal punctation with long bristles. In the ♂ the underside of posterior femora simple, without subtomentose stripe of yellowish hairs.

[*Minorus jouberti* n. sp.]

(Fig. 213.)

Very opaque, black, the appendages of a dark reddish brown colour. Head above densely rugose and with scattered, conspicuous, yellowish bristles. The contours of genæ, eyes and tempora forming a continuous, subparallel line. Pronotum broadest behind middle, about two-thirds broader than long, very densely and finely rugose, with scattered, very short bristles, rather strong and broad sub-

marginal depression, and with the sides distinctly rounded and narrowed towards posterior angles. Anterior angles produced, base deeply bi-sinuate. Elytra broader than pronotum, weakly rounded and narrowed towards base, the latter without or with only slightly demarcated humeral angles. Costæ fine, primary rows distinct. Punctures on abdomen strong, but well separated, fine and dense on preapical and anal sternites. Legs pubescent, the upper surface of tibiæ flattened, but not sulcate.

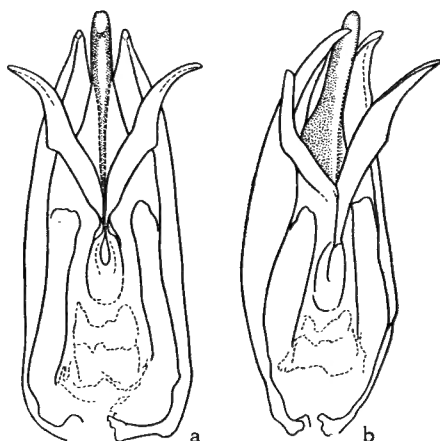


FIG. 213. — Dissected aedeagus of *Minorus jouberti* n. sp.
a : ventral surface; b : diagonal view.

Remarks. — This species is related to *M. rugiventris* and *lucigaster*, but of larger size, the lateral portions of epistome well separated from the contours of genæ (continuous with the latter in both the compared species), the genæ not prominent, the pronotum more slender, distinctly constricted posteriorly, with a much finer sculpture, and the sides of elytra distinctly narrowed towards base.

Aedeagus (fig. 213). — Large and stout, with the sides converging in a straight line towards apex. Parameres deeply divided, rather strongly gaping for a considerable distance distally, with moderately curved, sharply pointed apices. Ventral groove very broad, leaving exposed penis and lacinia.

Dimensions. — Length $8 \frac{1}{4}$ to $9 \frac{1}{4}$ mm, width 4 to $4 \frac{1}{2}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Stellenbosch, L. PÉRINGUEY (5 spec., types S.A.M.).

Dedication. — Named in honour of Mr. C. J. JOUBERT, principal of the Stellenbosch-Elsenburg College of Agriculture.

- Clypeal sutures sharply and obliquely impressed; the lateral portion of epistome badly demarcated from contours of genæ. Antennæ slender and long, extending almost to base of pronotum; the ninth and tenth segments weakly transverse, the eighth segment slightly longer than broad. Elytra with the eighth costa abbreviated posteriorly and ending at considerable distance from apex; the tenth interval on reflected portion with an extremely fine costula only on median two-thirds; Abdominal punctation with very short, inconspicuous bristles. In the ♂ the underside of posterior femora with a fine, subtomentose stripe of yellowish hairs.

[*Minorus sericeus* n. sp.]

Closely related to *M. jouberti*, but of larger size, the upper surface of body less opaque, head above and pronotum bare, the antennæ much less densely pilose, the pronotum more slender, only one and a half times as broad as long, with substriolate sculpture on disc, broader submarginal depression and posteriorly more strongly narrowed sides. The elytra with more regular and very distinct punctation of primary rows and intervals. Legs long and slender, the upper surface of tibiæ subsulcate.

Dimensions. — Length $10 \frac{1}{4}$ mm, width $5 \frac{1}{4}$ mm.

Distribution. — Central part of the South-western Cape Province. — Clanwilliam, VH.1946 (1♂, ex Stellenbosch University, holotype T.M.).

48. Disc of pronotum with extremely dense, sharply rugose sculpture as in all the preceding species of *Minorus*. All dorsal intervals on elytra carinate, the sutural interval included (as in all the preceding species of *Minorus*) 49
- Disc of pronotum with rather scattered, round, separated punctures. On disc of elytra at least the sutural interval flat to convex, but not costate 50
49. Elytral costæ sharply denticulate; the entire outlines of elytra serrate; pseudopleural carina extremely fine; pseudopleura complete, extending to apex. Pronotum, apart from the dense, subreticulate ground sculpture, with numerous, strongly raised, round granules on disc; sides distinctly rounded and narrowed towards base; submarginal depression strong. Abdomen with very dense, subgranular punctures. Antennæ stout, with the exception of the four proximal segments all other segments more or less transverse.

[*Minorus XVIII-seriatus* n. sp.]

On account of the serrate costæ on elytra and the supplementary granules on pronotal disc similar to *M. sculpticeps* and *namaquanus*. In the elytral sculpture, particularly by the sharply serrate-den-

ticulate costæ, almost completely agreeing with *sculpticeps*, but the upper surface of head plane, with only faintly indicated clypeal sutures laterally, the eyes strongly constricted by genal canthus, but not divided, the antennæ much stouter and about twice as broad, the pronotum with the sides distinctly rounded and narrowed towards posterior angles, the submarginal depression strong and well demarcated from disc and the supplementary sculpture on disc consisting of round granules and not of irregularly shaped rugosities, the elytra slightly rounded and narrowed towards base, very similar in sculpture, but the tenth interval on reflected lateral portion plane and not costate. The upper surface of tibiæ sulcate, as in *sculpticeps*.

From *M. namaquanus*, with which *XVIII-seriatus* agrees well in the formation and sculpture of head and pronotum, readily distinguished by the very stout and broad antennæ, the posteriorly rounded and narrowed sides of pronotum and especially by the much more strongly serrate-denticulate costæ, as well as by the plane and not costate tenth interval on the reflected portion of elytra. Both species, however, agree in the plane upper surface of head, the constricted, but not divided eyes and the round supplementary granules on pronotal disc.

Dimensions. — Length 7 ½ mm, width 3 ¾ mm.

Distribution. — Eastern part of the North-western Cape Province. — Pofadder, VIII.1950, C. KOCH & G. VAN SON (1 spec., sex not determined, holotype T.M.).

- Elytral costæ smooth as are the outlines of elytra; pseudopleural carina strong; pseudopleura abbreviate posteriorly, with the pseudopleural carina coalescent with the epipleural one at considerable distance from apex. Pronotum with very dense, rugosely confluent ground-sculpture, but without supplementary granules on disc; sides subparallel posteriorly and not narrowed towards base; submarginal depression confined to a fine and narrow canaliculation along sides. Abdomen with rather fine and scattered, round punctures. Antennæ strongly accrescent towards apex, but with only three transverse penultimate segments.

[*Minorus thornei* n. sp.]

Very similar to *M. rugicollis*, but the genal canthus only moderately constricting eyes, not dividing the latter, the antennæ much stouter, with similar proportions of segments, the subparallel course of pronotal sides commencing in front of middle (behind middle in *rugicollis*), and the elytra different. The integument of the latter is less opaque, smoothed and the inner costæ are much finer, with an extremely fine crest on sutural and second intervals; primary

rows sublineate, with very distinct and regular punctation; intervals with extremely fine punctures; on apical declivity the third and seventh costæ coalescent; pseudopleura abbreviated posteriorly (complete in *rugicollis*); the tenth interval on reflected portion of elytra plane and without the sharp costa which is present in *rugicollis*. Upper surface of tibiæ sulcate; the apex of anterior tibiæ only slightly narrower than length of unguis segment of anterior tarsi.

Dimensions. — Length $7 \frac{3}{4}$ to $8 \frac{3}{4}$ mm, width $3 \frac{1}{2}$ to about 4 mm.

Distribution. — Central part of the Southern Cape Province. — George District, VIII.1931, C. THORNE (7 spec., types S.A.M.).

Dedication. — Named in honour of Mr. C. THORNE of the South African Museum.

50. Upper surface of body shiny. Head above, pronotum and abdomen with scattered, short, but distinct hairs. Pronotum broadest behind middle, with the sides subparallel or slightly narrowed towards base. Intervals of elytra with dense, conspicuous punctures, distinctly costate only on outer intervals, with the costæ becoming more or less evanescent on inner intervals; on apical declivity the third costa not in contact with the seventh costa; reflected portion, apart from the punctures of primary rows, densely and irregularly punctured.

[*Minorus pilosicollis* n. sp.]

Greatly differing from all the preceding *Minorus* by the flattened and not costate inner intervals of elytra, the round, well separated punctation on disc of pronotum, and the only slightly constricted eyes. On account of these particulars similar to *Zadenos delalandei*, from which it is easily distinguished by the pilosity on upper surface of head, pronotum and abdomen, the only weakly shiny pronotum, the coarser discal punctures on the latter and less produced anterior angles, the posteriorly briefly depressed prosternal apophysis, the shorter and laterally slightly rounded elytra, as well as by the non-dimorphic legs. The upper surface of head is plane, the epistomal lateral contours not demarcated from the genal ones and the genæ are subparallel. Antennæ stout, with triangular eighth segment and transverse ninth and tenth segments. Pseudopleura abbreviated posteriorly. Abdomen with rather fine, scattered punctures on proximal sternites, very densely punctured on anal sternite. Legs robust, the apex of anterior tibiæ only a little narrower than length of the unguis segment of anterior tarsi; the upper surface of anterior tibiæ edged, that of intermediate tibiæ weakly sulcate.

Ædeagus. — Of simple shape and stout; sides of apical portion narrowed towards apex. Parameres gaping, with sharply pointed and bent apices. Ventral groove broad, leaving exposed penis and lacinia; penis broad, subparallel, with almost truncate apex; lacinia much narrower than penis, only slightly shorter, straight, with rounded apices.

Dimensions. — Length $6\frac{3}{4}$ to $8\frac{1}{4}$ mm, width $3\frac{3}{4}$ to $4\frac{1}{2}$ mm.

Distribution. — Western and central parts of the Southern Cape Province. — Still Bay, XI.1940, G. VAN SON (17 spec., types T.M.); Mossel Bay, I.1951, P. BRINCK & G. RUDEBECK (U.L.), same locality, IX.1921, R. E. TURNER (B.M.); George District, VIII.1931, C. THORNE (S.A.M.).

- Upper surface of body very opaque. Head above, pronotum and abdomen practically bare, with only microscopically short bristles. Pronotum broadest between posterior angles, with the sides slightly and gradually dilated towards base. Intervals of elytra with scarcely discernible, practically absent punctation; the six outer intervals distinctly costate on disc, the sutural and second intervals there with a row of extremely fine, widely separated granules; on apical declivity the third and seventh costæ coalescent in front of apex; reflected portion smooth, except for the two finely punctured primary rows.

[**Minorus barnardi** n. sp.]

Agreeing with *M. pilosicollis* in the not costate two inner intervals on elytra, the round, separated punctures on disc of pronotum, and the slightly constricted eyes. Readily distinguished from this species by the above mentioned characters, as well as by the stouter and densely pilose antennæ, the broader elytra with apically evanescent second costa (which is sharply raised on apical declivity in *pilosicollis*), and the finer punctation on abdomen and legs. The upper surface of all tibiæ sulcate.

Dimensions. — Length $7\frac{3}{4}$ mm, width $3\frac{3}{4}$ mm.

Distribution. — Central part of the Southern Cape Province. — Seven Weeks Poort, K. H. BARNARD (1 spec., sex not determined, holotype S.A.M.).

Dedication. — Named in honour of Dr. K. H. BARNARD, former director to the South African Museum, Cape Town.

- 51. Body small, 4 to $5\frac{3}{4}$ mm long. Pronotum not cordiform; its sides not sinuate in front of posterior angles, with smooth lateral carina and very narrow, canaliculate submarginal depression. Elytra with smooth lateral contours and costate to plane intervals. Upper surface of tibiæ not sulcate, underside of anterior femora simple, with straight lateral contours.

LASIODERUS MULSANT & REY 52

*1854 a, *Lasioderus* MULSANT & REY, p. 186. — 1854 b, MULSANT & REY, p. 42. — 1953 a, KOCH, pp. 271, 272.

Very similar to *Zadenos* and agreeing with this genus in all principal features, but constantly differing by only nine primary rows on elytra instead of ten; the ventrally reflected portion of elytra not or only very slightly broader than the pseudopleura, and with a single primary row of punctures. Eyes constricted by genal canthus, but not divided, often only weakly emarginated. Pseudopleura abbreviated apically. Shape of body almost subparallel, the size always small.

Type species. — *Lasioderus sulcipennis* MULSANT & REY, 1854.

Distribution (map 5). — Southern Africa. Endemic to a small area of the eastern part of the Central Cape Province, from the Port Elizabeth District northwards into the Southern Orange Free State.

- Body large, about 10 mm long. Pronotum strongly cordiform, its sides deeply sinuate in front of posterior angles, with irregularly crenulate lateral carina and very broad, strong submarginal depression. Elytra with strongly crenulate to obtusely serrate lateral contours and tuberculate intervals. Upper surface of tibiæ sulcate, the underside of anterior femora with an arcuate dilation behind middle of lateral contours.

HADRODERUS n. gen.

Monotypical.

Type species : —

Hadroderus tuberculiferus n. sp.

(Pl. XXXI, fig. 4.)

Shiny; of a very black tint, the antennæ, maxillary palpi and tarsi dark reddish brown; bare. Head as in *Zadenos*. Upper surface plane, densely and rugosely punctured, substriolate on vertex. Epistome with deep median emargination; its lateral contours slightly demarcated from those of genæ. The latter weakly narrowed towards eyes; genal canthus constricting eyes on about anterior half. Eyes without supra-orbital structures, their outlines continuous with those of tempora, but including a widely open angle with genal contours. Labrum emarginate apically; epipharynx with a few long bristles on both sides. Mentum and maxillary palpi as in *Zadenos*. Mandibular portion of postgenal margin produced into a long and sharp tooth. Antennæ as in *Zadenos*, with eleven segments, the

eighth segment triangular and a trifle broader than long, the ninth and tenth segments transverse. Pronotum broadest behind middle, twice as broad as head and almost twice as broad as long, uniformly covered with a very dense, coarse and rugosely confluent punctation. Sides strongly rounded and deeply sinuate in front of posterior angles: the lateral carina strong and widely, irregularly crenulate: submarginal depression broad. Anterior margin strongly carinate laterally, with moderately produced, rather blunt anterior angles. Base marginate, bi-sinuate, with sharply rectangular and distinctly produced posterior angles. Prosternum as in *Zadenos*; with coarse, but scarcely confluent punctures, the flattened submarginal portion of episternum smoothed, the intercoxal apophysis produced horizontally and with demarcated, somewhat tuberculate apex. Elytra broader than pronotum, strongly rounded and narrowed towards base, with prominent, rather large humeral angles. Primary rows very regular and composed of coarse punctures. Intervals with dense, extremely fine and barely perceptible punctures; each interval with a longitudinal row of roundish to elongate tubercles which are coarser and more concentrated on outer intervals; on apical declivity only the third, seventh and eighth intervals subcostate, but the apices of costæ well separated one from another, and, with exception of the eighth costa, not reaching the apex of elytra; the apex of the ninth costa separated from pseudopleural carina. Reflected lateral portion of elytra scarcely broader than pseudopleura, with only a single primary row, running very close to pseudopleural carina and composed of coarse punctures; the ventral portion of ninth interval with very fine, irregular punctation. Pseudopleura abbreviated posteriorly, strongly and irregularly punctured; pseudopleural carina sharp, smooth, bent towards humeral angle basally and coalescent with the epipleural carina at about level of middle of anal sternite. Abdomen as in *Zadenos*; very coarsely but not too densely punctured, with the punctures becoming finer and more scattered on intermediate sternites; anal sternite with extremely dense, very coarse and subfoveate punctures, finer and rugosely confluent near to apical margin. Legs pubescent, very densely, somewhat asperously punctured. The tibiæ stout; the anterior ones rather strongly dilated towards apex, there almost as broad as length of unguis segment of anterior tarsi, with the upper surface sharply edged and subsulcate on distal two-thirds; the upper surface of intermediate and posterior tibiæ subsulcate. Tarsi short, with prolonged unguis segment; in the single known specimen, sex not determined, the anterior tarsi are not dilated, nor exhibit the legs any other distinctive characters, with the exception of the postmedian dilation of lateral contours of underside of anterior femora.

Remarks. — This genus is very well characterized by the reduced number of primary rows on elytra. Not a single of the many species of *Zadenos* and *Minorus* shows any tendency to a reduction in the number of primary rows, but all species exhibit constantly a broad reflected portion of elytra, with two primary rows. For the remainder *Hadroderus* appears to be closely related to *Zadenos*, resembling in particular *Zadenos tuberculatus* on account of the tuberculated elytral intervals and the strongly cordiform pronotum.

Dimensions. — Length 10 mm, width $4 \frac{3}{4}$ mm.

Distribution (map 5). — Natal. — Ingwawama, Zululand, VII.1938. R. F. LAWRENCE (1 spec., sex not determined, holotype S.A.M.).

52. The discal portion of the inner intervals of elytra distinctly costate, with the exception of the sutural interval which is sometimes obsoletely costate or obtusely convex 53
- At least the discal portion of the sutural and second intervals on elytra plane, without any trace of costæ, but sometimes also the third and fourth intervals only convex and not distinctly costate 54
53. Upper surface of head, pronotum and abdomen with conspicuous, rather long and dense hairs; the elytra densely covered with very short, punctiform, but well perceptible hairs, somewhat appearing as if pulverulent. On apical declivity of elytra the ninth costa coalescent with the pseudopleural carina in front of apex of elytra.

[*Lasioderus sulcipennis* Mulsant & Rey.]

*1854 a, *Lasioderus* Mulsant & Rey, p. 186. — 1854 b, Mulsant & Rey, p. 42. — Rey, p. 43.
1870, *Eurynotus sulcipennis* Gemminger & De Harold, p. 1914. — 1910 b, Gebien, p. 276. — 1938-1942, Gebien, p. 414, n° 5547.

Original description. — « Long. 6,1 mm, lat. 2,3 mm. — Corps oblong; assez faiblement convexe; brun; visiblement pubescent sur la tête et le prothorax, peu distinctement sur les élytres. Tête réticuleusement ou rugueusement ponctuée; sillonnée sur la suture frontale. Labre et palpes d'un fauve testacé. Antennes prolongées environ jusqu'aux trois cinquièmes ou un peu plus des côtés du prothorax; pubescentes; d'un rouge testacé, graduellement plus claires vers l'extrémité; grossissant graduellement vers celle-ci; le troisième article de moitié à peine plus long que le suivant; les huitième à dixième en ovale transverse; le onzième de moitié plus long que le précédent. Prothorax élargi en ligne courbe d'avant en arrière, d'une manière assez marquée sur le premier tiers, presque parallèle ou peu sensiblement élargi ensuite; en ligne presque droite

à la base ou du moins sur les deux tiers médiaux, à peine sinué à chaque sixième ou septième externe, avec les angles postérieurs très faiblement dirigés en arrière et prononcés; médiocrement convexe, avec les bords latéraux relevés et formant par là une gouttière à leur côté interne; marqué de points assez gros donnant naissance à un poil soyeux assez long. Écusson en triangle plus large que long. Élytres à peu près en ligne droite à la base; offrant à l'angle huméral une très petite dent dirigée en dehors; presque parallèles jusqu'aux trois cinquièmes; en ogive étroite postérieurement; assez faiblement convexes; à neuf sillons; dont huit seulement visibles en dessus : ces sillons, marqués dans le fond d'une rangée longitudinale de points ronds assez gros, séparés entre eux par des espaces lisses, notés de chaque côté d'une rangée de points assez petits. Intervalles étroits, saillants en forme d'arête; garnis près de leur tranche de poils laineux, cendrés, courts, fins, peu apparents; le sutural divergeant en avant pour enclore, avec son pareil, l'écusson; les troisième et septième postérieurement unis et prolongés après leur réunion jusqu'à l'angle sutural; le septième, aboutissant en avant à l'angle huméral, en se courbant en dehors; les troisième et septième postérieurement unis en enclosant les quatrième à sixième; le cinquième plus long que les deux autres. Repli assez grossièrement ponctué. Dessous du corps parcimonieusement pubescent; d'un rouge-brun ou d'un brun-rouge; marqué d'assez gros points, moins gros sur le ventre que sur les côtés de l'antépectus. Prosternum ponctué, peu distinctement rebordé. Pieds d'un fauve testacé; pubescents; tibias antérieurs un peu élargis; plans et râpeux en dessous. »

Remarks. — Lateral portion of epistome not separated from genal contours. Genæ short, practically subparallel in front of eyes. The latter faintly projecting, with their lateral outlines almost continuous with those of genæ, moderately constricted by the genal canthus anteriorly. Antennæ stout and short, strongly accrescent towards apex, with four transverse penultimate segments and large apical segment. Pronotum broadest at about middle, almost twice as broad as long, densely covered with coarse and setiferous punctures, round but very dense on disc, becoming slightly rugose on lateral portions. Submarginal depression weak, dilated towards base. Anterior margin shallowly emarginated, with only faintly produced anterior angles. Base from straight to very weakly bi-sinuate, carinate only on lateral portions, with rectangular, but not produced posterior angles. Elytra subparallel, very little broader than pronotum, with fine and minutely prominent humeral angles. Primary rows with strong and regular punctures; intervals scarcely punctured, appearing as if smooth, less shiny than the remaining

upper surface, sharply costate, except for the sutural interval which sometimes is obtusely tectiform; costal arrangement as indicated in the original description, with apically prolonged and coalescent third and seventh costæ. Pseudopleura abbreviate posteriorly, rather coarsely punctured. Abdomen uniformly covered with a rather strong, moderately dense punctation which is scarcely denser on the anal sternite than on proximal sternites. Legs pilose and stout; the upper surface of tibiæ shiny, but rather densely punctured, that of anterior tibiæ obtusely edged, that of intermediate and posterior tibiæ simple and not sulcate; the anterior tibiæ moderately dilated towards apex, the latter distinctly narrower than length of unguis segment of anterior tarsi. Tarsi stout, with short proximal segments and strongly prolonged unguis segment. ♂ unknown.

Dimensions. — Length 5 to 6 mm, width $2\frac{1}{4}$ to $2\frac{1}{2}$ mm.

Type locality. — « Cap de Bonne-Espérance ». Type probably in Museum Paris (coll. CHEVROLAT).

Distribution. — Central part of the Southern Cape Province. — Addo Bush, VII.1919, J. DRURY (1♀, S.A.M.). A further ♀ from the Cape Province, without specified locality, in T.M.

- Upper surface of head, pronotum and abdomen with very short, inconspicuous hairs; the elytra practically bare, as the hairs are microscopically short and scarcely discernible. On apical declivity of elytra the ninth costa not in contact with the pseudopleural carina.

[*Lasioderus vanhillei* n. sp.]

(Figs. 214, 215.)

Very closely related to *L. sulcipennis*, but the pilosity on body not conspicuous, the upper surface more strongly shiny, the antennæ slightly more slender, but with similar proportions of segments, the pronotum a trifle narrower, less densely punctured, with the sides not exactly subparallel and straight as is the case in *sulcipennis*, but very slightly rounded and narrowed towards base, with very thick lateral carina, but only canaliculate submarginal depression. The elytra as in *sulcipennis*, but the costæ more strongly raised, sharper, and the ninth costa separated from the pseudopleural carina apically. Abdomen with finer and more scattered punctures. In the ♂ legs with remarkable, distinctive characters; the anterior tarsi strongly dilated, with transverse second, third and fourth segments; the anterior tibiæ (fig. 214) straight, but the inner contours exhibiting a strong, obtusely dentiform median dilation which bears some squarrose short bristles; the intermediate tibiæ almost straight, rather thick, as the anterior tibiæ with convex,

shiny, rather sparsely punctured upper surface, but with a fine fringe of hairs on distal half of underside; the posterior tibiæ with shiny, convex, sparsely punctured upper surface, slightly curved and with a dense fringe of hairs on underside; the femora sparsely punctured, the underside of intermediate and posterior ones with a subtomentose proximal stripe of fine, yellowish hairs.

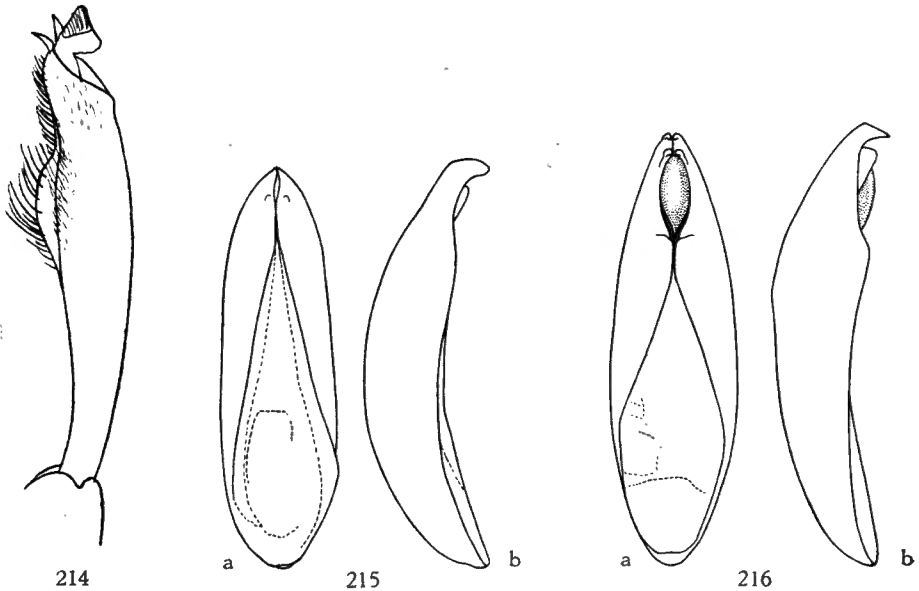


FIG. 214. — Anterior tibia of a ♂ of *Lasioderus vanhillei* n. sp.

FIG. 215. — Aedeagus of *Lasioderus vanhillei* n. sp.

FIG. 216. — Aedeagus of *Lastoderus dicksonæ* n. sp.

a : ventral surface; b : lateral view, with the ventral surface at right.

Aedeagus (fig. 215). — Broad and rather strongly complanate. The apical portion of tegmen slightly narrowed in a straight line, but the apex itself triangularly pointed. Parameres deeply divided, but closely attached to one another, with straight and converging apices. Ventral groove entirely closed by the extremely dilated, flat inflexed alæ concealing the inner sclerite.

Dimensions. — Length 5 to 5 $\frac{1}{4}$ mm, width about 2 $\frac{1}{4}$ mm.

Distribution. — Central part of the Southern Cape Province. — Grahamstown, II.1933, R. F. LAWRENCE (2 ♂, holotype S.A.M.).

Dedication. — Named in honour of Dr. J. C. VAN HILLE, Zoological Department of Rhodes University.

54. Body brownish. Sides of pronotum slightly to distinctly narrowed to posterior angles. On apical declivity of elytra the third costa prolonged, angularly bent towards suture in front of apex and coalescent with the latter apically 55
- Body very black. Sides of pronotum straight and subparallel on posterior two-thirds. On apical declivity of elytra the third costa straight, subparallel with suture and not reaching the apex.

[*Lasioderus dicksonæ* n. sp.]

(Fig. 216.)

Related to *L. vanhillei*, from which it is easily distinguished as follows : — Body smaller and broader, the upper surface black and shiny as in *vanhillei*, but the hairs on pronotum still shorter and more scattered, scarcely perceptible. Head as in *vanhillei*; the antennæ shorter, with the third segment only a trifle longer than the second segment or of almost equal length. Pronotum of very similar shape and identical, coarse, well separated punctation; the sides exactly parallel posteriorly and without any submarginal depression, but distinctly impressed transversely on each side of base. Elytra practically subparallel, but faintly dilated posteriorly, more convex, strongly shiny, with microscopically short, punctiform hairs. Humeral angles rectangular, not prominent. Primary rows a little finer; intervals distinctly and rather densely punctured (appearing as if smooth in *vanhillei*); the outer intervals sharply costate, the inner ones with fine costæ, becoming finer towards suture and subgranulate on apical declivity, the sutural and second intervals convex and not costate at least on disc; apex of third costa abbreviate, not reaching the elytral apex, nor approximated to suture, but coalescent with the seventh costa. In the ♂ the anterior tarsi distinctly dilated and soleate below; the anterior tibiæ with excavate underside, the inner contours rather strongly dilated towards middle and slightly emarginate on distal third; the inner contours of intermediate and posterior tibiæ with fringe of short, dense hairs distally.

Ædeagus (fig. 216). — Similar to *L. vanhillei*, but the tegmen less strongly complanate, the sides of apical portion narrowed in a straight line to the extreme and not triangularly demarcated apex, and the ventral groove open, leaving exposed the apical portion of penis.

Dimensions. — Length 4 to 4 $\frac{3}{4}$ mm, width 2 $\frac{1}{4}$ mm.

Distribution. — Central part of the Southern Cape Province. — Port Elizabeth, Mrs. K. M. DICKSON (2 ♂, 1 ♀, types T.M.).

Dedication. — Named in honour of the discoverer, Mrs. K. M. DICKSON, Durban.

55. Pronotum very slightly narrowed towards posterior angles, with dense, confluent punctures on middle of disc and longitudinally rugose to substriolate on lateral portions; the anterior margin shallowly emarginate, with straight median portion of emargination and the anterior angles distinctly produced beyond level of the latter. Elytra subparallel, not constricted basally; the third, fourth and fifth costæ very fine, with distinctly crenulate to subgranulate crest.

[*Lasioderus kannemeyeri* n. sp.]

Very similar to *L. dicksonæ* and agreeing with the latter in the discally incostate sutural and second intervals on elytra. Narrower than *dicksonæ*, of a dark brownish colour, the appendages paler, the head with denser and subrugose sculpture, the antennæ a little finer, the pronotum bare, much more densely and rugosely punctured, the anterior emargination more shallow and the sides not subparallel posteriorly. The elytra very similar, but exactly subparallel and not dilated posteriorly, the humeral angle minutely but sharply projecting. The costal arrangement, as well as the sculpture of primary rows and secondary intervals much resembling these structures in *dicksonæ*; on apical declivity the apex of the seventh costa well separated from the third costa. Pseudopleura irregularly punctured. Abdomen with dense and rather strong punctation, concentrated on anal sternite. In the ♂ the anterior tarsi moderately dilated, small, with strongly transverse second, third and fourth segments; all tibiæ and femora without distinctive characters, except for the underside of anterior tibiæ, which is smoothed, slightly depressed and shiny on middle portion.

Dimensions. — Length 5 ½ mm, width 2 ½ mm.

Distribution. — Southern part of the Orange Free State. — Smithfield, 1908, KANNEMEYER (1♂, holotype S.A.M.).

Dedication. — Named in memory of the late Dr. KANNEMEYER of Smithfield.

- Pronotum rather strongly rounded and narrowed towards posterior angles, with round, well separated, coarse punctures on disc, becoming only faintly confluent on lateral portions; the anterior margin bi-sinuate, as the median portion is weakly and broadly produced and the anterior angles not projecting beyond level of the latter. Elytra distinctly rounded and narrowed towards humeral angles; the third, fourth and fifth costæ rather broad and obtuse, with smooth crest.

[*Lasioderus lænoides* n. sp.]

Closely related to *L. kannemeyeri* but well characterized among all *Lasioderus* by the basally constricted sides of pronotum and elytra. Apart from the above mentioned characters differing from *kannemeyeri* by the smaller size of body, the paler, reddish brown colour, the shorter antennæ, the less transverse, differently shaped and sculptured pronotum, the somewhat sericeous elytra, the cuticle of which exhibits a very fine micro-reticulation, and finally by the coarser punctures on abdomen. The costal arrangement on elytra is very similar to that in *kannemeyeri*, but the apex of the seventh costa is generally in contact with the apex of third costa. ♂ unknown.

Dimensions. — Length $4 \frac{3}{4}$ mm, width $2 \frac{1}{4}$ mm.

Distribution. — Southern part of the Orange Free State. — Colesberg, X.1935, Mus. Staff (2 ♀ ♀, holotype S.A.M.).

56. Genal canthus broadly rounded and narrowed towards eyes, only moderately projecting beyond the latter and faintly constricting them anteriorly. Pronotum loosely attached to elytra, considerably narrower than the latter; base with strongly produced middle portion which projects backwards beyond level of posterior angles, and with two short, but deep lateral sinuosities which leave exposed an angular portion of the prosternal episterna, formed by a sharp, oblique carinula which runs from the basal margination of prothoracic foramen towards posterior angles of pronotum. Elytra shiny, with ten regularly punctured primary rows and all intervals provided with minutely serrate costæ; in ventral aspect the reflected portion of elytra much broader than pseudopleura, with two primary rows and costate tenth interval.

PSEUDEMMALLUS n. gen.

Monotypical.

Type species : —

***Pseudemmallus aspericollis* n. sp.**

Body apterous, elongate, shiny, black, with reddish brown appendages. Head as in *Zadenos*, but the labrum with strongly raised carina on the subtruncate apical margin. Upper surface with very coarse, subrugose punctures, from which arise short, erect bristles, concentrated on supra-orbital portion. Lateral contours of epistome

indistinctly separated from genæ. Frons separated from vertex by a shallow, transverse epistomal impression. Antennæ short, stout, setiferous, only a little longer than width of head; the fifth and sixth segments about square or slightly broader than long, the four penultimate segments transverse; apical segment small and roundish, much narrower and a little shorter than the preceding segment. Pronotum rather slender, broadest at about middle and not quite one and a half times as broad as long, with the sides equally rounded and narrowed towards anterior margin as well as towards base. Integument peculiar, uniformly covered with very dense, coarse, rugose punctures, the anterior margin of which is strongly raised, forming dense, lunulate, asperate rugosities; these punctures bear short, yellowish bristles. Submarginal depression of sides canaliculate, with smooth and shiny background of cuticle, sharply separating the lateral margin from the rather strong discal convexity; lateral carina extremely fine, almost obsolescent, punctured and therefore appearing as if minutely serrate or crenulate, with short yellowish cilia, arising from punctures. Anterior margin shallowly bi-sinuate, similar to *Lasioderus lænoides*, with the short anterior angles not produced beyond level of middle portion. The peculiar formation of the immarginate base as described above. Prosternum, together with episternum, with rather scattered, round, very coarse, subfoveate, setiferous punctures; intercoxal apophysis obliquely depressed, with subtuberculate apex. Elytra oblong, broader than pronotum, with the sides distinctly rounded and narrowed towards base, as is the case in *Lasioderus lænoides*. Humeral angles not prominent. Sculpture similar to *Lasioderus* or many *Zadenos*; primary rows with coarse, round and regular punctures; all intervals smooth, sharply costate, with the crest of costæ minutely serrate or crenulate, bearing a row of short, semi-erect, yellowish bristles; the costa of sutural interval evanescent between base and apical declivity; on the latter all costæ abbreviate, except for the eighth costa which runs around apex parallel with the pseudopleural carina and coalesces with the prolonged second costa. The lateral outlines in part minutely serrate, particularly on basal and apical portions. Pseudopleura complete from base to apex, with the obsoletely crenulate pseudopleural carina bent towards humeral angle basally. Metasternum short, about half the length of basal sternite of abdomen and between meso and metacoxal cavities a little shorter than longitudinal diameter of the latter. Abdomen setiferous, the proximal sternites with dense, coarse punctures, the two penultimate sternites with scattered and very fine punctuation. (Anal sternite missing). Legs as in *Lasioderus*, short and pilose; the anterior tibiæ rather strongly dilated towards apex, there almost broader than

length of unguis segment of anterior tarsi, with edged and spinose upper surface and asperously granular outer lateral surface; tarsi with bristles below, the unguis segment produced.

Remarks. — This genus, which is well characterized by the peculiar formation of pronotal base, resembles *Lasioderus lænoides* on account of the basally constricted pronotum and elytra, but exhibits ten primary rows, of which two are situated on the reflected lateral portion of elytra, the same as in *Zadenos*.

Dimensions. — Length $5 \frac{1}{4}$ mm, width $2 \frac{1}{4}$ mm.

Distribution (map 5). — Northern Transvaal. — Salt Pan, Zoutpansberg District, VII.1949, C. KOCH & G. VAN SON (1 spec., sex not determined, holotype T.M.).

- Genal canthus rectangular, very strongly narrowed towards, and strongly projecting outwards beyond, eyes, strongly constricting the latter on anterior two-thirds. Pronotum closely jointed to elytra, broader than elytra or of equal width; base deeply bi-sinuate, but the posterior angles, as usual, produced backwards, at least reaching the level of middle portion of base and not leaving exposed any portion of underside of prothorax; formation of basal margination of prothoracic foramen simple, without supplementary carinula on lateral portion of episternum of prosternum. Elytra dull to moderately shiny, either with nine regularly punctured primary rows, but non-costate intervals, or with scarcely defined primary rows, but subcostate alternating odd intervals; in ventral aspect the entire reflected portion of elytra occupied by the pseudopleura, the outer portion of elytra lateral in position, not or obsoletely visible in ventral aspect 57
57. Body apterous; densely covered with sessile, elongate yellowish scales; small, only $5 \frac{1}{4}$ to $5 \frac{1}{2}$ mm long. Pronotum broadest in front of middle and there distinctly broader than elytra; very closely fitting to elytral base, with the lateral contours together with those of elytra forming a continuous line. Elytra short, not quite twice as long as pronotum, strongly narrowed in a straight line on posterior half, with regular primary rows and flat to convex, but not costate secondary intervals. Annal sternite immarginate.

GRIDELLIOPUS n. gen.

Monotypical.

Type species : —

Gridelliopus subsquamosus n. sp.

(Figs. 217, 218, 219.)

Of the appearance of a posteriorly attenuate *Gonocephalum*. Body almost oval, with continuous lateral contours (as usually shown in the *Crypticini*), slightly convex, rather densely covered with yellowish, elongate scales, moderately shiny, of a brownish black tint. Head perfect, much narrower than prothorax. Upper surface very densely rugose, covered with scales and a tuft of short erect bristles on supra-orbital edge. Epistome deeply emarginate, laterally not separated from genæ, without perceptible clypeal sutures. Genæ strongly and triangularly projecting outwards beyond eyes. Dorsal portion of eyes large and transverse, but only slightly broader than the ventral portion; the anterior half constricted by genal canthus. Labrum transverse, smooth, the apical margin shallowly emarginate, edged; epipharynx setiferous on both sides. Mentum almost square, shallowly concave, with straight median carinula on basal half. Postgenæ, prelabium and maxillæ as in the preceding Southern African *Litoborini*. Neck subparallel, in normal state of rest amplexed in prothorax (together with gula). The latter badly defined, densely and irregularly sculptured. Antennæ with eleven segments, slender, about one and a half times as long as width of head, with testaceous bristles, gradually dilated towards apex; third segment elongate, about two and a half times as long as the short and slightly transverse second segment; only the two penultimate segments transverse; apical segment large, much longer and only a trifle narrower than the preceding segment, slightly narrowed towards apical margin, the latter rounded and poriferous. Pronotum large, very closely fitted to elytra, twice as broad as head, about twice as broad as long, broadest in front of middle, distinctly broader than elytra, with only slightly convex disc; uniformly covered with extremely dense, shiny, subgranular rugosities and sessile, elongate scales. Anterior margin strongly emarginate, carinate laterally, with produced, but moderately sharp anterior angles. Sides strongly rounded and narrowed anteriorly, much less strongly narrowed in an almost straight line towards base. Submarginal depression broad, but only gradually demarcated from discal convexity. Base very strongly bi-sinuate, immarginate but provided with a fine row

of short, scaly cilia; posterior angles rectangular. Prosternum about one and a half times as long as coxal cavities, rather densely granulate; episternum posteriorly separated from prosternum by a strong suture, densely and sharply granulate on sloping inner portion, with smoothed sculpture on the broad and flat, submarginal portion of sides; intercoxal apophysis long, exactly horizontal, strongly projecting beyond coxal cavities, with rather sharply pointed apex. Elytra weakly convex, subparallel anteriorly, strongly narrowed in a straight line on posterior half, their lateral contours not demarcated from those of pronotum. Base immarginate, following exactly the bi-sinuate course of pronotal base; the prebasilar articulation surface, on which the transverse scutellum is situated, concealed in normal state of rest. Integument densely covered with sessile, elongate scales of a yellowish tint; with nine primary rows of regular punctures, becoming less clear on sides; the eighth and ninth primary rows lateral in position, but not ventral; secondary intervals with rather dense punctures, changing to dense and sharp granules on sloping lateral and apical portions; all intervals broad, flat to slightly convex, becoming more strongly convex towards sides and apex, there the third and seventh intervals obtusely subcostate and arranged in a similar way as in many Southern African *Litoborini*, viz. the third interval prolonged, subangularly bent towards suture, coalescent with the seventh interval and practically reaching the apex. Pseudopleura complete, reaching the extreme apex of elytra, occupying the entire reflected portion of elytra, only slightly dilated towards the rectangular humeral angles, densely granular; pseudopleural carina complete, consisting of a fine, minutely serrate and densely ciliate crest which is not visible from above. Mesosternum with strongly raised, sharp median carina basally; intercoxal apophysis excavate for receiving the prosternal apophysis. Metasternum densely rugose, large, about the length of basal sternite of abdomen, between meso and metacoxal cavities about as long as the latter; episternum elongate, very slightly narrowed towards epimeron, about four times as long as broad, with sharp sutures. Abdomen densely covered with elongate scales, very densely rugose on proximal three sternites, with finer and less strongly confluent punctures on penultimate and anal sternites. Legs slender, non-dimorphic. Underside of femora with sharply edged sides, more or less concave proximally. Tibiæ sparsely spinose; the anterior tibiæ with sharp, minutely serrate and briefly spinose outer edge, more strongly dilated towards apex than the intermediate and posterior tibiæ, with the apex about as broad as length of unguis segment of anterior tarsi. Tarsi slender, with strongly prolonged unguis segment, but that of posterior tarsi not longer than the basal segment.

Ædeagus (figs. 218, 219). — Small, almost subparallel. The apical portion with dorsally and ventrally strongly separated parameres; the latter stout, long, very faintly narrowing in a straight line towards apex, with broadly rounded and almost straight apices. Ventral groove broad, leaving exposed penis and lacinia. Penis baculiform, but with minutely dilated, roundish apex; lacinia straight, shorter than the penis, compressed.

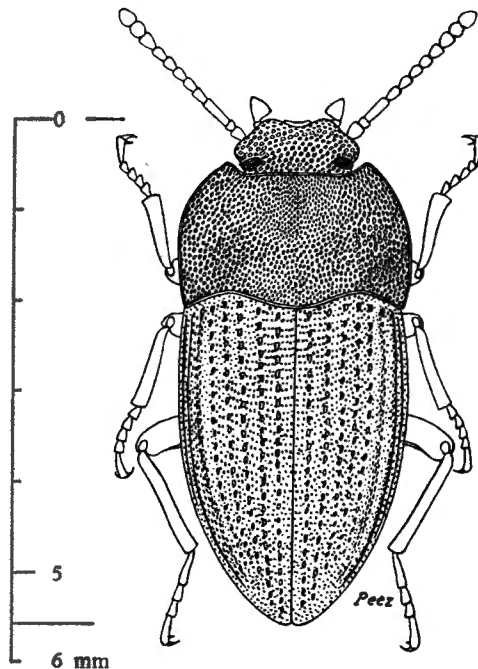


FIG. 217. — *Gridelliopus subsquamosus* n. sp.

Remarks. — *Gridelliopus* is a highly specialized genus which resembles an Opatrin of *Gonocephalum*- or *Cædius*-like appearance rather than a *Litoborin*. However, the formation of the head, underside of body, and in particular the slightly indicated but well perceptible costal arrangement on apical declivity of elytra, as well as the typically *Litoborin*-like structure of ædeagus, define *Gridelliopus* clearly as a *Litoborin*.

Dimensions. — Length $5 \frac{1}{4}$ to $5 \frac{1}{2}$ mm, width 3 to $3 \frac{1}{4}$ mm.

Distribution (map 2). — Italian Somaliland. — Chisimaio, 1936, A. BIDOLI (7 spec., types Museo Civico di Storia Naturale, Trieste).

Dedication. — I have much pleasure in naming this peculiar genus in honour of Prof. Dr. E. GRIDELLI, director of the Museum Trieste and eminent bio-geographer.

- Body alate, with fully developed, long wings, or at least with rudimentary wing strips; setiferous, the elytra with additional erect bristles;

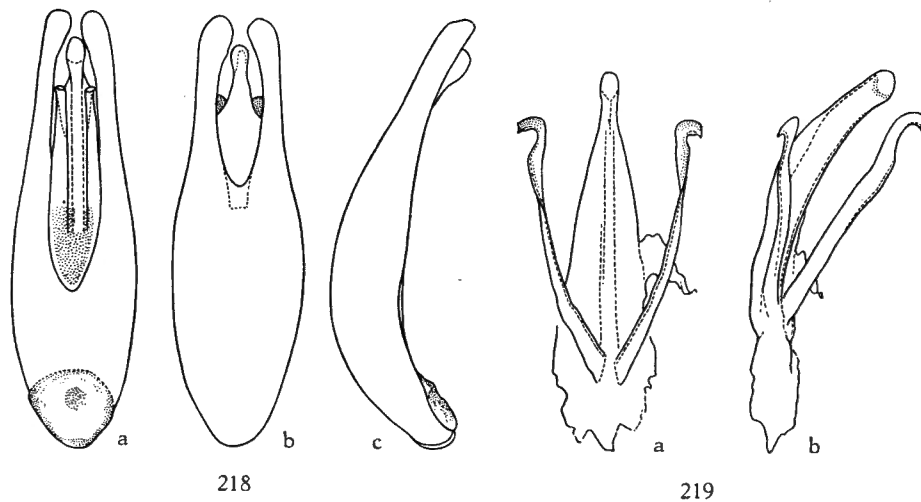


FIG. 218. — Aedeagus of *Gridelliopus subsquamosus* n. sp. (a : ventral surface; b : dorsal surface; c : lateral view, with the ventral surface at right). — FIG. 219. — The extracted sclerotized portion of penis plus lacinia of the aedeagus of *Gridelliopus subsquamosus* n. sp. (a : outer surface; b : diagonal view).

of larger size, 7 to 8 $\frac{3}{4}$ mm long. Pronotum broadest at about middle, there about as broad as elytra; not closely fitting to elytral base, with the lateral contours well demarcated from those of elytra. Elytra elongate, about three times as long as pronotum, subparallel on basal two-thirds and broadly rounded and narrowed posteriorly, irregularly covered with rather scattered granules or dense granular punctures, without clearly defined primary rows, but with subcostate odd inner intervals and lateral ones. Anal sternite with broadly sulcate and sharply carinate margin.

SILVESTRIELLUM n. gen. 58

(Fig. 220.)

Of *Scleron*-like appearance. Body elongate, subparallel, dull, setiferous, black, with dark reddish brown appendages. Head (fig. 220) porrect, transverse, narrower than pronotum. Upper surface very densely and coarsely rugose, covered with adherent bristles, concentrated and semi-erect on supra-orbital ridges. The latter well developed. Epistome emarginate, not separated from genæ. No clypeal or epistomal sutures indicated. Genæ strongly and triangularly projecting beyond eyes, constricting the latter on anterior half or two-thirds. Labrum carinate apically. Mentum with more or less developed median carina basally. Basal segment of maxillary palpi rather large, slightly longer than the first segment; apical segment dilated, but small. Antennæ large, extending to pronotal base, densely sculptured and setiferous; third segment elongate, a little more than twice as long as second segment; fourth segment only slightly longer than broad, all the following segments broader than long, becoming strongly transverse towards apex; the two penultimate segments larger than preceding segments; apical segment slightly narrower than pre-apical segment, but not shorter, with broadly rounded apical margin and sensorial, poriferous apical half. Pronotum flat, two-thirds to three-quarters broader than long, uniformly covered with an extremely dense sculpture, composed of subgranular rugosities, with scattered, adherent yellowish bristles, and often with a more or less developed, fine, median carinula. Anterior margin strongly carinate laterally, deeply emarginate and with rather sharp, produced anterior angles. Sides weakly, but almost equally rounded and narrowed towards anterior margin as well as towards base, sometimes very faintly sinuate in front of posterior angles, with strong, briefly ciliate lateral carina and broad but shallow submarginal depression. Base immarginate, deeply bi-sinuate, with sharply rectangular posterior angles. Prosternum, together with episternum, very densely and coarsely rugose, setiferous; the flattened submarginal area of episternal sides rather narrow and finely sculptured; intercoxal apophysis moderately produced backwards beyond coxal cavities, but distinctly depressed, with rounded apex. Elytra slender, elongate and subparallel, with nine secondary intervals, but irregularly sculptured primary ones. The latter more or less densely covered with granules or granular punctures, bearing adherent to semi-erect yellowish to reddish brown bristles. Secondary intervals with longer erect bristles of the same colour; the third, fifth, seventh and usually also the eighth and ninth intervals subcostate, with the crest of costæ from granular to smoothed; the sutural interval obtusely costate to convex on posterior half;

the sixth and fourth intervals sometimes with just indicated, fine, longitudinal row of granules; on apical declivity all costæ abbreviated, ending at rather wide distance from apex, with the third and seventh costæ coalescent. Base a little broader than pronotal base, with shallowly emarginated middle portion, sharply rectangular to minutely prominent humeral angles. Scutellum transversely triangular, exposed also in normal state of rest and situated on dorsal portion of elytral base. Pseudopleura complete, occupying the entire reflected portion of elytra, rather broad also apically, dilated basally, concave, sparsely granulated and setiferous. Pseudopleural carina complete,

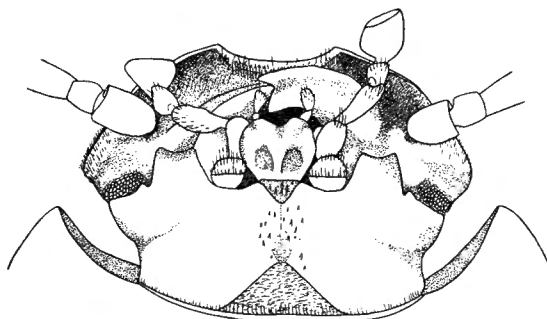


FIG. 220. — Under surface of head of *Silvestriellum scleronoide* n. sp.

ciliate, from serrate to smooth, visible from above and forming the lateral outlines of elytra. Wings from fully developed to rudimentary. Mesosternum similar to *Gridelliopus*. Metasternum densely rugose and setiferous, about as long as basal sternite of abdomen, or shorter. Abdomen with coarse, rather dense to longitudinally confluent punctures; the two basal sternites shallowly impressed discally; anal sternite very coarsely punctured, with deep sulcus along the carinate margin. Legs slender, slightly dimorphic. Femora scabrously punctured, slightly clavate. Tibiæ slender, the anterior ones with edged upper surface, gradually dilated towards apex and there a little narrower than length of unguis segment of anterior tarsi; tarsi slender, with elongate unguis segment, but that of posterior tarsi about the length of basal segment or a trifle shorter. In the ♂ the underside of tibiæ sulcate, often densely denticulate and sometimes briefly curved inwards apically.

Remarks. — *Silvestriellum* disagrees with all the other *Litorini*, the palæarctic ones included, by the alate body. With regard to the degree of development of wings it is specifically variable. On account of the strongly marginate anal sternite of abdomen it

shows somewhat related to the palæarctic *Litoborini*, but is placed best near to *Hanstræmium*, with which it agrees in the general structure of ædeagus, and often in the peculiar denticulation of inner contours of tibiæ in the ♂.

Type species. — *Silvestriellum alatum* n. sp.

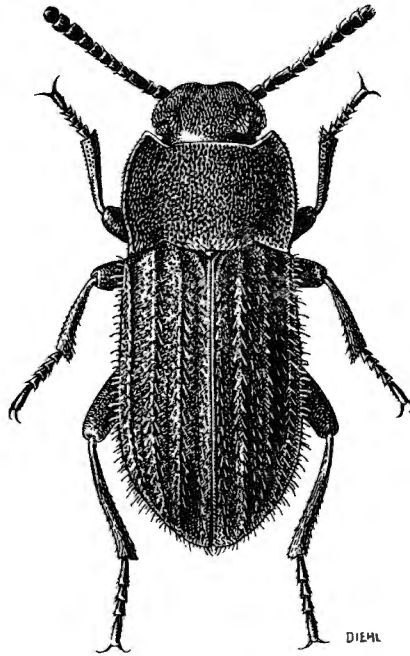


FIG. 221. — *Silvestriellum scleronoide* n. sp.

Distribution (map 2). — Central East African.

Dedication. — Named in memoriam of the Italian Maestro of Entomology, the late Prof. FILIPPO SILVESTRI.

58. Wings fully developed, at least as long as elytra. Metasternum the length of basal sternite of abdomen, between meso and metacoxal cavities distinctly longer than the longitudinal diameter of the latter. Pseudo-pleural carina densely and minutely serrate, the lateral outlines of elytra therefore finely serrate. Elytra very densely sculptured. Punctuation on abdomen extremely dense and in part longitudinally confluent. In the ♂ the inner contours of tibiæ straight and smooth.

[*Silvestriellum alatum* n. sp.]

(Fig. 222.)

For the remainder agreeing with the generic description.

Ædeagus (fig. 222). — Of quite peculiar shape. The distal half of tegmen divided into two narrow, spiniform, widely separated parameres, which dorsally are united by a membranous process of basal portion of tegmen on proximal portion. Parameres spini-

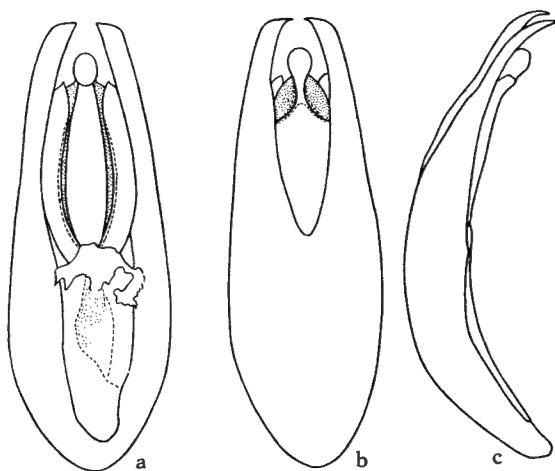


FIG. 222. — Ædeagus of *Silvestriellum alatum* n. sp.

a : ventral surface; b : dorsal surface, c : lateral surface, with the ventral surface at right.

form, continuously converging, with weakly bent and sharply pointed apices. Ventral groove only basally developed, the penis and lacinia freely inserted between parameres, entirely exposed ventrally, their apical portions visible also in dorsal aspect; penis strongly dilated towards base, with preapical constriction and abruptly demarcated, dilated and roundish apical orifice; lacinia strongly sclerotized, subparallel, moderately shorter than penis, thin, curved inwards, and with rounded apices.

Dimensions. — Length 7 to 7 $\frac{3}{4}$ mm, width 2 $\frac{3}{4}$ to 3 $\frac{1}{4}$ mm.

Distribution. — British East Africa. — North Baringo, 2,700 ft., 1,1938, D. G. MACINNES (1♂ ♀, types Coryndon Museum, Nairobi).

- Wings rudimentary, reduced to narrow strips which extend to about middle of elytra. Metasternum distinctly shorter than basal sternite of abdomen, between meso and metacoxal cavities about the length

of the latter. Pseudopleural carina smooth or obsolete crenulate, the lateral contours of elytra therefore practically smooth. Elytra with less dense to rather scattered and finer sculpture. Punctuation on abdomen finer, round and separated. In the ♂ the inner contours of anterior and intermediate tibiae briefly curved inwards apically, the underside of all tibiae sharply sulcate, that of anterior and intermediate tibiae with conspicuous denticulation on both sides of sulcus.

[*Silvestriellum scleronoides* n. sp.]

(Fig. 221.)

Very closely related to *S. alatum* and agreeing with the latter in all the remaining characters, the aedeagus included.

Dimensions. — Length 7 to 8 $\frac{3}{4}$ mm, width 2 $\frac{3}{4}$ to 3 $\frac{1}{2}$ mm.

Distribution. — Belgian Congo. — St. Louis, VI.1912, STAPPERS (1 ♂ ♀, types MCB.); Kigoma, V.1930, P. GÉRARD (1 ♀, BCM.). — Tanganyika Territory. — North Rukwa, 3,300 ft., VII.1938, D. G. MACINNES (2 ♂ ♂, 1 ♀, Coryndon Museum); L. Rukwa Area, 3,700 ft., IV.1938, D. G. MACINNES (1 ♀, Coryndon Museum); Mwamgongo, XI.1943, MENEGHETTI (1 ♀, Coryndon Museum); Urungu, near Bismarckburg (1 ♀, Museum Budapest).

59. Body small and elongate, 4 to 7 $\frac{3}{4}$ mm long, at the best 3 mm broad. Upper surface of body either bare or with scattered, erect bristles, but the antennae with eleven segments, the pronotum loosely attached to elytra and the elytral costae not abruptly ending in a prominent, tuberculiform dilation in front of apical declivity 60
- Body large and broad, 5 $\frac{3}{4}$ to 9 $\frac{1}{2}$ mm long and 3 $\frac{1}{2}$ to 5 $\frac{1}{4}$ mm broad. Upper surface covered with a dense vestiture of short, erect bristles. Pronotum closely jointed to elytra. The antennae either with only ten segments or with eleven segments, but then the sides of pronotum with large prebasilar incision and the elytral costae ending abruptly with a strong, prominent, tuberculiform dilation in front of initiation of apical declivity 70
60. Genal canthus long, completely dividing the eyes, with its lateral contours obliquely narrowed towards eyes and strongly, triangularly projecting beyond lateral contours of eyes. Supra-orbital crest very strongly raised, often overlapping partially the dorsal portion of eyes. Antennae *Adelostoma*-like; the apical segment small, shorter than the preapical segment, with truncate apical margin; the poriferous, sensorial portion of this segment confined to the sectional, apical disc and therefore not visible in lateral aspect. Maxillary palpi with strikingly large basal segment, the first segment considerably shorter than the latter, the apical segment triangular and small. Pronotum with strong, sulciform submarginal depression of sides. Apical

declivity of elytra with usually all the costæ united and forming together a transverse ridge at considerable distance from apex; the smooth portion between this ridge and apex of elytra perpendicular to concave, sharply demarcated from the more or less continuously sloping anterior portion of apical declivity (lateral view).

HANSTRÆMIUM KOCH 61

(Figs. 177 *e*, 223.)

*1953 *e*, *Hanstræmium* KOCH, p. 19. — 1953 *f*, KOCH, p. 91. — 1953 *a*, KOCH, pp. 271, 272.

To an extraordinary extent resembling certain genera of the *Adelostomina* of *Eurychorini* (*Tentyriinæ*). Body elongate, subparallel, very opaque to shiny, bare or with scattered, more or less conspicuous, erect bristles above. Head (fig. 223) prognathous, transverse, with sharp, strongly raised supra-orbital carinæ, and longitudinally impressed each side of the latter. Epistomal emargination broad, rather shallow, often angularly demarcated from lateral lobes of epistome. Genæ large, triangularly and strongly projecting outwards beyond lateral contours of eyes. Eyes completely divided by genal canthus into a dorsal and a ventral section. Mentum (fig. 177 *e*) subpedunculate, scarcely broader than long, faintly concave, with strongly rounded sides, deeply and angularly emarginate apical margin and weakly indicated median carinula on basal half. Maxillary palpi short, with strikingly enlarged basal segment. Mandibular portion of postgenal margin obliquely truncate, angularly demarcated from the lateral margin of postgenæ; the latter straight, overlapping and concealing a portion of the ventral section of eyes. Antennæ with eleven segments, stout, dilated and compressed towards apex, with the apically truncate apical segment shaped as in many of the genera of *Eurychorini*. Pronotum slender, almost square, with strong discal convexity, well delimited submarginal depression and very fine lateral carina. Prosternal apophysis lanceolate and horizontally produced beyond coxal cavities. Elytra elongate, subparallel, often with minutely dentiform and prominent humeral angle; with ten usually badly defined primary rows, of which two are situated at the ventrally reflected portion; the alternating odd intervals with very strongly raised, sharply carinate to denticulate costæ which are usually all united in front of the initiation of apical declivity and there forming a transverse ridge. Apical declivity perpendicular to concave or slightly re-entrant. Pseudopleura developed only on apical third, of equal width and reaching the apex, there remaining widely separated from the sharply carinate epipleural crest. Metasternum moderately short,

one half to two-thirds the length of basal segment of abdomen, between meso and metacoxal cavities about as long as the latter. Basal sternite of abdomen with very broad and anteriorly truncate intercoxal process; anal sternite immarginate. Legs short, the tarsi non-dimorphic, but the inner contours of intermediate and posterior tibiæ densely serrate-denticulate in the ♂ (as is the case in *Silvestriellum* and some of the palæarctic *Litoborini*). Ædeagus similar to that of *Silvestriellum*, with widely separated, thin and spiniform parameres, and entirely exposed, also dorsally visible penis and lacinia.

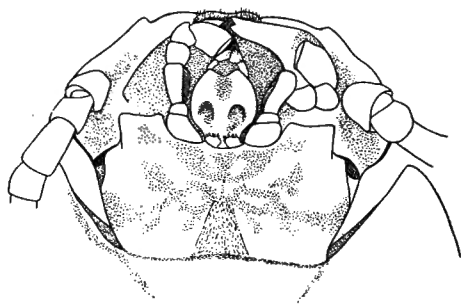


FIG. 223. — Under surface of head of *Hanstræmium lævifrons* KOCH.

The most specialized genus of *Litoborini*, in a striking way exhibiting several features of the adelostomoid *Eurychorini*, due probably to similar and particularly myrmecophilous life habits.

Dimensions. — 4 $\frac{1}{4}$ to 9 mm long.

Type species. — *Hanstræmium adelostomoide* KOCH, 1953 *e.*

Distribution (map 5). — From North-western Damaraland and the Kaokoveld to South- and Central-western Angola, but also in the central part of the Southern Belgian Congo.

- Genal canthus constricting the eyes only anteriorly, with straight, sub-parallel outer contours, and not projecting beyond lateral contours of eyes. Supra-orbital crest absent or only briefly indicated. Antennæ *Zadenos*-like; the apical segment large, longer than the preapical segment, with large, poriferous sensorial portion on apical half, well visible also in lateral aspect. Maxillary palpi with small basal segment, the first segment three to four times as long as the latter, the apical segment large and securiform. Pronotum with weakly marked sub-marginal depression of sides. Apical declivity of elytra simple, in lateral aspect with continuously sloping and arcuate contours.

TRAGARDHUS n. gen. 67

Directly related to *Zadenos* and *Minorus*, but sharply separated by the proximally absent pseudopleura which are well developed only on apical third, extending to the extreme apex of elytra and there remaining broadly separated from the sharply carinate epipleural crest. The eyes emarginate by the genal canthus only anteriorly, the elytra with ten primary rows, of which two are situated on the ventrally reflected portion of elytra but sometimes badly defined; the secondary intervals with more or less elongate tubercles. The remaining characters, as well as the simple, ventrally only narrowly grooved ædeagus, as in *Zadenos*. The new genus is divided into two sharply separated subgenera, of which *Tragardhus* s. str. is particularly distinguished by the presence of an alveolate gland on the preapically dilated pseudopleura and two median carinulæ on pronotal disc, whereas *Mitragardhus* by the peculiar structure of anal sternite of abdomen. All these particulars are quite unique in the *Litoborini*.

Dimensions. — 3 ½ to 6 mm long.

Type species. — *Tragardhus glandipleurum* n. sp.

Distribution (map 5). — Southern African, endemic to the coastal part of Natal. Probably myrmecophilous or termitophilous.

Dedication. — Named in honour of the discoverer, the late Swedish Entomologist, Prof. IVAR TRÄGÅRDH.

61. Body larger, 6 ¾ to 9 mm long. The ninth and seventh costæ of elytra coalescent apically 62
 — Body small, 4 ¾ to 5 ½ mm long. The ninth costa of elytra abbreviate posteriorly and ending at considerable distance from seventh costa ... 63
62. Epistome with very dense, strong, more or less rugose punctures; the sides distinctly demarcated from genal outlines by a more or less indicated, subangular sinuosity. Lateral impressions on head deep. Anterior angles of pronotum not or only faintly produced. Antennæ and legs with very dense, scabrous punctation.

[**Hanstrœmium adelostomoide** KOCH.]

(Figs. 224, 225, 226.)

*1953 e, *Hanstrœmium adelostomoide* KOCH, p. 22. — 1953 a, KOCH, p. 91.

Original description. — « Schwarz, seidig matt. Kopf quer, fast um die Hälfte breiter als lang, oben vorne äusserst dicht und feiner, rückwärts ebenfalls äusserst dicht, aber gröber und runzelig punktiert. Die Seitenlappen des Clypeus seicht eingedrückt,

von den Wangen mehr oder weniger deutlich getrennt. Die Wangen sehr lang, nach vorne stark verengt, mit leicht doppelbuchtigen Konturen und vor den Augen weit, eckig bis zähnenartig über die Augen und den genalen Canthus nach aussen vorspringend. Der Scheitel entlang der supraorbitalen Kante breit furchig eingedrückt. Fühler zurückgelegt die Mitte des Halsschildes erreichend oder diese

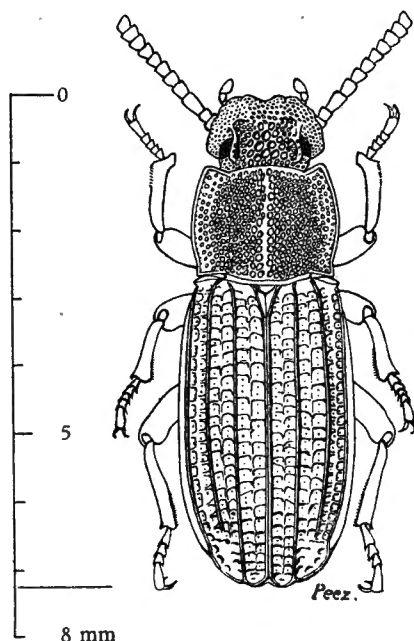


FIG. 224. — *Hanstræmium adelostomoide* KOCH.

überragend. Halsschild nur wenig breiter als lang, auf der gewölbten Scheibe ausserordentlich dicht und grob punktiert, daselbst mit scharf gratartigen, unregelmässig, fast netzartig gerunzelten Zwischenräumen und einer aus Runzeln gebildeten, mehr oder weniger zusammenhängenden Mittellinie; in der breiten Seitenkehle nur fein und wenig dicht punktiert. Seiten nur schwach gerundet, die grösste Halsschildbreite vor oder knapp in der Mitte einschliessend, nach vorne schwach gerundet eingezogen, nach hinten nur sehr schwach, fast gerade oder leicht ausgeschweift verengt; Randungsleiste scharf und punktiert. Unterseite des Prothorax dicht und grob punktiert, ausgenommen die geglättete und abgeflachte Seitenrandzone des Episternums des Prosternums. Flügeldecken zwei einhalbmal so lang wie breit, mit subparallelen, nur sehr schwach nach vorne eingezogenen Seiten und quer und scharf zähnenartig über

die Konturen der Halsschildseiten nach aussen vorspringenden, scharf rechteckigen Schultern. Die drei dorsalen primären Rippen ungefähr gleichweit voneinander entfernt; bei Ansicht von oben der laterale Zwischenraum und die Lateralrippe vollkommen und frei sichtbar. Die verschwommenen Punkte der dorsalen Zwischenräume durch feine Querfältchen voneinander getrennt. Meso- und Meta-

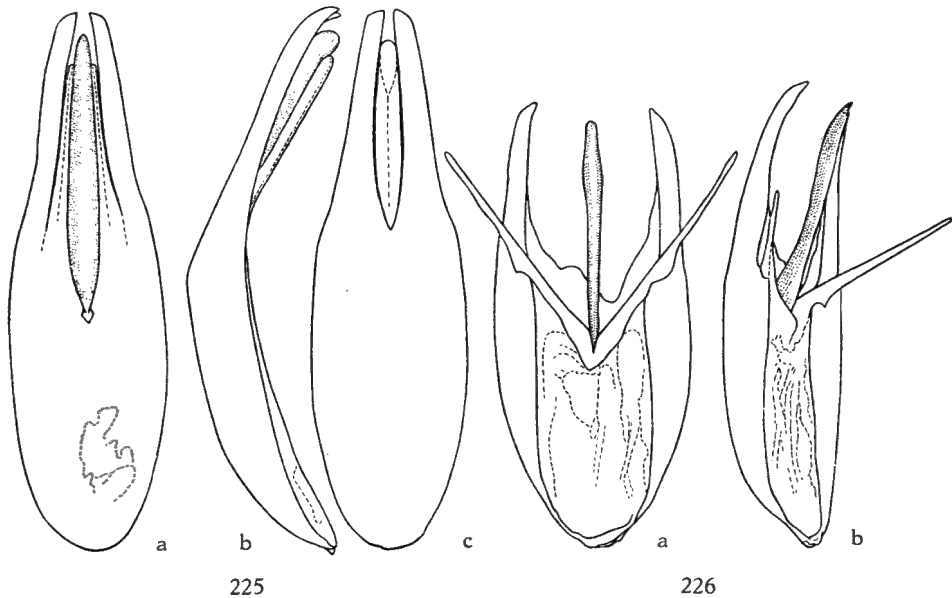


FIG. 225. — Aedeagus of *Hanstræmium adelostomoide* KOCH (a: ventral surface; b: lateral aspect, with the ventral surface at right; c: dorsal surface). — FIG. 226. — The dissected aedeagal tegmen with the penis and lacinia in *Hanstræmium adelostomoide* KOCH (a: ventral view; b: diagonal view).

sternum, sowie die drei proximalen Sternite des Abdomens sehr dicht und grob punktiert und fast matt, die beiden apikalen Sternite glänzend, fein und zerstreut punktiert, matt. Die Punkte der Unterseite, der Beine und der Fühler kurz beborstet. Die Unterseite der Tarsen mit spärlicheren längeren Borsten. »

Remarks. — The foveate und rugosely confluent punctures of pronotum with microscopically short bristles. The odd intervals on elytra, the sutural one included, with strongly raised, sharp costæ, the alternating even intervals with extremely fine, sometimes interrupted longitudinal carinulæ or a fine row of granules, often obsolete. On top of apical declivity all odd costæ, with the exception of the abbreviate fifth costa, coalescent and forming there

a zigzagged, transverse crest. The reflected lateral portion of elytra plane, with two more or less regular, often obsolescent primary rows of shallow punctures, and with the pseudopleural carina sharply developed on apical quarter, becoming gradually evanescent towards the middle of elytra. Anterior tibiæ with obtusely edged upper surface, slightly curved, rather strongly dilated towards apex, the latter a little broader than the unguis segment of anterior tarsi; the intermediate and posterior tibiæ straight, rather stout and subcylindrical. Tarsi short and subcylindrical, the unguis segment of all tarsi considerably longer than the basal segment. In the ♂ the inner contours of intermediate and posterior tibiæ densely serrate-denticulate.

Ædeagus (figs. 225, 226). — In general agreeing with the *ædeagus* of *Silvestriellum* but the parameres less widely separated. Parameres spiniform, very long, practically subparallel on distal half, with the apices obtusely attenuate and minutely bent ventrad. Ventral groove developed only basally, the penis and lacinia freely inserted between parameres and entirely exposed; penis thin, narrower than parameres, subparallel from base to the narrow and obtuse apex; lacinia only slightly shorter than penis, extremely thin, straight, constricted on distal half, with obtuse apices.

Dimensions. — Length $6\frac{1}{4}$ to $8\frac{1}{2}$ mm, width 2 to 3 mm.

Subspecies: —

a) adelostomoide. — The double interval between ninth costa and pseudopleural carina open apically and extending to extreme apex of elytra, there meeting the costate sutural angle. Epistomal emargination plane to feebly convex.

Type locality. — Kaokoveld: Zesfontein. Types in Transvaal Museum.

Distribution. — Kaokoveld. — Zesfontein (T.M.); Orupembe (T.M., U.L.); Ehombe Mount. (T.M.); Franzfontein (T.M., M.C.A.); Swartboois Drift (T.M.); Kaoko Otavi (T.M.). — Southern part of South-western Angola. — Ruacana (T.M., M.C.A.).

b) mocamedinum n. ssp. (= subsp. *adelostomoide* s. str. sensu KOCH, 1953e, p. p.). — In the apical construction of elytral costæ similar to subsp. *adelostomoide* s. str., but the costate transverse ridge on top of apical declivity with a short, perpendicular costula, entering for a short distance into the double interval between ninth costa and pseudopleural carina on both sides of transverse ridge. Epistomal emargination bunched up on both sides, appearing as if bi-tuberculate.

Distribution. — South-western Angola. — Moçamedes, X.1949, A. BARROS MACHADO (11 spec., types Museu Dundo).

c) *bicornutum* n. ssp. (1953f, *Hanstrœmium adelostomoide* subsp. *bicornutum* KOCH, p. 91, sensu latiore). — The double interval between ninth costa and pseudopleural carina closed apically, abbreviate and not extending to suture; the perpendicular apical declivity with two roundish, large cavities, encircled by the transverse ridge on top of apical declivity plus a perpendicular costula, running downwards from the united apex of seventh and ninth costæ and coalescent with the pseudopleural margin; both cavities divided by the sutural costæ. Epistomal emargination bi-tuberculate and often also the lateral angles of epistome bunched up and more or less tuberculiform.

Type locality. — Vila Arriaga. Types in Transvaal Museum.

Distribution. — South-western Angola. — Vila Arriaga (T.M., M.C.); Karakul (T.M., M.C.); btwn. Karakul and Rio Giraul (T.M., M.C.); btwn. Moçamedes and Rio Coroca (T.M., M.C.).

- Epistome smooth and shiny, with extremely fine and sparse punctures; the lateral outlines of epistome not demarcated from those of genæ. Inner lateral impressions on head very shallow to obsolescent. Anterior angles of pronotum very strongly produced and lobiform. Antennæ and legs strongly shiny, bare, with fine and scattered punctures.

[*Hanstrœmium lævifrons* KOCH.]

*1953 f, *Hanstrœmium lævifrons* KOCH, p. 92, figs. 24-26.

Original description. — «Closely related to the widely spread *H. adelostomoide* KOCH, but readily distinguished by the following particulars. The anterior half of the upper surface of head, consisting of epistome and frons, is abruptly smoothed and shiny, with the integument showing a fine and rather scattered punctation (dull and rugosely punctured in *adelostomoide*): the lateral impressions are not deep as in *adelostomoide*, but shallow; the epistomal emargination is much deeper and the sides of epistome are not angularly separated from the genal contours. The antennæ are a little more slender, shiny, with the scattered and fine punctures bearing only a very fine and sparse microscopical pilosity (they are dull, rugosely punctured and distinctly pilose in *adelostomoide*). The pronotum is about one and a half times as broad as long, with well-rounded sides and strongly produced anterior and posterior angles. As to the sculpture it is very similar to that of *adelostomoide*, but the discal rugosities between the subfoveate punctation are broader and more shiny. The punctures on episternum of

prosternum are less concentrated and not rugosely confluent. The elytra agree almost completely with those of *adelostomoide*; they are a little less dull and the sculpture on lateral interval is more scattered, with the outer row of punctures more distinctly delimiting the pseudopleural space. The punctures on metasternum and the three proximal sternites of abdomen are well-separated, only slightly tending to become longitudinally confluent on the disc of the two basal sternites; underside of afterbody therefore shiny (in *adelostomoide* the latter is almost dull owing to the very dense and rugosely confluent punctation on metasternum and the three proximal sternites). Legs shaped as in *adelostomoide*, but the femora and tibiæ almost bare, shiny, smoothed and with only fine and scattered punctures (dull, microscopically pilose and covered with a scabrous and very dense punctation in *adelostomoide*). Black to dark reddish brown, with the underside and appendages often paler.»

Remarks. — The apical construction of elytral costæ agrees with *H. adelostomoide adelostomoide*. In the ♂ the underside of intermediate and posterior tibiæ serrate denticulate as in *adelostomoide*.

The resemblance of *H. lævifrons* with the adelostomoid *Eurychorini* is very striking, in particular if compared with the Moroccan *Adelostoma granulithorax* ESCALERA. This similarity is not confined to the habitus, but extended even to the analogy of differing characters, relationship and distribution. *Adelostoma granulithorax* (cf. KOCH, 1945, p. 399) differs from its next allied species, *Ad. sulcatum* DUPONCHEL, by the same particulars, viz. the smooth epistome and frons, the smoothed cuticle of appendages; occurs locally within the wide area of distribution of *Ad. sulcatum*, the same as *H. lævifrons* does within that of *H. adelostomoide*.

Ædeagus. — As in *H. adelostomoide*.

Dimensions. — Length 7 to 9 mm, width 2 ¼ to 3 ¼ mm.

Type locality. — South-western Angola, Province of Huila and same district : btwn. Jau and Ongueria. Types in Museum Dundo.

63. The odd elytral intervals with continuous costæ, the crest of which is densely, finely crenulate to granulate, bare or provided with scattered, very short erect bristles; in lateral view the granules of these costæ not projecting beyond the surface of elytra; lateral outlines of the latter from smooth to obtusely and sparsely denticulate. Base of pronotum subtruncate to very shallowly bi-sinuate; the posterior angles situated at, or a little in front of, level of middle portion of base 64
- The odd elytral intervals with a longitudinal series of well separated, erect, dentiform and pointed tubercles or granules, from which arise

rather long erect bristles; in lateral view the dentiform tubercles of these rows strongly projecting beyond surface of elytra; lateral outlines of the latter sharply and rather densely denticulate. Base of pronotum with strongly produced middle portion and obliquely cut lateral portions; the posterior angles therefore situated considerably in front of level of middle portion.

[*Hanstrœmium spiniferum* n. sp.]

(Pl. XXXII. fig. 1.)

Black, the tarsi and buccal organs reddish brown; shiny, but the upper surface usually covered with earthy particles. Head very similar to *H. adelostomoide*, but the sculpture consisting of an extremely dense, strongly raised, subdenticulate granulation, rugosely confluent on vertex. Epistome with plane acies of emargination; the lateral lobes subtruncate apically and demarcated from genæ by a broad sinuosity laterally. Supra-orbital ridges setiferous. Antennæ more slender than in *adelostomoide*, with longer and denser bristles. Pronotum only moderately broader than head, about one and a half times as broad as long, densely covered with strongly raised, subdenticulate, setiferous and confluent rugosities on the convex disc. Anterior margin straight, with rather strongly produced, sharp anterior angles. Sides constricted and slightly sinuate in front of anterior angles, almost subparallel on the posterior two thirds, with irregularly crenulate and ciliate margin and very broad, smooth and shiny submarginal sulcus. Posterior angles sharply rectangular, situated considerably in front of middle portion of base. The latter with dense fringe of yellowish, short silken bristles. Elytra elongate, slightly broader than pronotum, with subparallel sides which are weakly narrowed towards the broadly rounded shoulders. Primary rows formed by very coarse, dense, somewhat irregular punctures which are separated from each other by narrow, transverse wrinkles or rugosities. The odd dorsal intervals, the sutural interval included, denticulate, provided with erect bristles; the even intervals scarcely indicated discally, distinctly granulated laterally. The sutural, third and seventh costæ coalescent and forming a transverse ridge on middle of apical declivity; the space between this ridge and the apex of elytra, in lateral view, smoothed and perpendicular, formed by the open, lateral, double interval between ninth costa and pseudopleural carina. The fifth and ninth costæ strongly abbreviate posteriorly. Legs stout. Tibiæ spinose, the inner contours of anterior tibiæ shallowly emarginated between middle and the inwardly curved apical portion.

Dimensions. — Length $4 \frac{1}{4}$ mm, width 2 mm.

Distribution. — Western part of Central Angola. — Lobito, IV.1948, C. Koch (1 spec., sex not determined, holotype T.M.).

64. Shoulders obtuse or rounded, without prominent humeral angle. Lateral lobes of epistome subtruncate apically. Elytra with obtusely and sparsely denticulate lateral contours and very short, scattered erect bristles 65
- Shoulders with prominent, minutely dentiform, acute humeral angle. Lateral lobes of epistome large and subtriangular. Elytra with smooth lateral contours, bare.

[*Hanstrœmium brevipenne* n. sp.]

Black, clothed with a layer of earthy substance. Head transversely triangular, above covered sparsely with rather coarse, roundish granules, bearing each a punctiform, sessile, somewhat scaly, yellowish bristle. Epistome with deep emargination; the lateral lobes large, strongly produced, of subtriangular shape, with the inner angle slightly bent upwards, separated from supra-antennal portion of genæ by a minute, rather deep sinuosity. Supra-antennal contours of genæ separated from the preocular ones by a strong emargination in front of genal angles. Antennæ stout, with black bristles, strongly accrescent towards apex; the two penultimate segments twice as broad as long. Pronotum moderately broader than head, broadest in front of middle, about one and a half times as broad as long, uniformly covered with well separated, shiny, roundish granules, on which originate the same punctiform, scaly, yellowish bristles as on head. Anterior margin moderately emarginated, with produced rectangular anterior angles. Sides sparsely crenulate, rounded and narrowed towards anterior angles, as well as towards base, with strong, smoothed, rather broad submarginal depression. Posterior angles rectangularly demarcated from sides. Elytra short, slightly broader than pronotum, about one and a half times as long as broad, with the subparallel sides distinctly constricted in front of humeral angles. All the odd intervals with strongly raised costæ, the crest of which is very densely, almost microscopically crenulate, owing to extremely fine, transverse ridges or punctures on lateral declivities of costæ; the sutural, third and seventh costæ coalescent and forming a transverse ridge below middle of apical declivity; the space between this ridge and the apex of elytra perpendicular; the fifth and ninth costæ abbreviate. Primary rows with coarse, but shallow punctures, more sharply defined and deeper on lateral rows; between punctures with obtuse, transverse wrinkles or weak rugosities; the even intervals not indicated. Legs very similar to *H. spiniferum*; in the ♂ the inner contours of intermediate and posterior tibiæ serrate denticulate.

Dimensions. — Length $4 \frac{3}{4}$ mm, width a little more than 2 mm.

Distribution. — Belgian Congo. — Central Elisabethville Province: Mulongo (Mafinge), VII. 1930, P. GÉRARD (1♂, holotype BCM.).

- 65.** The apex of the seventh elytral costa coalescent with that of the sutural and third costæ. Epistomal emargination simple **66**
 — The apex of the seventh elytral costa free and separated from the posteriorly coalescent sutural and third costæ. Epistomal emargination with a porrect, obtuse tooth on both sides, sharply separated from lateral lobes of epistome.

[**Hanstrœmium armatum** n. sp.]

Closely related to *H. brevipenne*, but more slender, the head with similar lateral contours and almost identical sculpture, the antennæ with still more strongly enlarged, almost claviform, two penultimate segments, the pronotum with similar sculpture, but more slender, only a little more than one-third broader than long, with scarcely produced anterior angles, deep sinuosity in front of posterior angles and narrow submarginal depression. The elytra more elongate, without dentiform humeral angle, with denticulate lateral contours, granular and setiferous costæ and irregularly, transversely rugose intervening spaces between the latter. The fifth costa much more strongly abbreviate and becoming evanescent in front of apical declivity; the ninth costa strongly raised, but abruptly ending at about level with the apex of fifth costa; in dorsal aspect the apex of ninth costa forming a minute right angle, projecting from lateral contours of apical declivity. The reflected lateral portion of elytra with two subfoveate rows of primary punctures. Abdomen with subfoveate punctures on proximal three sternites, bearing the same scaly, punctiform bristles as on head and pronotum; the two distal sternites with only a few, very fine punctures. Legs stout, with subgranular sculpture and scaly bristles; the inner contours of anterior tibiæ curved inwards apically.

Dimensions. — Length $4 \frac{1}{2}$ mm, width not quite 2 mm.

Distribution. — Belgian Congo. — South-western Elisabethville Province: Sandoa, IV.1931, F. G. OVERLAET (1 spec., sex not determined, BCM.).

- 66.** Discal portion of pronotum uniformly convex. Lateral contours of supra-antennal portion of genæ separated from the preocular one by a distinct sinuosity or shallow emargination in front of genal canthus.

Hanstrœmium tropicale n. sp.

Very closely related to *H. armatum* and agreeing with the latter in shape of body, sculpture of upper surface and the granular, setiferous elytral costæ. Differing from this species by the simple epistomal emargination, the distinctly produced anterior angles of pronotum, the subdenticulate lateral margin and broad submarginal depression of the latter, as well as by the different apical arrangement of elytral costæ. The sutural, third and seventh costæ are coalescent posteriorly and the ninth costa does not terminate abruptly, nor project beyond lateral contours of apical declivity, if viewed from above. Legs as in the two preceding species.

Dimensions. — Length $4 \frac{3}{4}$ to $5 \frac{3}{4}$ mm, width 2 to $2 \frac{1}{4}$ mm.

Distribution. — Belgian Congo. — Western and Central Elisabethville Province: Upemba National Park, Mabwe, IX.1947, Mission G. F. DE WITTE (1 spec., holotype, sex not determined, I.P.N.); Kapanga, X.1931, F. G. OVERLAET (1 spec., sex not determined, B.C.M.).

- Discal portion of pronotum with a broad impression on middle of basal half, flanked on both sides by an obtuse, badly defined longitudinal convexity. Lateral contours of supra-antennal portion of genæ in line with that of preocular portion.

[Hanstrœmium bequaerti n. sp.]

Almost identical with *H. tropicale*, but constantly disagreeing with this species by the peculiar longitudinal convexities on basal half of pronotum. On account of this structure resembling *Psaryphis* of the adelostomoid *Eurychorini*.

Dimensions. — Length $4 \frac{3}{4}$ to $5 \frac{1}{2}$ mm, width $1 \frac{3}{4}$ to 2 mm.

Distribution. — Belgian Congo. — Central Elisabethville Province: Bukama, V.1911, BEQUAERT (2 spec., sex not determined, holotype BCM.).

Dedication. — Named in honour of Dr. J. BEQUAERT, Cambridge, Massachusetts.

- 67. Pseudopleura dilated at about level of preapical sternite of abdomen and there with a deep, roundish alveola (fig. 230). Pronotum with two more or less distinctly indicated median carinulæ. Reflected lateral portion of elytra with two regular primary rows of coarse punctures, the intervals smooth as is the pseudopleural space. Abdomen with fine punctation, the anal sternite dimorphic in sculpture, plane and uniformly punctured. Body larger, $4 \frac{1}{2}$ to 6 mm long.

TRAGARDHUS subg. **TRAGARDHUS** sensu stricto 68

- Pseudopleura simple, gradually narrowed towards apex, without alveola. Pronotum uniformly convex on disc, without any indication of median structures. Reflected lateral portion of elytra with less regular primary rows and with punctured intervals; the pseudopleural space with a longitudinal row of very coarse, round punctures. Abdomen very coarsely punctured, the anal sternite non-dimorphic, with broadly bunched up apical third, there finely and sparsely punctured, the basal two thirds flat and provided with extremely large, foveate punctures. Body small, only $3\frac{1}{2}$ to $4\frac{3}{4}$ mm long.

TRAGARDHUS subg. **MITRAGARDHUS** nov.

Monotypical.

[Tragardhus (Mitragardhus) nodosus n. sp.]

(Fig. 228.)

Dark to pale reddish brown, the appendages testaceous to brown, shiny, setiferous. Head above coarsely granulated. Epistomal impression obsolescent. Lateral contours of epistome continuous with genæ. The latter subparallel in front of eyes, broadly rounded towards epistome and there very slightly convex. Eyes transverse, convex, weakly projecting beyond lateral contours of head. Antennæ thin basally, but strongly accrescent towards apex; third segment narrower than the second segment and about one and a half times as long as the latter; eighth segment small, square to slightly broader than long; the two penultimate segments large, transverse; apical segment large, oval, considerably longer but scarcely narrower than the preapical segment. Pronotum broadest at about middle, almost two-thirds broader than long, setiferous, uniformly covered with an extremely dense, sharply raised, rugosely confluent sculpture, changing to coarse punctures on submarginal depression. Sides minutely crenulate, strongly rounded and narrowed towards anterior margin, only slightly less so towards base; submarginal depression rather broad. Anterior margin strongly emarginate, with sharp and considerably produced anterior angles. Base shallowly bisinuate, immarginate, with faintly obtuse posterior angles. Discal convexity weak. Prosternum, together with episternum, with coarse and rather scattered punctures; intercoxal apophysis bent towards foramen behind coxal cavities, but the apex prominent and tuberculiform. Elytra oval, moderately broader than pronotum, convex, with distinctly rounded sides. Humeral angle dentiform, prominent.

Primary rows subsulcate, regular and composed of coarse, very dense punctures, with almost adherent, short bristles. Intervals with a row of more or less regular, fine punctures, intermixed with scattered, large, raised and roundish granules, becoming finer but dense, and forming a kind of granulate costa on the lateral intervals, particularly on ninth interval; on apical declivity all intervals straight, the third interval coalescent with the seventh interval, but not prolonged, the eighth interval running parallel with pseudo-

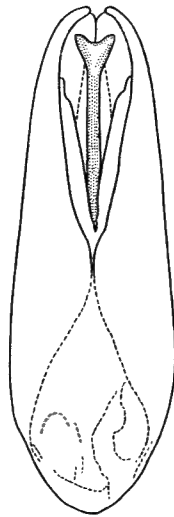


FIG. 228. — Ventral surface of the aedeagus of *Tragardhus (Mitragardhus) nodosus* n. sp.

pleural carina apically and almost in contact with the sutural angle; ninth costa abbreviate. Lateral contours of elytra more or less strongly and irregularly denticulate to crenulate. Legs slender, piliferous; tibiae subcylindrical, tarsi with elongate unguis segment. In the ♀ all tibiae straight and of similar shape, the anterior tibiae inconspicuously more strongly dilated towards apex than the remaining tibiae. In the ♂ the anterior tibiae more strongly dilated, their inner contours with very slight, arcuate median dilation, between the latter and the apical portion very shallowly emarginate and with fine squarrose bristles; the underside of intermediate and posterior tibiae with very fine distal stripe of yellowish, depressed hairs.

Aedeagus (fig. 228). — Stout and of simple shape. The apical portion of tegmen moderately narrowing in a straight line towards

apex. Parameres briefly divided only on apical third, with very broad inflexed alae and weakly curved, rather obtuse apices. Ventral groove broad, leaving exposed penis and lacinia.

Dimensions. — Length $3\frac{1}{2}$ to $4\frac{3}{4}$ mm, width $1\frac{1}{2}$ to $2\frac{1}{4}$ mm.

Distribution. — Zululand. — Junction of Mfolozi and Onkudu Rivers, VII.1905, I. TRAGÅRDH (4♂♂, 1♀, types M.St.).

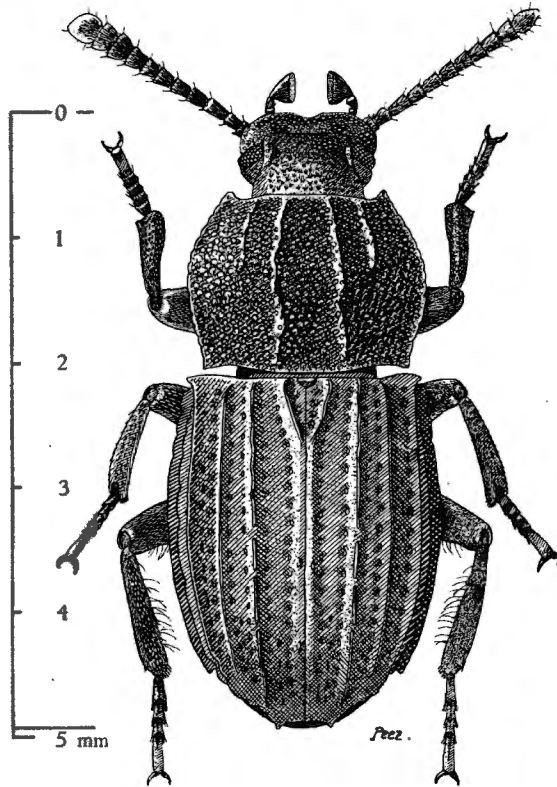


FIG. 229. — *Tragardhus* (s. str.) *glandipleurum* n. sp.

(The left antenna in lateral view, the right antenna from above.)

68. On elytra the sutural, third, fifth, seventh, eighth and ninth intervals with a longitudinal row of more or less concentrated, but always well separated, elongate tubercles; the outlines of elytra appearing as if denticulate. In the ♂ the inner contours of anterior tibiae with a prominent, obtusely dentiform, arcuate median dilation 69
- On elytra only the sutural and third intervals with small and scattered tubercles, but the fifth, seventh, eighth and ninth intervals with a

sharply raised and continuous costa; the outlines of elytra smooth or obtusely denticulate only basally and apically. In the ♂ the inner contours of anterior tibiæ without prominent, dentiform median dilation.

[**Tragardhus** (s. str.) **glandipleurum** n. sp.]

(Figs. 229 to 232.)

Black, the appendages reddish brown; almost dull, the elytra sericeous. Head above uniformly covered with a dense, reticulate, rugose sculpture. Clypeal sutures oblique and finely impressed; epistomal impression shallow; epistomal outlines scarcely demarcated from genal ones. Genæ long, straight, almost subparallel or very slightly narrowed towards eyes. The latter weakly projecting outwards beyond lateral contours of head. Supra-orbital crest very short and fine. Antennæ setiferous, only a trifle longer than width of head; proportions of segments very similar to *T. nodosus*. Pronotum broadest in front of middle, strongly transverse, about two-thirds broader than long, uniformly covered with a dense, rugose reticulation and some punctiform microscopical bristles. Anterior margin emarginated and with moderately produced anterior angles. Sides sparsely crenulate, strongly rounded and narrowed towards anterior margin, narrowed in an almost straight line towards base and sometimes very slightly sinuate in front of posterior angles. Submarginal depression broad, but weak and badly demarcated from discal convexity. Middle of disc with two fine, arcuate, more or less distinct carinulæ which are converging anteriorly and posteriorly, running across the entire length of pronotum; the lateral portions of disc with an often indistinct, shiny and elongate convexity each side of median carinulæ in front of middle. Base immarginate, faintly bi-sinuate, with sharply rectangular posterior angles. Underside of prothorax as in *T. nodosus*. Elytra only slightly broader than pronotum, short, with distinctly rounded sides and prominent, dentiform humeral angle. Primary rows with regular, strong, moderately dense punctures. Intervals smooth, tuberculate and costate as described above, but sometimes also the sutural and third intervals faintly subcostate. Eighth costa prolonged apically, ninth costa strongly abbreviate and ending at level of pseudopleural alveola. All costæ with microscopically short, yellowish bristles which are barely perceptible. Abdomen with rather fine, distinctly setiferous punctures; in the ♀ the anal sternite with extremely dense, somewhat asperous, often transversely confluent and densely setiferous punctation. Legs rather slender, piliferous. Femora shiny, the outer lateral surface with fine and scattered punctures on proximal two-thirds, densely and coarsely punctured on distal

third. Tibiæ densely sculptured, the intermediate and posterior tibiæ subcylindrical, the anterior ones with spinose and distally edged upper surface. In the ♂ the anterior tibiæ slightly more dilated towards apex than in the ♀, the underside weakly excavate at middle portion, and the inner contours weakly dilated behind middle and thence subparallel; the underside of posterior tibiæ with

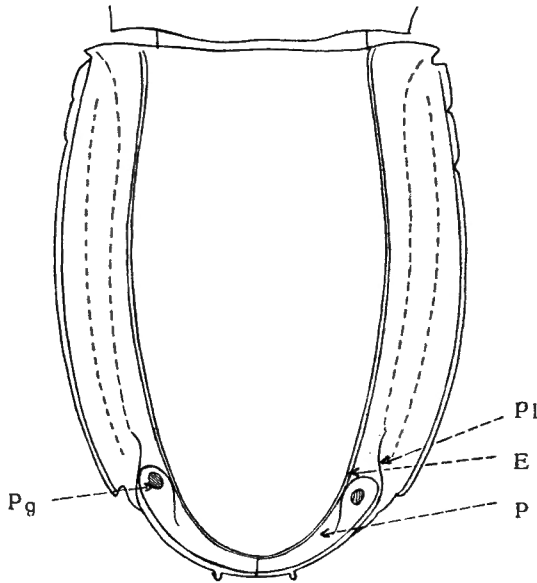


FIG. 230. — Scheme of the ventrally reflected portion of elytra in *Tragardhus* s. str. E: epipleura; P: pseudopleura; Pg: pseudopleural gland; Pl: pseudopleural crest.

extremely fine, almost inconspicuous, subtomentose stripe of yellowish hairs; the underside of posterior femora with a very fine brush of squarrose, fine, rather long hairs on proximal half.

Ædeagus (figs. 231, 232). — Slender. The apical portion continuously converging towards the demarcated and subtriangular apex. Parameres deeply, elongately divided, almost straight, with the apices obliquely directed inwards, well demarcated from sides and enclosing a preapical, fenestrate gap. Ventral groove constricted, but with the penis narrowly exposed.

Dimensions. — Length $4\frac{1}{2}$ to $5\frac{1}{2}$ mm, width 2 to $2\frac{1}{2}$ mm.

Distribution. — Zululand. — Junction of Mfolozi and Onkudu Rivers, VII.1905, I. TRÄGÄRDH (21 spec., types M.St.); Hluhluwe, IV.1950, C. KOCH & T. LILIER (1 spec., T.M.); Entenadweni (1 spec., M.B.).

69. Pronotum strongly cordiform and deeply sinuate in front of posterior angles; lateral carina sparsely subdenticulate. Elytra strongly tuberculate on odd and lateral intervals, with a few tubercles also on second or fourth intervals; apical declivity simple, with the pseudopleural carina visible from above and delimiting the apical outlines of elytra.

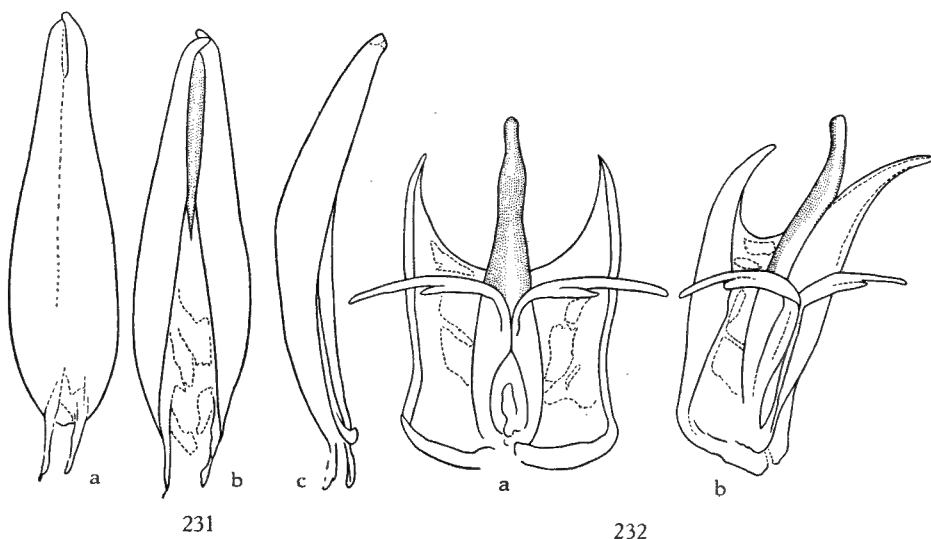


FIG. 231. — *Ædeagus* of *Tragardhus* (s. str.) *glandipleurum* n. sp. (a: dorsal surface; b: ventral surface; c: lateral aspect, with the ventral surface at right). — FIG. 232. — The dissected *ædeagal tegmen* with the penis and lacinia in *Tragardhus* (s. str.) *glandipleurum* n. sp. (a: ventral view; b: diagonal view).

[*Tragardhus* (s. str.) *stigmaticus* n. sp.]

Closely related to *T. glandipleurum*, but of larger size, the antennæ much longer than the head is broad and with non-transverse, eighth segment, all intervals on elytra tuberculate (the alternating even intervals only sparsely so on disc), both the ninth, as well as the eighth costæ strongly abbreviate posteriorly, the lateral outlines of elytra denticulate, the scabrous upper surface of intermediate and posterior tibiæ flattened, and in the ♂ the inner contours of anterior tibiæ with prominent, dentiform median dilation, the underside of posterior femora without hairy brush and that of posterior femora with scattered, short, squarrose hairs.

Dimensions. — Length 5 ½ to 6 mm, width about 3 mm.

Distribution. — Natal. — Malvern, II.1897 (1♂ ♀, types M.D.).

- Pronotum strongly narrowed in a straight line towards base; lateral carina obsoletely crenulate. Elytra sparsely tuberculate on odd and lateral intervals, the second and fourth intervals plane, not tuberculate; apical declivity with a transverse ridge in front of apex, by which the pseudopleural carina is concealed, if viewed from above; the space between transverse ridge and pseudopleural carina of apex concave.

[**Tragardhus** (s. str.) **biapicalis** n. sp.]

Apart from the smaller size almost identical with *T. stigmaticus*. In the ♂ the anterior tibiæ shaped as in this species, but the under-side of posterior tibiæ with a brush of rather long and dense hairs on distal half.

Dimensions. — Length 4 ½ mm, width 2 ¼ mm.

Distribution. — Zululand. — Without specified locality, VII.1938, F. R. LAWRENCE (1♂, holotype S.A.M.).

70. Antennæ with eleven segments, much longer than the head is broad. Pronotum broadest in front of, or at, middle, with the sides narrowed in a straight line towards base; the latter practically truncate; the sides with a peculiar, large incision in front of posterior angles. Elytral base broader than pronotal base; the four subcostate odd intervals abruptly abbreviate in front or on top of apical declivity, with more or less dilated, tuberculiform apices; the middle of apical declivity with a large, roundish and prominent callosity on each side.

HÆMODUS (PÉRINGUEY).

*1904, *Hæmus* PÉRINGUEY, p. 228.

1938-1942, *Hæmodus* nom. nov. GEBIEN, p. 819.

Monotypical.

Type species : —

Hæmodus carinatipennis (PÉRINGUEY).

(Pl. XXXII, fig. 2; Fig. 235.)

PÉRINGUEY, 1904, p. 229, t. 3, fig. 13 a. — 1910 b, GEBIEN, p. 123. — 1942-1944, GEBIEN, p. 820, n° 12584.

Original description. — « Black, but covered all over with an earthy coating and short, densely set, thick, bristle-like hairs, springing from each of the somewhat deep punctures. Head broader than long. Mentum long, one-third longer than broad, slightly rounded laterally at apex, emarginate, deeply impressed on

each side, labial palpi inserted on the inner face, but the two apical joints project beyond the edge of mentum, the last joint is subfusiform, broadly truncate; the two lobes of maxillæ are stiffly bristly, last joint of the long maxillary palpi cup-shaped, broadly truncate; left mandible trifid; antennæ reaching the base of prothorax, bristly except the four last apical joints which are briefly pubescent, joints third to seventh elongated, fourth as long as fifth and sixth taken together, seventh a little shorter than the preceding, eighth sub-conical, ninth and tenth transverse, eleventh sub-turbinate, closely fitting against the tenth; labrum transverse, emarginate, epistoma incised in front, genæ strongly projecting beyond the very narrow transverse eyes. Prothorax deeply incised laterally beyond the median part which is therefore strongly angular, straight along the base, with the angles sharp; diagonally amplified laterally from the apex to the median part, straight thence for a short distance, deeply incised there, thus forming a sharp angle, and with the posterior part straight; discoidal part very little convex; outer sides slightly deplanated. No scutellum. Elytra oblong-ovate, not much convex, somewhat plane in the anterior part, dehiscent behind, epipleural fold broad; very rugose, but the background is hidden by the earthy coating, except along the epipleural fold; the suture is broad, raised, and on each side are three costæ, the first and third of which reach the posterior dehiscence, but the first one is slightly longer, at some distance from the outer costa there is a small tubercle nearly equidistant from the apex and from the apex and from the terminal part of the costa, the second costa is a little shorter than the other two. The under side and legs are clothed with very dense, short depressed hairs, finer than those covering the upper side. Legs somewhat short, not very strong, anterior tibiæ obliquely truncate outwardly, neither angular, dentate or dilated outwardly at apex, slightly emarginate inwardly towards the apex in the ♂, not in the ♀; all the apical spurs very small, especially the posterior; tarsi bristly above and beneath, basal one longer in the ♂ than in the ♀. »

Remarks. — PÉRINGUEY placed this genus erroneously in the *Asidini* of tentyrioid *Tenebrionidæ*, while GEBIEN transferred it, likewise erroneously, to the *Helopinini* near to the genus *Aptila* FÄHRAEUS. In actual fact *Hæmodus* is clearly defined as a *Litoborin* on the basis of the ædeagus, the epistomal emargination, the shape of eyes, the buccal organs, the underside, legs and costal arrangement on elytra. It is quite peculiar among all the other genera of *Litoborini* by the angular incision of pronotal sides.

The upper surface of head is finely granulated and densely covered with short yellowish bristles. Clypeal structures are scarcely

indicated. The sides of epistome are in line with those of genæ. The latter project strongly and triangularly beyond ocular outlines; the genal canthus emarginates strongly the eyes on anterior two-thirds. The basal segment of maxillary palpi is widely separated from cardo and stipes, rather large, roundish and about as long as the second segment. All segments of antennæ are elongate, with the exception of the four last segments; eighth segment triangular, ninth and tenth segments strongly transverse and large, the apical segment obtusely triangular, longer but narrower than the preapical segment. Pronotum almost twice as broad as long, uniformly covered with a sharply raised, subgranular and rugosely confluent reticulation, and semi-erect yellowish bristles. Anterior margin strongly emarginate, with produced anterior angles. Submarginal depression of sides rather narrow and badly defined; sides minutely serrate-denticulate and ciliate. Prosternal apophysis horizontally produced, broadly rounded apically. Elytra considerably broader than pronotum, with rather strongly rounded sides, densely covered with short, semi-erect yellowish bristles. Humeral angles right, demarcated from the basally constricted sides. Scutellum transversely triangular, in normal state of rest almost concealed by the base of pronotum. Integument densely covered with fine granules on the broad sutural interval, with extremely dense, granular to punctured, but irregular sculpture on all the remaining intervals, without discernible primary rows. The third, fifth, seventh and ninth intervals subcostate, the crest of costæ with fine, subdentate granules, aggregated on the apical dilations of costæ and the roundish callosity on middle of apical declivity. Reflected lateral portion large, densely punctate-granulate. Pseudopleura only apically developed, but extending to extreme apex of elytra. Lateral outlines of elytra appearing as if densely and minutely serrate-dentate, ciliate, and with prominent contours of the apex of seventh costa and of the callosity on apical declivity. Abdomen densely covered with granular, setiferous, rather strong punctures; intercoxal process of basal sternite very broad and truncate. In the ♂ the inner contours of anterior tibiæ with weak, shallowly arcuate median dilation and between the latter and apical portion rather strongly emarginate and bearing a fringe of long, rather dense hairs.

Ædeagus (fig. 235).

Dimensions. — Length 9 to 10 mm, width 5 to 5 ½ mm.

Distribution. — Southern Rhodesia. — So far known only in the typical series from Umtali. Types in S.A.M.

- Antennæ with ten segments, barely longer than the head broad. Pronotum broadest basally, with the sides rounded and gradually dilated

towards posterior angles; base bi-sinuate, with strongly produced and arcuate middle portion. Elytral base a little narrower than pronotal base; the four subcostate odd intervals extending far beyond top of apical declivity, with the apices of third, seventh and ninth costæ coalescent in front of apex of elytra; no callosity on apical declivity.

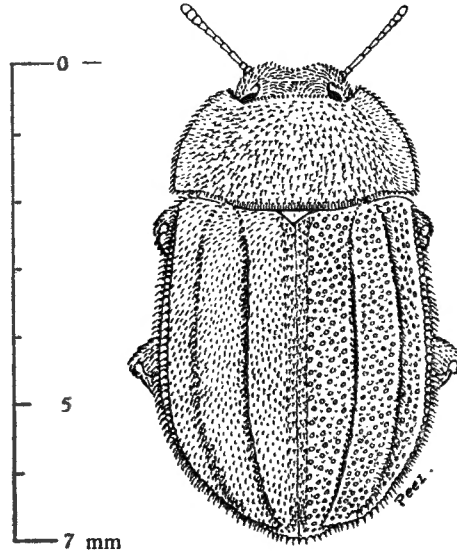


FIG. 233. — *Zoutpansbergia serricostata* n. sp.
Right half : elytral sculpture, dorsal surface of antenna; left half : elytral vestiture, compressed lateral surface of antenna.

ZOUTPANSBERGIA n. gen.

Monotypical.

Type species : —

[*Zoutpansbergia serricostata* n. sp.]

(Figs. 233, 234.)

Black to dark reddish brown, dull, usually covered with earthy particles, densely setiferous. Head hypognathous, amplexed in the prothorax up to genal angles, transverse. Upper surface plane, densely covered with fine, sharply raised granules and short, erect, yellowish bristles. Epistome broadly emarginate; epistomal impression transverse and shallow; lateral lobes short, broadly rounded, their contours in line with those of genæ. The latter triangularly prominent, as in *Hæmodus*; genal canthus emarginating the anterior two-thirds of eyes. Buccal organs, the maxillary palpi and mentum

included, as in *Hæmodus*. Mentum subpedunculate, moderately transverse, plane and without any trace of a median convexity, with deeply and triangularly emarginate apical margin. Antennæ with only ten segments, of which the three apical ones form a kind of club; the proximal segments slender, filiform, with elongate third segment; the eighth segment triangular and slightly transverse, the penultimate segment transverse and closely attached to the apical segment; the latter elongate, pointed, one and a half times as long as the preceding segment, without traces of any dividing sutures. Pronotum very strongly transverse, broadest basally, there about two and one third times as broad as long, with strongly produced and arcuate base, uniformly covered with dense, sharp and rather fine granules and semi-erect yellowish bristles. Anterior margin rather deeply emarginate, with strongly produced, rectangular anterior angles. Sides broadly rounded and dilated towards base, in front of posterior angles briefly subparallel or slightly narrowing; lateral margin minutely but sharply denticulate and ciliate; submarginal depression rather broad and strong. Posterior angles rectangular, situated distinctly in front of the backwardly produced middle portion of base. Discal convexity moderately strong. Prosternum together with episternum granular and setiferous, with anterior carina; intercoxal apophysis broad, as in *Hæmodus*, but the apical margin subtruncate. Elytra short, rather strongly convex, only slightly broader than pronotum, with very weakly rounded, anteriorly almost subparallel sides. Base strongly emarginate, a trifle narrower than pronotal base, with obtuse and not demarcated humeral angles. Without indication of primary rows. The odd intervals, the sutural one included, provided with a fine, distinctly raised, very densely and sharply denticulate costa; the intervening spaces between suture, third, fifth, seventh and ninth costæ densely and irregularly covered with fine, sharply raised granules, bearing stiff, erect yellowish bristles, as do the denticulate granules of costæ. Lateral outlines of elytra densely and sharply denticulate and ciliate. Reflected lateral portion broad, densely covered with setiferous, fine granules. Pseudopleura as in *Hæmodus*, developed only apically. Abdomen with broad, subtruncate intercoxal process of basal sternite, very densely covered with fine, sharp and setiferous granules. Legs similar to *Hæmodus*, but shorter, the tibiæ with strongly spinose outer contours, in the ♂ the anterior tibiæ almost simple, with smoothed and laterally carinate underside. Tarsi short, the unguis segment of all tarsi elongate and considerably longer than basal segment.

Remarks. — This genus is strikingly characterized by the reduced number of antennal segments, thereby distinguished from all *Opatrinæ* in general. Although sharply separated from *Hæmodus*

by several important particulars, *Zoutpansbergia* agrees with the latter in the convexity of body, the dense vestiture on upper surface, the formation of head and buccal organs, the presence of four costæ on each elytron, and the construction of sterna and abdominal segments.

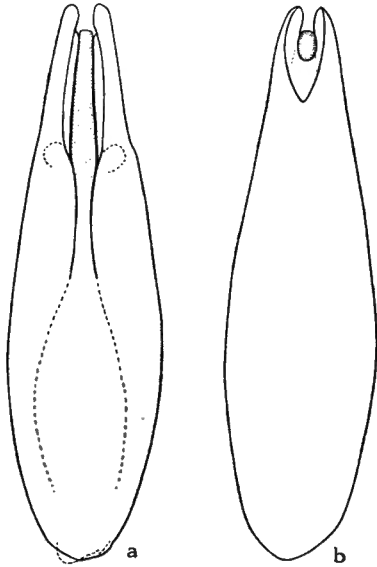


FIG. 234. — *Ædeagus* of *Zoutpansbergia serricostata* n. sp.
a : ventral surface;
b : dorsal surface.

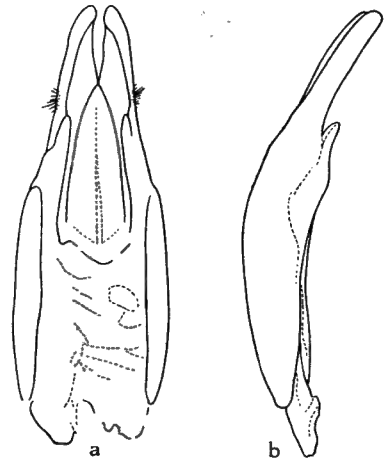


FIG. 235. — *Ædeagus* of *Hæmodus carinatipennis* (PÉRINGUEY).
a : ventral surface; b : lateral view
with the ventral surface at right.

Ædeagus (fig. 234). — Slender, of rather simple but elongate shape. The apical portion of tegmen strongly narrowed towards apex in a straight line. Parameres almost straight, divided only on apical third, but gaping, with sharply pointed apices (dorsal aspect). Ventral groove broad, leaving exposed penis and lacinia; penis considerably dilated towards base, with simple and rounded apex; lacinia almost as long as penis, but thinner, strongly sclerotized, curved outwards and very sharply pointed apically.

Dimensions. — Length $5 \frac{1}{2}$ to 7 mm, width $3 \frac{1}{4}$ to $4 \frac{1}{4}$ mm.

Distribution. — Northern Transvaal. — Zoutpansberg District: Salt Pan and Futie, VII.1949, C. KOCH & G. VAN SON (35 spec., types T.M.).

(PALÆARCTIC *LITOBORINI*, cf. KOCH, 1948.)

71. Anterior tibiæ slender, only slightly dilated towards apex, there at the best twice as broad as basally, with the upper surface edged only apically; sectional surface of apical disc oval, not flattened towards outer margin. Pseudopleura abbreviated posteriorly; the pseudopleural carina coalescent with the epipleural margin at about level with anal sternite. In the ♂ the inner contours of posterior tibiæ serrate-denticulate.

Litoborina 72

In this subtribe the ædeagal tegmen is truncate and fused apically, without a median division. Shape of body elongate and subparallel. With a single exception [*Melasma* (*Heliomelasma*) *appenhagensi* KOCH], the elytra exhibit the following arrangement of lateral costæ:— The lateral outlines are formed by the ninth costa which, in dorsal aspect, conceals the pseudopleural carina; the intervening space between the ninth costa and the pseudopleural carina is situated at level with the pseudopleura and much broader than the latter; the ninth costa is united with the seventh costa at the humeral angle; the eighth costa always developed but abbreviate anteriorly. Humeral angle more or less distinctly dentiform and prominent. Base of pronotum deeply bi-sinuate and marginate.

- Anterior tibiæ more strongly, often very strongly dilated towards apex, there at least two and a half times as broad as apically, with the upper surface sharply edged at least on distal half; sectional surface of apical disc distinct only at inner portion, but strongly complanate and therefore reduced to a sharp edge at outer portion. Pseudopleura complete, extending to extreme apex of elytra; the pseudopleural carina either separated from the epipleural margin also apically, or there obsolescent, but then the epipleura together with pseudopleura forming a rather broad and obtuse edge. The inner contours of posterior tibiæ smooth in both sexes.

Melambiina 76

ANTOINE, 1941, has studied the ædeagus of the Moroccan representatives of this group. According to his indications the apical portion of the ædeagal tegmen is constricted, more or less strongly rounded and exhibits a short median division. ESPAÑOL, 1945, reports a similar structure for a few extra-Moroccan, palæarctic *Litoborini*. — Shape of body elongate or short and broad. The lateral construction of costal elements on elytra very variable. The lateral outlines of elytra are formed either by the pseudopleural carina or, as in the *Litoborina*, by the ninth costa which, in dorsal aspect, conceals the pseudopleural carina. In the latter case, however,

either the seventh and eighth costæ are developed (as in the *Litoborina*), but then the pseudopleura are much broader than the intervening space between ninth costa and pseudopleural carina and situated at a lower level than this interval, — or the lateral arrangement of costæ disagrees with that in the *Litoborina* in that the lateral costæ are not developed or if so, then the ninth or eighth costæ are united with the humeral angle but not the seventh costa, and the pseudopleura are often narrower than the intervening space between ninth costa and pseudopleural carina. In the latter case the base of pronotum often immarginate.

72. In the ♂ the anterior tarsi strongly dilated, at least as broad as the widest point of anterior tibiæ; the three proximal segments below with tomentose soleæ, covering the entire under surface of these segments. Anal sternite of abdomen with a large, roundish fovea, running across whole length of sternite. Pronotum almost square, only a little broader than long.

MELASMANA (WOLLASTON) 73

- In the ♂ the anterior tarsi not or only slightly dilated, in the latter case much narrower than the widest point of anterior tibiæ; the three proximal segments without or with only small tomentose patches which cover only a portion of under surface. Anal sternite without median fovea. Pronotum distinctly transverse 74

73. Lateral outlines of elytra formed by the ninth costa; the pseudopleural carina visible only at the minutely prominent humeral angles; the intervening space between ninth costa and pseudopleural carina situated at same level with pseudopleura. Anal sternite of abdomen completely marginate in both sexes. In the ♂ the intermediate tarsi feebly dilated and soleate below; the inner contours of anterior tibiæ with moderate dilation in front of middle.

MELASMANA subg. **MELASMANA** sensu stricto.

1948, KOCH, p. 407.

Monotypical. — *Melasmata* (s. str.) *lineata* (BRULLÉ).

Canary Islands of Fuerteventura, Lanzarote and Teneriffa.

- Lateral outlines of elytra formed by the pseudopleural carina; ninth interval not costate, situated above pseudopleura and dorsal in position. Anal sternite of abdomen marginate only in the ♂; in the ♀ immarginate or with a rudimentary impression only apically. In the ♂ the intermediate tarsi elongate and not dilated, without tomentose patches on underside; the inner contours of anterior tibiæ with a strong and dentiform dilation in front of middle.

MELASMANA subg. **HELIOMELASMA** KOCH.

*1948, KOCH, p. 408.

Monotypical. — *Melasmata (Heliomelasma) appenhageni* KOCH.
Canary Island of Teneriffa.

74. In the ♂ the anterior tibiæ simple, straight, with truncate apex and plane underside. Apical segment of maxillary palpi strongly securiform. Margination of anal sternite very strong.

LITOBORUS MULSANT & REY 75

- In the ♂ the anterior tibiæ curved inwards apically, with oblique outer contours of apex; the underside with sharp edge, bearing a strong tooth close to apex. Apical segment of maxillary palpi weakly securiform. Margination of anal sternite fine.

MELANSIS WOLLASTON.

With the two species *M. costata* (BRULLÉ) and *angulata* WOLLASTON on the Canary Islands of Gran-Canaria and Palma respectively.

75. The under surface of the three proximal segments of anterior tarsi in the ♂ with setiferous patches apically, in the ♀ with dense spinulæ each side of midline.

LITOBORUS subg. **LITOBORUS** sensu stricto.

Type species. — *Litoborus moreleti* LUCAS.

Three species (*L. moreleti*, *clermonti* ANTOINE and *maroccanus* ESCALERA) in Algeria and Morocco.

- The under surface of anterior tarsi simple in both sexes.

LITOBORUS subg. **PARALITOBORUS** ANTOINE.

Type species. — *Litoborus sternalis* (FAIRMAIRE).

Morocco (*L. sternalis*, *olceseii* FAIRMAIRE with the subspecies *atlantis* ANTOINE, *chobauti* ANTOINE, *escaleraii* ANTOINE, *planicollis* (WALTL) [with the subspecies *bolivari* ANTOINE and the aberrations *defrictus* ANTOINE and *rugosus* ANTOINE], and *forticostis* ESCALERA).

76. Posterior angles of pronotum rectangularly demarcated by a small sinuosity of sides in front of base. Humeral angle callose, projecting outwards beyond the slightly sinuate basal portion of sides of elytra. (Body smaller, 7 ½ to 12 mm long, mentum and postgenæ plane, the

latter without pre-gular sulcus, base of elytra simple, anal sternite immarginate or marginate, in the latter case the outer margin as broad as, or narrower than, the marginal sulcus.)

ALLOPHYLAX BEDEL 77

- Posterior angles either obtuse (as the sides are dilated, rounded or narrowed in a straight line towards base), or rectangular and with the sides in front of them briefly sinuate, but in the latter case the body larger, 11 to 14 $\frac{1}{2}$ mm long, the anal sternite marginate, with the marginal sulcus being narrower than the apical margin of sternite, and either postgenæ with a transverse, pre-gular cavity, or the apical half of mentum transversely depressed, or the base of elytra with prominent and callose fifth intervals and impressed between the latter. Humeral angle never projecting outwards beyond lateral contours of elytra, nor callose; the basal portion of elytral sides not sinuate in front of humeral angles 79

77. Elytral intervals plane or only the alternating intervals costate; in the latter case the seventh costa not united with the humeral angle. Anal sternite marginate, except for *A. picipes* and subspecies 78

- All elytral intervals costate; the seventh costa coalescent with the humeral angle. Anal sternite at the best with rudimentary marginal sulcus.

ALLOPHYLAX subg. **LITOBOROMIMUS** KOCH.

Type species. — *Allophylax parallelus* SCHUSTER.

Endemic to the north-western part of Tripoli. The Tunesian *A. rotundicollis* CHABAUT belongs probably to the same subgenus.

78. Anal sternite without or with rudimentary or only very fine margination. Lateral punctures on underside of body very coarse.

ALLOPHYLAX subg. **ALLOPHYLAX** sensu stricto.

Type species. — *Allophylax picipes* (OLIVIER).

A. picipes (with the two subspecies *dalmatinus* REITTER and *melitensis* REITTER) and *A. brevicollis* BAUDI, widely distributed over Southern France, Sardinia, the tyrrhenic Italy, Sicily, Malta and the Dalmatian Island of Lessina.

- Anal sternite with strong and complete margination. Lateral punctures on underside of body finer, often very fine.

latter without pre-gular sulcus, base of elytra simple, anal sternite immarginate or marginate, in the latter case the outer margin as broad as, or narrower than, the marginal sulcus.)

ALLOPHYLAX BEDEL 77

- Posterior angles either obtuse (as the sides are dilated, rounded or narrowed in a straight line towards base), or rectangular and with the sides in front of them briefly sinuate, but in the latter case the body larger, 11 to 14 $\frac{1}{2}$ mm long, the anal sternite marginate, with the marginal sulcus being narrower than the apical margin of sternite, and either postgenæ with a transverse, pre-gular cavity, or the apical half of mentum transversely depressed, or the base of elytra with prominent and callose fifth intervals and impressed between the latter. Humeral angle never projecting outwards beyond lateral contours of elytra, nor callose; the basal portion of elytral sides not sinuate in front of humeral angles 79

77. Elytral intervals plane or only the alternating intervals costate; in the latter case the seventh costa not united with the humeral angle. Anal sternite marginate, except for *A. picipes* and subspecies 78

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- Anal sternite with strong and complete margination. Lateral punctures on underside of body finer, often very fine.

ALLOPHYLAX subg. **PHYLAXIMON** KOCH.

Type species. — *Allophylax variolosus* (OLIVIER).

Seven species (*variolosus*, *ingratus* MULSANT & REY, *costatipennis* LUCAS [with the forma *sicardi* REITTER], *undulatus* MULSANT & REY, *seguis* MULSANT & REY, *ovipennis* FAIRMAIRE and *ignavus* MULSANT & REY), occurring in Tunisia, Algeria and Eastern Morocco.

- 79.** Pronotum dilated towards base, with lateral carina and narrow submarginal depression. Antennæ short and stout, extending to the posterior quarter of pronotum but not reaching the base. Elytra broadly rounded apically **80**
 — Pronotum rounded and narrowed towards base, without lateral carina and with broad submarginal depression. Antennæ fine and long, extending to pronotal base. Elytra acuminate apically.

BERMEJOINA ESPAÑOL.

Monotypical. — *Bermejoina aiunica* ESPAÑOL, 1944.

Sahara of Rio de Oro. A specialized genus, differing strongly from all the tropical and Southern African genera, as well as from the palæarctic ones.

- 80.** At least the basal portion of the lateral outlines of elytra is formed by the pseudopleural carina (dorsal aspect). Pseudopleura broader than, or at the best as broad as, the marginal interval of elytra, gradually dilated towards base. Anal sternite with broad marginal sulcus; the apical margin distinctly broader than the marginal sulcus, exceptionally narrow, when the lateral margin of elytra is ciliate **81**
 — The lateral outlines of elytra are formed by the ninth costa; the pseudopleural carina also basally concealed (dorsal aspect). Pseudopleura much narrower than the marginal interval of elytra, subparallel and suddenly dilated towards humeral angle basally. Anal sternite with fine marginal sulcus; the apical margin very narrow, at the best as broad as marginal sulcus. Lateral margin of elytra bare and not ciliate **91**
- 81.** Ninth interval of elytra with sharp and complete costa; the latter almost reaching the base **82**
 — Ninth interval of elytra either plane or subcostate, but in the latter case the fine costa or granular row abbreviate anteriorly and becoming evanescent at considerable distance from base **84**
- 82.** Anterior tarsi in both sexes short and of identical shape.

OROPHYLAXUS KOCH **83**

- Anterior tarsi in the ♂ very slender, as long as the anterior tibiæ are long at the outer margin; in the ♀ short.

OTINIA ANTOINE.

Type species. — *Otinia iblanensis* ANTOINE. With two species (*O. iblanensis* and *embergeri* KOCH), endemic to the Middle Atlas.

83. Inner contours of intermediate tibiæ with very fine denticulation on distal half; outer apical angle of anterior tibiæ forming at least a sharp angle, but usually produced into a briefly prominent tooth. Pronotum with very fine and sparse punctures; the canaliculate submarginal depression dilated towards base. Elytral micro-sculpture distinctly granular.

OROPHYLAXUS subg. **OROPHYLAXUS** sensu stricto.

Monotypical. — *Phylax incertus* MULSANT & REY.

Algeria, with the subsp. *disparis* ESCALERA also in the Middle Atlas. Specimens of the latter with indistinct or practically absent outer apical tooth of anterior tibiæ are to refer to the ab. *inermis* ESCALERA (nec *inermis* ANTOINE).

- Inner contours of intermediate tibiæ smooth; outer apical angle of anterior tibiæ obtuse or rounded. Pronotum with denser and stronger punctures: the canaliculate submarginal depression not or only obsoletely dilated posteriorly. Elytral micro-sculpture superficially and obsoletely granular.

OROPHYLAXUS subg. **ANTOINEIUS** KOCH.

Monotypical. — *Micrositus (Hoplariobius) jeanneli* KOCH.

Endemic to the Middle Atlas.

84. Sides of pronotum and elytra, as well as the episternum of prosternum bare. Pseudopleural carina smooth. Anterior tibiæ often with more or less developed, large, lobiform tooth at outer apical angle, but without pointed median tooth 85
- Sides of pronotum and elytra, as well as the episternum of prosternum with long cilia, except for *Hoplarion torre-tassoæ*, when the anterior tibiæ exhibit a large and pointed median tooth besides the lobiform outer apical tooth. Pseudopleural carina finely serrate-denticulate, except for *Hoplarion torre-tassoæ*.

85. Postgenæ on underside of head plane and simple, without pre-gular sulcus. Prosternum uniformly convex. Apex of the horizontal portion of prosternal apophysis not prominent. Sides of pronotum without sinuosity in front of posterior angles 86
- Postgenæ on underside of head with broad, deep, transverse pre-gular cavity. Prosternum tectiform, with obtuse median edge. Apex of the horizontal portion of prosternal apophysis projecting beyond the perpendicular apical declivity. Sides of pronotum with slight sinuosity in front of posterior angles.

PEYERIMHOFFIUS KOCH.

Monotypical. — *Peyerimhoffius plicatus* (LUCAS).

The only Litoborin with a pre-gular cavity. Algeria.

86. Outer apical angle of anterior tibiæ produced into a large, lobiform, strongly projecting tooth. Episternum of prosternum shiny, with smooth and flattened marginal area, coarsely and densely punctured, often longitudinally rugose. Submarginal depression of pronotum rather broad, usually dilated towards base. (Elytra often with costate or edged ninth interval, the primary rows without discernible punctures, only lineate, often reduced in number, and sometimes the intervals apically very finely costate, but not tuberculate).

ATLASON KOCH 87

- Outer apical angle of anterior tibiæ inermous or with only a short, pointed and not lobiform tooth. Episternum of prosternum dull, without demarcated marginal area of sides, either very sparsely sculptured and often smooth, or with more or less dense granules or granular rugosities. Submarginal depression of pronotum practically absent or reduced to a narrow, fine canaliculation. Elytra with plane ninth interval, the primary rows distinctly punctured or lineate, but in the latter case with flattened tubercles.

HOPLARIOBIUS REITTER 88

87. In the ♂ the underside of proximal segments of anterior and intermediate tarsi with small, subtomentose, setiferous, yellowish patches, well visible also in lateral aspect; the intermediate and posterior tibiæ curved.

ATLASON subg. **ATLASON** sensu stricto.

Type species. — *Atlason* (s. str.) *bedeli* (ESCALERA).

The type species and *A. escaleraei* KOCH in the Middle Atlas. A subspecies of *bedeli* (ssp. *septentrionalis*) was described by ANTOINE from the northern part of the Middle Atlas. I do not know the two *Melambius* (*Hoplariobius*) *major* ANTOINE and *latissimus* ANTOINE, both from the Great Atlas; according to their descriptions they may belong to *Atlasion* sensu lato.

- In the ♂ the underside of anterior and intermediate tarsi simple, with the usual spiniform bristles; the intermediate and posterior tibiæ straight.

ATLASION subg. **MEGATLASION** KOCH.

Type species. — *Atlasion* (*Megatlasion*) *atlantis* (ESCALERA).

With several species confined to the Great Atlas and the northern slopes of the Anti-Atlas. All have been described as *Micrositus* by ANTOINE and ESCALERA (*angulatus* ESCALERA with the subspecies *gundaficus* ANTOINE, *atlantis* ESCALERA with the subspecies *gattefossei* ANTOINE, and *theryi* ANTOINE).

88. Body large, 11 to 14 ½ mm long. Pronotum with fine, scattered, often evanescent punctures. Episternum of prosternum smooth, without or with only fine, very sparse punctures; prosternal apophysis horizontally produced, sulcate or foveate. Mentum either depressed on apical half or evenly flat, but then the base of the fifth interval on elytra callose and produced, and the intervals densely tuberculate 89
- Body smaller, 8 ½ to 10 ½ mm long. Pronotum densely punctured. Episternum of prosternum densely covered with granules or granular rugosities; prosternal apophysis bent towards foramen or depressed, short and plane. Mentum evenly flat. On elytra the fifth interval neither callose nor produced basally, and the intervals never tuberculate.

HOPLARIOBIUS subg. **HOPLARIOBIUS** sensu stricto.

Type species. — *Hoplariobius* (s. str.) *decurtatus* (FAIRMAIRE).

The type species with the subspecies *tenuepunctatus* ESCALERA, and *punctistriatus* ESCALERA, both widely distributed in Morocco.

89. Elytra with impressed middle portion of base, the fifth interval callose and obtusely produced basally, the primary rows lineate, without discernible punctation, and the intervals densely tuberculate. Pseudopleura strongly dilated basally. Sides of pronotum straight in front of posterior angles.

HOPLARIOBIUS subg. **GLYPTARIOBIUS** KOCH.

Monotypical. — *Hoplariobius (Glyptariobius) excavatus* KOCH.
Algeria.

- Elytra with simple base, the fifth interval not produced and not callose basally, the primary rows usually with distinct punctures, and the intervals rarely with transverse rugosities. Pseudopleura moderately dilated basally. Sides of pronotum in front of posterior angles rounded or straight.

HOPLARIOBIUS subg. **MENTARIOBIUS** KOCH.

Type species. — *Hoplariobius (Mentariobius) distinguendus* (MULSANT & REY).

The type species and *H. (M.) pueli* KOCH in Algeria.

90. The marginal carina of pronotal base complete or at most briefly interrupted on middle; disc of pronotum with round punctures. Anterior tibiae with pointed middle tooth; the apical tooth is situated at the extreme apex of tibiae; the outer contours of intermediate and posterior tibiae briefly sinuate in front of apex, the latter therefore somewhat dentiform and prominent; the unguual segment of posterior tarsi elongate, considerably longer than the two preceding segments taken together.

HOPLARION subg. **HOPLARION** sensu stricto.

Type species. — *Hoplarion tumidum* MULSANT & REY.

Western Algeria and Eastern Morocco (*tumidum*, *kocheri* ANTOINE, *attritum* BEDEL, *humile* ANTOINE and *torre-tassoæ* KOCH).

- The marginal carina of pronotal base absent or confined to posterior angles; disc of pronotum with elongate, partially and longitudinally confluent punctures. Anterior tibiae with denticulate median dilation; the apical tooth situated in front of the extreme apex of tibia; the outer contours of intermediate and posterior tibiae straight, without dentiform apex; the unguual segment of posterior tarsi only slightly longer than the two preceding segments taken together.

HOPLARION subg. **SAHAROPLARION** KOCH.

Monotypical. — *Hoplarion (Saharoplarion) compactum* FAIRMAIRE).

Widely distributed in the northern parts of the Tripolitanian, Tunesian and Algerian Sahara.

91. Base of pronotum immarginate, straight, sometimes with a minute, semi-circular incision close to posterior angles. All elytral intervals costate, also discally. Outer contours of anterior tibiæ straight, but sinuate or emarginate in front of apex, the latter sharply angular to dentiform prominent, sometimes in front of apex with strongly projecting tooth.

MELAMBIUS MULSANT & REY 92

- Base of pronotum marginate, bi-sinuate, the marginal carina more or less widely interrupted on middle portion. Elytral intervals plane discally, sometimes very finely costate on sloping lateral and apical portions. Outer contours of anterior tibiæ slightly curved, the apex obtuse to broadly rounded.

MELAMBATLASUS KOCH.

Type species. — *Melambatlasus hebes* (ANTOINE).

Endemic to Morocco and in particular to the Middle and Great Atlas. To this genus belong *hebes*, *cacuminorum* ANTOINE with the aberrations *subsiniuatus* ANTOINE and *humeralis* ANTOINE, *pauliani* KOCH, and *antoinei* KOCH. I do not know the following species which probably have to be placed to the same genus: *hassani* ANTOINE, *vidali* ANTOINE, *asniensis* ANTOINE, *androgynus* ANTOINE, *venustus* ANTOINE, *anemophilus* ANTOINE and *cultriger* ANTOINE, all originally described as *Melambius* (*Hoplariobius*).

92. Outer contours of anterior tibiæ with a shallow, irregularly denticulate dilation in front of middle, and with large apical tooth. Pronotum with dentiform demarcated anterior angles and simple base. Body larger, 11 ½ to 12 ½ mm long.

MELAMBIUS subg. **HOPLAMBIUS** REITTER.

Monotypical. — *Melambius* (*Hoplambius*) *melamboides* (FAIRMAIRE).

Algeria and Tunesia.

- Outer contours of anterior tibiæ without median dilation. Pronotum with simple and not demarcated anterior angles; base either with a short incision close to posterior angles, or simple, but then the outer apical angle of anterior tibiæ not produced into a large tooth. Body smaller, 8 ½ to 11 mm long 93
93. Base of pronotum simple, without lateral incisions. Pronotum with strongly raised, longitudinally strigose sculpture.

MELAMBIUS subg. **HADROMELAMBIUS** KOCH.

Monotypical. — *Melambius (Hadromelambius) telueticus* ESCALERA).

Great Atlas.

- Base of pronotum with a short, irregular incision very close to posterior angles. Pronotum without longitudinally strigose sculpture.

MELAMBIUS subg. **MELAMBIUS** sensu stricto.

Type species. — *Melambius* (s. str.) *barbarus* (ERICHSON).

Widely distributed in Western Tunesia, Algeria and Morocco (*barbarus*, *teinturieri* MULSANT & REY, *tuniseus* LEVR., *breviusculus* FAIRMAIRE, *asperocostatus* FAIRMAIRE, *denticollis* ESCALERA, *bidens* ANTOINE, *mideltensis* ANTOINE with the aberration *simulator* ANTOINE, and *otini* ANTOINE).

C. — LOENSINI

tribus nova.

Definition. — Body apterous, depressed, oval, with continuous, *Crypticus*-like lateral outlines, bare and shiny. Epistome broadly and shallowly emarginate. Eyes constricted by genal canthus. Underside of head fig. 236. Gula non-stridulatory, polished and unsculptured. Mentum (fig. 237) tri-partite, with distally well exposed, sharply acute lateral wings; the median section broadly rounded and arcuate apically, with longitudinal, obtuse to carinate, median convexity. Apical segment of maxillary palpi securiform, very strongly dimorphic and in the ♂ much more dilated than in the ♀. Antennæ thin, with eleven segments, filiform, only slightly accrescent towards apex; third segment elongate and the longest. Pronotum transverse, broadest basally, rounded and strongly narrowed towards anterior margin, with uniform discal convexity, reaching the lateral carina; densely punctured. Anterior margin strongly emarginate; base with the posterior angles moderately produced backwards. Prosternum emarginate anteriorly, about as long as coxal cavities; intercoxal apophysis strongly produced horizontally, lanceolate. Elytra with nine fine, lineate primary rows and broad, flat, densely punctured, secondary intervals. The pseudo-pleural crest together with the very narrow justa-pseudo-pleural canal-culation entirely exposed dorsally. Pseudo-pleura complete, the pseudo-pleural crest distinctly separated from the epipleural carina apically, very broad, occupying almost the entire ventrally reflected portion of elytra and leaving exposed a very narrow portion of the ninth interval of elytral surface posteriorly. Mesosternum with very long, narrow, sulcate and laterally strongly carinate intercoxal apophysis; mesocoxal cavities with large trochantin. Metasternum moderately shorter than basal sternite of abdomen, between meso and metacoxal cavities about half the length of the latter; with complete pre-metacoxal sclerite. Intercoxal process of basal sternite of abdomen twice as broad as apex of mesosternal apophysis, broadly rounded anteriorly. Abdomen with pleurital margination on sides of the three proximal sternites; the anal sternite immarginate. Legs slender. Tarsi appearing as if homonomous, as the preapical segment of anterior and intermediate tarsi is rudimentary, very small, narrowly cylindrical and enclosed by the bi-lobate third segment; in the ♂ the anterior and intermediate tarsi soleate below, the former strongly dilated; the basal segment of posterior tarsi elongate and practically as long as all the remaining segments taken together. Tibiæ slender, the anterior ones weakly dilated towards apex, with convex upper surface, in the ♂ often

with distinctive characters. Femora simple, in the ♂ sometimes curved and with distinctive characters. Ædeagus elongate, uni-partite, without separating sutures between apical and basal portions; inner sclerites composed of penis plus a pair of lacinia. Length of body varying from 7 to 11 mm.

Relationship. — In shape of body and the strongly dilated anterior tarsi in the ♂ superficially recalling the palæarctic *Pedinini*, this tribe shows related only to the *Litoborini*, with which it agrees in the uni-partite

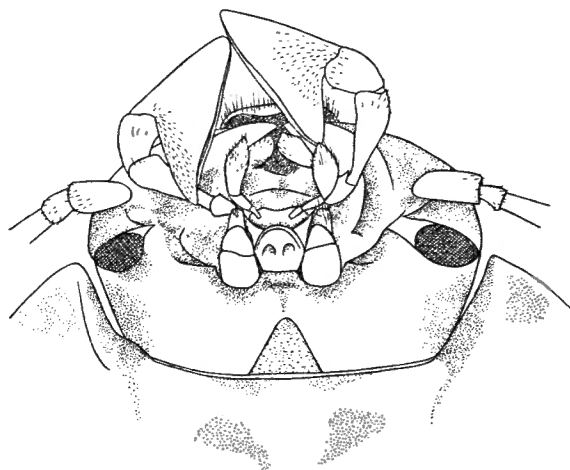


FIG. 236. — Under surface of head of a ♂ of *Loenus wittei* n. sp.

structure of ædeagal tegmen and the presence of lacinia. It is very sharply separated from the *Litoborini* by the peculiar formation of tarsi, the normal and short basal segment and the very strongly dimorphic apical segment of maxillary palpi, the exposed lateral wings and the apically arcuate and not emarginate middle section of mentum, the different formation of apical margin of postgenæ, the less deep epistomal emargination, the never divided eyes, the strongly elongate mesosternal apophysis, the polished and unsculptured gula, the strongly dilated tarsi in the ♂, the different shape of parameres of ædeagus, as well as by the strongly depressed, evenly sculptured upper surface of body, exhibiting very characteristic, *Crypticus*-like and continuously curved lateral outlines. There is among the *Litoborini* only the peculiar genus *Gridelliopus* displaying a rather similar shape of body, but in this case the body is densely covered with scaly, sessile bristles.

Represented by a single Southern East African genus (map 2).

Loensus (GEBIEN).

1920, (LUCAS), nom. nov. for *Pedinopsis* GEBIEN, 1910, p. 157. — GEBIEN, 1938-1942, p. 428.

The single genus of *Loensini* is composed of several extremely homogeneous species which can be sharply separated provisionally only in the ♂. The general appearance of all these species is practically the same and no major morphologic differences occur. The sculpture is very similar and varies specifically to an almost negligible extent. On the other hand very sharp and strong differences exist in the distinctive characters of the ♂, and in particular in the structure of ædeagus. With regard to the latter two types of ædeagus can be observed. In one (*colpotoides*-type, figs. 240,

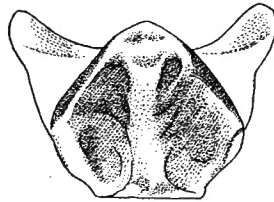


FIG. 237. — Mentum of *Loensus gebieni* n. sp.

252) the tegmen is small, with short and not distinctly demarcated parameres; in the other (*pedinopsis*-type, figs. 246, 247, 248, 250) it is large, with elongate, conspicuously demarcated and apically dilated parameres. The species of both groups display a rather convergent development of distinctive characters of the legs in the ♂. *L. colpotoides* and *L. pedinopsis* are very similar in the peculiar structure of the legs of ♂, and so are *L. wittei* and *L. gebieni*, although the former possesses an ædeagus of the *pedinopsis*-type and *gebieni* one of the *colpotoides*-type.

Distribution. — Strictly confined to a small area of the South-eastern part of Central Tropical Africa, from North-eastern Northern Rhodesia northwards to the southern part of Ruanda-Urundi (map z).

KEY.

1. In the ♂ the inner contours of intermediate tibiæ with conspicuous distinctions, the tibiæ and femora with fringes of hairs *pilipes* group. **2**
- In the ♂ the inner contours of intermediate tibiæ practically simple, straight or only inconspicuously curved or emarginate, the tibiæ and femora without hairy fringes *wittei* group. **6**

2. In the ♂ the inner contours of anterior tibiæ with small, sharp median tooth 3
- In the ♂ the inner contours of anterior tibiæ inermous, exceptionally with obtusely arcuate median dilation (*L. leleupi*) 4
3. In the ♂ the intermediate tibiæ curved and apically dilated; the posterior tibiæ weakly curved, of equal width.

[*Loensus pilipes* (GEBIEN).]

*1910 a, *Pedinopsis pilipes* GEBIEN, p. 157. — 1910 b, GEBIEN, p. 287.
1938-1942, *Loensus pilipes* GEBIEN, p. 428, n° 5728.

Original description. — «Ziemlich flach, oval, glänzend schwarz, Unterseite schwach metallisch. Augen bis über die Mitte eingeschnürt. Halsschild an der Basis am breitesten, Seiten kaum gerundet, Hinterrand schwach ausgeschnitten, Oberfläche dicht und deutlich punktiert. Flügeldecken flach, Epipleuren bis zur Spitze reichend, Schultern ziemlich rechtwinklig, Scheibe gereiht punktiert, Seiten gestreift punktiert; Parapleuren grob runzlig. Prosternum über die Hüften hinaus verlängert, Prosternalfortsatz ungerandet. Erstes Abdominalsegment breit, abgestutzt. Schenkel stark, die hinteren beim ♂ gekrümmt, alle mit Haarbesatz, wie auch die Schienen, die ersten 3 Glieder der Vordertarsen erweitert, das erste ist das grösste, das vierte versteckt; Vorderschienen der ♂♂ oberhalb der Mitte mit kleinem Zahn, Mittelschienen gekrümmt, vor dem Ende verdickt, Hinterschienen schwach gekrümmt, gleichmässig dick. L. 10 - 11 mill. »

Remarks. — This species is unknown to me.

Type locality. — «Madona» (collected by SH. NEAVE in the southern part of the Belgian Congo). Type probably in British Museum.

- In the ♂ the intermediate tibiæ only slightly curved, with the inner contours abruptly, very strongly and angularly dilated at about middle, thence almost subparallel, but practically twice as broad as on proximal half, with slightly dilated apical angle; the posterior tibiæ straight, with the inner contours slightly broadened on basal fifth and shallowly emarginate on distal three-fifths.

[*Loensus smithersi* n. sp.]

(Figs. 238, 239.)

Head above very densely and rugosely punctured. Pronotum with very dense, briefly and longitudinally confluent punctation, slightly less concentrated on middle of disc. Episternum of prosternum very densely covered with strongly raised, longitudinally

confluent, substrigose rugosities. Elytra very densely and coarsely punctured, the primary punctures only slightly coarser than the secondary ones; the latter tending to become transversely confluent. Pseudopleura flat and with a few coarse punctures on basal half, strongly concave and smooth on narrowing posterior half. Abdomen with fine and rather dense punctures, not impressed on middle of

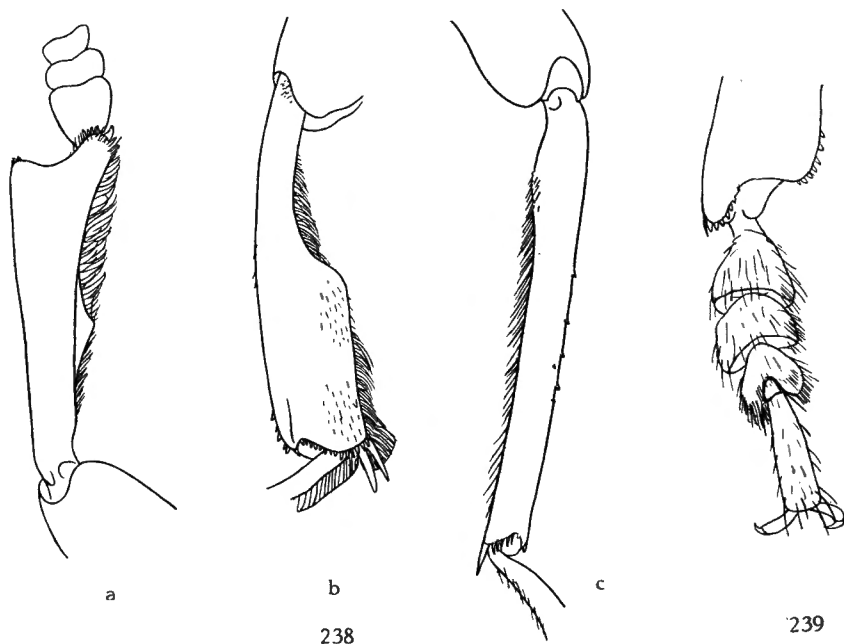


FIG. 238. — *Loensus smithersi* n. sp. (a : anterior tibia of ♂; b : intermediate tibia of ♂; c : posterior tibia of ♂. — FIG. 239. — Anterior tarsus of a ♂ of *Loensus smithersi* n. sp.

proximal sternites in the ♂; the anal sternite with elongately setiferous punctures and with a minute, but sharply raised tubercle on middle of extreme apex of sternite (probably only in the ♂). In the ♂ (figs. 238, 239) the anterior tarsi strongly dilated and with spongiose soleæ below; the anterior tibiæ with very densely pilose underside, their inner contours with a very small, but sharp tooth a little proximad from middle, thence emarginate; the intermediate tibiæ as described above, with excavate underside and apical brush of yellowish hairs on outer lateral surface; the posterior tibiæ as described above, densely pilose below; the underside of anterior femora with fine pilosity on proximal half; the intermediate femora with straight outer carina of underside and preapical brush of hairs on underside;

the posterior femora with short brush of yellowish hairs on proximal two-thirds of underside, curved, the lower contours of outer lateral surface rather suddenly constricted apically.

Dimensions. — Length 10 $\frac{3}{4}$ mm, width 5 mm.

Distribution. — North-eastern part of Northern Rhodesia. — Luan-shya, I.1946 (1♂, holotype M.S.Rh.).

Dedication. — Named in honour of Mr. R.H.N. SMITHERS, director of the National Museum of Southern Rhodesia, Bulawayo.

4. Anal sternite of abdomen inermous and plane in both sexes. The inner contours of anterior tibiae in the ♂ without median dilation; the inner contours of intermediate tibiae strongly to angularly curved, without preapical tooth 5
- Anal sternite of abdomen in the ♂ with a minute, but sharp tubercle on middle of extreme apex of sternite. In the ♂ the inner contours of anterior tibiae with a small, obtuse median dilation; the inner contours of intermediate tibiae moderately and continuously curved proximally, very strongly dilated on distal half and there with a preapical tooth, projecting beyond contours from below.

[*Loensus leleupi* n. sp.]

(Pl. XXXIII, fig. 1.)

Very closely related to *L. smithersi* and agreeing with this species in the similar distinctive characters of ♂. Of identical shape, but slightly smaller, the sculpture a little less concentrated. In the ♂ the anterior legs as in *smithersi*, but the median dilation of inner contours of anterior tibiae not pointed, non-dentiform, but obtuse; the intermediate tibiae with similar, abrupt dilation at about middle, but the dilated distal half arcuate and narrowed towards apex, with a characteristic dentiform process of inner edge of excavate underside, projecting beyond inner contours and directed distad, situated at about halfway between middle and apex; posterior tibiae and femora as in *smithersi*.

Dimensions. — Length 10 mm, width 4 $\frac{1}{2}$ mm.

Distribution. — South-eastern Belgian Congo. — South-eastern Elisabethville Province: Kundelungu, 1.750 m, III.1950, N. LELEUP (1♂, holotype BCM.).

Dedication. — Named in honour of its discoverer, Mr. N. LELEUP.

5. Lateral portions of pronotum with well separated to slightly confluent punctation. In the ♂ the anterior tibiae with distally moderately curved,

inermous, but ciliate inner contours; the intermediate tibiæ (fig. 241) subangularly curved at the end of basal third, with the inner contours of distal two-thirds subparallel and not or only moderately broader than basal third; posterior tibiæ (fig. 242) shallowly curved to almost straight; the underside of intermediate femora with distally enlarged brush of yellowish hairs; the lower edge of outer lateral surface of posterior femora emarginate on proximal two-thirds, moderately constricted apically. *Ædeagus* of moderate size; the short parameres as broad as the basal portion of tegmen, not dilated apically, and with the lateral outlines continuous with, and not demarcated from, those of basal portion of tegmen.

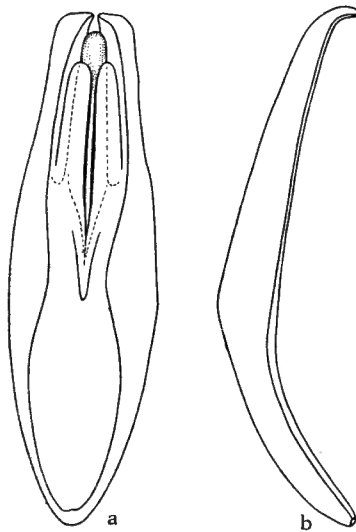


FIG. 240. — *Ædeagus* of *Loensus colpotoides* n. sp. (from Mutha).
a : ventral surface; b : lateral view, with the ventral surface at right.

[***Loensus colpotoides*** n. sp.]

(Figs. 240 to 242.)

Shape of body very similar to *L. leleupi* and *smithersi*, the elytra more or less strongly convex, the pronotum with less concentrated, not or only slightly confluent punctation, but the sculpture on elytra and underside of hind body practically identical. In the ♂ the anterior tarsi very strongly dilated.

Ædeagus (fig. 240). — Tegmen with practically subparallel, straight contours from base to apex. The parameres divided on

about distal half to two-thirds of tegmen, more or less gaping, almost subparallel, with slightly narrowed, more or less bent, subtruncate apices. Ventral groove with flat or concave underside of parameres, and narrowly exposed penis and lacinia; the penis slender and spoon-shaped on apical orifice.

Dimensions. — Length $7\frac{1}{2}$ to $8\frac{1}{2}$ mm, width 4 to $4\frac{1}{4}$ mm.

Distribution. — Tanganyika Territory: Mutha, VII.1935, C. G. MACARTHUR (1 ♂ ♀, C.M.); without specified locality (2 ♂ ♂, BCM.).

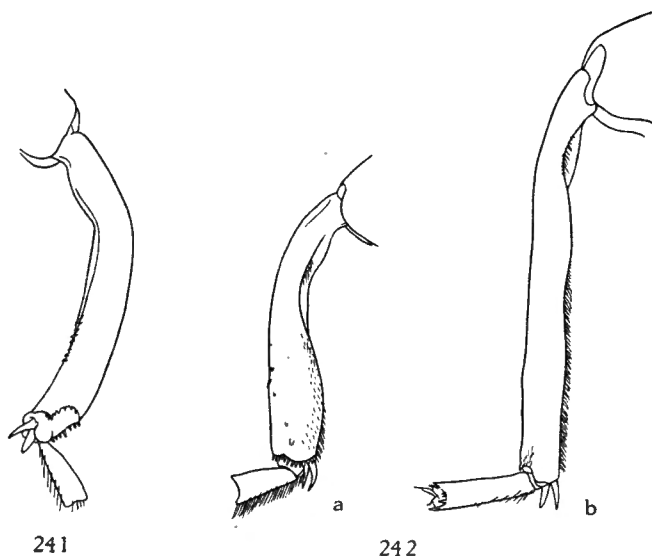
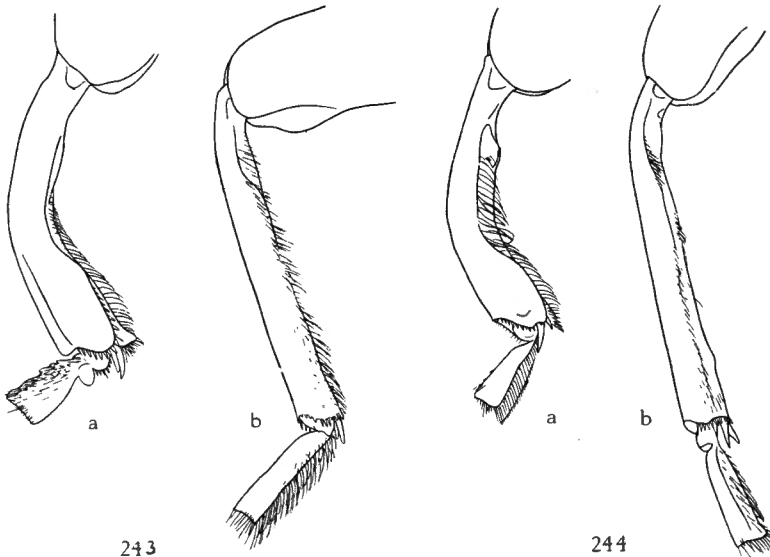


FIG. 241. — *Loensus colpotoides* n. sp., intermediate tibia of a ♂ from Mutha. — FIG. 242. — *Loensus colpotoides* n. sp., legs of a ♂ from « German East Africa » (a : intermediate tibia; b : posterior tibia).

- Lateral portions of pronotum with longitudinally confluent, often strongly substrigose sculpture. In the ♂ (fig. 245) the anterior tibiae practically straight, the intermediate tibiae (figs. 243, 244) subangularly bent at about middle and with the distal half more or less strongly dilated, conspicuously broader than proximal half; the underside of posterior tibiae broadly flattened and densely pilose; the lower edge of outer lateral surface with more or less distinct, dentiform dilation between middle and apex. Aedeagus large; the long parameres much narrower than the basal portion of tegmen, distinctly demarcated from the latter and dilated apically.



243

244

FIGS. 243 and 244. — *Loensus pedinopsis* n. sp. :

243 : Legs of a ♂ from Albertville. — 244 : Legs of a ♂ from Tabora-Kigoma.
a : intermediate tibia; b : posterior tibia.

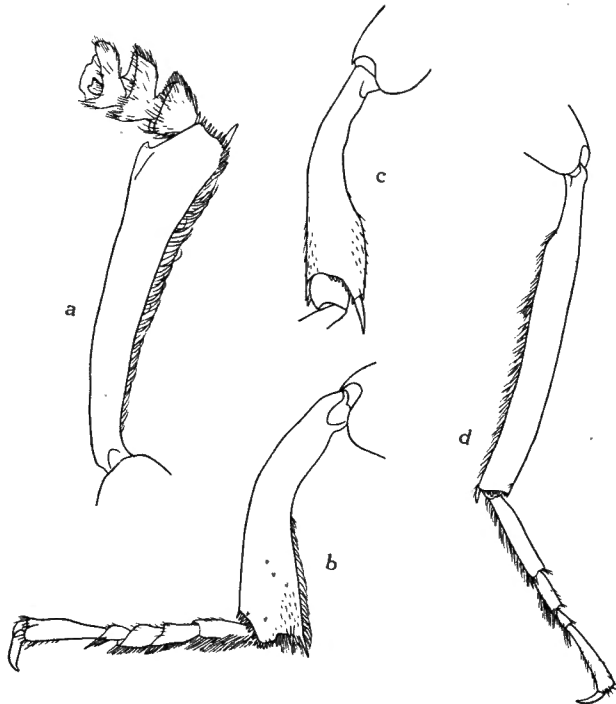
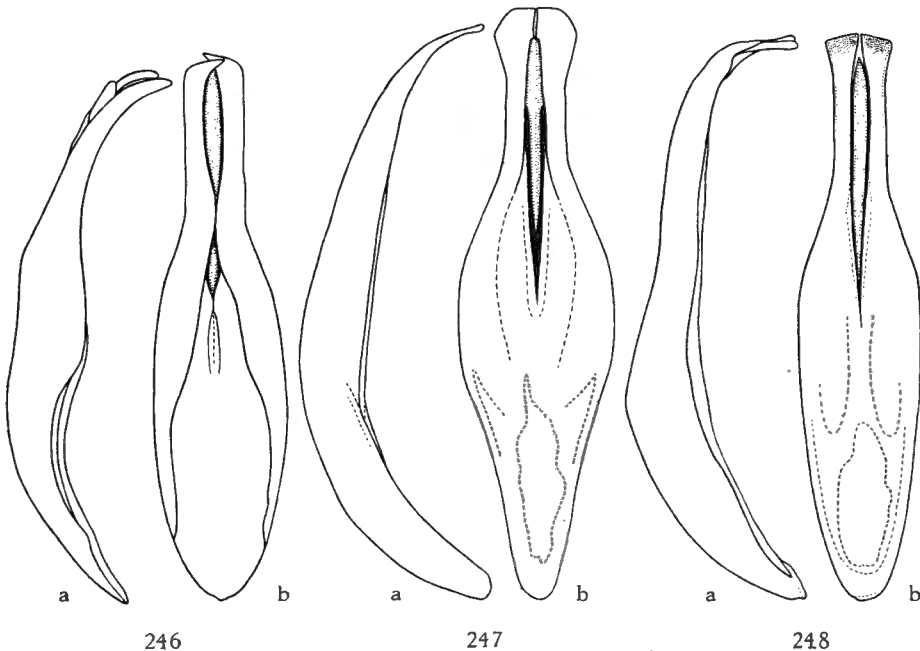


FIG. 245. — *Loensus pedinopsis* n. sp., legs of a ♂ from Ruanda-Urundi.
a : anterior tibia with tarsus; b : intermediate tibia with tarsus in dorso-lateral view; c : intermediate tibia, inner lateral view; d : posterior tibia with tarsus.

[*Loensus pedinopsis* n. sp.]

(Pl. XXXIII, fig. 2; Figs. 243 to 248.)

Shape of body as in *L. leleupi* and *smithersi*, but more strongly depressed than in *L. colpotoides*. The sculpture on upper surface very dense, particularly on the pronotum, there often also very coarse on lateral portions. Underside of body as in the preceding species. In the ♂ the legs as described above, with strongly dilated anterior tarsi.

FIGS. 246 to 248. — Aedeagus of *Loensus pedinopsis* n. sp. :

246 : ♂ from Tabora-Kigoma. — 247 : ♂ from Albertville. — 248 : ♂ from Ruanda-Urundi.
 a : lateral view, with the ventral surface at right; b : ventral surface.

Aedeagus (figs. 246, 247, 248). — Strongly differentiated from *L. colpotoides* and large. The parameres divided on about distal two-thirds of tegmen, but closely approximated, narrowed and only half the width approximately of basal portion of tegmen, with sub-parallel to slightly sinuate lateral outlines of median portion, more or less distinctly dilated apically, with the truncate apices bent ventrad. Ventral groove with narrowly exposed penis and lacinia.

Dimensions. — Length 8 to 10 mm, width $3\frac{1}{4}$ to $4\frac{1}{4}$ mm.

Distribution. — Lake Tanganyika Region. — Ruanda-Urundi : Rumonge, 800 m, III.1953, P. BASILEWSKY (7 spec., types BCM.). — Central-

western Tanganyika Territory : btwn. Tabora and Kigoma, STAMPER (1 spec., BCM.). — Central-eastern Belgian Congo, north-eastern Elisabethville Province : Albertville, XII.1918, R. MAYNÉ (1 spec., BCM.).

6. Body of larger size, 9 to 10 mm long. Upper surface more strongly compressed. In the ♂ the anterior tarsi very strongly dilated and large, of the width of apex of anterior tibiæ; the apical half of intermediate tibiæ distinctly dilated. *Ædeagus* of the shape of that of *L. pedinopsis*, large, with long and distinctly demarcated parameres which are considerably narrower than the basal portion of tegmen.

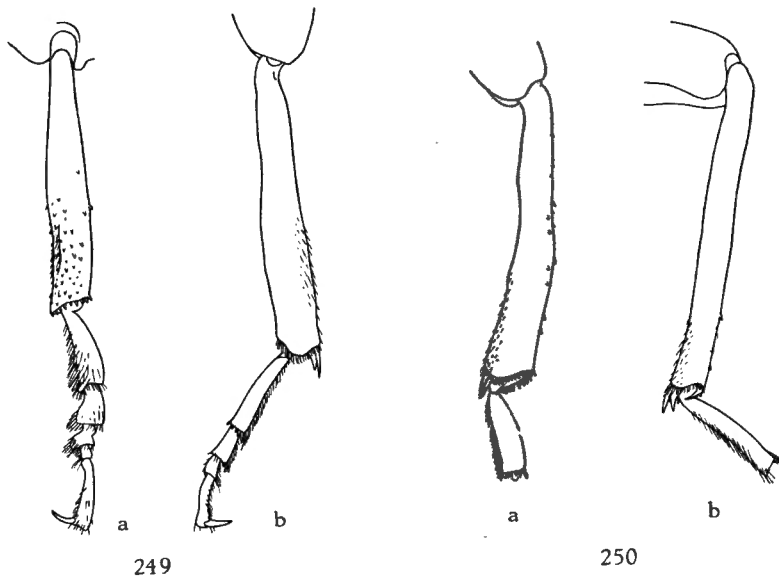


FIG. 249. — *Loensus wittei* n. sp. (a : intermediate tibia with tarsus of ♂ ; b : posterior tibia with tarsus of ♂). — FIG. 250. — *Loensus gebieni* n. sp. (a : intermediate tibia of ♂ ; b : posterior tibia of ♂).

***Loensus wittei* n. sp.**

(Pl. XXXIII, fig. 3; Figs. 249, 251.)

In the strongly depressed shape of body similar to *L. leleupi*, *smithersi* and *pedinopsis*, but the sculpture on upper surface finer and less concentrated, but often also longitudinally confluent on lateral portions of pronotum. In the ♂ the tibiæ and femora not furnished with hairs, except for the underside of intermediate femora, exhibiting a very fine, short, somewhat pulverulent and sparse yellowish pilosity: the anterior tibiæ dilated towards apex, with only slightly curved inner contours; the intermediate tibiæ (fig. 249) not excavate underneath, very slightly curved and with very weakly

dilated inner contours on distal third or half; the inner contours of the straight posterior tibiae (fig. 249) very shallowly emarginate on distal two-thirds or three-fifths; the intermediate and posterior femora curved, the lower edge of the outer lateral surface of the former without preapical dilation, that of posterior femora moderately dilated between middle and apex. Ædeagus (fig. 251) very similar to *L. pedinopsis*, but the apices of parameres almost straight and only gradually dilated.

Dimensions. — Length 9 to 10 mm, width $4 \frac{1}{4}$ to $4 \frac{3}{4}$ mm.

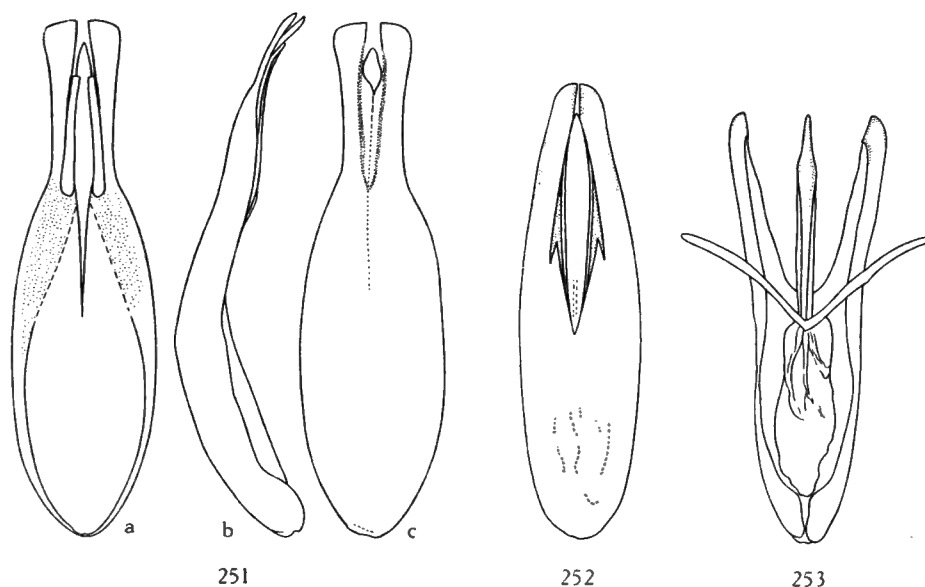


FIG. 251. — Ædeagus of *Loensus wittei* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 252. — Ædeagus of *Loensus gebieni* n. sp., ventral surface. — FIG. 253. — Dissected aedeagus of *Loensus gebieni* n. sp., ventral surface with the penis and lacinia.

Distribution. — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park: Mabwe, XII.1948, Mission G. F. DE WITTE (15 spec., types I.P.N.).

Dedication. — Named in honour of Mr. G. F. DE WITTE.

- Body of smaller size, 7 to 9 mm long. Upper surface less strongly depressed. In the ♂ the anterior tarsi less strongly dilated, of smaller size, distinctly narrower than the apex of anterior tibiae; the apical half of intermediate tibiae inconspicuously dilated. Ædeagus of the shape of that of *L. colpotoides*, small, with continuous, but converging lateral outlines of parameres, the basal portion of which is not narrower than the basal section of tegmen.

Loensus gebieni n. sp.

(Pl. XXXIII, fig. 4; Figs. 250, 253.)

Very similar to *L. wittei*, of slightly more strongly convex upper surface, more concentrated sculpture and more slender legs. The distinctive characters of legs in the ♂ (fig. 250) almost identical with those of *wittei*, but the anterior tarsi less strongly dilated and the lower edge of lateral surface of intermediate femora practically straight. The aedeagus (figs. 252, 253), however, very different, of small size, similar to that of *L. colpotoides*, but the parameres not subparallel, neither as broad as the basal portion of tegmen, but gradually converging in a straight line towards apex; the apices of parameres narrowed, from almost straight to distinctly curved ventrad, obtuse and slender.

Dimensions. — Length 7 to 9 mm, width 3 $\frac{1}{4}$ to 4 $\frac{1}{2}$ mm.

Distribution. — South-eastern Belgian Congo and North-eastern part of Northern Rhodesia. — Central Elisabethville Province, Upemba National Park: Kaswabilenga, X.1947 (51 spec., types I.P.N.); Lupiala, X.1947 (9 spec., I.P.N.); Kateke River, XII.1947 (2 spec., I.P.N.); Lukawe River, X.1947 (3 spec., I.P.N.); Munoi, VI.1948 (8 spec., I.P.N.); Kankunda, XI.1947 (17 spec., I.P.N.); all captured by the Mission G. F. DE WITTE. — [North-eastern part of Northern Rhodesia: Abercorn, VII.1944, H. J. BRÉDO (4 spec., I.R.).]

Dedication. — Named after my late friend H. GEBIEN, the eminent specialist on world *Tenebrionidæ*.

SPECIES INCERTÆ SEDIS.[**Eurynotus lamnicollis** FAIRMAIRE, 1894, p. 322.]

« Oblongus, niger, opacus, elytris paulo nitidulis; capite lævi, clypeo late ac profunde emarginato, genis ante oculos rotundatim ampliatis, antennis parum gracilibus, medium prothoracis paulo superantibus, articulis 2 primis brevibus, æqualibus, 3^o longiore, quarto æquali, ultimis paulo brevioribus, prothorace elytris latiore, amplo, lateribus rotundatis, explanatis, margine leviter elevato, dorso lævi, obsolete impressiusculo, angulis anticis latis, productis, posticis latioribus, paulo obtusis, postice productis; scutello brevi, obtuse triangulari; elytris ovatis, basi plicatis, ad humeros dente obtuso armatis, sutura et utrinque costis 3 elevatis, 1a et 3a apice conjunctis duabus, externis acute carinatis, interstitiis biseriatim foveolatis, parte

epipleurali similiter carinata; subtus fere laevis, medio ferrugineo-pilosulus, abdomine subtiliter punctato, pedibus sat gracilibus, dense punctulatis. Long. 17 mm — Abyssinie (ma collection). — Par la forme du corselet cet insecte rapelle l'*E. ruficornis* GERMAR, du Cap de Bonne Espérance : mais sa taille est bien plus forte, les élytres sont moins courts et leurs carènes moins nombreuses, plus saillantes. Le faciès rappellerait plutôt le *Diastoleus colaris*, du Chili.»

This species seems to belong to the *Litoborini*, but differs, according to the description, from all the known genera by the large size of body, the smooth upper surface of head and pronotum and the peculiar proportions of antennæ.

[*Selinus lucasi* MUSANT & REY, 1853*b*, pp. 97, 102.]

« Corps ovale oblong; longitudinalement arqué; faiblement convexe; d'un noir peu luisant. Tête pointillée; sillonnée sur la suture frontale jusqu'aux joues qui sont sensiblement relevées. Epistome échanuré en arc médiocre. Menton à carène obtuse, ponctuée, avancée jusqu'au bord antérieur; à carènes latérales formant un angle dans le milieu de leurs côtés. Antennes presque aussi longuement prolongées que les angles postérieurs du prothorax; d'un brun rouge; à troisième article d'un-cinquième seulement plus long que le quatrième. Prothorax échanuré en devant en demi-cercle, offrant un angle rentrant assez faible vers la base interne de chaque angle antérieur; élargi en ligne courbe jusqu'à la moitié, presque droite postérieurement; muni d'un rebord latéral assez étroit, saillant, convexe, un peu rétréci à ses extrémités; à sinuosités basilaires très-prononcées en forme d'angle très-ouvert et un peu obtus; assez faiblement et obtusément arqué entre ces sinuosités sur les trois-cinquièmes médiales de la base, et beaucoup moins prolongé en arrière que les angles; muni d'un rebord basilaire très-étroit et non interrompu; faiblement convexe; presque superficiellement pointillé; offrant les traces d'un sillon longitudinal médial et d'un sillon rapproché de chaque bord latéral et dirigé vers les angles de derrière. Ecusson en triangle moins long que large, à côtés curvilignes. Elytres à peine plus larges à la base que le prothorax à ses angles postérieurs; faiblement élargis en ligne presque droite jusqu'à la moitié puis un peu plus, en ogive légèrement sinuée dans les deux-cinquièmes postérieurs; faiblement convexes; à stries étroites, légères, oblitérées près de la base et dans le sixième postérieur de la longueur des élytres, excepté parfois la première; marquées de petits points qui ne débordent pas ou les débordent à peine (environ soixante sur la quatrième). Intervalles moins finement pointillés que le prothorax; plans: le quatrième ou plutôt la partie oblitérée correspondant au quatrième, chargé d'une courte carène longitudinale près de l'extrémité. Bord supérieur du repli presque entièrement visible en dessus. Dessous du corps un peu luisant; lisse ou à peu près sur les côtés de l'antépectus; finement ponctué

sur le ventre, rugueux sur les côtés de celui-ci. Prosternum rayé d'une strie parallèle à ses bords ou comme faiblement rebordé. Postépisternums presque parallèles; trois fois environ aussi longs que larges. Tarses grèles. Cuisses postérieures droites (σ): les antérieures peu renflées. Jambes grèles: les antérieures et intermédiaires faiblement et graduellement renflées vers l'extrémité; les postérieures presque cylindriques. σ : Cuisses postérieures garnies en dessous d'un duvet court; d'un testacé roussâtre. Jambes antérieures échancrées sur le sixième antérieur de leur arête; munies d'une très-petite dent au bord antérieur de cette échancrure. Quatre premiers articles et troisième des antérieurs un peu plus sensiblement; ceux des intermédiaires d'une manière à peu près égale. φ inconnue. Long. 15,7 mm; Larg. 7,8 mm — Cette espèce a de l'analogie pour la forme et la taille avec l'*Eurynotus muricatus* dont elle s'éloigne par les caractères tirés du menton. Patrie: l'Asie (Muséum de Paris). »

On account of the slender and weakly dilated anterior tibiae and the superficially punctured pronotum this species may belong to the selinoid *Platynotina*. I do not know of any species of this group from the African Continent, exhibiting basally and apically evanescent primary rows and a short apical carina on the fourth secondary interval of elytra. But there is some supposition that this species, reported to come from «Asia», may be referable to one of the Madagascar «*Selinus*». According to the description, the shape and sculpture of body, as well as the distinctive characters of the σ , do not differ essentially from *Selinus* sensu novo.

**DESCRIPTIONS OF NEW SPECIES
OF TRIGONOPOID PLATYNOTINA, MENTIONED OR FIGURED
IN THE PRESENT VOLUME.**

[*Selinopodus giganteus* n. sp.]

(Pl. XXIV, fig. 1; Figs. 254 to 256.)

Upper surface of body sericeous. Head above with rather dense, fine and round punctures, concentrated on epistome, very scattered on occiput. Epistomal emargination very deep; the clypeal sutures sharply impressed and long; the contours of lateral lobes of epistome continuous with those of genæ. The latter rounded, distinctly projecting beyond ocular outlines, with the canthus strongly constricting the eyes. Dorsal section of eyes about three times as broad as long. Mentum (fig. 254) tripartite; the lateral wings acute, exposed on distal half; median section large, slightly broader than long, about four times as broad as one of the lateral wings, with slightly rounded, edged sides and distinctly emarginate apical margin; surface of middle section with very broad, laterally subparallel, plane, rugosely punctured median convexity and with an elongate cavity on each side

of this convexity. Apical segment of maxillary palpi triangular, very slightly broader than long. Antennæ comparatively slender, strongly compressed, but moderately dilated distally; the proximal five segments elongate, the following five distal segments transverse, but small, with distinctly enlarged seventh segment; the apical segment oval, longer than broad, almost twice as long as the preceding segment and a little narrower than the latter. Pronotum transverse, broadest behind middle, not quite twice as broad as long, the cuticle with extremely fine, dense micro-sculpture, uniformly covered with a fine to rather strong, more or less concentrated punctation. Anterior margin with complete and medially dilated carina, moderately emarginate; the anterior angles weakly produced. Sides posteriorly subparallel or very

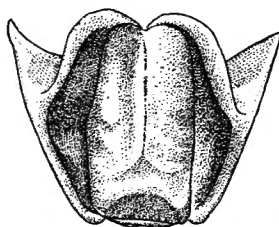


FIG. 254. — Mentum of *Selinopodus giganteus* n. sp.

faintly narrowing; the lateral carina very broad, obtuse, distinctly narrowed on anterior half, at the broadest point considerably broader than the third antennal segment, separated from discal convexity by a narrow, but not smoothed justa-lateral canaliculation. Base broadly carinate, shallowly bisinuate, with the posterior angles well produced backwards to slightly beyond middle section of base. Prosternum rugosely wrinkled on sides; episternum smooth; intercoxal apophysis with produced, laterally marginate, attenuate to triangular apex. Elytra strongly convex, broadest behind middle, with the base edged laterally, but not carinate, only slightly broader than pronotal base. Humeral angles rectangular, non-prominent. Sides subparallel or very slightly rounded or very shallowly sinuate behind shoulders. Primary rows composed of very fine punctures, sharply impressed and lineate on sloping lateral portions, with about 45 punctures in the fourth row; the ninth row separated from pseudopleural crest by a narrow, but equally broad, justa-lateral canaliculation; the supplementary tenth row branching off the ninth row at or behind middle of elytra. Secondary intervals smooth discally and there with very fine, inconspicuous punctures, sometimes faintly and transversely wrinkled close to primary rows, sharply and more or less densely granulate on apical declivity, obsolete so on sides; flat, becoming moderately convex towards sides and apex. Pseudopleural crest together with justa-lateral canaliculation entirely exposed dorsally. Pseudopleura occupying the entire ventrally reflected

portion of elytra, practically smooth. Metasternum very short, between meso and metacoxal cavities only as long as is the pre-metacoxal sclerite or shorter; episternum densely and coarsely punctured. Abdomen with fine and scattered punctation, becoming a little more concentrated on sides of anal sternite; the cuticle of the three proximal sternites longitudinally wrinkled; anal sternite strongly marginate. Legs robust. Tibiæ moderately dilated towards apex, the upper surface of anterior tibiæ edged distally and with rectangularly rounded outer apical angle; the upper surface of inter-

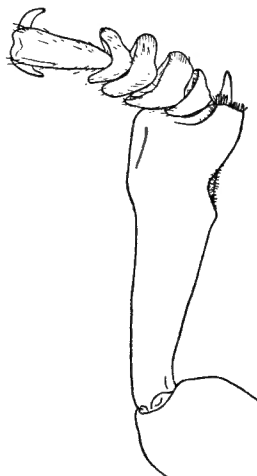


FIG. 255. — Anterior tibia with tarsus of ♂ of *Selinopodus giganteus* n. sp.

mediate and posterior tibiæ broadly flattened, with straight outer contours. In the ♂ the anterior and intermediate tarsi with entire soleæ below, both dilated, the anterior tarsi very strongly so, almost as broad as the apex of anterior tibiæ and about two and a half times as broad as the preapical segment of antennæ; the anterior tibiæ (fig. 255) with small, roundish cavity on distal portion of underside, the inner contours with a short preapical emargination which is angularly delimited proximally; the intermediate and posterior tibiæ straight and simple as are the femora.

Ædeagus (fig. 256). — Small and of rather simple shape. The sides of apicale narrowing towards apex in a straight or slightly sinuate course. Parameres deeply and entirely divided, with obtuse and curved apices. Ventral groove leaving exposed the apical portion of penis and lacinia. Basale slightly broader than the base of apicale, two to three times as long as apicale.

Dimensions. — Length 17 to 22 $\frac{1}{2}$ mm, width 9 to 11 $\frac{1}{2}$ mm.

Distribution. — Zululand: Mkuzi, IV.1950, C. KOCH & T. LILIER (7 spec., types T.M.); Ngxwala hill, VII.1915, L. BEVIS (1 spec., D.M.); Ingwavuma, VII.1939, R. F. LAWRENCE (1 spec., S.A.M.); Hluhluwe, X.1947, G. VAN SON (1 spec., T.M.); Umfolosi, X.1924, H. W. BELL-MARLEY (2 spec., S.A.M.); Pongola River, X.1929, H. W. BELL-MARLEY (1 spec., T.M.); Zululand, without specified locality, VII, I. TRÄGÄRDH (3 spec., M.St.). — South-western Portuguese East Africa: Magude, X.1918, C. J. SWIERSTRA (2 spec., T.M.).

Relationship. — Type species of the monotypical genus *Selinopodus* (see p...). In shape of body similar to some large species of *Melanopterus*, but readily recognized from this genus and all the other trigonopoid *Platy-*

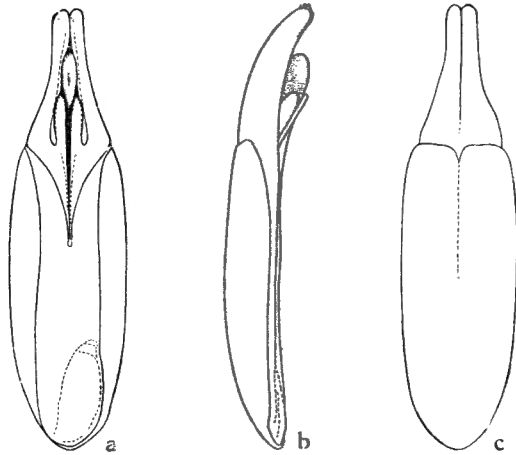


FIG. 256. — Aedeagus of *Selinopodus giganteus* n. sp.
a: ventral surface; b: lateral view, with the ventral surface at right;
c: dorsal surface.

notina by the presence of a supplementary tenth primary row on posterior half of elytra, the granules on apical declivity of the latter, the moderately dilated anterior tibiae and the straight intermediate and posterior tibiae, as well as by the singular structure of middle section of mentum.

[**Schelodontes frater** n. sp.]

(Pl. XVI, fig. 3; Fig. 257.)

Upper surface strongly convex, weakly shiny. Head above rugosely punctured. Middle section of mentum with converging sides and fine, sharply raised median carina. Antennae scarcely longer than the head is broad, reddish brown, with very strongly transverse distal segments. Pronotum broadest at about middle, moderately transverse, coarsely and densely punctured, more or less rugose on lateral portions. Sides posteriorly very slightly narrowed in a straight line. Anterior margin shallowly emarginate, with extremely fine carina which becomes evanescent on middle. Lateral

carina narrow, separated from the strong discal convexity by a narrow, basally faintly dilated, rugose justa-lateral canaliculation. Base immarginate, with slightly arcuate and weakly produced middle section distinctly projecting backwards beyond level of posterior angles. Prosternum densely covered with irregular, longitudinal rugosities; episternum with dense, subparallel, strongly raised and longitudinal wrinkles; intercoxal apophysis marginate. Elytra broadest behind middle, slightly narrower than pronotal base basally, with bluntly rectangular, non-prominent humeral angles and subparallel basal portion of sides. Primary rows broadly sulcate, with scattered and badly defined punctures; secondary intervals obtusely convex, broader than primary rows, particularly so on sides, rather densely covered with rather strong, round and conspicuous punctures which are finer than those on pronotum. Pseudopleural crest dorsally exposed only on basal and apical fifths. Pseudopleura with fine and sparse punctures, leaving exposed a portion of the ninth interval on posterior two-thirds, not broader than the broadest point of the exposed ninth interval. Upper surface of the intermediate and posterior tibiae strongly sulcate and with sharply edged lateral margins. In the ♂ the inner contours of anterior tibiae (fig. 257) shallowly emarginate on distal half and proximad of emargination with slightly indicated median dilation; posterior femora inermous.

Dimensions. — Length 8 to 9 mm, width $3\frac{1}{2}$ to $4\frac{1}{4}$ mm.

Distribution. — South-western Cape Province. — Montagu District: Ashton, 1901, F. W. PURCELL (6 spec., types S.A.M.); Montagu, X.1919, R. TUCKER (1 spec., S.A.M.). — Bredasdorp District: Bredasdorp, H. FRY (2 spec., S.A.M.).

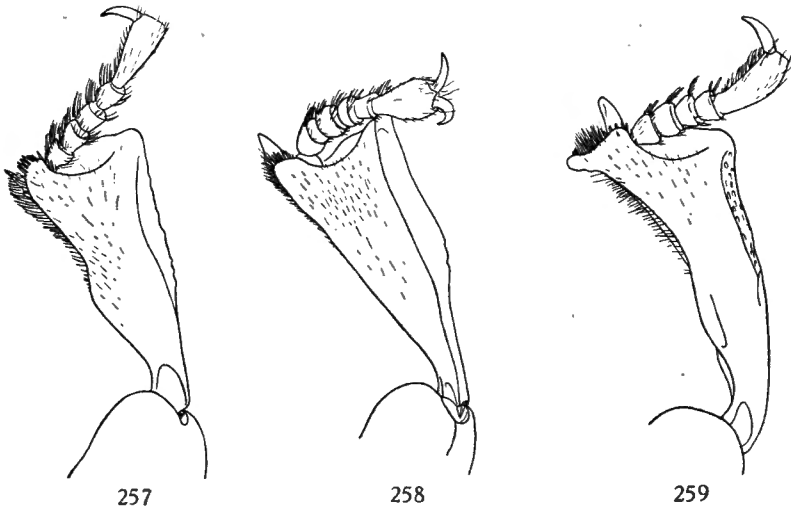
Relationship. — Only allied to *Sch. verreauxi* (MULSANT & REY) and agreeing with this species in the conspicuously punctured secondary intervals of elytra, the non-prominent humeral angle, and the inermous femora in the ♂. Readily distinguished from this species by the dark legs (which are testaceous to red in *verreauxi*), the finer punctation of pronotum, the distinct, posteriorly dilated justa-lateral canaliculation of pronotum, the only badly defined punctures of primary rows and the finer punctation on secondary intervals of elytra, distinctly shiny upper surface and the larger size of body (*verreauxi* varies from 7 to $7\frac{1}{2}$ mm in length and $3\frac{1}{4}$ to $3\frac{1}{2}$ mm in width).

[*Schelodontes simplimanus* n. sp.]

(Fig. 258.)

Very closely related to *Sch. frater*, but readily distinguished as follows: — Pronotum with coarse punctures; sides posteriorly subparallel (and not narrowing towards base); justa-lateral canaliculation broader and very distinct; base considerably projecting outwards beyond lateral contours of elytra. Secondary intervals of elytra with coarser punctures and

subcostate; the alternating even intervals much narrower than the odd intervals and distinctly narrower than the primary rows (in *frater* the secondary intervals are convex, the even ones slightly narrower than the odd intervals, but considerably broader than the primary rows). In the ♂ the inner contours of anterior tibiæ (fig. 258) strongly dilated in a straight line towards apex, without distal emargination.



FIGS. 257 to 259. — Anterior tibia with tarsus of ♂ of :
 257 : *Schelodontes frater* n. sp. — 258 : *Schelodontes simplimanus* n. sp.
 259 : *Schelodontes terrenus* n. sp.

The only specimen in front of me has been classified originally as a ♀ because of the simple inner contours of anterior tibiæ; in actual fact it is a ♂, well recognizable as such by the median cavity on underside of anterior tibiæ.

Dimensions. — Length 8 mm, width $3 \frac{3}{4}$ mm.

Distribution. — South-western Cape Province. — Mossel Bay, VII.1906 (1♂, holotype S.A.M.).

[***Schelodontes terrenus* n. sp.**]

(Pl. XVI, fig. 4; Fig. 259.)

Upper surface moderately shiny. Head above with dense, coarse, but not confluent punctures. Middle section of mentum with sharp and strongly raised median carina. Antennæ longer than width of head, with strongly transverse three preapical segments; the apical segment broadly oval, about two-thirds longer than the penultimate segment. Pronotum broadest at

about middle, strongly convex, slender, only about one-third broader than long or less, uniformly covered with dense and the same coarse punctures as on head, becoming rugosely confluent only close to the justa-lateral canaliculation. Anterior margin deeply emarginate, with complete and rather strong carina; the anterior angles very strongly produced, minutely dentiform and with the apices curved inwards. Sides equally rounded and distinctly narrowed towards base, with narrow lateral carina; the justa-lateral canaliculation very well marked, distinctly dilated anteriorly as well as posteriorly, with smoothed background of cuticle. Base immarginate, with the middle section distinctly arcuate and projecting backwards beyond posterior angles. Prosternum densely rugose on sides; episternum with a few coarse punctures and superficially wrinkled longitudinally; apex of prosternal apophysis weakly produced, marginate. Elytra slender, subparallel, slightly narrower than pronotum, in the ♂ often broadest basally, with very sharp, rectangular humeral angles which are demarcated from sides by a post-humeral sinuosity of the latter. Base emarginate, with very fine, irregularly interrupted margination. Primary rows broadly sulcate, composed of dense, more or less distinct, transverse punctures, of which there are about 30 in the fourth row; secondary intervals strongly and obtusely convex, moderately broader than primary rows or practically of equal width, densely covered with rather coarse punctures. Pseudopleural crest dorsally exposed only on basal fourth, but altogether absent around the broadly rounded apical portion of elytra. Pseudopleura with fine and scattered punctures, very narrow on posterior two-thirds, much narrower than the ventrally reflected portion of the ninth plus eighth intervals. Metasternum very short; episternum with coarse, partially and longitudinally confluent punctures. Abdomen with extremely fine, sparse punctures, the anal sternite strongly marginate and with deep transverse sulcus across base. Upper surface of intermediate and posterior tibiae broad, but only shallowly sulcate. In the ♂ the inner contours of anterior tibiae (fig. 259) with strongly and inwardly produced apical angle, with a weak and obtuse median dilation and a fringe of a few bristles on distal third; the outer contours of anterior tibiae with more or less distinct median dilation and demarcated apical angle; the posterior femora with very large, triangular and sharply pointed apical tooth.

Ædeagus. — Apicale slender, with the sides strongly narrowing in a straight line towards apex. Apices of the divided parameres almost straight and obtuse. Basale only twice to two and a half times as long as apicale.

Dimensions. — Length 9 to 11 mm, width $3\frac{3}{4}$ to $4\frac{3}{4}$ mm.

Distribution. — Eastern part of the Central Cape Province. — Albany District: Resolution, near Fort Brown, I.1929, A. WALTON (18 spec., types T.M.); Grahamstown, XII.1892, SCHOENLAND, VII.1910, J. R. IVY, II.1933, R. F. LAWRENCE (9 spec., S.A.M. and T.M.).

Relationship. — Agreeing with the *verreauxi* and *immundus* groups in the densely and conspicuously punctured secondary intervals on elytra, but closely allied to *immundus* (Pl. II, fig. 4) on account of the larger size, the sharp and demarcated to minutely prominent humeral angle, the posteriorly very narrow pseudopleura and the strong apical tooth on posterior femora in the ♂. Both *immundus* and the new species differ from *verreauxi*, *frater* and *simplimanus* furthermore in the formation of the anterior tibiæ in the ♂. In the *immundus* group (fig. 77) the inner angle of anterior tibiæ is strongly produced inwards, bearing the apical brush on apical margin of tibia, and with the calcaria inserted likewise on apical margin of tibia, but shifted inwards from apical angle and apical brush. In the species of the *verreauxi* group the inner apical angle is not conspicuously produced inwards, bearing the tibial calcaria plus apical brush on apical portion of inner margin of tibia.

The new species is distinguished from *Sch. immundus* (Pl. II, fig. 4) by the smaller size (*immundus* varies from 11 to 13 mm in length), the distinctly shiny upper surface of body (very opaque in *immundus*), the strongly produced, very sharp and acute anterior angles of pronotum (which are obtuse and only moderately produced in *immundus*), as well as by the quite different sculpture of elytra. In *Sch. immundus* the primary rows are very fine, narrow and lineate; the secondary intervals are almost flat, very broad and several times broader than the primary rows, very densely, rugosely punctured and in between punctures transversely wrinkled. In the new species the primary rows are broadly sulcate and deeply impressed; the secondary intervals are strongly convex to obtusely subcostate, about as broad as the primary rows, densely, but not rugosely punctured, and with smooth cuticle between punctures. The ædeagus is very similar to that of *immundus*, but the apicale is a little shorter, the parameres less well divided and the ventral groove more strongly constricted by the inflexed alæ, with the lacinia being exposed only apically. *Sch. immundus* (MULSANT & REY) is known to me from the Port Elizabeth and Uitenhage Districts.

[*Schelodontes exceptionalis* n. sp.]

Of a dark reddish brown colour, the appendages paler. Upper surface shiny, the elytra strongly so. Head above densely punctured, with the punctures becoming coarse and rugosely confluent on the convex vertex. Middle section of mentum with strongly raised, very sharp median carina. Antennæ rather slender, with strongly dilated three distal segments. Pronotum moderately convex, broadest in front of middle, slender, almost square and only a fifth broader than long, with coarse and moderately dense punctation, aggregated and rugose only along the lateral carina. Anterior margin completely carinate, deeply emarginate, with strongly produced, but not demarcated anterior angles. Sides equally rounded and distinctly

narrowed towards base, with strong, obtuse, shiny and equally broad lateral carina, but without justa-lateral canaliculation or submarginal depression, with the discal convexity reaching, and in contact with, the lateral carina; the latter considerably broader than the third antennal segment, but slightly narrower than the penultimate segment. Base almost subtruncate, with straight and non-arcuate middle section, completely, very finely but sharply carinate; the posterior angles inconspicuously produced backwards beyond level of middle section of base. Prosternum very densely rugose on sides; episternum shiny, with only sparse and fine punctures, longitudinally rugose only on inner quarter; intercoxal apophysis with obtusely produced, broadly rounded and immarginate apex. Elytra about as broad as pronotum, in the ♂ broadest basally, with subparallel sides or the latter very weakly narrowing backwards, with sharply rectangular, slightly prominent humeral angles. Primary rows deeply impressed and narrowly sulcate, with rather dense, round and strong punctures, of which about 28 stand in the fourth row; secondary intervals strongly shiny, smooth, convex, subcostate apically, considerably broader than the primary rows. Pseudopleural crest dorsally exposed only basally, altogether absent around the broadly rounded apical portion. Pseudopleura almost smooth, leaving exposed a narrow portion of the ventrally reflected ninth interval on posterior half and there distinctly broader than the latter. Metasternum very short; episternum covered with an extremely dense, longitudinally rugose, almost substriolate sculpture. Abdomen finely and sparsely punctured, the base of the penultimate and anal sternites deeply sulcate, the anal sternite strongly marginate. In the ♂ the inner contours of anterior tibiae curved inwards apically, the outer contours with very weak median dilation and very sharp, rectangular apical angle; the posterior femora with very weakly marked, obtuse angle apically, inermous.

Dimensions. — Length $8 \frac{1}{2}$ mm, width $3 \frac{1}{4}$ mm.

Distribution. — Eastern part of the Central-southern Cape Province. — Uitenhage District: Dunbrody, J. O'NEIL (1♂, holotype T.M.).

Relationship. — Belonging to the many species of *Schelodontes* exhibiting smooth and only inconspicuously punctured secondary intervals on elytra, this species is well characterized by the entirely carinate and different structure of pronotal base. With the exception of the following species, all the other *Schelodontes* agree in the immarginate base of pronotum, the middle section of which is arcuate and slightly produced backwards beyond posterior angles. In *Sch. exceptionalis* and *oblitus* the middle section of base is straight, non-arcuate and not produced backwards beyond the level of posterior angles; on the contrary the latter are inconspicuously produced backwards beyond the level of middle section. On account of this character, as well as by the shape of body, the new

species resembles much certain species of *Amblychirus*, but the sharp median carina on the middle section of mentum, the broadly exposed distal portion of the lateral wings of mentum, the shape of legs and all the other characters agree entirely with *Schelodontes*.

[*Schelodontes oblitus* n. sp.]

This is the second species of *Schelodontes* with truncate and more or less distinctly carinate pronotal base. It is not related phylogenetically to *Sch. exceptionalis*, but agrees with the latter in the structure of pronotal base. It is very sharply distinguished from this species as follows : —

Body of larger size, the upper surface more strongly shiny, the elytra almost polished. Head above with uniform, well separated and round punctures; underside and antennæ as in *exceptionalis*. The pronotum much broader, more flattened, coarsely but much less densely punctured, with the punctures remaining well separated also on lateral portions; broadest at middle, almost one and a half times as broad as long. Anterior margin less deeply emarginate, with the marginal carina more or less distinctly interrupted on middle. Sides more strongly rounded and narrowed posteriorly; the lateral carina rather broad and considerably dilated towards base (very slightly dilated towards anterior margin in *exceptionalis*), basally considerably broader than the third antennal segment, but slightly narrower than the preapical segment; with very narrow, but deep and complete justa-lateral canalization. Base subtruncate, strongly carinate on lateral portions, less so and sometimes with the marginal carina irregularly interrupted on middle section; the posterior angles not produced backwards. Underside of prothorax as in *exceptionalis*, but the apex of intercoxal apophysis slightly attenuate. Elytra distinctly narrower than pronotum, with subparallel to slightly rounded sides, but always constricted basally. Base exactly as broad as pronotal base (distinctly broader than the latter in *exceptionalis*), with sharply dentiform and prominent humeral angle which is strongly demarcated from the constricted basal portion of sides. Primary rows fine, but sharply impressed and lineate, with only badly indicated punctation; there are about 30 punctures in the fourth row, which are almost finer than those on pronotum. Secondary intervals uniformly flat to inconspicuously convex, several times broader than the primary rows, smooth and polished. Pseudopleural crest dorsally exposed on basal third, complete and finely carinate. Underside of hind body similar to *exceptionalis*, but the pseudopleura considerably narrower than the ventrally reflected portion of the ninth plus eighth intervals posteriorly. Legs much more slender. The narrow upper surface of intermediate and posterior tibiæ sulcate. In the ♂ the anterior tibiæ very similar, but the outer apical angle broadly rounded; the posterior femora with sharply pointed, short apical tooth, pointing towards base of femur.

Ædeagus. — Of simple shape, with large apicale; the basale only one and two thirds times as long as apicale.

Dimensions. — Length 9 to 10 $\frac{1}{2}$ mm, width 4 to 4 $\frac{1}{2}$ mm.

Distribution. — South-eastern Cape Province. — Molteno District: Molteno, A. ROBERTS (4 spec., types T.M.); Albert District: Burghersdorp, KANNEMEYER (1 spec., S.A.M.); Komga District: Kei River, 1883 (1 spec., S.A.M.). — North-central Cape Province. — Hanover District: Hanover, 1901, C. SCHREINER (1 spec., S.A.M.). — Southern Orange Free State. — Bethulie District: Springfontein, XII.1947, P. JACKSON (1 spec., U.St.).

[**Schelodontes grandis** n. sp.]

Black, moderately shiny. Head above coarsely and rather densely punctured. Middle section of mentum with sharp median carina. Antennæ short, not longer than the head is broad, with strongly transverse distal segments. Pronotum weakly convex, with flattened disc, broadest in front of middle, almost square, about a third broader than long, with weak and rather scattered, laterally slightly coarser and more concentrated punctures. Anterior margin moderately emarginate, with complete and broad marginal carina and fairly produced, rather obtuse anterior angles. Sides practically subparallel or very slightly narrowing in a straight line posteriorly; lateral carina broad, obtuse, but constricted on middle and there distinctly narrower than anteriorly or posteriorly and slightly narrower than the third antennal segment; justa-lateral canaliculation broad and deep, gradually dilated and flattened towards posterior angles. Base with broad and obtuse marginal carina, interrupted on about median fifth; the middle section rather strongly arcuate and very distinctly produced backwards beyond posterior angles. Prosternum with asperate punctures on sides; episternum with a few fine punctures; apex of intercoxal apophysis produced, immarginate and triangular. Elytra about as broad as pronotum or slightly narrower, with subparallel sides, sharply rectangular but non-prominent humeral angles which are scarcely demarcated from sides. Base emarginate on middle, very sharply edged (but not carinate) on sides. Primary rows narrow, becoming more distinctly impressed on sloping lateral portions, with distinct, rather fine, round punctures, of which about 35 are in the fourth row; secondary intervals with extremely fine, scattered punctures, much broader than the primary rows, uniformly flat. Pseudopleural crest dorsally exposed on basal half, but absent from the broadly rounded apical portion. Posterior portion of pseudopleura about as broad as the ventrally reflected portion of the ninth interval. Metasternum distinctly longer than in the preceding species, between mesocoxal cavities and the pre-metacoxal sclerite about as long as the latter or slightly longer; episternum very coarsely, densely punctured. Abdomen longitudinally wrinkled, with very fine, sparse punctures; anal sternite strongly marginate. Legs stout; the

upper surface of intermediate and posterior tibiae superficially sulcate, the lateral surfaces very densely and asperately sculptured. In the ♂ the inner contours of anterior tibiae strongly curved inwards, the outer contours with very weak median dilation and blunt apical angle; the intermediate tibiae strongly curved basally; the inner contours of posterior tibiae rather strongly but continuously dilated post-basally, thence gradually dilated in a straight line towards apex; the posterior femora with large, triangular and sharply pointed apical tooth.

Ædeagus. — Slender, with elongate, continuously converging apicale: the basale about two and a half times as long as apicale.

Dimensions. — Length 14 to 15 mm, width $6\frac{1}{4}$ to $6\frac{1}{2}$ mm.

Distribution. — Central-southern Cape Province. — Jansenville District: Klipplaat, X.1948, Univ. California-Transv. Mus. Exped. (1♂, 2♀♀, types T.M.).

Relationship. — This species is the largest of all *Schelodontes*, readily recognizable by its length alone, and superficially recalling the *Parastizopus* of *Stizopina*. It is the only known species with almost complete basal margination of pronotum in correlation with the strongly arcuate course of base. In the two preceding species, exhibiting a basal carina of pronotum, the base is truncate and the posterior angles are situated either at level with middle section of base or slightly projecting backwards beyond the latter. Phylogenetically, however, *grandis* is neither related to *exceptionalis* nor to *oblitus*, but belongs to the *nigerrimus* group. It is easily recognized from *Sch. nigerrimus* (MULSANT & REY) (Pl. XVII, fig. 3) by the larger size (with *nigerrimus* varying from 9 to $12\frac{1}{4}$ mm in length), the sharply marked primary rows on apical declivity of elytra (there evanescent to absent in *nigerrimus*), the shiny cuticle and dense secondary punctation on apical declivity (sericeous to dull and sparsely punctured in *nigerrimus*), the posteriorly sharply impressed, but apically abbreviate ninth row of elytra, which is distant from the pseudopleural margin on its posterior course (in *nigerrimus* the ninth row is broadly sulcate and closely following the pseudopleural crest to the apex of elytra), as well as by the rather obtuse and weakly produced anterior angles of pronotum (which are strongly produced, very sharp and minutely demarcated in *nigerrimus*). From the second known species of the *nigerrimus* group, viz. *morosus* (MULSANT & REY), the new species is distinguished by the much larger size (*morosus* varies from $8\frac{1}{4}$ to $9\frac{3}{4}$ mm in length), the broader and laterally strongly carinate pronotum (in *morosus* the pronotum is slender, only slightly broader than long, with a very fine and sharp lateral carina which is considerably narrower than the third antennal segment also basally), the moderately produced anterior angles of pronotum (strongly produced and very sharp in *morosus*), the almost complete basal margination of pronotum (immarginate in *morosus*, as well as in *nigerrimus*), the fine primary rows of

elytra (rather broadly sulcate in *morosus*), and the different formation of legs in the ♂. The isolated species *Sch. mannerheimi* (MULSANT & REY), varying in length from 9 ½ to 11 ¼ mm, is very well differentiated from the new species, as well as from all the other *Schelodontes* by the peculiar formation of the strongly rounded sides of pronotum; both the lateral carina as well as the justa-lateral canaliculation are very fine and narrow on basal portion, becoming considerably dilated towards the anterior angles anteriorly.

The range of the three compared species is the following : — *Sch. nigerimus* is known to me from the Mossel Bay-, Oudtshoorn-, Prince Albert-, Riversdale- and Caledon Districts, *morosus* from the George District, and *mannerheimi* from the George- and Uniondale Districts.

[*Schelodontes omeri* n. sp.]

Black, the appendages of a dark reddish brown. Upper surface moderately shiny. Body elongate and subparallel. Head above uniformly covered with strong and well separated punctures. Middle section of mentum strongly narrowing towards the apical margin, the latter briefly emarginate; with sharp and strongly raised median carina. Antennæ as in *Sch. terrenus*. Pronotum rather convex, broadest in front of middle, slender, almost square, only a third broader than long, covered with coarse, moderately dense, round punctures which are slightly more concentrated, but well separated on sides. Anterior margin rather strongly emarginate, completely carinate, with well produced, sharp anterior angles. Sides weakly narrowed in a straight line towards base; lateral carina moderately strong, slightly narrowed on middle, a trifle narrower than the third antennal segment; justa-lateral canaliculation only obsoletely indicated. Base weakly arcuate and immarginate as in *terrenus*. Prosternum with separated, round, somewhat asperate punctures on sides; episternum smooth, very sparsely and finely punctured, the obtuse apex of intercoxal apophysis depressed. Elytra elongate, subparallel, slightly narrower than pronotum, with the sides constricted basally and with dentiform, sharply prominent humeral angles. Primary rows narrowly sulcate, with rather dense and strong, more or less distinct punctures, of which about 26 to 30 are in the fourth row; secondary intervals smooth, uniformly and moderately convex, much broader than the primary rows. Pseudopleural crest dorsally exposed on about basal half, but absent around the broadly rounded apical portion. Pseudopleura narrow posteriorly and there distinctly narrower than the ventrally reflected portion of ninth interval. Metasternum very short; the episternum with coarse, slightly elongate, but separated punctures. Abdomen with fine punctures; the base of the two apical sternites transversely sulcate; the anal sternite strongly marginate. Legs slender. The upper surface of intermediate and posterior tibiæ moderately sulcate. In the ♂ the inner contours of all tibiæ with rather abrupt

premedian dilation, best marked on intermediate tibiæ; the inner apical angle of anterior tibiæ strongly produced inwards; the apex of posterior femora with small, but sharply pointed, prominent tooth, directed towards base of femur.

Ædeagus. — Slender, with elongate, continuously converging apicale; the basale slightly more than twice as long as apicale; penis and lacinia exposed.

Dimensions. — Length $8 \frac{1}{2}$ to $10 \frac{3}{4}$ mm, width 4 to $4 \frac{1}{4}$ mm.

Distribution. — Eastern part of the Central-southern Cape Province. — Somerset East, I.1887 (3 ♂♂, holotype S.A.M.); Uitenhage District: Dunbrody (1 ♀, allotype T.M.); Albany District: Grahamstown, X (1 ♂ ♀, Rh.U.), Sheldon, VIII.1950, F. ZUMPT (2 ♂♂, 2 ♀♀, Museum FREY).

Relationship. — Belonging to the *chevrolati* group and agreeing with the latter in the smooth secondary intervals of elytra, the prominent humeral angle, the arcuate and immarginate base of pronotum, the basally not conspicuously dilated lateral carina and the anteriorly not dilated justa-lateral canaliculation of pronotal sides. Among the known species of this group [viz. *chevrolati* MULSANT & REY (Pl. II, fig. 5), *amplicollis* FAIRMAIRE and *longulus* MULSANT & REY] *Sch. longulus* is the closest ally of the new species, differing from *Sch. chevrolati* and *Sch. amplicollis* in the only moderately shiny upper surface, the less strongly transverse pronotum, the sharply rectangular posterior angles and the uniform, coarse, dense punctation on pronotum, as well as by the sulcate, coarsely punctured primary rows on elytra, which are only slightly narrower than the secondary intervals. *Sch. longulus* is readily distinguished from *Sch. omeri* by the smaller size of body ($7 \frac{3}{4}$ to $8 \frac{1}{4}$ mm long), the shape of pronotum, sculpture on elytra and the practically non-dimorphic legs in the ♂. The pronotum is more elongate, posteriorly rounded and narrowed towards the base, without justa-lateral canaliculation. The humeral angle of elytra is rectangular, but not dentiform; the primary rows are very strong, scarcely narrower than the secondary intervals. In the ♂ the intermediate and posterior tibiæ are straight and the apical dilation of posterior femora is obtuse.

Dedication. — Named in honour of Prof. J. OMER COOPER, director of the Zoological Institute of Rhodes University, Grahamstown.

[*Schelodontes rotundicollis* n. sp.]

(Pl. XVII, fig. 2.)

Very closely related to *Sch. chevrolati* (MULSANT & REY) and agreeing with this species in the sharply carinate median carina of middle section of mentum, the transverse, posteriorly narrowed, weakly and sparsely punctured pronotum, the equally broad, moderately strong lateral carina of the

latter, the arcuate and immarginate pronotal base, the sharply rectangular, well demarcated to minutely prominent humeral angles, the lineate primary rows and smooth, uniformly flat secondary intervals of elytra, the polished upper surface and similar formation of underside of hind body. Specifically differing from *chevrolati* by the less short body, the broader and more conspicuous justa-lateral canaliculation of pronotum, which is distinctly dilated posteriorly and often so also anteriorly (very narrow and of equal width in *chevrolati*), the very sparsely and finely punctured sides of prosternum, the strong, sharply pointed, dentiform apical dilation of posterior femora in the ♂ (moderate and obtuse in *chevrolati*), as well as by the shape and sculpture of elytra. In the new species the elytra are longer, narrower than pronotum basally (very slightly broader than pronotum in *chevrolati*); the primary rows are finer, with only obsolescent and scattered, fine punctures, becoming very fine on apical declivity (in *chevrolati* the primary rows are stronger, with rather dense, round and well defined punctures, strongly impressed also on apical declivity); the secondary intervals are flat also on sides of apical declivity (there weakly but distinctly convex in *chevrolati*); on apical declivity the ninth primary row becomes obsolescent to evanescent at considerable distance from the end of the first row, but the pseudopleural crest is complete, finely marked around the entire apical portion of elytra (in *chevrolati* the ninth row is sharply impressed, extending clearly to the end of the first row, but the pseudopleural crest is absent from the broadly rounded apical portion of elytra). The aedeagus differs rather strongly from *chevrolati* by the narrowed and almost subparallel apical third of apicale, the sides of which are continuously narrowing from base to apex in *chevrolati*.

Sch. amplicollis (FAIRMAIRE), extremely closely related to *chevrolati*, differs strongly from the new species by the broad shape of body, the coarse, very dense to almost rugose punctures on sides of pronotum and the formation of pronotal sides. The justa-lateral canaliculation is absent or indistinct, not smoothed on background, not separated from the discal convexity of pronotum nor from the dense punctures of the latter; the punctures are almost in contact with the lateral carina. *Sch. chevrolati* occurs with *Sch. amplicollis* in the Port Elizabeth District, the former also in the Uitenhage District.

Dimensions. — Length 9 to 10 $\frac{1}{2}$ mm, width 4 $\frac{1}{4}$ to 4 $\frac{3}{4}$ mm.

Distribution. — South-central Cape Province. — Middelburg District: Naauwpoort, X.1948, Univ. California-Transv. Mus. Exped. (42 spec., types T.M.); Graaff Reinet District: Graaff Reinet and Kendrew, X.1948, Univ. California-Transv. Mus. Exped. (10 spec., M.C.A.); Beaufort West, F. W. PURCELL (1 spec., S.A.M.); Jansenville District: btwn. Klipplaat and Miller, X.1948, Univ. California-Transv. Mus. Exped. (5 spec., T.M.). — Southern Orange Free State. — Smithfield, 1909, KANNEYER (1 spec., S.A.M.).

[Schelodontes mulsanti n. sp.]

(Pl. XVII, fig. 1.)

Very closely related to *Sch. rotundicollis* and agreeing with this species in all particulars, with the exception of the following ones : — Pronotum slightly less transverse; the lateral carina of quite different formation, much narrower, becoming strongly constricted on middle, there extremely fine, much narrower than on anterior or posterior angles and much narrower than the third antennal segment, but in front of posterior and anterior angles dilated and there only slightly narrower than the third antennal segment, but about two and a half times as broad as on the constricted middle section; the justa-lateral canaliculation as in *rotundicollis*, but extremely narrow, fine on middle section and more strongly dilated and flattened basally. Elytra subparallel on basal half of sides (constricted in *rotundicollis*), with the sides weakly rounded at, or slightly in front of, middle; humeral angle rectangular and only slightly prominent (dentiform and somewhat acute in *rotundicollis*). In *rotundicollis* the lateral carina of pronotum is broader, of about equal width throughout, on middle almost as broad as on anterior and posterior angles and about as broad as the third antennal segment; the justa-lateral canaliculation is broad and on middle not narrower than anteriorly or only slightly so.

The ædeagus differs by the short and continuously converging apicale, in this respect agreeing with *Sch. chevrolati* and *amplicollis*, but not with *rotundicollis*.

Dimensions. — Length 9 to 10 $\frac{1}{2}$ mm, width 4 $\frac{1}{4}$ to 4 $\frac{3}{4}$ mm.

Distribution. — Central-southern Cape Province. — Willowmore District : Willowmore, III.1912, H. BRAUNS (21 spec., types T.M.); gorge 8 miles W of Willowmore, XI.1948, Univ. California-Transv. Mus. Exped. (2 spec., M.C.A.).

[Schelodontes apicalis n. sp.]

(Pl. XVII, fig. 4.)

Reddish brown to black, the upper surface strongly convex and polished. Body of broadly oval shape. Head above uniformly covered with strong, round and very dense punctures. Middle section of mentum with sharp, very strongly raised and complete median carina. The antennæ very short, scarcely as long as the head is broad; the five preapical segments transverse, becoming strongly dilated towards apex. Pronotum broadest rather distant from behind middle or even at base, strongly rounded and narrowed on anterior two thirds, subparallel to very slightly dilated on posterior third, more than two-thirds broader than long, uniformly covered with rather weak, scattered punctures. Anterior margin strongly and completely carinate, moderately emarginate, but with well produced anterior angles.

Lateral carina rather narrow, constricted at middle, conspicuously dilated basally; on middle considerably narrower than the third antennal segment, basally slightly broader than the latter, but much narrower than the preapical segment of antennæ. Justa-lateral canaliculation very narrow on anterior two thirds, but distinctly dilated and flattened close to posterior angles; anteriorly narrower than the lateral carina, basally about as broad as the latter. Base immarginate, with arcuate and distinctly produced middle section. Prosternum densely and obliquely wrinkled on sides; episternum polished and practically impunctate; intercoxal apophysis produced and with immarginate, broadly rounded apex. Elytra short, broadest behind middle, distinctly broader than pronotum, with the sides rather well rounded and dilated towards middle, and with slightly obtuse, non-prominent humeral angles. Primary rows sharply impressed, fine, well-marked also on apical declivity, with fine, rather dense, more or less distinctly defined punctures, of which about 40 stand in the fourth row; secondary intervals polished, several times broader than the primary rows, flat to very weakly convex. The pseudopleural crest dorsally exposed on basal third, very sharply carinate around the apical portion. Pseudopleura smooth, narrow, leaving exposed the ninth and eighth intervals on posterior four-fifths, much narrower than the latter posteriorly. The metasternum short; episternum with very coarse, dense and substriolate sculpture. Abdomen rather densely punctured; the anal sternite strongly marginate. The upper surface of intermediate tibiæ deeply, that of posterior ones superficially sulcate. In the ♂ the anterior tibiæ with straight outer contours, almost rectangular outer apical angle and triangularly produced inner apical angle; the posterior femora with small, fine, but prominent and pointed apical tooth.

Ædeagus. — Similar to *Sch. morosus*, but the basale longer and two and a half times as long as apicale (in *morosus* only one and two thirds times as long as the latter).

Dimensions. — Length $7\frac{3}{4}$ to $9\frac{3}{4}$ mm, width $3\frac{3}{4}$ to $4\frac{3}{4}$ mm.

Distribution. — Central-southern Cape Province. — Willowmore District: Willowmore, XII.1913, H. BRAUNS (41 spec., types T.M.), X.1948, Univ. California-Transv. Mus. Exped. (4 spec., M.C.A.); Ladismith District, H. BRAUNS (1 spec., T.M.); Oudtshoorn District, VII.1886 (1 spec., S.A.M.).

Relationship. — This new species is well characterized by the short shape of body, the polished cuticle of upper surface, the posteriorly broadest pronotum, the obtuse humeral angles of elytra and the apically very sharply carinate and complete pseudopleural crest. It may be compared only with *Sch. morosus* (MULSANT & REY), agreeing with the latter in the non-dentiform humeral angles of elytra, the shiny apical declivity, on which the primary rows are well marked, the course of the ninth primary row on elytra, which is diverging from pseudopleural crest posteriorly, and the similar construc-

tion of lateral carina and justa-lateral canaliculation of sides of pronotum. It differs, however, very strongly from *morosus* by the broad and distinctly rounded body (narrow and subparallel in *morosus*), the strongly transverse and convex pronotum (slender, almost square and flattened in *morosus*), the strongly convex, laterally rounded elytra, the primary rows of which are fine and lineate (in *morosus* the elytra are less strongly convex, subparallel and exhibit strong, subsulcate primary rows), the obtuse humeral angles (rectangular and sharp in *morosus*) and by the apically sharply carinate pseudopleural crest (which is altogether absent on apical portion in *morosus*). The lateral carina of pronotum is distinctly dilated basally and there slightly broader than anteriorly; the justa-lateral canaliculation is well dilated basally and there broader than anteriorly; in *Sch. morosus* the lateral carina as well as the justa-lateral canaliculation are equally narrow anteriorly and posteriorly, the latter there inconspicuously dilated.

[**Schelodontes gemmeulus** n. sp.]

(Pl. XVIII, fig. 1.)

Very closely related to *Sch. apicalis*, of similar formation and the same broad shape of body, but readily distinguished as follows: — Body larger and broader, with less shiny upper surface. The pronotum of similar shape and width, but the punctures are coarse, deep, denser and strongly concentrated on sides. The anterior margin is less deeply emarginate, with obtuse and moderately produced anterior angles, and very broad, complete margination. The sides, including the greatest width of pronotum considerably behind middle, are rounded and narrowed for a short distance just in front of posterior angles. The lateral carina is considerably broader than in *apicalis* and very conspicuously dilated basally; it is as broad as the third antennal segment on the slightly constricted middle, but as broad as the preapical segment on the dilated basal portion. The justa-lateral canaliculation is very narrow, several times narrower than the lateral carina, but of equal width from base to anterior margin. The elytra are of the same shape and sculpture as in *apicalis*, with the exception of the sharply rectangular, minutely dentiform humeral angles which are well demarcated from sides by a post-humeral sinuosity of the latter. The cuticle of pronotum is not smooth and polished as in *apicalis*, but very densely micro-sculptured and appearing as if sericeous. The legs of the single ♀ are similar to those of *apicalis*, except for the anterior tibiae which exhibit a distinct premedian dilation on upper surface.

Dimensions. — Length 9 mm, width 5 mm.

Distribution. — Central-southern Cape Province. — Willowmore District: Willowmore, II.1901. H. BRAUNS (1♀, holotype T.M.).

[*Atrocates bisinuatus* n. sp.]

(Pl. XVIII, fig. 4; Fig. 260.)

Black, the appendages and underside more or less reddish brown. Upper surface shiny. Head above with dense, extremely fine punctures.

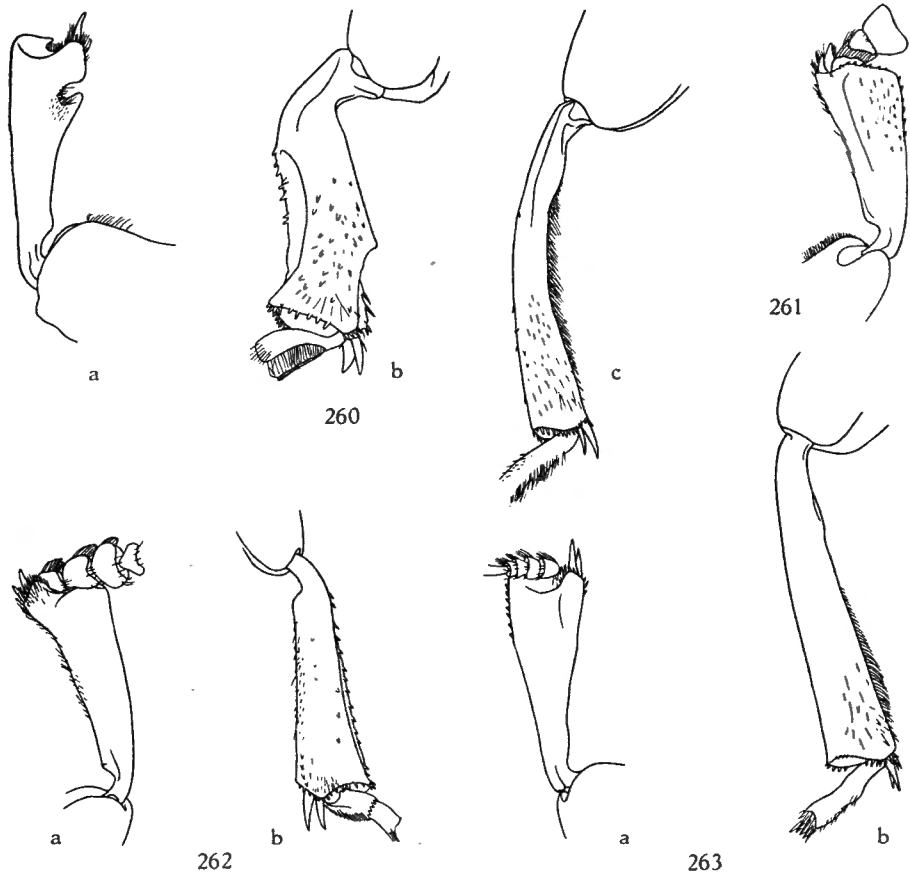


FIG. 260. — *Atrocates platyderus* (MULSANT & REY) (a: anterior tibia of ♂; b: intermediate tibia of ♂; c: posterior tibia of ♂). — FIG. 261. — *Atrocates latemarginatus* (MULSANT & REY), anterior tibia of ♂. — FIG. 262. — *Atrocates striatus* (QUENSEL) (a: anterior tibia of ♂; b: intermediate tibia of ♂). — FIG. 263. — *Atrocates peringueyi* n. sp. (a: anterior tibia of ♂; b: posterior tibia of ♂).

Genæ strongly projecting outwards beyond ocular outlines. Middle section of mentum moderately narrowing to the subtruncate apical margin, with fine median carina, well developed on middle. Antennæ slender, with three transverse preapical segments. Pronotum broadest a little behind

middle, more than one and a third times as broad as long, polished, with scarcely discernible, extremely fine punctures. Anterior margin moderately emarginate, with the marginal carina interrupted on middle. Sides equally rounded and narrowed towards base; the lateral carina broad, obtuse, gradually dilated from anterior margin towards base, there about twice as broad as anteriorly and approximately as broad as the preapical segment of antennæ; the justa-lateral canaliculation extremely fine and of equal width. Base with fine and complete marginal carina; the middle section straight, but the lobes of posterior angles rather strongly produced backwards beyond level of middle section. Prosternum with a few fine punctures on sides; episternum smooth, with fine, longitudinal wrinkles; intercoxal apophysis produced, with broadly rounded, immarginate apex. Elytra slightly narrower than pronotum, with weakly rounded, but basally subparallel sides and dentiform, strongly prominent humeral angle. Base straight on middle, very slightly sloping towards humeral angles laterally. Primary rows very fine, more sharply impressed on sides, but becoming evanescent on apical declivity, composed of very fine, dense punctures, with about 45 punctures in the fourth row; secondary intervals uniformly flat, smooth, with dense, fine, irregular, secondary punctures on apical portion of apical declivity. Pseudopleural crest complete, entirely visible from above. Pseudopleura occupying the entire ventrally reflected portion of elytra, smooth. Metasternum very short, densely and coarsely substriolate on sides; episternum with scattered, rather fine punctures. Abdomen with fine, scattered punctures, the anal sternite strongly marginate. In the ♂ the anterior and intermediate tarsi strongly dilated and with entire soleæ below; the anterior tarsi about as broad as the apex of anterior tibiæ and almost three times as broad as the preapical segment of antennæ; the inner contours of anterior tibiæ with abrupt and angular postbasal dilation, thence straight to a strong, triangular, prominent postmedian tooth, projecting from underside beyond inner contours, and with strongly produced, angular apical dilation, the outer contours with well demarcated, broadly rounded to laterally subtruncate apical angle; the intermediate tibiæ broadly sulcate and smoothed on underside, but with practically straight and only pre-apically shallowly emarginate inner contours, with a minutely prominent tubercle in front of apical angle; the upper surface of intermediate tibiæ slightly dilated on distal two-thirds, but there with practically subparallel lateral contours; the underside of the straight posterior tibiæ with a broad stripe of subtomentose, yellowish, sessile pilosity; the underside of anterior and intermediate femora with a dense brush of golden, silky bristles.

Ædeagus. — Simple. The sides of apicale converging in a straight line towards apex; the parameres entirely divided, but closely attached one to another, with straight and obtuse apices.

Dimensions. — Length 11 to 12 $\frac{3}{4}$ mm, width 5 to 6 mm.

Distribution. — Western part of the South-western Cape Province. — Tulbagh District: Great Winterhoek Mountain, 4,500 ft., XI.1916, R. LIGHTFOOT (9 spec., types S.A.M.).

Relationship. — The previously described *Atrocates* species belong to two groups. *A. striatus* (QUENSEL) (Pl. XVIII, fig. 3), *platyderus* (MULSANT & REY) and *simius* (MULSANT & REY) to the *striatus* group, characterized by the presence of a broad, subtomentose stripe of hairs on the underside of posterior tibiae in the ♂, whereas *A. latemarginatus* (MULSANT & REY) (Pl. XVIII, fig. 2) is an isolated species, in which this stripe is lacking. All these species are furthermore well characterized by the angular or dentiform postbasal dilation of inner contours of anterior tibiae in the ♂.

The new species agrees very well with the *striatus* group, exhibiting in the ♂ the subtomentose stripe on underside of posterior tibiae, as well as the angular postbasal dilation of anterior tibiae. It is readily distinguished from *A. platyderus* by the simple structure of intermediate tibiae in the ♂ [in *platyderus* the inner (or lower) contours of the outer lateral surface of intermediate tibiae are not straight, but exhibit a tooth or a strongly arcuate dilation on distal half (fig. 260)]; from *A. striatus* and *simius* by the posteriorly rounded and narrowed sides of pronotum, which are straight and subparallel in both the compared species.

[***Atrocates montis-cedri* n. sp.**]

(Pl. XIX, fig. 1.)

Closely related to *A. bisinuatus* and agreeing in most of particulars with this species, but readily distinguished as follows: — Pronotum with slightly deeper anterior emargination and truncate base; the posterior angles are not produced backwards and at level with middle section of base. Elytra slightly shorter, exactly subparallel, with the humeral angles obtuse, non-prominent and not demarcated from sides; primary rows fine, but sharply impressed and lineate, with extremely fine punctures; the apical portion of apical declivity very densely covered with irregular, secondary punctures; the pseudopleural crest becoming evanescent in front of apex of elytra. The legs in the ♂ similar, but the anterior and intermediate tarsi less strongly dilated, the anterior tarsi narrower than the apex of anterior tibiae; the latter on inner contours with much smaller, only angular postmedian tooth, but with minutely prominent, obtuse tooth at the proximal end of apical dilation; only the underside of anterior femora with fringe of very short hairs on inner edge.

Dimensions. — Length 11 $\frac{1}{2}$ mm, width 5 $\frac{1}{4}$ mm.

Distribution. — Western part of the South-western Cape Province. — Clanwilliam District: Cedar Bergen, I.1930, K. H. BARNARD (1 ♂, holotype S.A.M.).

[*Atrocates peringueyi* n. sp.]

(Pl. XIX, fig. 2; Figs. 260 to 264.)

Reddish brown to black, shiny. Head above with very fine punctures. Genæ moderately projecting beyond ocular outlines. Epistome well demarcated from sides of genæ. Middle section of mentum with strongly raised, but obtuse and rather broad median carina. Antennæ stout, with strongly transverse four preapical segments. Pronotum broadest at about middle or a little in front of it, two-thirds broader than long, with extremely fine, scarcely discernible punctation. Anterior margin weakly emarginate, with the broad marginal carina briefly interrupted on middle. Sides posteriorly slightly rounded or narrowed in a straight line towards base; the lateral carina very broad, obtuse, gradually but rather strongly dilated towards base, there not quite twice as broad as anteriorly, but only slightly narrower than the very strongly transverse preapical segment; justa-lateral canaliculation narrow. Base straight and truncate, completely marginate. Underside of prothorax as in *A. bisinuatus*. Elytra narrower than pronotum, practically subparallel, with sharply dentiform, prominent humeral angles which are demarcated from sides by a distinct post-humeral sinuosity or constriction. Primary rows deeply impressed, composed of rather strong, round punctures, of which about 30 to 32 stand in the fourth row; all rows extending beyond top of apical declivity, but evanescent in front of apex. Secondary intervals polished, much broader than primary rows, weakly convex. Pseudopleural crest complete, reaching the apex of elytra, becoming concealed behind middle (dorsal aspect). Pseudopleura smooth, posteriorly narrow and leaving exposed a portion of the ventrally reflected ninth interval, but slightly broader than the latter. Metasternum with scattered, elongate and somewhat acuductate punctures on sides; episternum with uniform, rather fine, round and scattered punctures. Abdomen finely punctured, the anal sternite strongly marginate. In the ♂ (fig. 263) the legs almost non-dimorphic; the anterior and intermediate tarsi not dilated nor soleate below; the anterior and intermediate tibiæ neither excavate nor sulcate on underside, with simple inner contours which are slightly dilated on distal third in the anterior tibiæ, straight in the intermediate ones; the underside of the straight posterior tibiæ with an extremely fine, narrow, long stripe of fine, slightly squarrose, dense and very short hairs; the anterior femora dilated, but all femora with bare underside.

Ædeagus. — Fig 264.

Dimensions. — Length $8 \frac{1}{2}$ to $10 \frac{1}{4}$ mm, width 4 to $4 \frac{3}{4}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Caledon District: Caledon, 1905, L. PÉRINGUEY (5 spec., types S.A.M.); Ladismith District: Babylon's Tower, III.1939, Mus. Staff (5 spec., S.A.M.).

Relationship. — Although agreeing with the species of the *striatus* group in the subtomentose stripe of yellowish pilosity on the underside of the posterior tibiæ in the ♂, the new species is very easily recognized by the practically non-dimorphic legs. In all the hitherto known species of *Atrocates* the anterior tarsi are very strongly dilated in the ♂ and the inner contours of anterior tibiæ exhibit an angular to dentiform postbasal dilation (figs. 260, 261, 262).

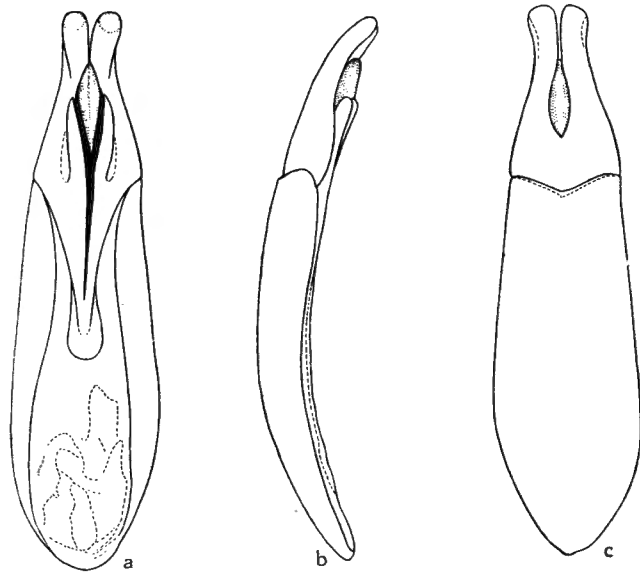


FIG. 264. — Aedeagus of *Atrocates peringueyi* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

[*Eviropodus lawrenceus* n. sp.]

Black, the appendages reddish brown, shiny. Head above with very fine, scattered punctures. Middle section of mentum strongly narrowing in a straight line towards apical margin, with a sharp median carina on about middle. Antennæ long and slender, with the three preapical segments becoming strongly transverse towards apex. Pronotum broadest in front of, or at about, middle, about two thirds broader than long, polished, without discernible punctation. Anterior margin shallowly emarginate, with broad marginal carina which becomes obsolescent on middle. Sides posteriorly exactly subparallel; the lateral carina broad, inconspicuously dilated on posterior half, slightly broader than the third antennal segment, but considerably narrower than the preapical segment; the justa-lateral canaliculation very narrow, almost inconspicuous and of equal width. Base

shallowly emarginate, with straight median section and very slightly produced lobes of posterior angles; entirely immarginate, but in front of base with a more or less distinct, linear, transverse impression. Underside of prothorax almost smooth; apex of intercoxal apophysis produced, immarginate and obtuse. Elytra as broad as pronotum, exactly subparallel and with the lateral contours in line with those of pronotum. Base with very sharp and complete carina, the humeral angles sharply rectangular. Primary rows impressed, with rather scattered, round, well defined punctures, of which there are about 22 to 25 in the fourth row; all rows sharply impressed also on apical declivity and reaching the apex of elytra. Secondary intervals polished, much broader than the primary rows, distinctly convex, slightly more strongly so on lateral portions. Pseudopleural crest complete, reaching the apex of elytra, entirely exposed dorsally, but just visible from above behind middle; the justa-pseudopleural canaliculation distinct and slightly broadened basally. Pseudopleura smooth, leaving exposed a portion of the ventrally reflected ninth interval on posterior two-thirds, but broader than the latter. Sides of metasternum and episternum with fine and sparse punctures. Abdomen with extremely fine and scattered punctures, longitudinally wrinkled on proximal three sternites; the anal sternite strongly marginate. The intermediate and posterior tibiæ with sinuate outer contours, the upper surface of the former shallowly sulcate, that of posterior tibiæ compressed and evenly convex. In the ♂ the legs weakly dimorphic; the anterior tarsi very faintly dilated, soleate below, only about as broad as the preapical segment of antennæ or a third the width of the apex of anterior tibiæ; the intermediate tarsi not distinctly soleate below; the anterior tibiæ simple, not excavate underneath, with straight inner contours; the intermediate tibiæ with straight inner contours, but with scattered, slightly squarrose hairs on distal half of underside; the underside of the straight posterior tibiæ with a fringe of erect, rather long and dense, yellowish hairs on distal three-quarters, growing in length towards the apex; femora simple, with polished and practically impunctate lateral outer surfaces.

Dimensions. — Length 9 to 10 $\frac{1}{2}$ mm, width 4 $\frac{1}{2}$ to 5 mm.

Distribution. — Eastern Transvaal. — Nelspruit, I.1939, R. F. LAWRENCE (3 ♂, 1 ♀, types S.A.M.).

Relationship. — Very well distinguished from the two known species of *Eviropodus* [viz. *E. alternans* (FÄHRÆUS) (Pl. XIX, fig. 3, Pl. II, fig. 2) and *E. funebris* (MULSANT & REY)] by the entirely immarginate base of pronotum and its smooth cuticle. In all *Eviropodus* the pronotum is distinctly punctured at least on lateral portions and the base is sharply and entirely carinate.

Dedication. — Named in honour of its discoverer, Dr. R. F. LAWRENCE, former director of the Natal Museum in Pietermaritzburg.

[Eviropodus clanceyi n. sp.] (1).

(Pl. XIX, fig. 4.)

On account of the entirely carinate base of pronotum related to *E. alternans* and *E. funebris*, but from both species readily distinguished by the subsulcate, broad primary rows on elytra, composed of dense, coarse, slightly transverse punctures, distinctly impinging the adjacent secondary intervals; the strongly convex, laterally and apically subcostate secondary intervals; and by the anterior femora in the ♂, being furnished with a fine fringe of hairs on inner lateral edge. In both the compared species the primary rows are sharply impressed, but narrow and composed of fine punctures which do not impinge the secondary intervals; the latter are much broader than the primary rows and vary from almost flat to moderately convex; the anterior femora are bare below in the ♂.

In the remaining characters the new species is very similar to *E. alternans*, but of more slender shape of body, the pronotum is polished, with very fine and sparse punctures on disc, coarsely and rugosely punctured along sides, the justa-lateral canaliculation of sides is almost absent, the base of elytra is sharply carinate, the humeral angles rectangular, and the legs in the ♂ agree with those of *E. lawrenceus*, except for the anterior femora, the sparsely but distinctly punctured outer lateral surfaces of femora, and the sulcate upper surface of posterior tibiae.

Dimensions. — Length $9 \frac{1}{4}$ to $10 \frac{1}{2}$ mm, width $4 \frac{1}{4}$ to $4 \frac{3}{4}$ mm.

Distribution. — Central-western Natal and northern part of the South-eastern Cape Province. — Estcourt, 1894, HAVILAND (2♂♂, 1♀, types S.A.M.); Mount Frere, 1892, A. MARSHALL (1♂, S.A.M.).

Dedication. — Named in honour of Dr. P. A. CLANCEY, director of the Museum and Art Gallery, Durban.

[Zophodes fitzsimonsi n. sp.]

(Pl. XX, fig. 2; Pl. II, fig. 3; Figs. 265, 266.)

Black, weakly shiny to dull. Head above densely rugose. Epistomal emargination deep. Genæ angularly projecting outwards beyond ocular outlines. Mentum with practically concealed lateral wings; the median section slightly transverse, with the sides weakly dilated in a straight line towards the very faintly rounded apical margin; the surface rugosely sculptured, with broad, plane median convexity which is separated from sides by an elongate concavity, and with slightly depressed apical portion. The antennæ short, scarcely as long as the head is broad, with the four

(1) Erroneously *clanseyi* on Plate XIX, fig. 4.

preapical segments strongly dilated and about twice as broad as long. Pronotum broadest at about middle or slightly behind middle, one and a half to almost one and two thirds times as broad as long, flattened discally, covered very densely with coarse, partially confluent punctures, becoming rugose on lateral portions. Anterior margin rather deeply emarginate, with produced anterior angles, very finely and entirely carinate. Sides distinctly narrowed in a straight line towards base; lateral carina very fine, sharp, scarcely stronger than the anterior or basal carina, considerably narrower than the third antennal segment; justa-lateral canaliculation rather deep, conspicuous, of equal width, much broader than the lateral carina, but with rugose background. Base very shallowly emarginate, entirely, but very finely carinate. Prosternum densely covered with coarse, round, somewhat asperate, often confluent punctures; episternum shiny, with sparse, strong punctures; intercoxal apophysis produced, with immarginate, subtuberculate apex. Elytra short, slightly broader than pronotum, subparallel, broadly rounded apically, with sharply carinate lateral two-thirds of base and sharply rectangular humeral angles which are demarcated from sides by a minute posthumeral constriction of the latter. Primary rows narrowly impressed, but badly defined, without well marked punctures; the secondary intervals covered with an extremely dense, rugose punctation which is only slightly finer than that on pronotum, much broader than primary rows, flat to moderately convex on disc, becoming strongly convex to subcostate and narrower on apical declivity. Pseudopleural crest complete, reaching the apex of elytra and there extremely fine, dorsally exposed only on basal fifth. Pseudopleura with scattered, extremely fine punctures, leaving exposed a large portion of the ventrally reflected ninth and eighth intervals on posterior five sixths, considerably narrower than the latter posteriorly. Sides of metasternum and the episternum with scattered, strong punctures. Abdomen with very fine, sparse punctures, concentrated on anal sternite; the latter strongly marginate. The anterior tibiae with strongly projecting, sharply pointed outer apical lobe and with sharply and entirely carinate upper surface; the upper surface of intermediate and posterior tibiae broadly sulcate, with sharply edged lateral margins, and the outer contours sinuate in front of the prominent, pointed apical angles. In the ♂ (fig. 265) the tarsi non-dimorphic, the anterior ones very small; the anterior tibiae with sparsely denticulate outer contours, and the inner contours with small, pointed, postmedian tooth, thence emarginate and with scattered, elongately setiferous, prominent tubercles, and with a short, prominent apical spine in front of tibial calcaria; the intermediate tibiae straight, with sparse, elongately setiferous, prominent tubercles and a minute, prominent spine apically in front of tibial calcaria; the posterior tibiae strongly curved and dilated on distal half, covered with a broad stripe of dense, long, semi-erect, yellowish hairs on underside, with the inner contours provided with

scattered, minutely dentiform, setiferous tubercles and a small apical spine in front of calcaria, directed backwards as are the latter; the underside of all femora with sparse, very short and fine, yellowish hairs proximally.

Ædeagus. — Simple. The apicale elongate, with the sides narrowing in a straight line towards the apex; the parameres divided, with straight and narrowly obtuse apices. The basale not quite twice as long as the apicale.

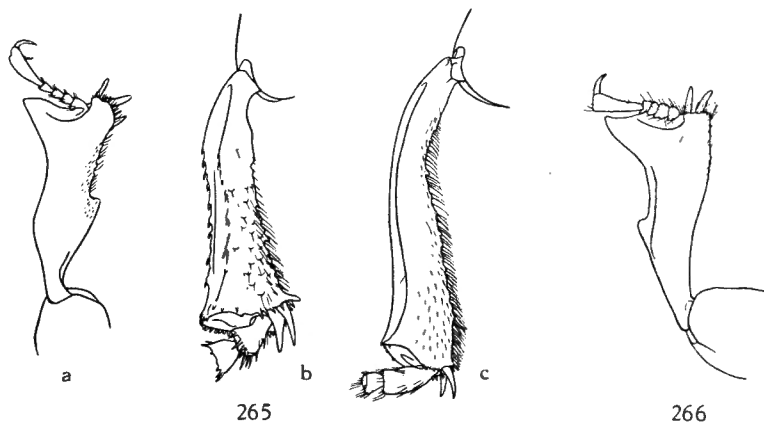


FIG. 265. — *Zophodes fitzsimonsi* n. sp. (a: anterior tibia with tarsus of ♂; b: intermediate tibia of ♂; c: posterior tibia of ♂). — FIG. 266. — *Zophodes tristis* FÄHRÆUS, anterior tibia with tarsus of ♂.

Dimensions. — Length $8 \frac{3}{4}$ to $10 \frac{1}{4}$ mm, width 4 to 5 mm.

Distribution. — Central-southern Transvaal. — Common at Pretoria and surroundings. The types, VIII.1951, collected by myself in the backyard of the Transvaal Museum, T.M.

Relationship. — Sharply separated from the only known species of *Zophodes*, viz. *Z. tristis* FÄHRÆUS (Pl. XX, fig. 1), by the much less convex body, the absence of a median tooth on upper surface of anterior tibiæ, the less transverse pronotum, the broad justa-lateral canaliculation of pronotal sides (practically absent in *tristis*), the rugose punctation on secondary intervals of elytra (with separated, round punctures in *tristis*) and the different formation of the legs in the ♂. In *Z. tristis* (fig. 266) the inner contours of anterior tibiæ are inermous, very slightly arcuate and dilated on distal half, there with a sparsely serrate carina, but with a similar, only smaller apical spine in front of calcaria; the intermediate tibiæ with a very small, almost microscopically short apical spine; the posterior tibiæ with the inner contours curved, but not dilated distally, without apical spine, but with numerous, elongately setiferous, small, prominent tubercles; the underside of posterior tibiæ without stripe of dense hairs.

I know *Z. tristis* only from the South-western Transvaal (Lichtenburg and Ventersdorp Districts).

Dedication. — Named in honour of Dr. V. F. FITZSIMONS, director of the Transvaal Museum, Pretoria.

[**Melanopterus podagricus** n. sp.]

(Pl. XX, fig. 4; Figs. 267, 269, 274.)

Black. Upper surface shiny. Head above polished, with microscopically fine punctures. Lateral wings of mentum entirely concealed by the median section; the latter about as broad as long, with the sides moderately dilated in a straight line towards the rounded and medially slightly incised apical margin; the sides obtusely and broadly edged, the apical margin carinate laterally; the surface with broad, obtusely and obsolete carinate median convexity and moderately depressed apical quarter. The inner angle of the mandibular ridge of postgenal margin produced into a long, spiniform and pointed tooth (ventral aspect, fig. 267). Antennæ slender, with rather weakly dilated and compressed distal segments, of which only the two preapical segments are moderately transverse. Pronotum broadest at about middle, not quite one and a half times as broad as long; polished and without discernible punctation. Anterior margin rather deeply emarginate, with produced but obtusely rounded anterior angles; the marginal carina almost complete, very briefly interrupted or obsolescent on middle. Sides subparallel on basal two-thirds, but strongly rounded and narrowed just in front of posterior angles; the lateral carina strong, becoming gradually narrowed towards anterior angles, basally not quite as broad as the third antennal segment, considerably narrower anteriorly; justa-lateral canaliculation very fine, narrower than lateral carina, deeper and more distinct basally. Base completely carinate, shallowly emarginate, with the obtusely rounded posterior angles slightly and gradually produced backwards beyond level of middle section. Sides of prosternum densely rugose; episternum smooth, superficially and longitudinally wrinkled; intercoxal apophysis with immarginate and rotundate apex. Elytra broadest behind middle, about as broad as pronotum, with the sides faintly rounded and narrowed towards base, and with obtuse, non-prominent humeral angles. Base immarginate. Primary rows extremely fine, slightly impressed, very fine to evanescent in front of apex of elytra, composed of fine, somewhat elongate punctures, of which there are about 40 to 45 in the fourth row; secondary intervals polished, appearing as if impunctate, much broader than the primary rows, with superficially, transversely uneven cuticle. The pseudopleural crest complete, reaching the apex of elytra, separated from discal convexity by a distinct justa-lateral canaliculation which is slightly dilated basally and preapically; both the pseudopleural crest together with the justa-lateral canaliculation entirely exposed dorsally. Pseudopleura smooth, occupying the entire ventrally reflected portion of elytra. Sides of metasternum with

coarse, substriolate sculpture; episternum finely, sparsely punctured. Abdomen with fine, rather scattered punctures; the three proximal sternites longitudinally wrinkled, the anal sternite strongly marginate. The upper surface of intermediate tibiae flattened and spinose on lateral edges, that of posterior tibiae compressed and evenly convex. In the ♂ the legs very strongly dimorphic (fig. 274). The anterior and intermediate tarsi very strongly dilated, with entire soleae below, the anterior tarsi about as broad as the apex of anterior tibiae and almost four times as broad as the preapical

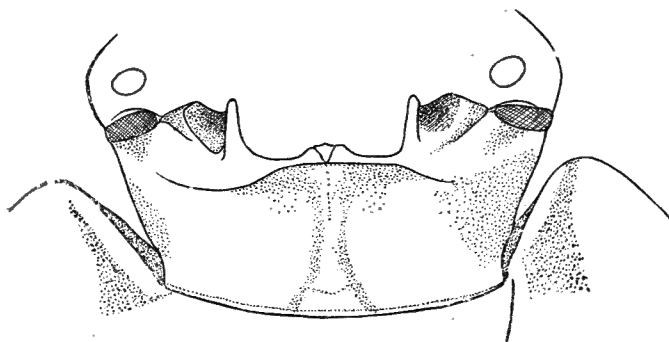


FIG. 267. — *Melanopterus podagricus* n. sp.

Postgenal margin of under surface of head, with the spiniform inner angles of mandibular ridge.

segment of antennae; the anterior tibiae short, with practically straight outer contours, but with excavate underside, their inner contours with strongly prominent, large and sharply angular premedian tooth, thence straight, but with long, transversely projecting, apically attenuate spine between middle and apex, and with the apical angle produced into an inwardly bent, strong tooth; the longer of the spurs of calcaria of anterior tibiae digitiform, enlarged, with obliquely cut apex; the intermediate tibiae of peculiar shape, with the upper surface strongly constricted on basal half, there with the arcuate contours of the dilated inner lateral surface projecting beyond the inner contours of upper surface, and with strongly arcuate, dilated and projecting inner lateral carina of upper surface on distal half; the underside of intermediate tibiae broadly flattened and smoothed, the inner contours strongly, angularly dilated postbasally, straight on median third, obliquely cut on apical third; the underside of the straight posterior tibiae with narrow stripe of a subtomentose, yellowish pilosity on distal two-thirds; the anterior femora with very large, triangular, pointed and dentiform dilation of apical third of inner carina on underside, with a dense brush of yellowish hairs on the two proximal thirds of the latter and densely pilose on proximal half of underside; the underside of the simple intermediate and posterior femora with fine, short, sparse yellowish hairs proximally.

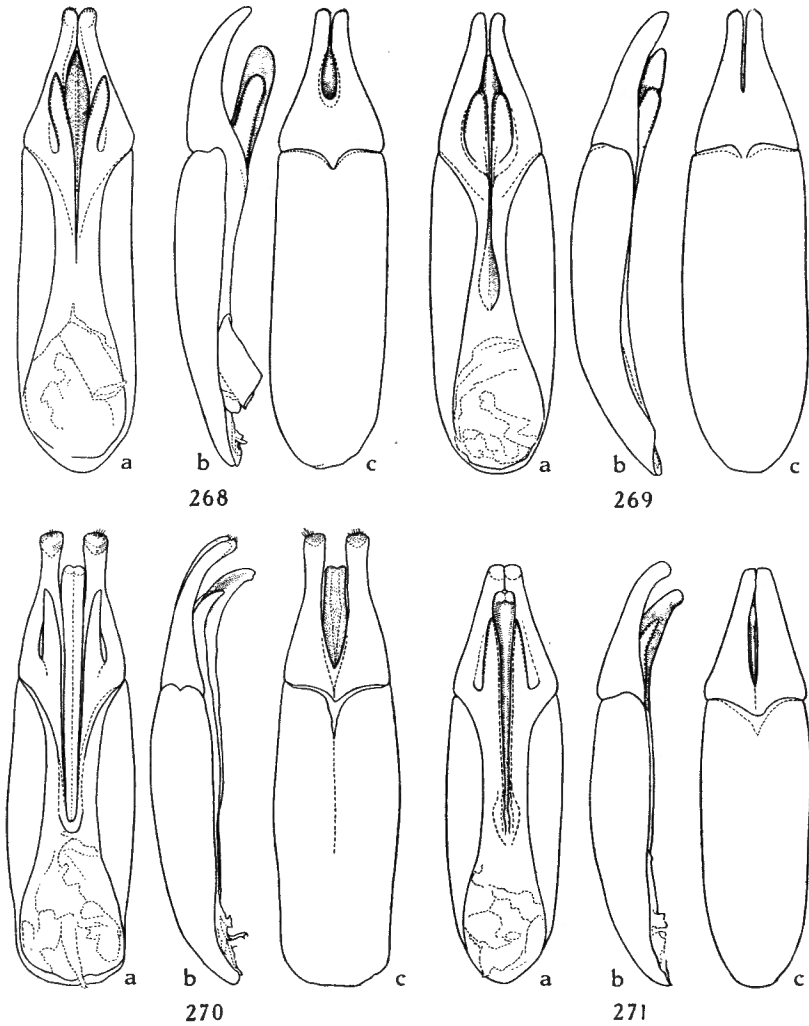
Ædeagus (fig. 269). — Apicale short and slender, with the sides continuously converging towards apex; the parameres deeply divided on distal two-thirds, with slightly gaping, obtuse, straight and minutely demarcated apices. Apical portion of penis and lacinia exposed. Basale about three times as long as apicale.

Dimensions. — Length 16 $\frac{1}{2}$ to 17 $\frac{1}{2}$ mm, width 7 $\frac{3}{4}$ to 8 $\frac{1}{4}$ mm.

Distribution. — Southern part of the South-western Cape Province. — Caledon District: Hermanus, 1902, R. LIGHTFOOT (2♂♂, 1♀, types S.A.M.); Bredasdorp District: De Hoop Vlei, 20 m E of Bredasdorp, 1.1951, P. BRINCK & G. RUDEBECK (1♀, U.L.).

Relationship. — Among all the Platynotina in general readily distinguished by the peculiar structure of the mandibular teeth of postgenal margin. Phylogenetically *M. podagricus* belongs to the *marginicollis* group of *Melanopterus*, characterized by the subtomentose stripe of yellowish hairs on the underside of posterior tibiæ in the ♂. This group is composed of the four known species *M. marginicollis* MULSANT & REY (Pl. XXI, fig. 2), *M. spinipes* (MULSANT & REY) (Pl. XXI, fig. 1), *M. amaroides* FÄHRAEUS (Pl. XXI, fig. 3) and *M. trivialis* FÄHRAEUS (Pl. XXI, fig. 4). From all these species *M. podagricus* is strongly differentiated by the mandibular teeth of postgenal margin (the mandibular ridge is entirely inermous and transversely edged in the compared species), the structure of mentum, the basally narrowed sides of pronotum (which are straight and subparallel in front of posterior angles in the compared species), the obtuse humeral angles of elytra (sharply rectangular in the compared species), the dentiform apical dilation of inner edge of underside of anterior femora in the ♂, as well as by the formation of legs in the ♂ in general. Armatus anterior tibiæ are found in the ♂ of *M. marginicollis* (fig. 272) and *spinipes* (fig. 273), whereas the inner contours of anterior tibiæ are simple and inermous in the ♂ of *M. amaroides* and *M. trivialis*. The ♂ of *M. marginicollis* differs furthermore from the ♂ of the new species by the absence of a premedian tooth on inner contours of anterior tibiæ and the simple, subparallel contours of the sides of upper surface of intermediate tibiæ; the ♂ of *M. spinipes* (ædeagus fig. 268) by the presence of a basal spine on underside of posterior femora, the distally dilated inner contours of posterior tibiæ, the only weakly arcuate and projecting inner edge of upper surface of intermediate tibiæ, as well as by the similar but modified formation of inner contours of anterior tibiæ, in which there is a very large, triangular median tooth, an apically bent, long and transversely projecting preapical spine, but a simple and non-prominent apical angle.

M. spinipes, *amaroides* and *trivialis* occur in the Port Elizabeth- and Uitenhage Districts, whereas *M. marginicollis* is known to me from the districts of Caledon, Bredasdorp, Riversdale, Mossel Bay, Oudtshoorn and Knysna.



FIGS. 268 to 271. — Aedeagus of :

268 : *Melanopterus spinipes* (MULSANT & REY). — 269 : *Melanopterus podagricus* n. sp.

270 : *Melanopterus inga* n. sp. — 271 : *Melanopterus varus* n. sp.

a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

[*Melanopterus inga* n. sp.]

(Figs. 270, 275.)

Upper surface moderately shiny. Head above with rather fine, dense punctures. Genæ subparallel, only slightly projecting outwards beyond ocular outlines. Lateral wings of mentum very narrowly exposed; middle section about as long as broad, the sides edged and weakly dilated in a straight line towards the rounded and medially emarginate apical margin; the surface of middle section very densely, rugosely punctured, with very broad, subcarinate median convexity on proximal two-thirds and rather strongly and transversely impressed apical quarter. Antennæ slender, with moderately dilated, compressed four preapical segments, of which the penultimate segment is about twice as broad as long. Pronotum flattened, broadest at about middle, slightly more than one and a half times as broad as long, with fine, rather scattered, more or less conspicuous punctures on disc, but with a broad area of coarse, rugosely confluent punctation along sides, expanding also to anterior margin as well as base. Anterior margin moderately emarginate, with broad and complete marginal carina. Sides practically subparallel on posterior half; the lateral carina strong, but narrowing towards anterior angles, on the broadest point about as broad as the third antennal segment; justa-lateral canaliculation obsolescent, densely rugose as are the lateral portions of discal convexity. Base subtruncate, with the posterior angles inconspicuously produced backwards; marginal carina complete and strong. Sides of prosternum with dense, asperate punctures; episternum very sparsely, finely punctured, with the cuticle forming longitudinal to oblique wrinkles; intercoxal apophysis obtusely triangular apically. Elytra exactly subparallel, as broad as the pronotum, with sharply rectangular humeral angles and subcarinate prebasilar edge. Primary rows deeply impressed, lineate on middle of disc, broadly sulcate on sloping lateral and apical portions, composed of very dense, fine, badly defined punctures which become obsolescent on posterior portion; these punctures impinge very finely the margins of secondary intervals. Secondary intervals with extremely fine, microscopical and sparse punctures, appearing as if smooth, convex to subcostate laterally and apically, much broader than the primary rows on disc, but from about as broad as the latter to considerably narrower on the lateral and apical portions. Pseudopleural crest entire, reaching the apex and exposed dorsally; the justa-lateral canaliculation slightly broadened basally. Pseudopleura smooth, leaving exposed a very narrow portion of the ventrally reflected ninth interval on apical third. Sides of metasternum slightly rugose on anterior half, the episternum with rather fine, dense punctures, changing to granules on anterior half. Abdomen with fine punctures and longitudinal wrinkles; the anal sternite strongly marginate. The upper surface of anterior tibiæ edged apically, with rounded and not

demarcated outer apical angle; that of intermediate tibiae strongly sulcate, and the posterior tibiae compressed, with evenly convex and smooth upper surface. In the ♂ only the anterior tarsi moderately dilated and soleate below, the intermediate tarsi simple, the former only slightly more than half the width of the apex of anterior tibiae, but about twice as broad as the penultimate antennal segment; the underside of anterior tibiae broadly smoothed and with distal cavity; the inner contours of anterior tibiae

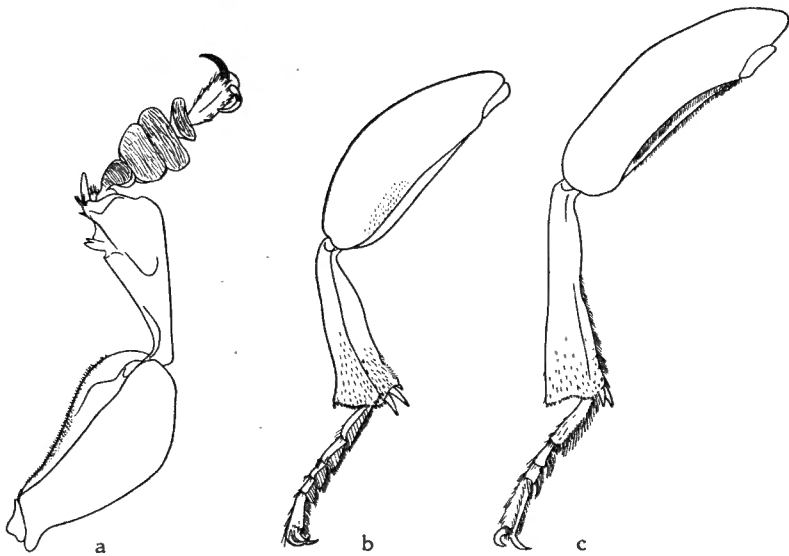


FIG. 272. — *Melanopterus marginicollis* MULSANT & REY.

a : front leg of ♂; b : intermediate leg of ♂; c : hind leg of ♂.

(fig. 275) broadly, rather briefly emarginate on apical third, but the proximal delimitation of emargination sharply angular; the inner contours of intermediate tibiae straight, with small, transversely projecting apical spine; the posterior tibiae with gradually and arcuately dilated distal half of inner contours, and a stripe of yellowish hairs on distal two-thirds of underside, with the hairs growing in length and becoming squarrose towards the apex; the underside of all femora with strong, distally more or less extending brush of yellowish hairs.

Ædeagus (fig. 270). — Large. The parameres of apicale divided, but broadly gaping on about distal four-fifths, with weakly narrowing sides and subtruncate, rather broad, laterally subparallel and well curved apices. Ventral groove very broad, leaving entirely exposed the penis and lacinia; penis compressed, with the obtuse apex curved in the same ventral direction as are the apices of parameres; lacinia a little shorter than penis, com-

pressed, with very sharply pointed apices which are slightly curved outwards. Basale subparallel, as broad as the base of apicale, a little more than twice as long as apicale.

Dimensions. — Length 16 to 17 mm, width 7 to 8 mm.

Relationship. — Agreeing with the other species of the *M. marginicollis* group in the pilose underside of posterior tibiæ in the ♂, but readily recognized by the broad, rugose area of sides of pronotum (the lateral portions of discal convexity of pronotum are smooth to sparsely punctured in *M. marginicollis*, *spinipes*, *amaroides*, *trivialis* and *podagricus*), the laterally and apically broadly sulcate primary rows of elytra (fine and lineate in the compared species) and in the ♂ by the non-dilated intermediate tarsi, the anterior tarsi which are much narrower than the apex of anterior tibiæ and the distally emarginate, but non-armatus inner contours of anterior tibiæ [in all the compared species the intermediate tarsi are distinctly dilated and soleate below, the anterior tarsi are about as broad as the apex of anterior tibiæ and the inner contours of the latter are either armatus (in *marginicollis*, *spinipes* and *podagricus*), or simple, straight and without distal emargination (*amaroides* and *trivialis*)].

Distribution. — South-eastern Cape Province. — East London, 1915, R. LIGHTFOOT (7 spec., types S.A.M.).

Dedication. — Named in honour of Mrs. INGA RUDEBECK, technical assistant to the Entomological Department of the Transvaal Museum.

[*Melanopterus varus* n. sp.]

(Pl. XXII, fig. 1; Figs. 271, 276.)

Very closely related to, and agreeing with, *M. inga* in most of particulars. Readily distinguished as follows: — Body of larger size, upper surface more shiny, the elytra in particular polished. Disc of pronotum with scattered, but strong and conspicuous punctures; sides very slightly narrowed towards base posteriorly. Elytra more flattened, with slightly less broadly sulcate primary rows on sides. In the ♂ the legs similar, but sharply separated by the more strongly dilated anterior tarsi which are about two-thirds the width of the apex of anterior tibiæ; the inner contours of the latter (fig. 276) without angularly demarcated distal emargination, but strongly and continuously dilated on distal half and with slightly constricted, subparallel apical portion; the intermediate and posterior tibiæ distinctly curved basally. Ædeagus (fig. 271) very similar, the sides of apicale slightly sinuate and the parameres more approximated.

Dimensions. — Length 18 $\frac{1}{4}$ to 20 $\frac{1}{4}$ mm, width 8 $\frac{1}{2}$ to 10 mm.

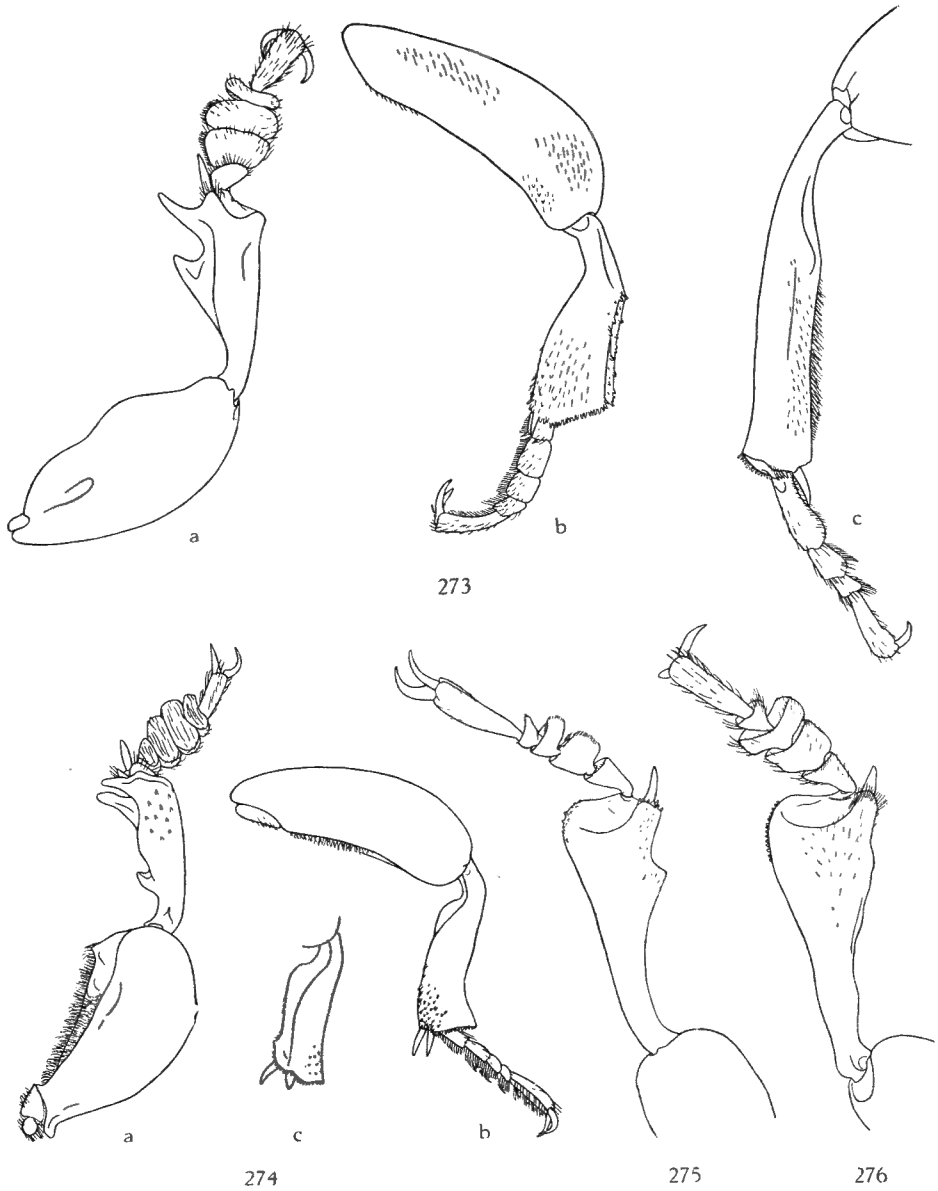


FIG. 273. — *Melanopterus spinipes* (MULSANT & REY) (a : front leg of ♂; b : intermediate leg of ♂; c : hind leg of ♂). — FIG. 274. — *Melanopterus podagricus* n. sp. (a : front leg of ♂; b : intermediate leg of ♂ [inner lateral surface]; c : intermediate tibia of ♂ [diagonal view]). — FIG. 275. — *Melanopterus inga* n. sp., anterior tibia with tarsus of ♂. — FIG. 276. — *Melanopterus varus* n. sp., anterior tibia with tarsus of ♂.

Distribution. — Eastern part of the Central-southern Cape Province. — Uitenhage District: Dunbrody, 1897, J. O'NEIL (1♂, holotype, S.A.M.), same locality (2♂♂, 1♀, allotype I.R.); Uitenhage (2♂♂, D.M.); Enon, III.1912, J. O'NEIL (2♂♂, S.A.M.).

[**Melanopterus dilatipes** n. sp.]

(Pl. XXII, fig. 2; Fig. 277.)

Upper surface of body polished and shiny. Head above with fine, very dense punctures. Lateral wings of mentum concealed; middle section slightly transverse, carinate peripherally, with broad and plane median convexity on basal two-thirds, strongly depressed on apical third. Antennæ only slightly longer than the head is broad, with strongly dilated, compressed four preapical segments. Pronotum broadest at about middle, almost two-thirds broader than long, uniformly covered with very fine, sparse, partially hardly perceptible punctures, slightly concentrated and more distinct on middle of anterior portion. Anterior margin moderately emarginate, entirely carinate. Sides exactly subparallel on posterior half; the lateral carina slightly dilated posteriorly and there about as broad as the third antennal segment, but much broader than anteriorly; the justa-lateral canaliculation extremely fine, becoming obsolescent anteriorly. Base completely marginate, very shallowly emarginate to practically subtruncate. Underside of prothorax with very fine, sparse punctures; apex of intercoxal apophysis produced, broadly rounded and sharply marginate. Elytra as broad as pronotum; exactly subparallel, their lateral contours in line with those of pronotum, with immarginate base and rectangular, non-prominent humeral angles. Primary rows rather fine, becoming more strongly lineate on lateral portions, with distinct, fine punctures, of which there are about 35 in the fourth row; secondary intervals smooth, with extremely fine punctures, much broader than the primary rows, flat to very weakly convex on sloping lateral and apical portions. Pseudopleural crest becoming concealed behind middle or there indistinct (dorsal aspect). Pseudopleura almost smooth, leaving exposed a narrow portion of the ventrally reflected ninth interval posteriorly. Sides of metasternum with rugose sculpture; the episternum densely, coarsely substrigose. Abdomen finely punctured, the anal sternite with strong margination. In the ♂ (fig. 277) only the anterior tarsi very strongly dilated and with entire soleæ below, slightly narrower than the apex of anterior tibiæ and about three times as broad as the preapical segment of antennæ; the inner contours of anterior tibiæ almost simple, with only very weakly indicated postmedian dilation; the intermediate tibiæ short and S-curved, their inner contours strongly curved basally, thence straight, but obliquely cut on apical fifth, with the underside of the latter bearing a conspicuous, subtomentose patch of yellowish, sessile hairs; posterior tibiæ strongly compressed, the inner contours of upper surface conspicuously dilated behind basal third, with excavate underside,

furnished with a narrow stripe of subsquarrose, very dense, yellowish hairs on distal two-thirds; the underside of all femora with a more or less developed brush.

Ædeagus. — Very similar to *M. amaroides* FÄHRAEUS.

Dimensions. — Length 12 to 14 mm, width 5 ½ to 6 ¼ mm.

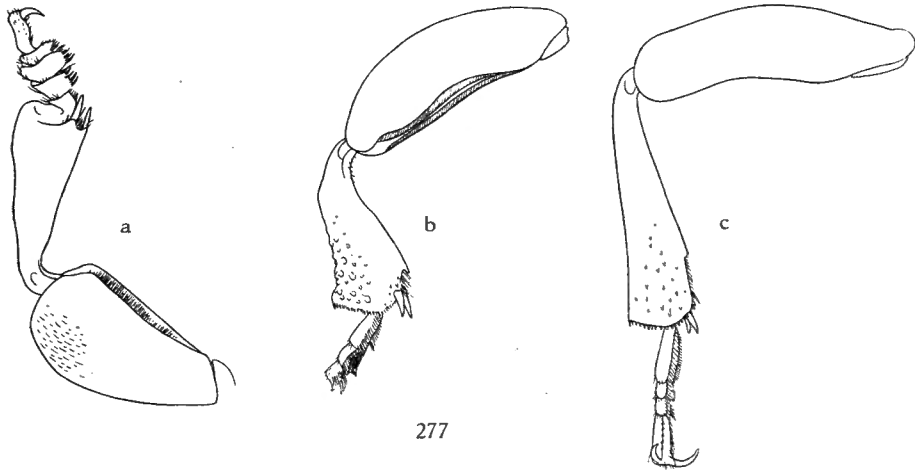
Distribution. — Eastern part of the Central-southern Cape Province. — Albany District: Farm Resolution near Fort Brown, VI.1928, A. WALTON (14 spec., types T.M.); Grahamstown, VII.1910, I. R. IVY (5 spec., T.M.), XII.1892 (2 spec., S.A.M.); Sheldon, VIII.1950, F. ZUMPT (2 spec., Museum Frey).

Relationship. — On behalf of the pilose underside of posterior tibiæ in the ♂ belonging to the *marginicollis* group and allied with those species having inermous, practically simple anterior tibiæ in the ♂ (viz. *M. amaroides* and *M. trivialis*). From both these species readily distinguished by the rather abrupt postbasal dilation of inner contours of upper surface of posterior tibiæ and the course of inner contours of intermediate tibiæ in the ♂; from *amaroides*, with which the new species agrees in the formation of underside of intermediate tibiæ in the ♂, furthermore by the densely substrigose sculpture on episternum of metasternum and in the ♂ by the distinctly arcuate and projecting inner edge of upper surface of intermediate tibiæ (subparallel with the outer edge in *amaroides*); from *trivialis* in the ♂ by the absence of a supplementary stripe of subtomentose yellowish hairs along inner edge of underside of intermediate tibiæ and the fine stripe on underside of posterior tibiæ (which is very broad, composed of dense, long and squarrose hairs in *trivialis*).

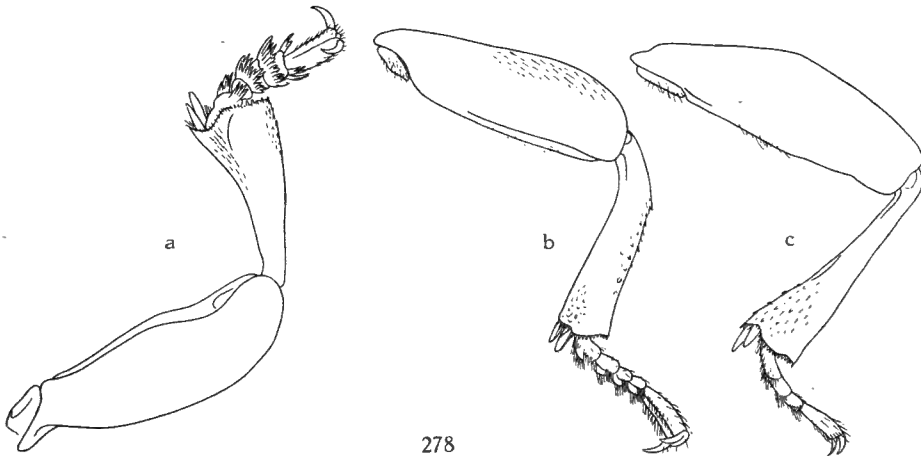
[**Melanopterus amicus** n. sp.]

(Pl. XXII, fig. 3; Fig. 280.)

Agreeing with *M. amaroides*, *trivialis* and *dilatipes* in the pilosity on underside of posterior tibiæ and the simple inner contours of anterior tibiæ in the ♂, but readily distinguished from these species as follows: — The upper surface of body more strongly convex and only weakly shiny. Pronotum more strongly transverse, with distinct, posteriorly dilated and rugose justa-lateral canaliculation of sides; the latter slightly rounded and narrowed towards base. The elytra not subparallel, but faintly rounded and narrowed towards the non-prominent humeral angle, with laterally subsulcate primary rows and strongly convex to subcostate secondary intervals. In the ♂ (fig. 280) the anterior tarsi usually less strongly dilated and only half the width of the apex of anterior tibiæ; the intermediate tibiæ less strongly dilated towards apex, not distinctly S-shaped, with subparallel upper contours and on underside with a fine subtomentose stripe on distal half of inner edge but without apical patch; the inner contours of intermediate tibiæ straight from basal curvature to apex; the posterior tibiæ dilated in a



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FIG. 277. — *Melanopterus dilatipes* n. sp.FIG. 278. — *Melanopterus exaratus* (MULSANT & REY).

a : front leg of ♂; b : intermediate leg of ♂; c : hind leg of ♂.

straight line towards apex, but with distinctly sulcate and broadened upper surface; the underside of femora with only inconspicuous pilosity or bare.

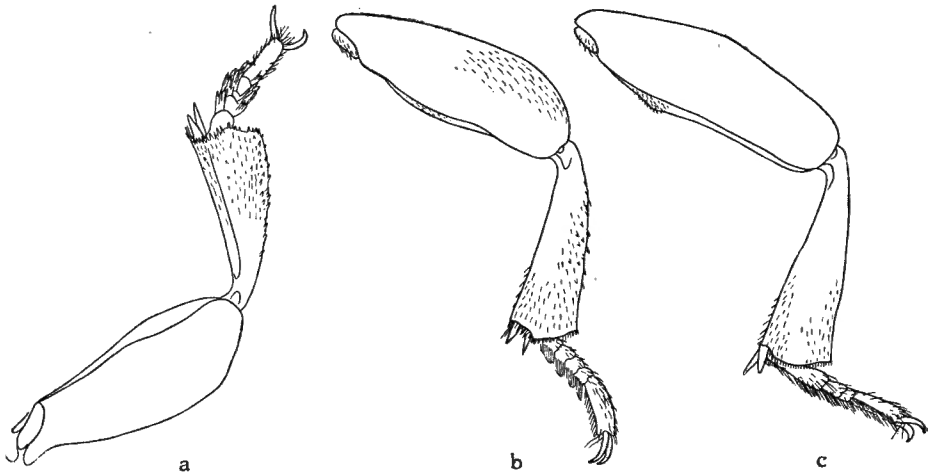
Dimensions. — Length 11 to 15 mm, width $5 \frac{3}{4}$ to $7 \frac{3}{4}$ mm.

Distribution. — Central-southern Cape Province. — George District: George, VIII.1931, C. THORNE (15 spec., types S.A.M.), I.1931, K. H. BARNARD (1 spec., S.A.M.), IX.1948, M. V. GRENN (1 spec., U.St.), III.1896 (5 spec., S.A.M.); Mossel Bay District: Robinson's Pass, H. BRAUNS (2 spec., T.M.); Willowmore District: Willowmore, XII.1920, H. BRAUNS (1 spec., T.M.).

[*Melanopterus incisus* n. sp.]

(Pl. XXII, fig. 4.)

Moderately shiny. Head above with very fine, dense punctures. Mentum as in *M. amicus*. Antennæ slightly longer than the head is broad, with moderately dilated and transverse three preapical segments. Pronotum broadest at about middle, about one and a half times as broad as long, very finely punctured, with the punctures becoming slightly more distinct along

FIG. 279. — *Melanopterus porcus* (MULSANT & REY).

a : anterior leg of ♂ ; b : intermediate leg of ♂ ; c : hind leg of ♂ .

justa-lateral canaliculation. Sides very weakly rounded and narrowed towards base posteriorly; the lateral carina broad, narrowing anteriorly, considerably broader than the third antennal segment and almost as broad as the penultimate segment; justa-lateral canaliculation very narrow, but deep and smoothed, narrowing anteriorly, much narrower than lateral carina. Base sharply carinate, very shallowly emarginate. Sides of prosternum rather densely punctured, episternum with a few fine punctures; apex of intercoxal apophysis produced, broadly rounded to subtruncate, obsoletely marginate. Elytra subparallel, about as broad as pronotum, with slightly obtuse, non-prominent humeral angles. Primary rows very fine, lineate, more sharply impressed on posterior portion of sides, composed of very fine punctures, with about 25 punctures on the discal portion of the fourth row which is uniformly lineate on apical declivity; secondary intervals practically smooth, with the extremely fine

punctures becoming slightly more distinct on apical declivity, much broader than the primary rows, flat discally, very weakly convex apically. Pseudopleural crest becoming indistinct behind middle (dorsal aspect). Pseudopleura as in *M. amicus*. Sides of metasternum and episternum sparsely punctured. Anal sternite strongly marginate. In the ♂ the anterior tarsi rather weakly dilated, soleate below, less than half the width of the apex of anterior tibiæ and about two and a third times as broad as the penultimate segment of antennæ; the under side of anterior tibiæ with small, but deep distal cavity, the inner contours with a small, but strong and abrupt emargination on about apical sixth, angularly delimited proximally; the intermediate tibiæ with subparallel lateral edges of upper surface, the inner contours strongly dilated in a straight line almost to the apex, but briefly subparallel just in front of apical angle; the posterior tibiæ with compressed and evenly convex, smooth upper surface, and with a row of concentrated, but separated, sessile and punctiform bristles on median two-quarters of underside; the underside of all femora granulate, but not or only inconspicuously pilose.

Dimensions. — Length 14 ½ mm, width 7 ½ mm.

Distribution. — Central-southern Cape Province. — Willowmore District: Willowmore, H. BRAUNS (1♂, holotype T.M.).

Relationship. — Belonging to the *M. porcatus* group [*M. porcatus* (MULSANT & REY) (Pl. XXIII, fig. 3), *M. porcus* (MULSANT & REY) (Pl. XXIII, fig. 1) and *M. exaratus* (MULSANT & REY) (Pl. XXIII, fig. 2)] and agreeing with these species in the absence of a subtomentose stripe of hairs on the underside of posterior tibiæ in the ♂. Readily distinguished by the finely lineate primary rows of elytra and the flat to laterally weakly convex, very broad secondary intervals, the smooth and not densely rugose justa-lateral canaliculation of pronotal sides, and in the ♂ by the rather strong, short emargination on apical sixth of inner contours of anterior tibiæ (without such an emargination in the compared species, figs. 278, 279) and the punctiform bristles on underside of posterior tibiæ (bare in the compared species).

[**Melanopterus rugatipennis** n. sp.]

(Fig. 281.)

Upper surface moderately shiny. Head above with extremely fine, rather scattered punctation. Mentum with concealed lateral wings; the middle section about as long as broad, with the sides dilated in an almost straight line towards the subtruncate, finely carinate apical margin; the surface of median section broadly convex, plane and rugosely sculptured

on proximal four-fifths, strongly depressed to transversely excavate on apical fifth. Antennæ with moderately dilated, transverse three to four preapical segments. Pronotum broadest behind middle or often in front of base, about one and a half times as broad as long, with sericeous background of cuticle and extremely fine, rather scattered punctures. Anterior margin moderately emarginate, strongly and completely carinate. Sides

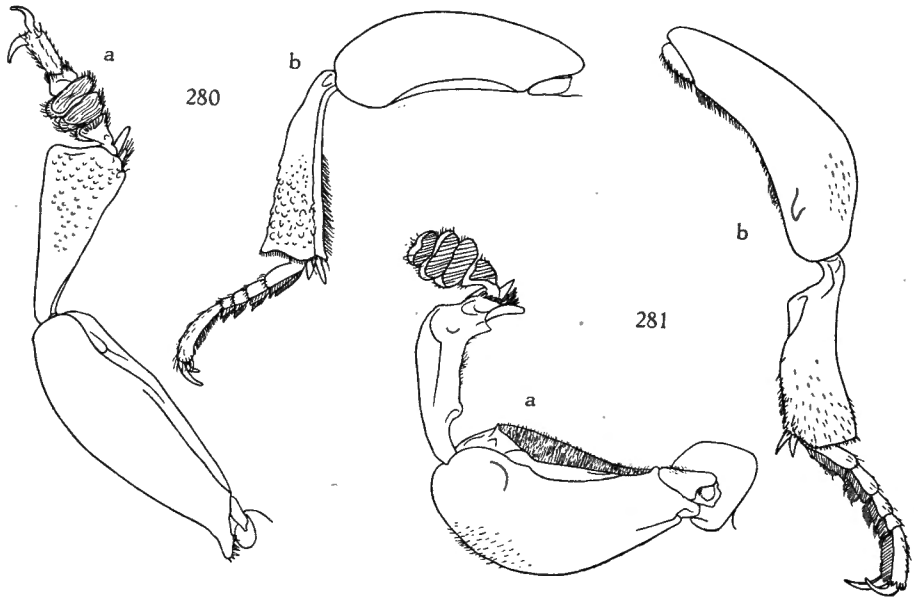


FIG. 280. — *Melanopterus amicus* n. sp. (a : anterior leg of ♂; b : intermediate leg of ♂). — FIG. 281. — *Melanopterus rugatipennis* n. sp. (a : front leg of ♂; b : intermediate leg of ♂).

slightly dilated and rounded from middle towards base, but rounded and narrowed just in front of posterior angles; the lateral carina strongly raised, narrow, of almost equal width, about as broad as the third antennal segment, but considerably narrower than the penultimate segment; justalateral canaliculation deep, narrow, slightly and gradually dilated towards posterior angles, there only a little narrower than the lateral carina, with transversely, sparsely rugose background. Base completely carinate, distinctly bi-sinuate, with the obtuse posterior angles rather strongly produced backwards beyond the straight middle section. Prosternum densely and obliquely rugose on sides; the episternum superficially and longitudinally wrinkled, with a few fine punctures; apex of intercoxal apophysis produced, slightly depressed, rounded and obsolete marginate. Elytra strongly

convex, broadest behind middle and there distinctly broader than pronotum, with the sides slightly narrowed in a straight line towards base. Humeral angles faintly obtuse, very weakly demarcated from sides. Base immarginate, as broad as pronotal base or a little narrower. Primary rows formed by well impressed crenulate lines, without discernible punctures on the background of lines; secondary intervals from moderately to strongly convex on lateral portions, impunctate, much broader than primary rows, densely and rather strongly wrinkled transversely close to the crenulate primary rows, appearing as if transversely rugose. Pseudopleural crest complete, dorsally exposed only on basal and apical quarters. Pseudopleura uneven, leaving exposed a narrow portion of the ventrally reflected ninth interval posteriorly. Sides of metasternum and episternum with rather scattered, strong, round punctures. Abdomen densely and longitudinally wrinkled on proximal three sternites, with extremely fine, sparse punctures, becoming more distinct and more concentrated on preapical and anal sternites; anal sternite strongly marginate. Upper surface of anterior tibiæ sharply edged on distal half, that of intermediate tibiæ broadly sulcate, the upper surface of posterior tibiæ flattened and sometimes with a weak longitudinal impression distally. In the ♂ (fig. 281) the anterior and intermediate tarsi strongly dilated and soleate below, the former distinctly broader than the apex of anterior tibiæ; the anterior tibiæ armatus, with strongly rounded and narrowed, curved distal third of outer contours (in the ♀ the latter are straight, strongly and continuously dilated towards the apical angle) and excavate underside; the inner contours of anterior tibiæ with very strong, sharply angular postbasal dilation, thence strongly emarginate and curved, with a sharp, considerably projecting preapical tooth, and the apical angle produced inwards into a prominent, apically obtuse tooth; the intermediate tibiæ S-shaped, strongly dilated towards the apex, with longitudinally excavate underside, the apical third of the inner edge of upper surface arcuate and projecting, the inner contours with very strong, angular postbasal dilation and slightly and inwardly curved apical angle; the posterior tibiæ simple, very slightly curved; the anterior femora dilated, similarly shaped as in *M. podagricus*, with the apical third of inner edge of underside triangularly dilated and subdentiform, the inner edge provided with a dense fringe of yellowish hairs; the underside of intermediate and posterior femora with fine, rather scattered and adherent hairs proximally.

Ædeagus. — Simple. The sides of apicale continuously converging; the parameres entirely divided, with straight, obtuse and not gaping apices. Ventral groove with exposed penis and lacinia. The basale almost subparallel, slightly broader than the base of apicale, about two and a half times as long as the apicale.

Dimensions. — Length 17 to 19 mm, width $9\frac{1}{4}$ to $10\frac{3}{4}$ mm.

Distribution. — South-western Cape Province. — Caledon District: Babylons Tower, III.1939, Mus. Staff (5 spec., types S.A.M.); Hermanus, 1902, R. LIGHTFOOT (1 spec., S.A.M.); Klein River Mts., II.1954, J. P. STOKOE (1 spec., S.A.M.).

Relationship. — This quite peculiar species belongs to the *M. porcatus* group on account of the bare underside of posterior tibiae in the ♂, but is readily distinguished from *M. porcatus*, *porcus*, *exaratus* and *incisus*

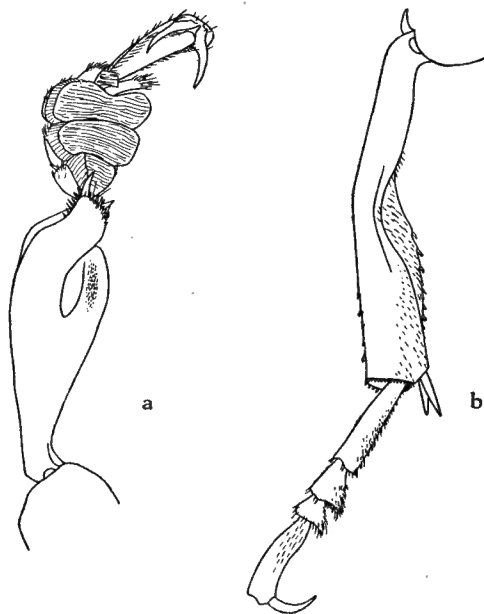


FIG. 282. — *Trigonopus flexipes* n. sp.

a : anterior tibia with tarsus of ♂;
b : posterior tibia with tarsus of ♂.

by the much larger size of body, the rather strongly produced posterior angles of pronotum, the transversely wrinkled and subrugose secondary intervals of elytra, and in the ♂ by the strongly dilated anterior and intermediate tarsi, the remarkably armatus anterior tibiae and the structure of intermediate tibiae and anterior femora. Although very sharply separated from *M. podagricus* by the simple mandibular ridge of postgenal margin and the bare underside of posterior tibiae in the ♂, the new species shows somewhat related to *podagricus* because of the posteriorly narrowed sides of pronotum, similar, though much more developed transverse wrinkles on secondary intervals of elytra and in the ♂ by the rather similar structure of legs.

[*Trigonopus flexipes* n. sp.]

(Pl. XXIV, fig. 2; Fig. 282.)

Very closely allied to *T. capicola* MULSANT & REY and of almost identical shape and sculpture. The upper surface of body more strongly flattened and the legs in the ♂ strongly dimorphic (fig. 282). The anterior tarsi are very strongly dilated, the posterior tibiæ angularly bent inwards and dilated on distal half, and the intermediate tibiæ distinctly curved. In the ♂ of *capicola* the intermediate and posterior tibiæ are simple, straight to inconspicuously curved.

Distribution. — South-eastern Cape Province. — King Williamstown (3♂♂, 4♀♀, types T.M.).

*Transvaal Museum,
Division of Entomology (Coleoptera).
Pretoria, 2 March 1955.*

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