

INSTITUT DES PARCS NATIONAUX
DU CONGO BELGE

INSTITUUT DER NATIONALE PARKEN
VAN BELGISCH CONGO

Exploration du Parc National de l'Upemba

MISSION G. F. DE WITTE

en collaboration avec

W. ADAM, A. JANSSENS, L. VAN MEEL et R. VERHEYEN (1946-1949).

FASCICULE 40

Exploratie van het Nationaal Upemba Park

ZENDING G. F. DE WITTE

met medewerking van

W. ADAM, A. JANSSENS, L. VAN MEEL en R. VERHEYEN (1946-1949).

AFLEVERING 40

II.

TENEBRIONIDÆ
(COLEOPTERA POLYPHAGA)

OPATRINÆ

First part :

PLATYNOTINI, LITOBORINI and LOENSINI

BY

CARLO KOCH (Pretoria)



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(With 8 maps, 282 figures and 35 plates.)

PREFACE ⁽¹⁾

The present work is a Pan African study and forms the second volume to a monograph of the *Tenebrionidæ* of the Upemba National Park, based on the rich material collected during a period of several years (1946-1949) on the expedition by Mr. G. F. DE WITTE. It deals with the three new tribes of *Platynotini*, *Litoborini* and *Loensini* of the subfamily *Opatrinæ*, and introduces a new systematic division into the African *Opatrinæ* in general. The main purpose of the monograph is to make an analysis of the fauna of the Upemba National Park, but, in the case of *Opatrinæ*, it has become necessary to extend its scope to the whole of the African Continent, owing to the lack of seriously based data ; to a certain extent even investigations into European, Indian and Madagascar genera were involved. Hitherto the modern catalogues to *Tenebrionidæ* have recorded

(*) The first article of this series (*Pycnocerini*) appeared in n° 24 of the publications of the « Institut des Parcs Nationaux du Congo Belge », on the exploration of the Upemba National Park.

(1) The present study has been realized thanks to a financial aid of the « Fondation pour favoriser l'Etude Scientifique des Parcs Nationaux du Congo Belge ».

five species of the concerned groups from the Belgian Congo. Together with 50.000 Belgian Congo specimens before me, I have had to include in this revision another 50.000 specimens from Southern, Eastern and Northern Africa, in order to avoid adding to the already existing accumulation



MAP N° 1.

Distribution of *Opatrinæ* in Africa, based on the previously available scientific data.

With the exception of a few tropical localities, all patria indications were restricted to a few general data (printed in capitals).

of detached descriptions. The comprehensive results achieved have brought to light the incorrectness of the hitherto adopted systematics, as well as some new zoogeographic findings, particularly in regard to the determination of the phylogenetic relations between the faunæ of the Belgian Congo and the Southern African Region.

The bringing forth of these results has been made possible by the goodwill of the « Institut des Parcs Nationaux du Congo Belge » and the « South African Council for Scientific and Industrial Research ». In addition I wish to thank the former for having entrusted me with the study of its precious material from the Upemba National Park, and to express my sincere indebtedness to the following institutions : the Transvaal Museum, South African Museum, Musée royal du Congo Belge, Institut royal des Sciences naturelles de Belgique, Coryndon Museum, National Museum of Southern Rhodesia and the Naturhistoriska Riksmuseum at Stockholm. Finally may I be allowed to express my gratitude to Dr. F. V. FITZSIMONS, director to the Transvaal Museum, as well as to Pr. V. VAN STRAELEN, president, and Mr. H. DE SAEGER, secretary to the « Institut des Parcs Nationaux du Congo Belge », for the many facilities extended in connection with the technical side of my work.

SYNOPSIS.

For the first time a revision of the *Opatrinæ* from South of the Sahara is being given, as worked out on the basis of entirely new findings in comparative morphology and detailed chorological data. The incorrectness of the systematics hitherto applied is proved, resulting in the collapse of previous zoogeographic conclusions. The supposed connections between the *Opatrinæ* of the Palæartic Region and those of the Tropical and Southern African Regions are clearly refuted. For the stenotopic tribes there is established the affinity of the Tropical to the Southern African Fauna, while in a wider sense there is shown an evident relationship with the Tropical Faunæ of Madagascar, India and America, and finally the probable existence of an ancient, pre-Saharan Pan African Fauna, as is manifest by the Recent dispersal of *Litoborini*.

THE NEW SYSTEMATICS OF AFRICAN « OPATRINÆ ».

The modern systematics of *Opatrinæ*, as reflected by the world catalogue of GEBIEN, 1938-1942, assumed for the African Continent five tribes, namely the « Asiatic - Southern African » *Platyscelini*, the « South- and West African » *Gonopini*, the « Southern- and Tropical African » *Stizopini*, as well as the *Pedinini* and *Opatrini*, both believed to represent rather indifferent Pan African - Mediterranean - Asiatic groups.

According to the present results, however, the African *Opatrinæ* show a quite different composition and can be sharply divided into the following tribes, without it being necessary to allow for any exceptions in regard to transitional links.

Platynotini KOCH. Including a part of *Gonopini* GEBIEN, a few genera of *Opatrini* GEBIEN, and in addition the greater part of *Pedinini* GEBIEN from

South of the Sahara. From this change it follows that the supposed *Pedinini* from South of the Sahara do not belong to a North-west African-Mediterranean-Palæarctic-Asiatic group, but represent an independent Tropical- and Southern African, Madagascar, American and Indian tribe.

Oncotini KOCH. Southern African. Composed of the « Southern African branch » of GEBIEN's *Platyscelini*, plus parts of the *Gonopini*, *Pedinini*, *Opatrini* and *Helopinini* sensu GEBIEN.

Litoborini ANTOINE. A Pan African tribe of disjunct dispersal, and not an Atlasic element of the Palæarctic Fauna, as believed previously. As a result of LACORDAIRE's cardinal error in the judging of the systematic importance of the dimorphism of legs, its species were mixed up within the tribes *Pedinini*, *Opatrini* and *Helopinini* sensu GEBIEN.

Loensini. A new tribe, formerly placed to the *Pedinini*, is endemic to a small Southern East African area.

Leichenini. A new tribe, having been included in GEBIEN's *Opatrini*. Mediterranean, Indo-Malayan-Australian and Pan-African.

Dendarini ESPAÑOL. Correctly separated from the *Pedinini* GEBIEN by ESPAÑOL. Of similar distribution as the *Pedinini* MULSANT & REY, in the African Continent found in the central and western parts of North Africa.

Pedinini MULSANT et REY. A small part of GEBIEN's palæarctic *Pedinini*. Euro-Mediterranean and Palæarctic-Asiatic, confined in the African Continent to a small area of the north-eastern part of North Africa.

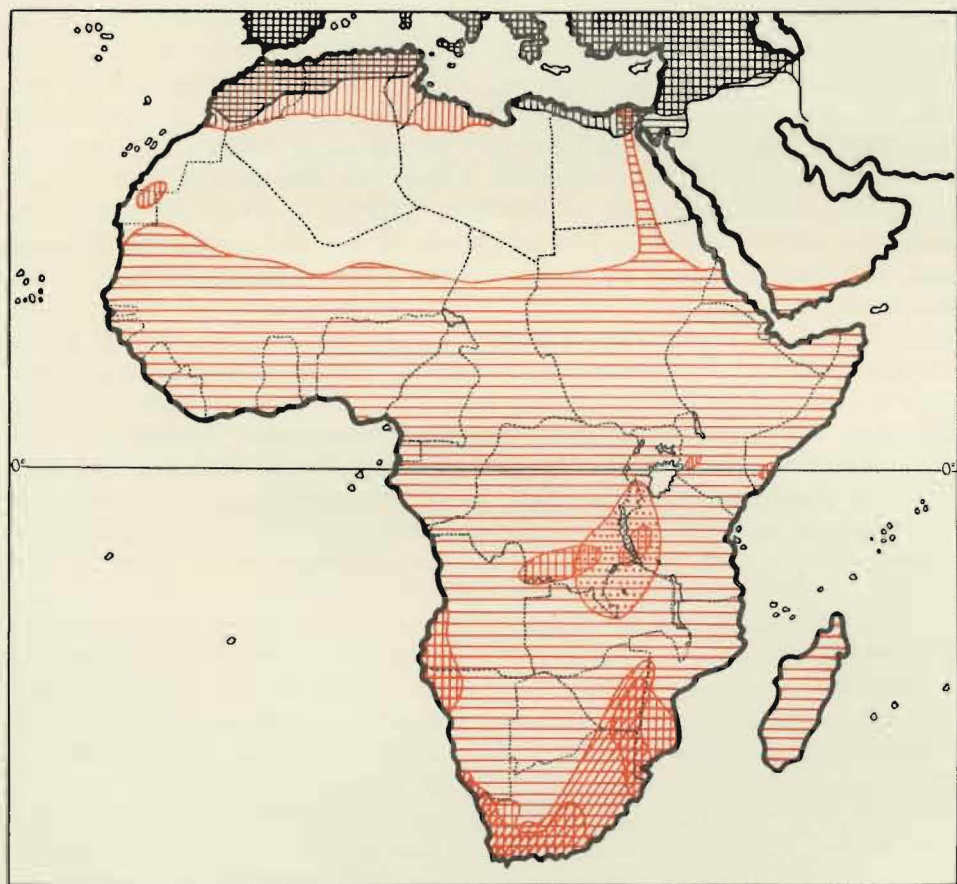
Pythiopini KOCH. An ancient and peculiar tribe, endemic to the western part of the Cape Province and Southern Namib. The only previously known genus, viz. *Meglyphus*, has been listed among the tentyrioid *Stenosini* by GEBIEN.

Melanimini. A new tribe, previously standing within the *Opatrini* GEBIEN. Of presumably world-wide distribution.

Opatrini. In its new conception and as far as the African Fauna is concerned, including the *Stizopini*, large parts of *Opatrini*, some *Gonopini* and *Pedinini* sensu GEBIEN.

Heterotarsini. A newly defined tribe, restricted to *Heterotarsus* of the previous *Heterotarsini* GEBIEN. Tropical African and Indian. The remainder of GEBIEN's *Heterotarsini* genera, ranging over the Tropical zones of the world, will have to be re-studied in regard to their systematic position.

Heterocheirini. A new tribe, composed of a small part of GEBIEN's *Pedinini*. Littoral, of Indo-Malayan-Australian origin, in the African Continent on the shores of Eastern and the eastern part of Southern Africa.



MAP n° 2.

The distribution of the stenotopic tribes of *Opatrinæ* in the African Continent.
 RED : Of Tropical origin. — Horizontal : *Platynolini*; Vertical : *Litoborini*;
 Diagonal : *Oncolini*; Dotted : *Loensini*.
 BLACK : Of Palæarctic origin. — Horizontal : *Dendarini*; Vertical : *Pedinini*.

THE « OPATRINÆ » FAUNA OF THE BELGIAN CONGO.

On comparing map 1, drawn on the basis of the previously available scientific data, with map 2, it can be seen at a first glance that the fauna of *Opatrinæ* from South of the Sahara has nothing in common with that from North of the Sahara and the Sahara itself. Without taking into consideration those tribes, the distribution of which is world-wide (*Leichenini*, *Melanimini* and *Opatrini*), all the other tribes are Tropical or Southern African in their dispersal, except for the ancient and disjunct *Litoborini* which, although of Southern African or Tropical origin, also occupy a relict-like area in Western North Africa. But neither the *Platynotini*, *Oncotini*, *Loensini*, *Pythiopini*, *Heterotarsini* and *Heterocheirini*, nor the *Emmallina*, *Stizopina* and *Stenolamina* of *Opatrini*, cross the northern boundary of the Tropical African Region (with the exception of two species of *Opatrinus* and *Diphyrrhynchus*, which penetrate to a negligible extent into the Palæarctic Region by way of the Nile valley or the shores of the Red Sea, respectively). Of these tribes the *Platynotini*, *Heterotarsini* and *Heterocheirini* extend to the Tropical zones of Asia, Australia and even America (*Opatrinus* of *Platynotini*), while the *Loensini* and *Emmallina* of *Opatrini* are endemic to the Tropical African Region, and the *Oncotini*, *Pythiopini*, as well as the *Stizopina* and *Stenolamina* of *Opatrini*, are Southern African (map 5).

In the composition of the Belgian Congo fauna the following participate : *Litoborini*, *Heterotarsini*, *Loensini*, of the *Platynotini* the opatrinoid, anchophthalmoid and selinoid *Platynotina*, and of the stenotopic subtribes of *Opatrini* the *Emmallina*. But only the opatrinoid *Platynotina* and *Heterotarsini* inhabit there all three Provinces (of which the Belgian Congo is built up), namely the Guinean, Oriental and Zambesi Provinces of the Tropical African Region (map 3). The narrow Belgian Congo stretch of the Oriental Province is characterized by the presence of the genus *Quadrideres* of selinoid *Platynotina*, but all tribes, subtribes and groups suddenly meet with each other south of the central equatorial forest in the Bas-Katanga Guinean savanna and the Haut-Katanga dry forest, where a remarkable concentration of overlapping, heterogeneous elements takes place, particularly in the south-eastern part, in the centre of which the Upemba National Park area is situated. For the greater part, this territory belongs to the Zambesi Province, and outside of this area of zoogeographic concentration the stenotopic tribes of Belgian Congo *Opatrinæ* are poorly developed (cf map 4).

This state of affairs clearly points to a southern orientation of Belgian Congo *Opatrinæ*. In the North there are no relations at all with the Saharan or North African faunæ, and even the participation of Trans-Saharan or Ethiopian elements is practically nil. East African elements are abruptly stopped at the Tanganyika fault, extending westwards only



MAP N° 3. — Faunistic map of the African Continent.

- ×××× Boundaries of the Tropical Region.
- Tropical African Region. — I : Sudanese Province; II : Guinean Province; III : Oriental Province; IV : Zambesi Province; V : Ethiopian Province.
- - - - Palæarctic Region. — a : Saharan Province; b : Atlasic Province; c : Mediterranean Province.
- . - . Southern African Region. — 1 : Eastern and Cape Province; 2 : Trans-Bechuana Province; 3 : Karoo- and Kalahari Province; 4 : Namib Province.

in the South into the Haut-Katanga dry forest (*Quadrideres*). Thus, apart from the clearly established southern connections, a poorly developed, but widely spreading influence can be observed only from the West. These western elements are the only *Opatrinæ* which, apart from the indifferent *Opatrinus* and *Heterotarsus*, enter into the Central Equatorial Forest District, expanding eastwards to about the middle and dividing this phylogeographic District into a western area, where the western-tropical *Ectateus* dwell, and an eastern one which is altogether bare of stenotopic *Opatrinæ*. This eastern boundary of western elements in the North is the only deviation from the floristic division which, for the remainder, is strictly observed by the *Opatrinæ*.

The Belgian Congo, probably in correlation with its continental character, is extremely poor in the development of endemic groups. Apart from *Upembarus* there is no other endemic genus, subtribe or tribe known. In the adjacent western and eastern faunæ a great tendency for the development of endemic genera can be observed, growing in intensity towards the coastal areas, in particular in the biogeographic zone between the East African coast and the Rift Valley fault. The greatest percentage of endemism, however, is found in the Southern African Region, where not only endemic genera, but also a considerable number of peculiar tribes, subtribes and generic groups occur.

The complex affinity of the Belgian Congo *Opatrinæ* to those from Southern Africa may be explained by the following analysis of the stenotopic tribes.

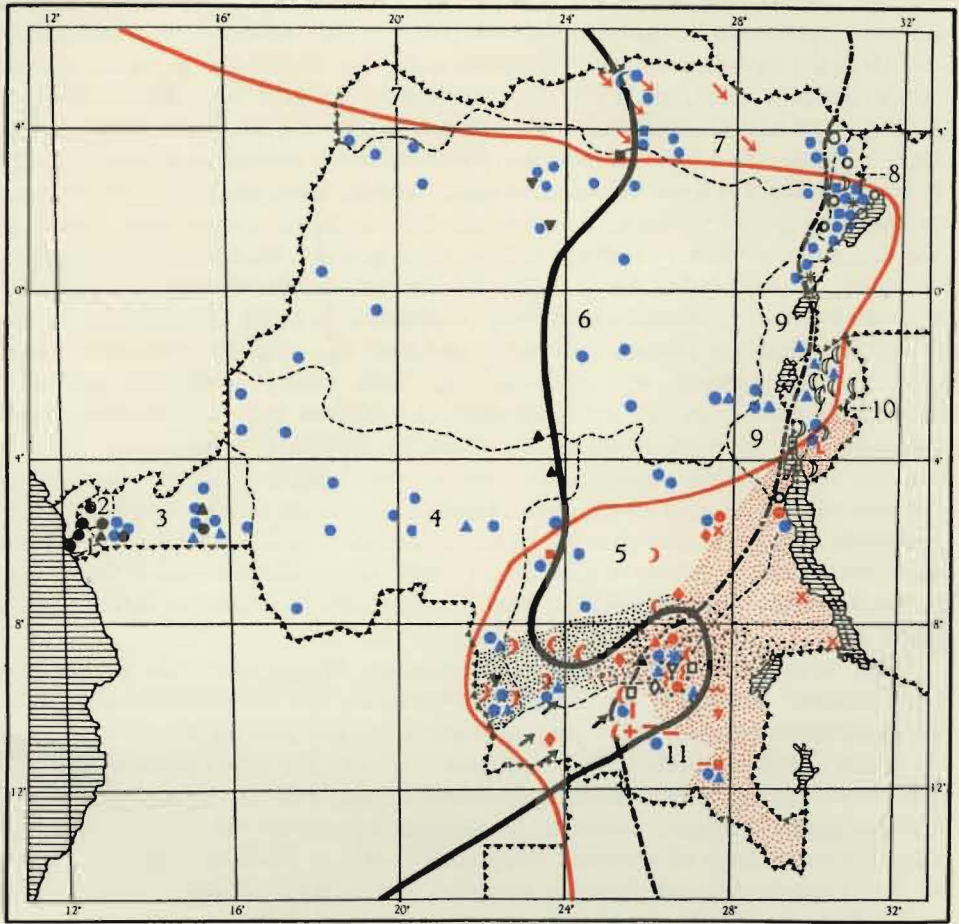
The *Platynotini*, deriving from the alate, arboreal to detritivorous, primitive genus *Opatrinus* are widely spread and predominant in forest, savanna and grassland country, strictly avoiding arid, desertical or semi-desertic conditions, with the exception of *Gonopina* (cf. map 6). The boundary of the great group of the Southern African trigonopoid *Platynotina*, for example, follows closely the floristic limits of the dry area of Namib and Karroo (cf. map 6). The separation between Southern African and Tropical groups is sharp, with only the *Gonopina* and *Anomalipina* expanding to the Oriental Province of the Tropical African Region, whereas for the remainder there is but a small area in the extreme South-east of the Zambesi Province of the Tropical African Region and in the North-east of the Southern African Region, where the peripheral species of the tropical genera *Anchophthalmus* and *Opatrinus* overlap the northern and easternmost range of the South African genera *Bantodemus*, *Eviropodus*, *Zophodes*, *Trigonopus* and *Selinopodus* (map 6).

None of the South African groups reach the Belgian Congo and consequently the direct communication between the Belgian Congo and Southern Africa is confined to *Anchophthalmus* and *Opatrinus*. Apart from these genera, the Belgian Congo is inhabited by the anchophthalmoid genus *Phallocentrion* and the selinoid genera *Selinus*, *Ectateus*, *Upembarus* and *Quadrideres* (map 4).

The *Opatrinus* are rather eurytopic and Trans-Tropical, with the widely diffused *Opatrinus latipes* found occurring in all biotopes of country. In the Oriental savanna and the Haut-Katanga dry forest up to three species occur sympatrically, of which two (*opatrinus exalatus* and *micrabilis*) are greatly specialized and endemic. The anchophthalmoid *Platynotina* are East African, but have developed a latitudinal, northern Trans-Tropical branch to West Africa (*Phallocentrion*), which, however, does not expand to the Sudanese Province, nor beyond the southern and eastern limits of the Guinean savanna of the floristic Ubangi-Uele District. The western boundary of *Anchophthalmus* enters the Belgian Congo through the Ruanda-Urundi Territory, thence expanding westwards beyond the western limits of the Bas-Katanga District. Strictly avoiding the central equatorial forest, the *Anchophthalmus* are splitting up into many endemic, probably orophilous species in the southern part of both the Bas- and Haut-Katanga Districts and in particular in the Upemba National Park area. In this region, ten endemic species are found, of which five are sympatric. Outside of the Belgian Congo the range of *Anchophthalmus* stretches from Northern Transvaal into the Ethiopian Province. A few orophilous species and the endemic genera *Cosmogaster* and *Oncotiphallops* have developed in the biogeographic District between the East African coast and Rift Valley fault.

The large and tropical group of selinoid *Platynotina* reaches to just the southern limits of the Zambesi Province, and is divisible into four zoogeographic groups, ie. a pair of eastern and a pair of western groups, with the limits of both widely separated, except for the Upemba National Park area, where they overlap. A singular, disjunct dispersal is displayed by the genus *Selinus*, forming three isolated groups of species. Of the two eastern groups of selinoid *Platynotina*, one is most strikingly confined to the biogeographical District between the coast and Rift Valley fault, and built up by the endemic genera *Anchophthalmops*, *Glyptopteryx*, *Microselinus*, *Phymatoplata*, the disconnected East African stem of *Selinus* (with the morphological groups of *menouxi* and *platessa*), and a considerable number of endemic species of the East African genus *Quadrideres*. The second eastern group has spread westwards beyond the barrier of the Rift Valley fault, but is rather abruptly stopped at the Tanganyika fault, in the South it expands moderately to the dry forest of the Haut-Katanga District and the Upemba National Park area. To this group belong the western species of *Quadrideres*, being thus the only East African selinoid elements found in the Belgian Congo. Up to four species of *Quadrideres* occur in the Oriental savanna of the Lake Albert District, three endemic and sympatric species in the Upemba National Park area.

The more northern of the two western groups is formed by the Guinean genera *Monodius* and *Ectateus*, and the north-western stem of *Selinus* (*planus* group). Of these, only the *Ectateus* are found also in the Belgian Congo, where they live together with *Opatrinus* in the equatorial forests of



MAP N° 4. — Distribution of *Opatrinæ* in the Belgian Congo.

Phytogeographic division, according to ROBYNS. — Fine, striolate lines in black colour refer to boundaries between the following phytogeographic Districts :

- 1: Coastal District (Guinean savanna);
- 2: Mayumbe District (Equatorial forest);
- 3: Bas-Congo District (Guinean savanna);
- 4: Kasai District (Guinean savanna);
- 5: Bas-Katanga District (Guinean savanna);
- 6: Central Equatorial District (Equatorial forest);
- 7: Ubangi-Uele District (Guinean savanna);
- 8: Lac Albert District (Oriental savanna prevalent);
- 9: Lac Edouard and Kivu District (Oriental savanna prevalent);
- 10: Ruanda-Urundi District (Oriental savanna);
- 11: Haut-Katanga District (dry forest).

Opatrinoid *Platynotina* : BLUE.

- : *Opatrinus latipes* (SAHLBERG), the only eurytopic *Platynotina*;

the phytogeographic Central- and Mayumbe Districts, the Guinean savanæ of the Bas-Congo- and Kasai Districts, with one widely diffused species (*Ectateus ghesquierei*) even reaching the Upemba National Park area. The southern of the two western groups comprises the Zambesi and xerophilous group of *Selinus punctatostriatus*, from which the endemic genus

- ▼ : *Opatrinus attenuatus bottegoi* GRIDELLI;
- ▲ : *Opatrinus setuliger* MUELLER;
- : *Opatrinus costulatus* (GUÉRIN);
- ◀ : *Opatrinus exalatus* sp. nov.;
- * : *Opatrinus mirabilis* sp. nov.

Anchophthalmoid *Platynotina* : RED.

- : *Anchophthalmus obsoletus* (ANCEY);
- : *Anchophthalmus striolipennis* sp. nov.;
- ▲ : *Anchophthalmus straeleni* sp. nov.;
- ▼ : *Anchophthalmus eurychoroides* sp. nov.;
- ◆ : *Anchophthalmus pedestris* sp. nov.;
- ◊ : *Anchophthalmus cariniceps* sp. nov.;
- ◀ : *Anchophthalmus pulvereus* sp. nov.;
- ⊕ : *Anchophthalmus brevis* sp. nov.;
- : *Anchophthalmus curvipes* sp. nov.;
- : *Anchophthalmus katangicus* sp. nov.;
- : *Anchophthalmus soleatus* sp. nov.;
- ~ : *Anchophthalmus spinipes* sp. nov.;
- + : *Anchophthalmus basilewskyi* sp. nov.;
- x : *Anchophthalmus plicipennis* PÉRINGUEY, forma;
- ↘ : *Phallocentrion prælacinatum* sp. nov.

Red line : western boundary of anchophthalmoid *Platynotina*.

Selinoid *Platynotina* : BLACK.

a) East African elements : ENCIRCLED BY BLACK.

- : *Quadrideres lineatus* sp. nov.;
- : *Quadrideres elegans* sp. nov.;
- △ : *Quadrideres schoutedeni* sp. nov.;
- ▽ : *Quadrideres witteanus* sp. nov.;
- ◇ : *Quadrideres stigmaticollis* sp. nov.;
- ◊ : *Quadrideres ruandanus* sp. nov.;
- ◀ : *Quadrideres robynsi* sp. nov.;
- * : *Quadrideres interioris* (GEBIEN).

Striolate — punctate black line : western boundary of East African selinoid *Platynotina* (*Quadrideres*).

b) West African (Guinean and West-Zambesi) elements : FULLY BLACK.

- : *Ectateus modestus* (FAIRMAIRE);
- : *Ectateus curtulus* (FAIRMAIRE);
- ▲ : *Ectateus ghesquierei* sp. nov.;
- ▼ : *Ectateus latipennis* sp. nov.;
- ↗ : *Selinus basilewskyi* sp. nov.;
- : *Upembarus* (gen. nov.) species.

Continuous black line : eastern boundary of West African selinoid *Platynotina*.

Litoborini (*Hanstræmium* KOCH and *Silvestriellum* gen. nov.) : DOTTED IN BLACK.

Loensini (*Loensus* [GEBIEN]) : DOTTED IN RED.

Upembarus appears to be derived. An endemic species of this *Selinus* group, viz. *Selinus basilewskyi*, closely allied to South-western Angolan species, has been discovered in the south-western part of the Haut-Katanga dry forest. *Upembarus* is the northern and easternmost example of this group of selinoid *Platynotina*, with seven different, partially orophilous forms adding to the faunistic complexity of the Upemba National Park area.

The poorly developed *Loensini*, probably allied to the *Litoborini*, represent the only existing, endemic and tropical tribe of *Opatrinæ*. They occupy a restricted area around Lake Tanganyika, but do not stretch far beyond the western boundaries of the Upemba National Park area. The *Heterotarsini* and *Emmallina* of *Opatrini* are tropical and both enter into the northern parts of the Southern African Region. The *Emmallina* do not cross the southern limits of the central equatorial forest nor the Rift Valley fault towards the East.

The *Litoborini* are the only true Pan African tribe, displaying a typically relict-like and disjunct dispersal, with distribution centres in Southern Africa (map 5), North-western Africa plus the central-mediterranean part of Europe, and also in Tropical Africa (map 2). This type of distribution suggests a very ancient origin, dating to a pre-Saharan age. On the other hand, the existence of the Sahara and its acting an important part as a faunistic barrier, is clearly revealed by the dispersal of all the other and consequently more Recent tribes.

The disjunct distribution areas of *Litoborini* cover, with a few exceptions in North-west Africa [e.g. *Hoplarion* (*Saharoplarion*) and *Bermejoina*], a rather homogeneous floristical type of macchia, bush and deciduous forest. They are composed of xerophilous, in particular orophilous elements, probably descended from the tropical, arboreal and alate genus *Silvestriellum*, the only known winged genus in the otherwise constantly apterous *Litoborini*. The Southern African subtribe of *Zadenina* is southern peri-karroid (bounded by the Zambesi River in the North) and its range almost covers that of the ecologically similar *Oncotini*. The West-Zambesi genus *Hanstraemium* is a geographically and morphologically strongly isolated group of myrmecophilous species, which range from the Kaokoveld through Southern and Central Angola to the South-eastern Belgian Congo, partially overlapping the distribution area of the *punctatostriatus* group of *Selinus*. The north-eastern group of *Hanstraemium* reaches the Upemba National Park and is there almost in contact with the East African group of *Zadenina* (with the two isolated genera *Silvestriellum* and *Gridelliopus*).

The palæarctic *Litoborini* (*Litoborina* and *Melambiina*) are endemic to the Atlasic District of North-western Africa, spreading slightly also to the Tyrrhenic parts of the Mediterranean Province, and with an isolated genus (*Bermejoina*) found in West Saharan Rio de Oro. The divergence between the palæarctic *Litoborini* and *Zadenina* is well indicated, and in no case do either cross the northern boundary of the Tropical African Region.

**THE FAUNISTIC CONCENTRATION IN THE UPEMBA NATIONAL
PARK AREA ⁽¹⁾.**

The following list of localities, visited by the G. F. DE WITTE expedition to the Upemba National Park, and arranged according to the altitude, may help explaining the concentration, vertical and sympatric occurrence of species of the three stenotopic tribes *Platynotini*, *Litoborini* and *Loensini* (cf. map 9).

Mabwe, 585 m, eastern shore of Lake Upemba.

Opatrinus latipes, *setuliger* and *mirabilis* ;
Anchophthalmus pulvereus ;
Quadrideres elegans ;
Upembarus saegeri and *wittei wittei* ;
Hanstrœmium tropicale ;
Loensus wittei.

Kaswabilenga, 680 m, right shore of Lufira River.

Opatrinus setuliger ;
Anchophthalmus pulvereus and *obsoletus* ;
Quadrideres elegans and *witteanus* ;
Upembarus saegeri and *wittei wittei* ;
Loensus gebieni.

Kanonga, 695 m, right tributary of Fungwe River.

Anchophthalmus pulvereus ;
Upembarus wittei masculinus.

Lukawe, 700 m, right tributary of Lufira River.

Upembarus wittei wittei ;
Loensus gebieni.

Lufira, 700-750 m, near Mount Sombwe.

Anchophthalmus obsoletus.

Lupiala, 700-850 m, right tributary of Lufira River.

Anchophthalmus obsoletus ;
Quadrideres witteanus ;
Upembarus saegeri ;
Loensus gebieni.

Shinkulu, 800 m, locality near the junction of Muye and Lufira Rivers.

Upembarus saegeri.

(1) All the localities between [] are situated outside the Park's boundaries.

Ganza, 860 m, salt works near the Kamandula River, right tributary of the Lukoka River.

Upembarus wittei debilis.

Munoi, 890 m, bifurcation Lupiala and Lufira Rivers.

Opatrinus setuliger ;
Anchophthalmus pulvereus and *obsoletus* ;
Upembarus saegeri and *wittei wittei* ;
Loensus gebieni.

[Kimiala, 900 m, near Sampwe (Kundelungu).]

Anchophthalmus soleatus ;
Upembarus wittei wittei.

Kateke, 960 m, right tributary of Lufira River.

Anchophthalmus obsoletus ;
Quadrideres witteanus ;
Upembarus saegeri and *wittei wittei* ;
Loensus gebieni.

Loie, 700-1.000 m, left tributary of Lufira River.

Upembarus saegeri.

Kalule-Nord, 1.050 m, spurs of Mount Kia, near Kiamalwa.

Anchophthalmus pulvereus.

[Masombwe, 1.070 m, near Mulungwe River.]

Opatrinus setuliger.

Kilwezi, 1.000-1.400 m, right tributary of Lufira River.

Quadrideres elegans ;
Upembarus saegeri, *upembaensis upembaensis* and *sympatrius*.

Kaziba, 1.140 m, left tributary of Senze River.

Upembarus upembaensis glabrior.

Kankunda, 1.300 m, left tributary of Lupiala River.

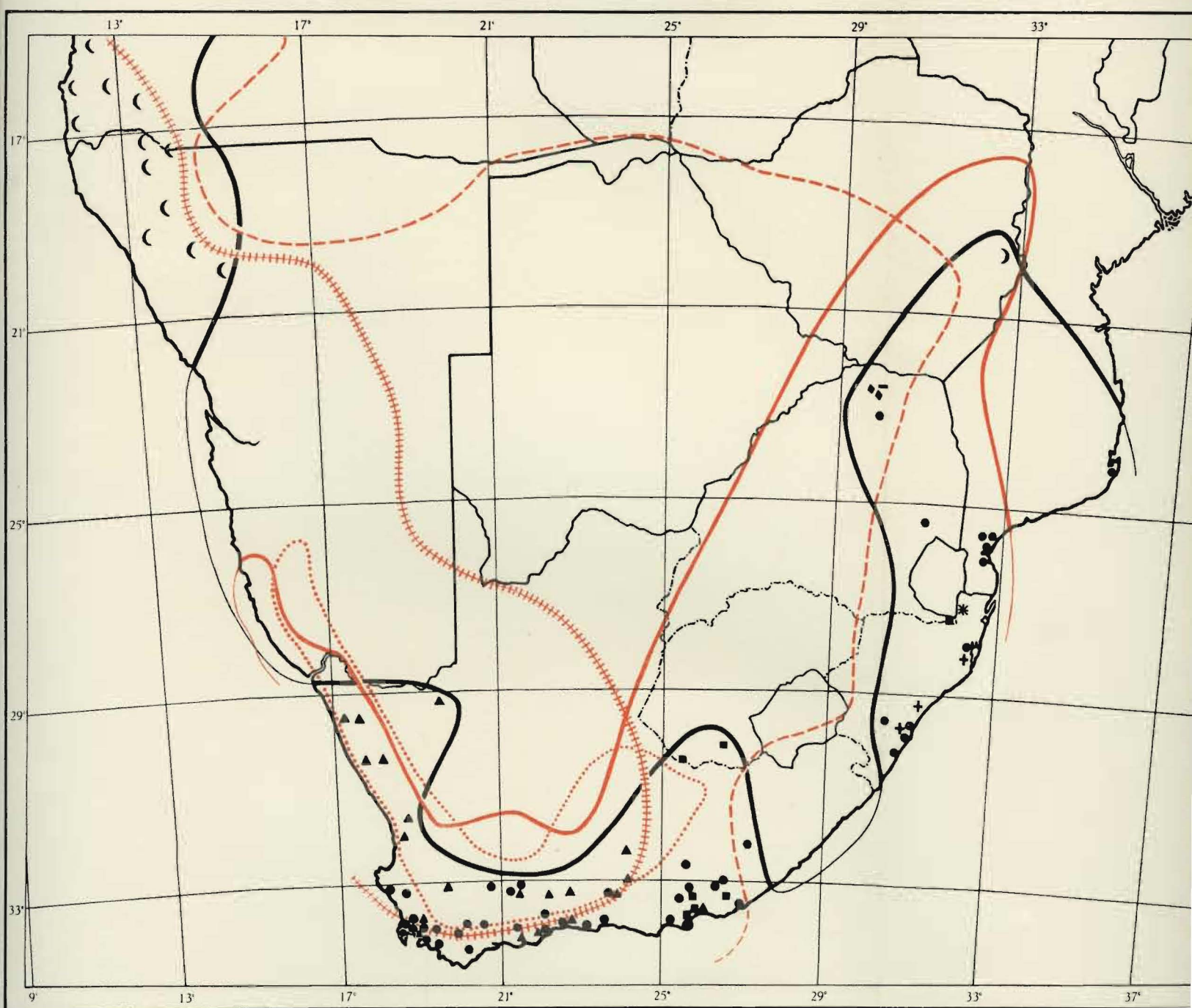
Anchophthalmus obsoletus ;
Quadrideres witteanus ;
Upembarus saegeri ;
Loensus gebieni.

Kabwe, 1.320 m, on the right shore of the Muye River.

Upembarus saegeri.

Pelenge, 1.250-1.600 m, right tributary of Lufira River.

Anchophthalmus obsoletus ;
Quadrideres elegans ;
Upembarus saegeri.



MAP No 5. — Distribution of stenotopic tribes of *Opatrina* in Southern Africa, with the exception of *Platynotini*.

Litoborini: BLACK.

- : *Zadenos* LAPORTE DE CASTELNAU;
- ▲ : *Minorus* MULSANT & REY;
- : *Lasioderus* MULSANT & REY;
- +
 : *Tragardhus* gen. nov.;
- *
 : *Hadroderus* gen. nov.;

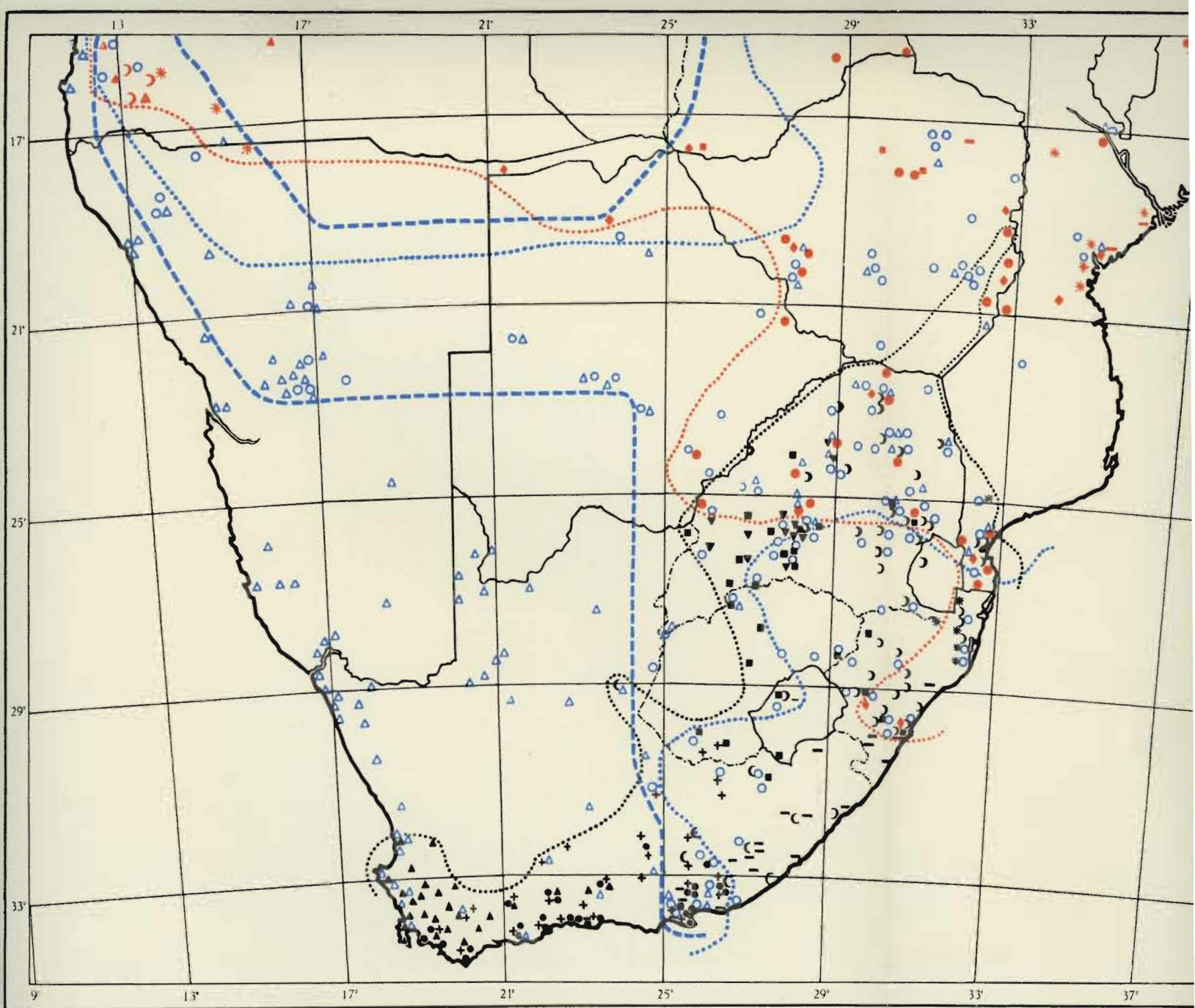
- ◆ : *Zoutpansbergia* gen. nov.;
-
 : *Pseudemmallus* gen. nov.;
- ⊂
 : *Harmodus* (PÉRINGUEY);
- ⊃
 : *Hanstremium* KOCH.

Black line: boundary of the disjunct distribution areas of Southern African *Litoborini*.

Limits of other tribes, and stenotopic subtribes of *Opatrini*: RED.

-
 : *Oncotini*;
-
 : *Pythiopinini*;

- - -
 : *Stizopina* of *Opatrini*;
- ++++
 : *Stenolamina* of *Opatrini*.



MAP N° 6. — Distribution of *Platynotini* in Southern Africa.

A. — *Anomalipina* and *Gonopina* : BLUE.

○ : *Anomalipus* LATREILLE;

▲ : *Gonopus* LATREILLE and *Stenogonopus* GEBIEN.

Southern and northern limits in Southern Africa of:

Anomalipina : striolate line;

Gonopina : punctate line.

B. — *Platynotina*.

a) Tropical *Platynotina* (opatrinoïd, anchophthalmoid and selinoïd *Platynotina*) : RED.

1. Opatrinoïd *Platynotina*.

◆ : *Opatrinus* LATREILLE.

2. Anchophthalmoid *Platynotina*.

● : *Anchophthalmus* GERSTAECKER;

+ : *Oncotiphallops* gen. nov.

3. Selinoïd *Platynotina*.

■ : *Anchophthalmops* gen. nov.;

■ : *Quadrideres* gen. nov.;

* : *Selinus* MULSANT & REY;

▲ : *Angolositus* KOCH.

Southern limits of Tropical *Platynotina* : punctate line.

b) Southern African *Platynotina* (trigonopoid *Platynotina*) : BLACK.

● : *Melanopterus* MULSANT & REY;

◐ : *Amblychirus* gen. nov.;

▲ : *Alrocrates* gen. nov.;

◑ : *Banlodemus* KOCH;

▼ : *Zophodes* FAHRAEUS;

+ : *Schelodontes* gen. nov.;

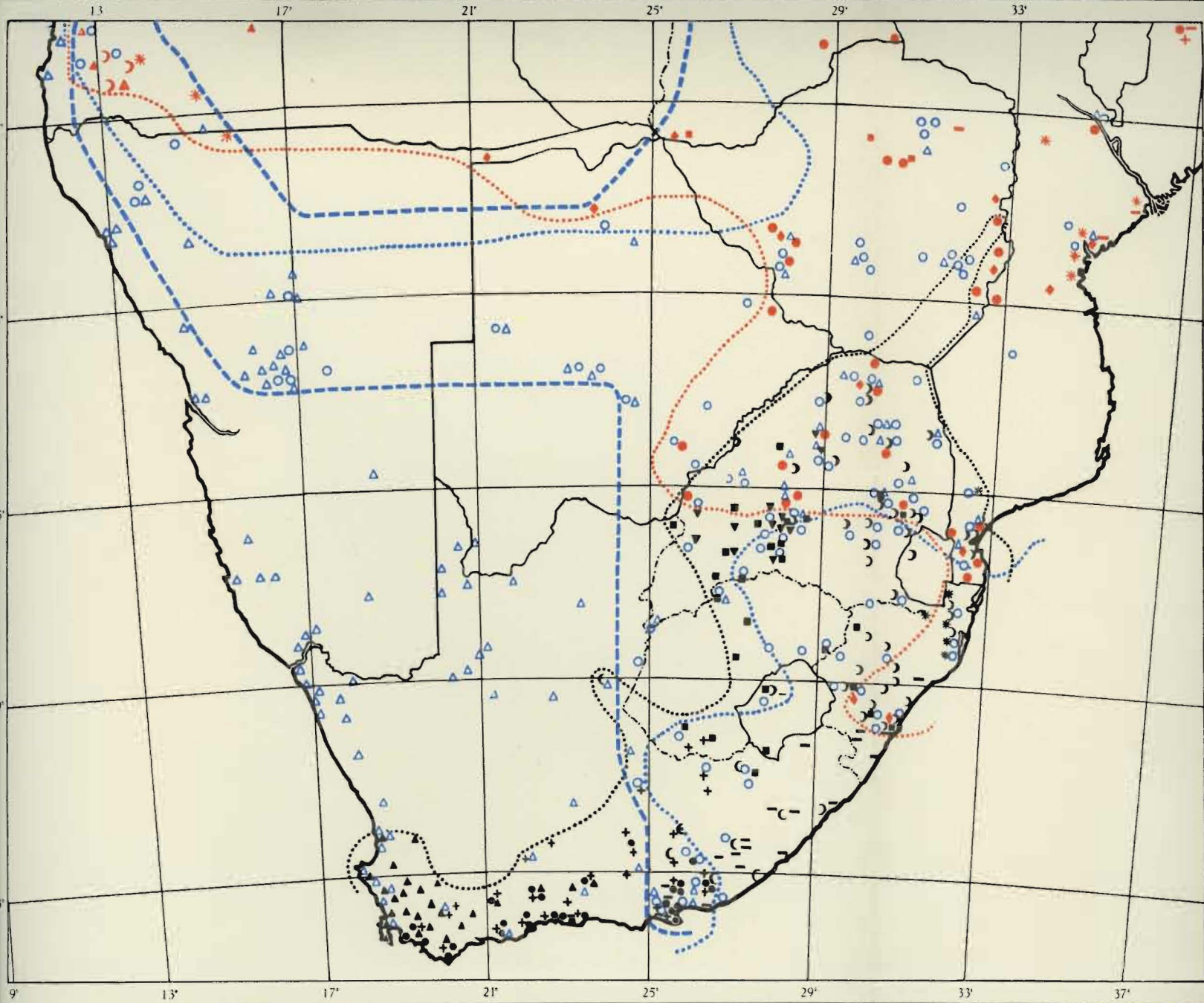
■ : *Eviropodus* gen. nov.;

- : *Trigonopus* MULSANT & REY;

◆ : *Crypticanus* FAIRMAIRE;

* : *Selinopodus* gen. nov.

Limits of distribution area of trigonopoid *Platynotina* : punctate line.



MAP No 6. — Distribution of *Platynotini* in Southern Africa.

A. — *Anomatipina* and *Gonopina* : BLUE.

○ : *Anomalipus* LATREILLE;

△ : *Gonopus* LATREILLE and *Stenogonopus* GEBIEN.

Southern and northern limits in Southern Africa of:
Anomatipina : striolate line;
Gonopina : punctate line.

B. — *Platynotina*.

a) Tropical *Platynotina* (opatrinoïd, anchophthaloïd and selinoïd *Platynotina*) : RED.

1. Opatrinoïd *Platynotina*.

◆ : *Opatrinus* LATREILLE.

2. Anchophthaloïd *Platynotina*.

● : *Anchophthalmus* GERSTAECKER;

+ : *Oncotiphallops* gen. nov.

3. Selinoïd *Platynotina*.

■ : *Anchophthalmops* gen. nov.;

■ : *Quadrideres* gen. nov.;

* : *Selinus* MULSANT & REY;

▲ : *Angolositus* KOCH.

Southern limits of Tropical *Platynotina* : punctate line.

b) Southern African *Platynotina* (trigonopoid *Platynotina*) : BLACK.

● : *Melanopterus* MULSANT & REY;

▲ : *Atrocrates* gen. nov.;

▼ : *Zophodes* FAHRAEUS;

■ : *Eviropodus* gen. nov.;

◆ : *Crypticanus* FAIRMAIRE;

◐ : *Amblychirus* gen. nov.;

◑ : *Bantodemus* KOCH;

+ : *Schelodontes* gen. nov.;

- : *Trigonopus* MULSANT & REY;

* : *Selinopodus* gen. nov.

Limits of distribution area of trigonopoid *Platynotina* : punctate line.

Luanana, 1.400-1.600 m, close to the intersection of the tracks Pelenge-Lufira.

Anchophthalmus obsoletus.

Mubale, 1.480 m, country of the junction of Mubale and Munte Rivers.

Opatrinus setuliger.

[Kenia, 1.585 m, right tributary of Lusinga River.]

Quadrideres stigmaticollis.

[Dipidi, 1.700 m, right tributary of Lufwa River.]

Opatrinus setuliger.

Kamitunu, 1.760 m, left tributary of Lusinga River.

Anchophthalmus straeleni.

Buye-Bala, 1.750 m, left tributary of Muye River.

Anchophthalmus straeleni.

Kapelwa, 1.780 m, left tributary of Grande-Kafwe River.

Anchophthalmus straeleni.

Lusinga, 1.810 m, shore of the Lufwa River, source.

Opatrinus setuliger ;

Anchophthalmus straeleni and *spinipes*.

Mukana, 1.810 m, swamps near Lusinga.

Opatrinus setuliger ;

Anchophthalmus straeleni.

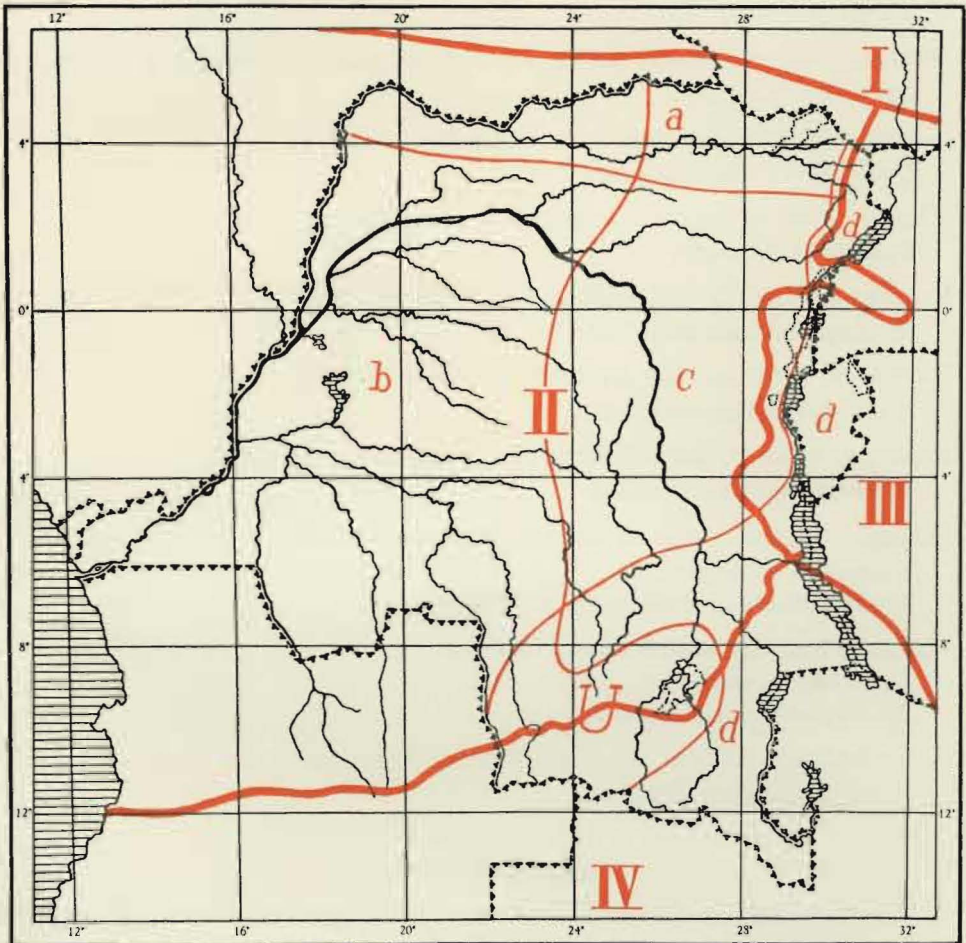
Kabwekanono, 1.815 m, swamps near to the source of the Lufwa River.

Anchophthalmus straeleni.

ABBREVIATIONS.

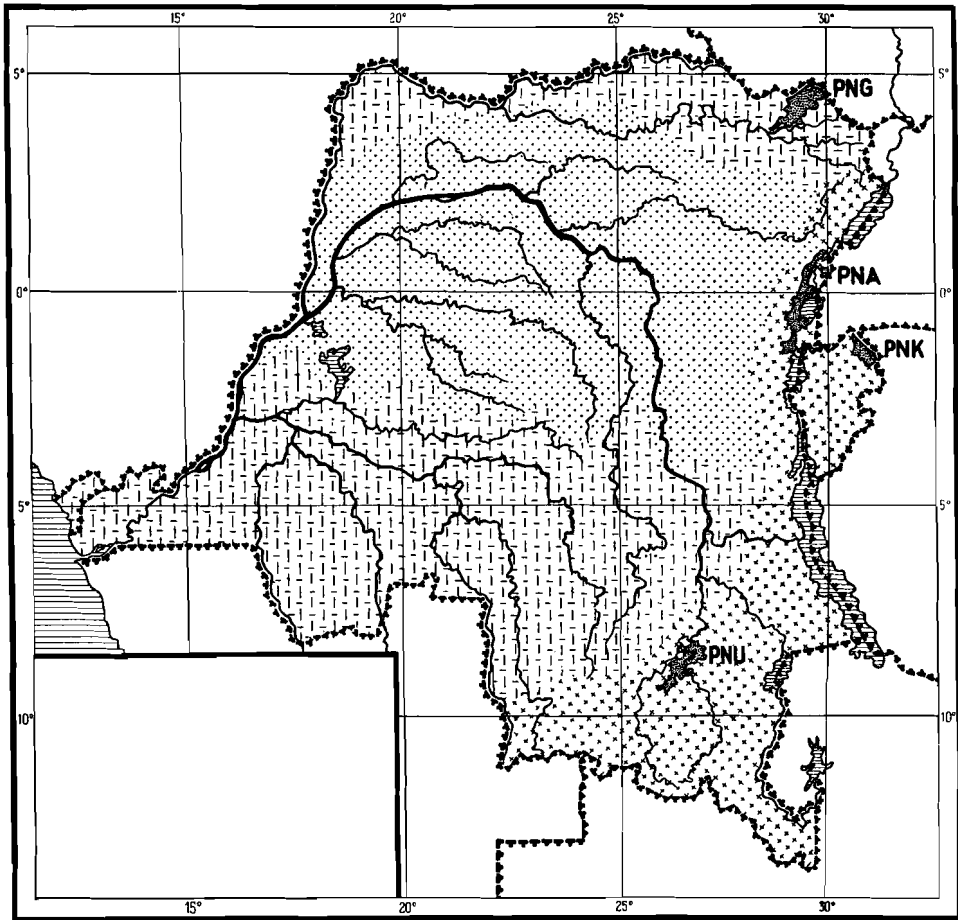
The only abbreviations used in the following taxonomic part refer to main collections of the following institutions.

B.C.M.	Musée royal du Congo Belge, Tervueren.
C.M.	The Coryndon Museum, Nairobi.
D.M.	Durban Museum & Art Gallery.
I.R.	Institut royal des Sciences naturelles de Belgique, Bruxelles.
I.P.N.	Institut des Parcs Nationaux du Congo Belge, Bruxelles.
M.C.A.	The Science Museum of the Californian Academy of Sciences, San Francisco.
M.D.	Museu Companhia de Diamantes de Angola, Dundo.
M.St.	Naturhistoriska Riksmuseum, Stockholm.
N.M.S.Rh. .	National Museum of Southern Rhodesia, Bulawayo.
S.A.M.	South African Museum, Cape Town.
T.M.	Transvaal Museum, Pretoria.



MAP N° 7. — Faunistic map of the Belgian Congo.

Provinces of the Tropical African Region and their boundaries. — I : Sudauese Province; II : Guinean Province; III : Oriental Province; IV : Zambesi Province.
 Faunistic Districts based on the distribution of the stenotopic *Opatrinæ*. — *a* : Northern District; *b* : Western District; *c* : Central District; *d* : Eastern District; *U* : Southern District, including the concentration area of the Upemba Park, and formed by the overlapping of the Western and Eastern Districts.

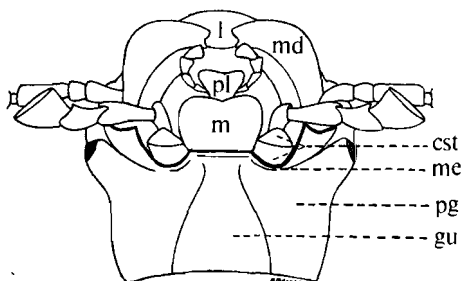


MAP N° 8. — Vegetation map of the Belgian Congo.

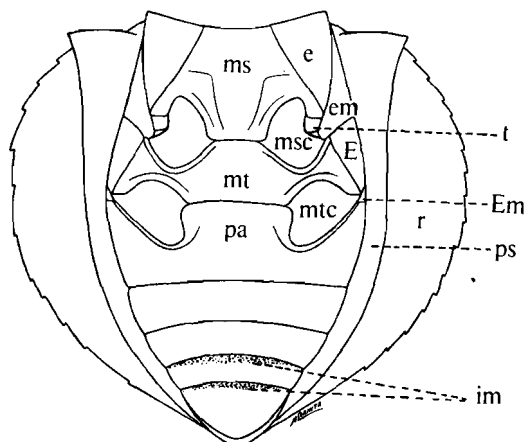
- ⋯⋯⋯ : Equatorial forest (cf. Plate XXXV, above).
- ||||| : Guinean savanna (cf. Plate XXXIV, above, and Plate XXXV, below).
- xxxxx : Oriental savanna (cf. Plate XXXIV, below).
- PNA : National Albert Park.
- PNG : National Garamba Park.
- PNK : National Kagera Park.
- PNU : National Upemba Park.

PRINCIPAL DIVISIONS OF PAN-AFRICAN OPATRINÆ

1. Gula transformed into a stridulatory organ, consisting of 100 to 300 entirely symmetrical, transverse, shallowly arcuate, fine carinæ and alternating sulci (figs. 3, 9) **2**



1



2

FIG. 1. — Underside of the head of an Opatrin (*Gonopus*).
 l : labrum; cst : cardo and stipes of maxillæ; gu : gula;
 m : mentum; md : mandible; me : maxillary emargination
 of postgenal margin; pg : postgenæ; pl : prelabium.

FIG. 2. — Underside of the hind body of an Opatrin (*Gonopus*).
 e : episternum of mesosternum; E : episternum of metasternum;
 em : epimeron of mesosternum; Em : epimeron of metasternum;
 im : inter-segmental membranes; ms : mesosternum; msc : meso-
 coxal cavity; mt : metasternum; mtc : metacoaxal cavity; pa : inter-
 coxal process of abdomen; ps : pseudopleura; r : ventrally reflected
 portion of elytra; t : trochantin of meso-coxa.

This character which I introduced into the systematics of *Tenebrionidæ* in 1953, was overlooked by former authors. The only references I was able tracing in literature have been made by GEBIEN in his descriptions of *Selinus edentatus* and *Glyptopteryx forticostis*. However, this author attributed to it merely a specific value and

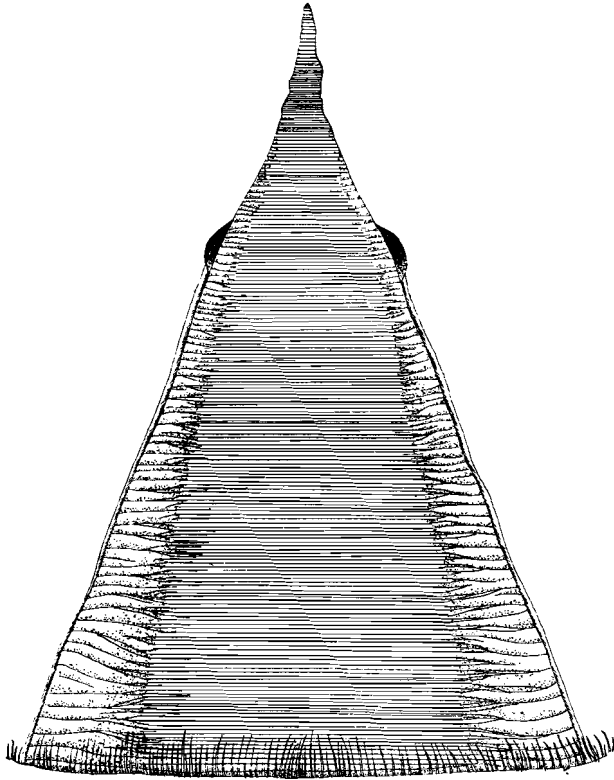


FIG. 3. — The stridulatory gula in *Platynotini*
(drawn after a ♂ specimen of *Anchophthalmus plicipennis* PÉRINGUEY,
from Elisabethville).

did not realize its systematic importance. Two rich tribes, viz. the African-Indian-American *Platynotini* and the Southern African *Oncotini*, exhibit a stridulatory gula and this without any exception whatsoever. Stridulatory organs seem to be frequent in the *Tenebrionidæ*, but as they are usually hidden, only a few of them have been described so far. Sometimes they are paleogenetic characters of a systematically super-ordinate value, as for instance the above mentioned stridulatory gula of *Platynotini* and *Oncotini*, or the occipital stridulatory organ of *Cryptochilini* and *Vansonini* (which

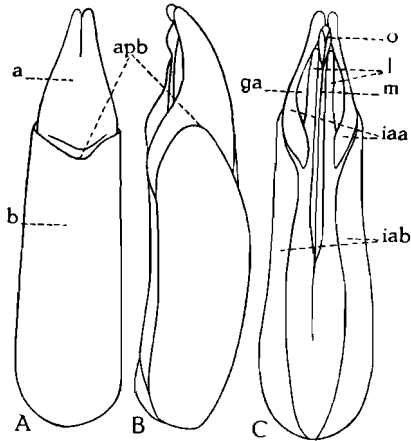


FIG. 4. — Aedeagus of *Zophodes tristis* FÄHRAEUS.
 a : apicale; b : basale; m : median lobe or penis; apb : apical margin of basale;
 l : lacinia; ga : ventral groove of apicale; iaa : inflexed alæ of apicale; iab : inflexed
 alæ of basale; gb : ventral groove of basale; o : apical orifice of penis.
 A : dorsal surface; B : lateral aspect, with the ventral surface at left;
 C : ventral surface.

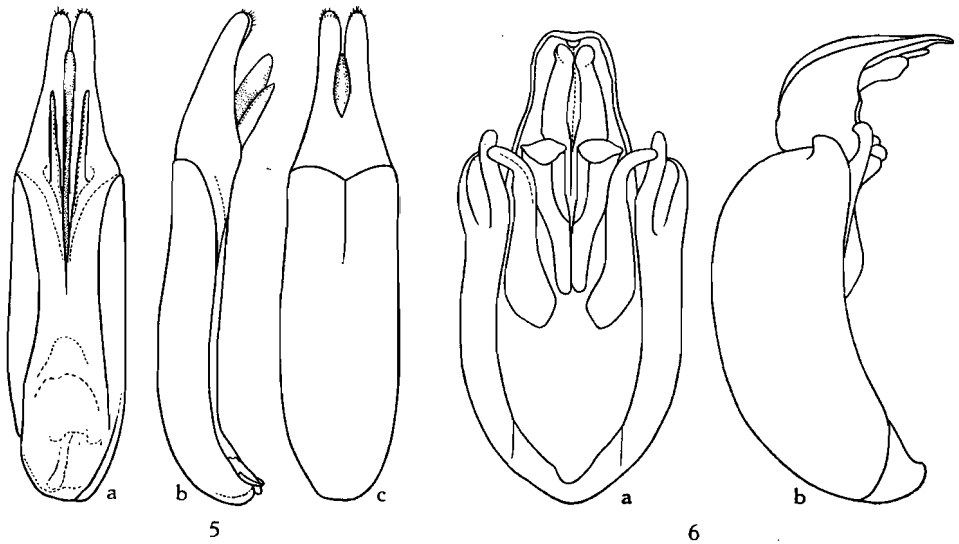


FIG. 5. — Aedeagus of a Madagascar *Melanocratus* sp.
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : ventral surface.

FIG. 6. — Aedeagus of an *Anomalipus* sp.
 with triple pairs of lacinia and armatures on the apical portion of basale.
 a : ventral surface; b : lateral aspect, with the ventral surface at right.

I have described in 1949), but sometimes they reveal a polygenetic origin, as it is shown in various genera of *Tentyriini* (e.g. the femoral-pseudopleural stridulatory organ in the genera *Homala*, *Oterophlæus*, *Psammoica*, *Cantopipleurus* *Symphoxycara* of *Oxycara*, cf. KOCH, 1943) or in the Molurini in which only the genus *Sridulomus* possesses a femoral-pseudopleural stridulatory organ (cf. KOCH, 1955b).

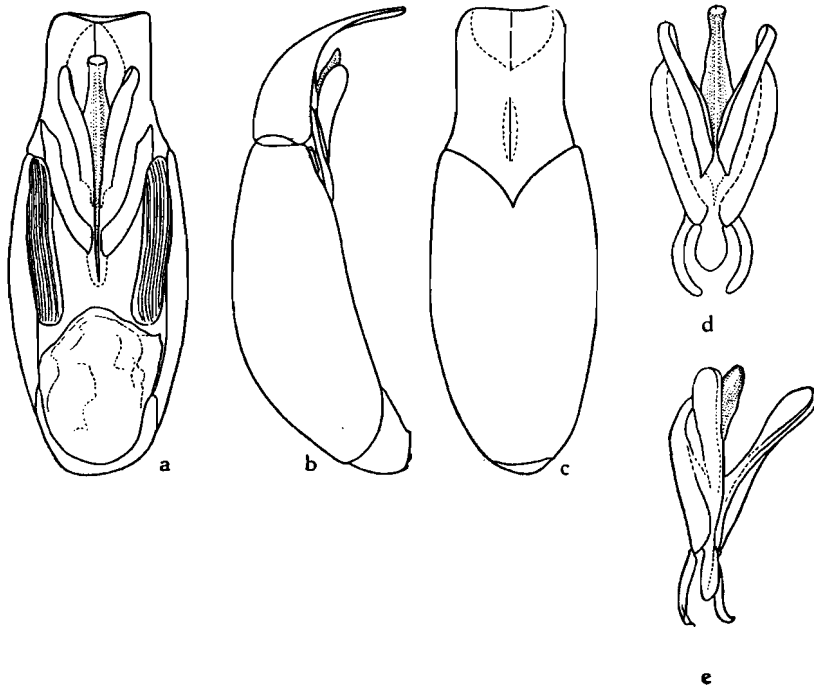


FIG. 7. — Aedeagus of an *Anomalipus* sp., with double pairs of lacinia. a: ventral surface; b: lateral aspect, with the ventral surface at right; c: dorsal surface; d: outer surface of penis and double pairs of lacinia; e: ditto, diagonal view.

- Gula simple, irregularly sculptured or smooth, without stridulatory structures **3**
- 2.** Inner sclerites of aedeagus composed of the penis plus one to three pairs of lacinia (figs. 4 to 7); in a few exceptional cases, viz. some species of *Anomalipus*, without lacinia (fig. 8), when the mentum is large, constricting the maxillary emargination of postgenæ and concealing the basal portion of maxillary palpi (but not the cardo and stipes of maxillæ) (fig. 75), being three to four times as broad as one of the maxillary emarginations of postgenæ.

I. — **PLATYNOTINI.**

KOCH, 1953 *a*, Rev. Fac. Cienc. Lisboa, 2, III, p. 269.

See p. 62.

Tropical and Southern African, Madagascar and neighbouring islands, Indian, Malayan archipelago, southern part of North America, South America, Antilles.

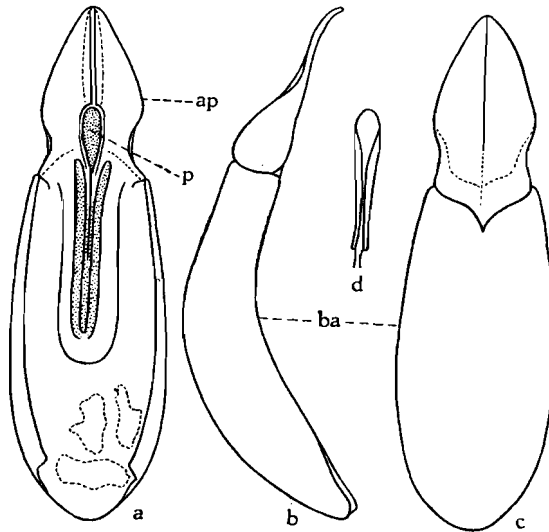


FIG. 8. — Aedeagus of an *Anomalipus* sp. exhibiting a simple penis, but no lacinia (ap : apicale; ba : basale; p : penis). a : ventral surface; b : lateral aspect; c : dorsal surface; d : the extracted penis.

- Inner sclerites of aedeagus confined to the simple penis, without lacinia (figs. 11, 12). Mentum, as usual in the *Opatrinæ*, of moderate size, not constricting the maxillary emargination of postgenæ, leaving exposed entirely the maxillary palpi, at the best twice as broad as one of the maxillary emarginations (fig. 10).

II. — **ONCOTINI.**

(Figs. 13, 206.)

KOCH, 1953 *a*, Rev. Fac. Cienc. Lisboa, 2, III, pp. 267, 274. — KOCH, 1954 *a*, Ark. f. Zool. Stockholm, 2, VII, p. 1.
Southern African (map 5).

This tribe is peculiar among all the other *Opatrinæ* by the often truncate and non-emarginate epistome, as well as by the frequent occurrence of tubercles on the secondary intervals of elytra. Although being sharply separated from the *Platynotini*, its phylogenetic relationship seems to be probable by the presence of a stridulatory gula (fig. 9).

The three subtribes are briefly established as follows :

Oncotina. — Prosternal apophysis bent towards foramen (with the exception of *Menederopsis constrictus* KOCH); apical margin of epistome shallowly emarginate.

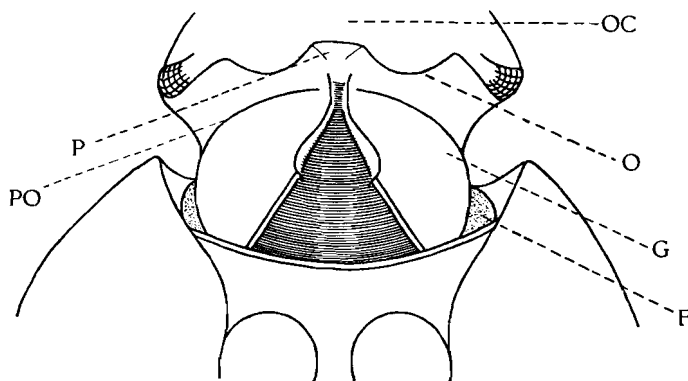


FIG. 9. — The stridulatory gula in the *Oncotini*.

G : gula; O : oral or postgenal margin; OC : oral cavity; P : pre-gular apophysis; PO : postoral transverse sulcus; F : prothoracic foramen.

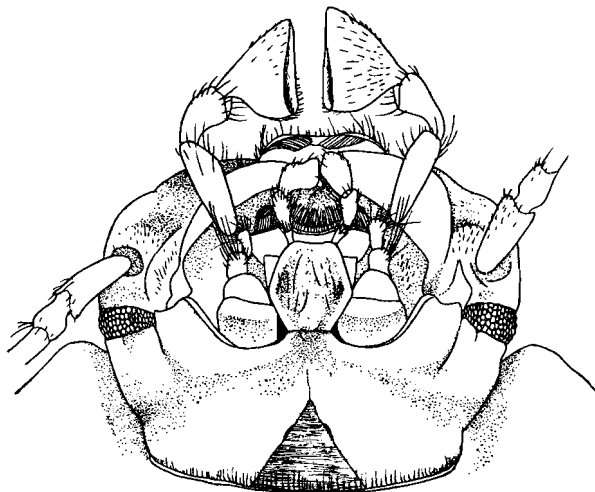


FIG. 10. — Under surface of head of *Eurynotus (Biolus) granulatus* (FABRICIUS).

Schyzoschelina. — Prosternal apophysis bent towards foramen; apical margin of epistome truncate.

Eurynotina. — Prosternal apophysis horizontally projecting beyond coxal cavities.

The genera belonging to this tribe are : *Menederopsis* KOCH, *Ograbies* PÉRINGUEY, *Hirtograbies* KOCH, *Phaleriderma* KOCH, *Onc-*

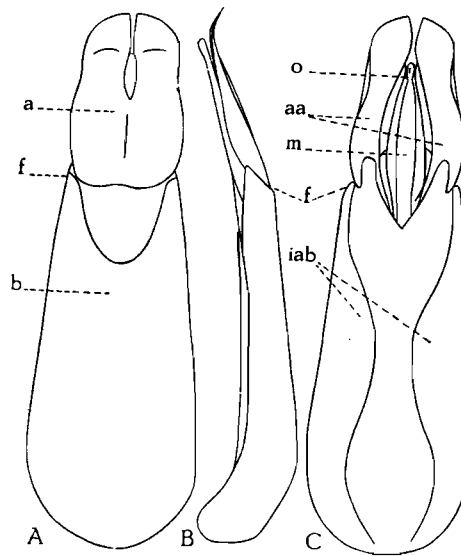


FIG. 11. — *Ædeagus* of *Eurynotus* (s. str.) *capensis* (FABRICIUS).
 a : apicale; b : basale; m : median lobe or penis; f : joint between
 basale and apicale; aa : ventrally separated parameres of apicale;
 iab : inflexed alæ of basale; gb : ventral groove of basale; o : apical
 orifice of penis.
 A : dorsal surface; B : lateral aspect, with ventral surface at left;
 C : ventral surface.

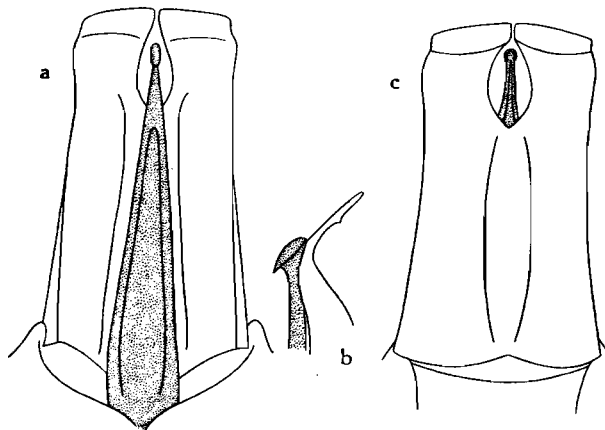


FIG. 12. — Apicale of the *ædeagus* of *Menederes* (s. str.) *dannheimeri* KOCH,
 with the ventrally entirely exposed and simple penis.
 a : ventral surface; b : lateral aspect of apical portion,
 with the ventral surface at left; c : dorsal surface.

tus BLANCHARD, *Capidium* KOCH, *Colophonesthes* KOCH, *Byrrhoncus* KOCH, *Isoncophallus* KOCH, *Stridigula* KOCH, *Menederes* SOLIER, *Psectrapus* SOLIER, *Heteropsectropus* KASZAB, *Schyzoschelus* KOCH, *Eurynotus* KIRBY and *Phylacastus* FAIRMAIRE.

3. Ædeagal tegmen uni-partite, without separated apicale and basale; inner sclerites always composed of the penis plus lacinia (figs. 14, 15, 180-186, 207, 218, 219, 252, 253) 4

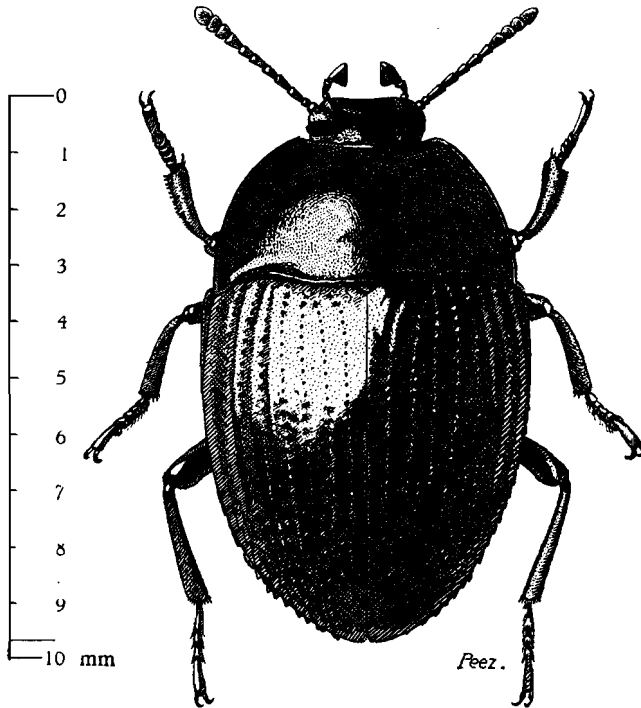


FIG. 13. — *Eurynotus* (s. str.) *barbosai* KOCH.

- Ædeagal tegmen bi-partite or tri-partite, divided clearly into an apicale and a basale by articulation sutures; inner sclerites with or without lacinia (figs. 20, 24, 25, 29-31, 33, 34, 36, 37, 41-45) 6
4. Apical portion of ædeagal tegmen divided at least apically (fig. 20), if not distinctly so (*Litoborina* of *Litoborini*), then broad and subtruncate (fig. 180). Eyes bare. Antennæ not clubbed distally. Body never densely covered with scales, in a single case (*Gridelliopus*, fig. 217) with adherent scaly bristles, when the upper surface of anterior tibiae is straight, inermous, and the pronotum broader than elytra. Body apterous, with the single exception of *Silvestriellum*, fig. 221, in which

the elytra are costate and the anal sternite of abdomen is broadly marginate 5

- Apical portion of ædeagal tegmen uniform and fused also apically, narrow, attenuate (fig. 14). Eyes with erect scales between corneal facets. Antennæ very short, with sharply demarcated, four-segmented

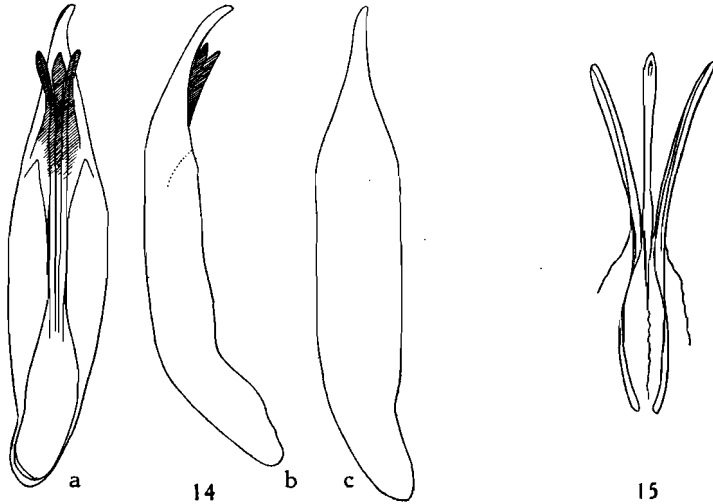


FIG. 14. — Ædeagus of *Leichenum* sp.
a: ventral surface; b: lateral aspect,
with the ventral surface at right;
c: dorsal surface.

FIG. 15. — The extracted penis with
lacinia of ædeagus of *Leichenum* sp.,
outer surface.

club distally. Body densely clothed with sessile, broad scales. Upper surface of anterior tibiæ with numerous subdentiform tubercles, the outer apical angle produced outwards and dentiform. Pronotum narrower than elytra. Body alate, but the elytra not costate and the anal sternite of abdomen immarginate (figs. 16, 17).

V. — **LEICHENINI** n. trib.

(Figs. 16, 17.)

Leichenina of *Opatrini* REICHARDT, Tabl. Analyt. Faune U.R.S.S., 19, Inst. Zool. Acad. Sci., Leningrad, 1936, pp. 24, 203.

The *Leichenini* can not be regarded a subtribe of *Opatrini*, as their ædeagal tegmen is uni-partite, neither exhibiting a suture between the apical and basal portions of tegmen, nor a median suture on the apical portion, nor possessing any intermediate sclerites between apicale and basale. Their systematic position may be close to the *Litoborini*, with which they agree in the similarity

of ædeagal structure, the presence of lacinia of ædeagus, the general shape of body and tarsi, although being sharply separated by numerous other morphologic particulars.

The single genus of this tribe, viz. *Leichenum* BLANCHARD, has a wide distribution in the eastern parts of the African Continent, Mediterranean Europe, the temperate and tropical areas of Asia,

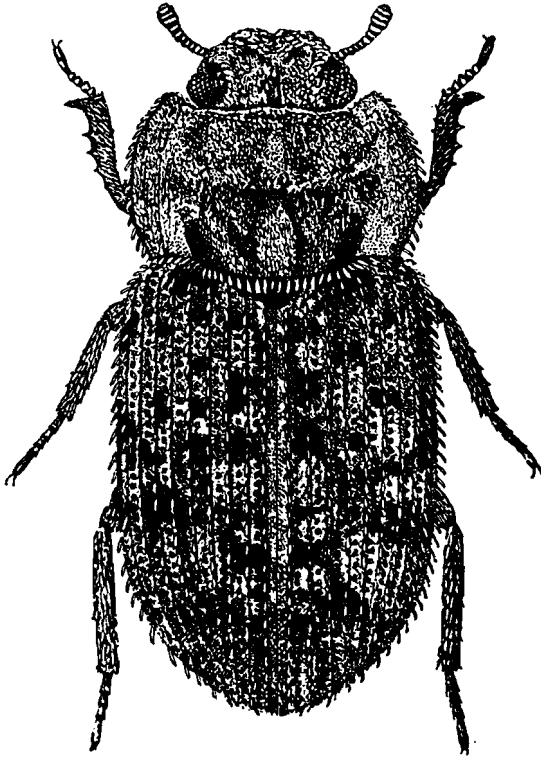


FIG. 16. — *Leichenum canaliculatum* KLUG (after GRIDELLI, 1939).

Madagascar and Malayan archipelagos, occurring also in South-western Australia (cf. GRIDELLI, 1939, *Atti Mus. Trieste*, XIV, pp. 210, 211).

5. Tarsi with normal preapical segment, clearly heteromerous (fig. 205); in the ♂ the anterior tarsi not or moderately dilated. Mentum unipartite, without lateral wings, emarginated apically (fig. 177). Maxillary palpi with more or less strongly enlarged basal segment; apical segment triangular to fairly securiform (figs. 187, 188, 220, 223). Pseudopleura not occupying the entire ventrally reflected portion of elytra (figs. 179, 230), if exceptionally so, then the integument of upper surface covered with dense bristles (fig. 217).

III. — LITOBORINI.

Litoborinæ ANTOINE, Bull. Soc. Sc. Nat. Maroc, 1941, XXI.

Litoborini ESPAÑOL, « Eos », Rev. Esp. Ent., Madrid, 1945, XX, p. 219. — KOCH, 1953 a, Rev. Fac. Cienc. Lisboa, 2, III, pp. 269, 272. See p. 275.

The *Litoborini*, originally believed to be endemic to the Atlasic and central areas of the Mediterranean Province, occur in discontinuous ranges of distribution practically in the whole of the African Continent (map 2).

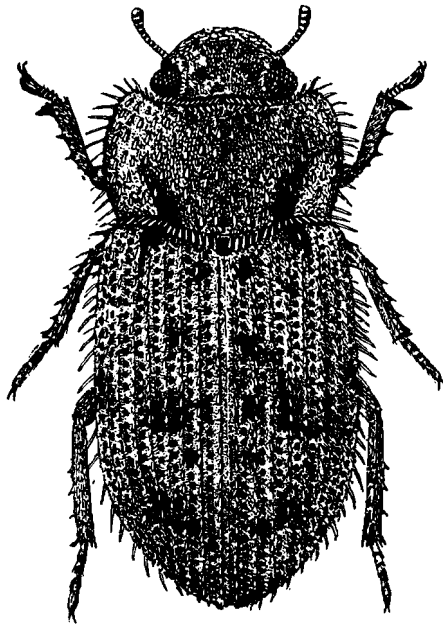


FIG. 17. — *Leichenum muelleri* GRIDELLI (after GRIDELLI, 1939).

- Anterior and intermediate tarsi with rudimentary preapical segment which is very small, narrowly cylindrical and enclosed by the bi-lobate third segment (figs. 239, 245); the tarsi therefore appearing as if homonomous and composed of only four segments. Mentum with acute lateral wings, rounded apically (fig. 237). Apical segment of maxillary palpi in the ♂ extremely enlarged, very strongly securiform; basal segment small (fig. 236). Pseudopleura occupying the entire, ventrally reflected portion of elytra; the pseudopleural crest exposed dorsally. Integument of upper surface of body bare and strongly shiny.

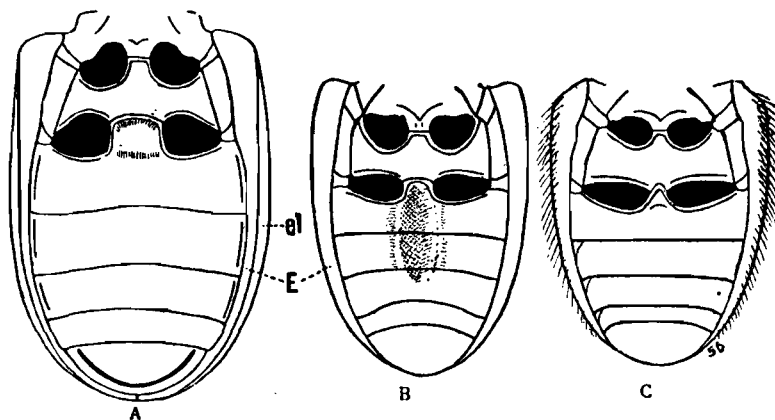


FIG. 18. — Under side of hind body in some *Opatrinæ*.
 A: *Micrositus granulatus* BILLBERG; B: *Monatrum carinatum* GEBLER;
 C: *Udebra fimbriata* MÉNÉTRIES (all after REICHARDT).

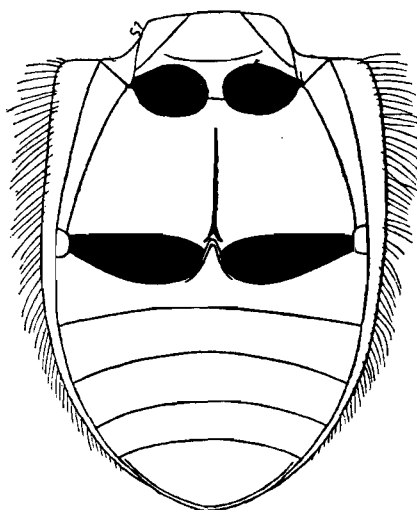


FIG. 19. — Under side of hind body in *Anemia dentipes* BALLION
 (after REICHARDT).

IV. — **LOENSINI** n. trib.

Erected for the single Southern East African genus *Loensus* (map 2), described by GEBIEN under the homonymous name *Pedinopsis*.

See p. 402.

- 6. Ædeagal tegmen bi-partite, without intermediate sclerites between apicale and basale (figs. 20, 21, 24, 26, 29, 30); the parameres of apicale

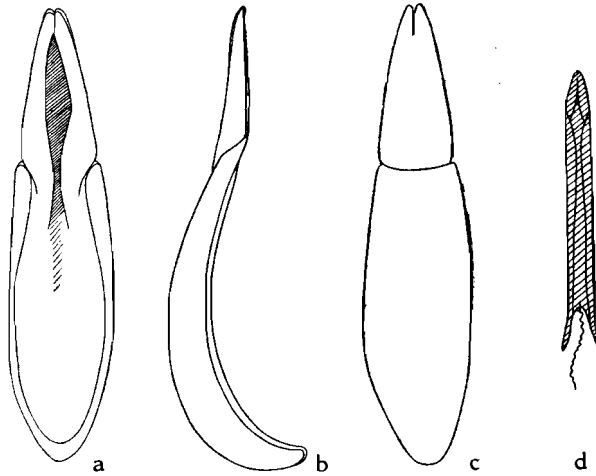


FIG. 20. — *Ædeagus* of *Melanimon tibialis* (FABRICIUS).
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : dorsal surface; d : the outer surface of the extracted penis.

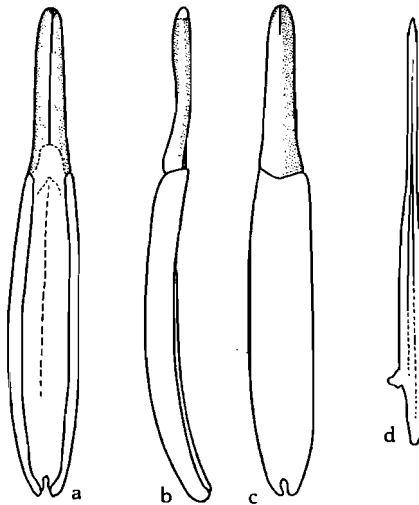


FIG. 21. — *Ædeagus* of *Anemia* sp. from South-west Africa (Abachaus).
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : dorsal surface; d : the outer surface of the extracted penis.

non-movable; inner sclerites, with a single exception (*Melanimini*, figs. 20, 21), with well developed lacinia (figs. 25, 26, 31) 7

— *Ædeagal tegmen* partially or altogether tri-partite, with more or less developed intermediate sclerites between apicale and basale (figs. 33, 36,

41, 49, 51, 58, 63, 65, 66); the parameres generally movable and opening sidewise (fig. 42), often enclosing the penis; inner sclerites rarely with lacinia (figs. 43-45, 54-56) **10**

7. Inner sclerites of ædeagus with lacinia (figs. 25, 26, 29-31). Body apterous. Intercostal process of basal sternite of abdomen broad, rounded to subtruncate (fig. 19 *a* and *b*). Metasternum very short (fig. 19) and the apicale of ædeagus longer than the basale or about as long as the

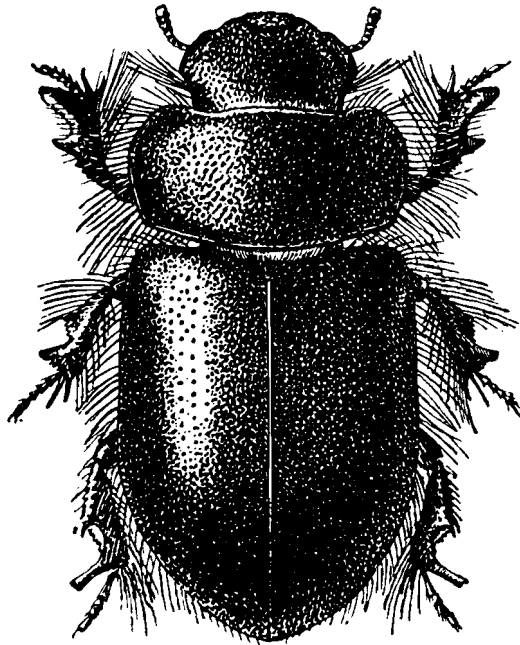


FIG. 22. — *Anemia fausti* SOLSKY (after REICHARDT).

latter (figs. 29, 30), except for the *Pythiopini*, when the basal sternite of abdomen is very large, as long as, or longer than, the two following sternites combined (figs. 27, 28). Anterior tarsi in the ♂ strongly dilated, except for *Pythiopus*, in which the mesosternum bears a prominent, dentiform and erect callosity (fig. 27*c*)..... **8**

— Ædeagus without lacinia (figs. 20, 21). Body fully winged. Intercostal process of basal sternite of abdomen very narrow and acuminate (fig. 18). Metasternum long and the apicale of ædeagus considerably shorter than the basale (fig. 20). Basal sternite of abdomen of usual size, distinctly shorter than the two following sternites combined. Anterior tarsi non-dimorphic.

IX. — **MELANIMINI** n. trib.

(Figs. 22, 23.)

Melanimonina of *Opatrini* REICHARDT, 1936, Tabl. Analyt. Faune U.R.S.S., 19, Inst. Zool. Acad. Sci., Leningrad, pp. 24, 62.

The *Melanimini* have to be considered an independent tribe and not a subtribe of *Opatrini*. Apart from the very characteristic morphology of their body, the neatly bi-partite aedeagus lacks the inter-

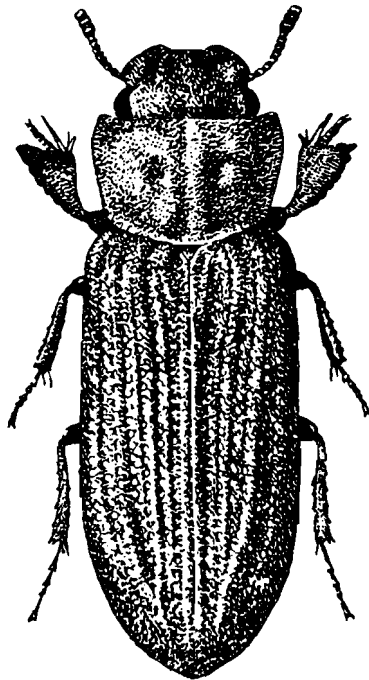


FIG. 23. — *Cnemeplatia atropos* COSTA (after REICHARDT).

mediate sclerites between apicale and basale, which are constantly developed in the *Opatrini*. Recorded from the whole world, but apparently xerophilous, with only the genus *Melanimon* STEVEN to be found also in Northern Europe and Asia. Of the many genera of this tribe *Philhammus* FAIRMAIRE, *Cnemeplatia* COSTA, *Anemia* LAPORTE DE CASTELNAU and *Histiæa* FAIRMAIRE ⁽¹⁾ occur also in the African Continent, with the three last mentioned genera represented in Africa South of the Sahara.

8. Apicale of aedeagus large, not or only slightly shorter than basale (figs. 29, 30). Body of oval shape (fig. 32). Metasternum short, considerably

(¹) About the systematic position of this genus cf. KOCH, 1953 b.

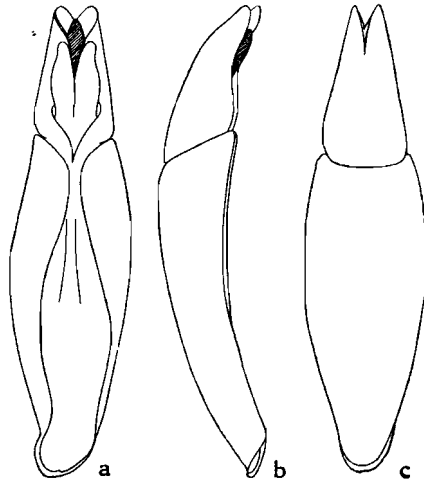


FIG. 24. — Aedeagus of *Pythiopus cornutipectus* KOCH.
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : dorsal surface.

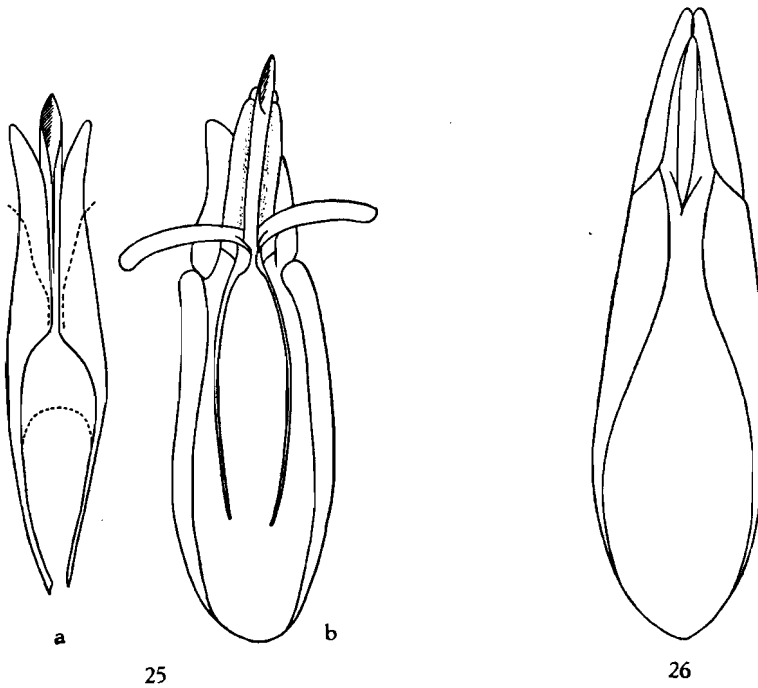


FIG. 25. — a : *Pythiopus cornutipectus* KOCH. Penis and lacinia. — b : *Meglyphus andreaei* KOCH. Ventral surface of aedeagus, with the inner sclerites layed open and the lacinia stretched outwards.

FIG. 26. — Ventral surface of the aedeagus of *Meglyphus andreaei* KOCH.

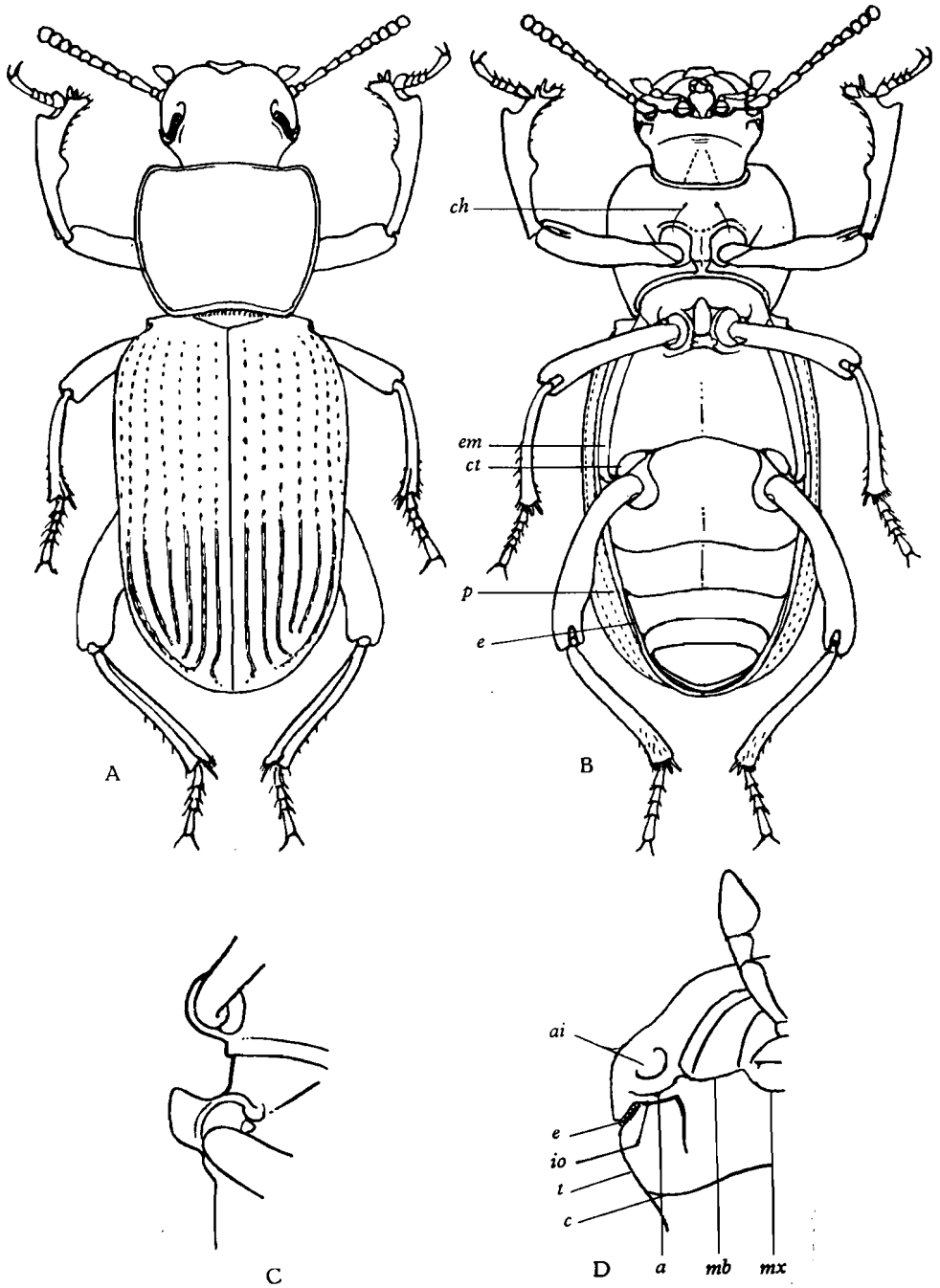


FIG. 27.

- shorter than basal sternite of abdomen; the latter of usual size, distinctly shorter than the two following sternites combined (fig. 19 *a* and *b*). **9**
- Apicale of α deagus small, considerably shorter and less than half the length of the basale (figs. 24, 26). Body of subparallel shape (figs. 27,

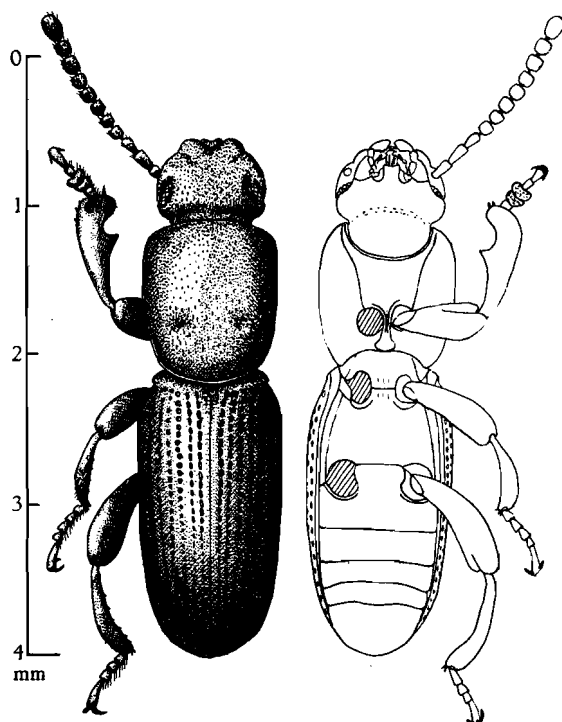


FIG. 28. — *Meglyphus andreaei* KOCH.

28). Metasternum very large, only a quarter shorter than basal sternite of abdomen or about as long as the latter. Basal sternite of abdomen enlarged, as long as the two following sternites combined or longer (figs. 27, 28).

EXPLANATION OF FIGURE 27.

FIG. 27. — *Pythiopus cornutipectus* KOCH, ♂.

A : dorsal aspect. — B : ventral aspect (*ch* : chætotaxical bristles; *ct* : trochantal sclerite of metacoxal cavities; *e* : epipleuron; *em* : metasternal episternum; *p* : pseudo-pleuron). — C : lateral view of the prominent mesosternal callosity. — D : under surface of head (*ai* : antennal insertion; *c* : cervical sulcus; *e* : ventral section of eye; *io* : infra-ocular slit; *t* : tempora).

VIII. — PYTHIOPINI.

(Figs. 27, 28.)

KOCH, 1953 *c*, Ann. Transv. Mus., XXII, p. 231. — KOCH, 1955 *a*, Ann. Transv. Mus., XXII, p. 450.

Unique among all *Opatrinæ* by the enlarged metasternum which in this case, however, is not correlate with the development of wings or lengthening of legs, as the body is apterous and the legs of slow motion. Usually the enlargement of metasternum is due either to the development of wings (e.g. in the *Opatrinus* of *Platy-*

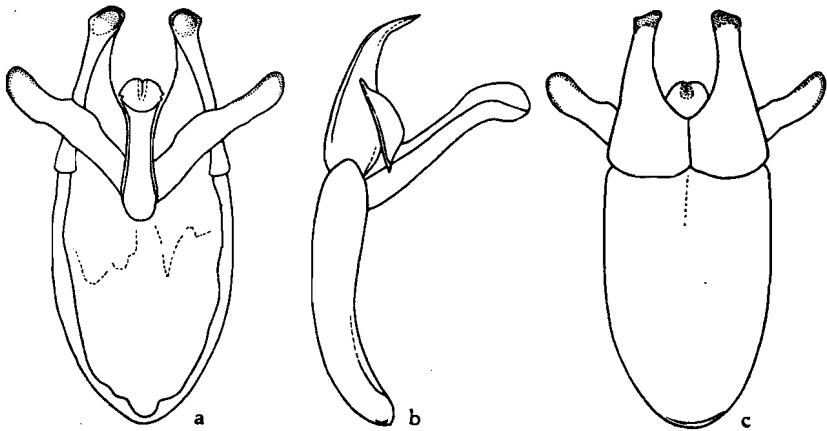


FIG. 29. — *Ædeagus* of *Dendarus tristis* LAPORTE DE CASTELNAU.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

notini) or to particularly long and fast moving legs (e.g. in the *Zophosini* and *Crypticini*). Without displaying any signs of a somewhat closer affinity to the *Pedinini* and *Dendarini*, the *Pythiopini* may be placed nevertheless near to these two palæartic tribes. They agree with both in the generally divided eyes, the complete pseudopleura of elytra, the principles of the structure of *ædeagus*, as well as in the usually dilated anterior tarsi in the ♂.

Two genera : *Meglyphus* MOTSCHOUJSKY and *Pythiopus* KOCH.

An ancient tribe, endemic to the Western and South-central Cape Province and the western part of Great Namaqualand (map 5).

9. *Ædeagal* tegmen with the basale being decidedly abbreviate and much shorter than the apicale; sutures between apicale and basale, as well as the parameral division weak. Mentum with median carina. Intercostal process of basal sternite of abdomen not broader than mesosternal apophysis.

VII. — PEDININI.

MULSANT & REY, 1853 b, pp. 37, 147 (« Pedinaires »). — ESPAÑOL, 1945, « Eos », Rev. Esp. Ent., Madrid, XX, pp. 218, 226.

Euro-Mediterranean and in the southern parts of Palæarctic Asia. Of the three genera *Pedinus* LATREILLE, *Colpotus* MULSANT & REY and *Cabirutus* (MULSANT & REY) only a single species, viz.

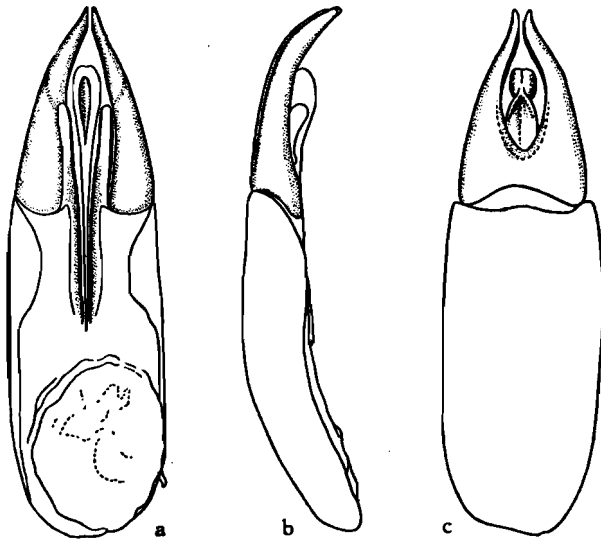


FIG. 30. — Aedeagus of *Phylan* sp. from Morocco (Azrou).
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

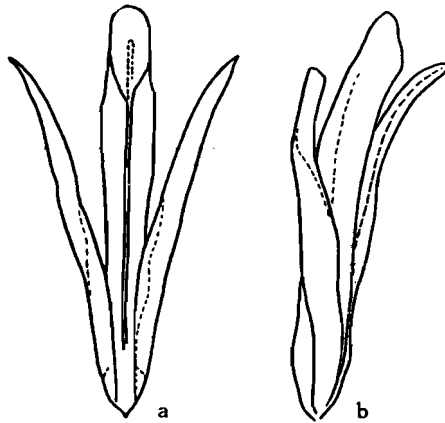


FIG. 31. — The extracted penis and lacinia of *Phylan* sp. from Morocco (Azrou).
a : outer surface; b : diagonal view.

Cabirutus cyrenaicus GRIDELLI, penetrates from the East into the north-eastern corner of the African Continent, namely to Mediterranean Egypt and Cyrenaica (map 2). MULSANT & REY in their splendid monograph of *Opatrinæ* assigned to this natural tribe the three genera *Pedinus*, *Colpotus* and *Cabirutus*. This tribe, having

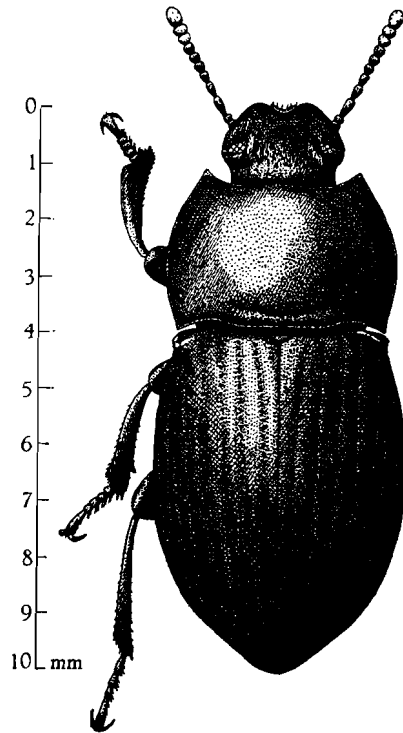


FIG. 32. — *Bioplanes meridionalis* MULSANT & REY.

been confused past recognition by the erroneous interpretation of subsequent authors, such as LACORDAIRE, REITTER and GEBIEN, it was ESPAÑOL who re-established this group in exactly the same conception as originally proposed by MULSANT & REY, confirming these authors' division by the study of the copulatory organs of ♂. However, at this occasion, no credit was given to these great French scientists.

- Basale and apicale of aedeagus of about equal length; sutures between both parts well marked; parameral division deep, the parameres usually gaping (figs. 29-31). Mentum without median carina. Intercostal process of basal sternite of abdomen broader than mesosternal apophysis.

VI. — DENDARINI.

(Fig. 32.)

ESPAÑOL, 1945, « Eos », Rev. Esp. Ent., Madrid, XX, pp. 216, 225.

Circum-Mediterranean, in the East expanding as far as the Transcaspian Province. A single species of probably Atlantic origin, viz. *Phylan* (s. str.) *gibbus*, spreading to Northern Europe.

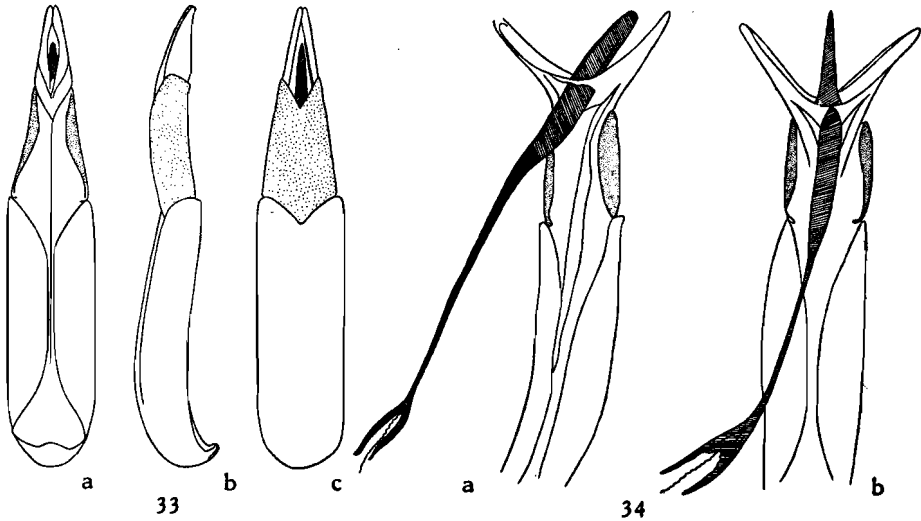


FIG. 33. — Aedeagus of *Heterocheira fryeri mocambicola* KOCH (dotted : intermediate sclerite between basale and apicale; striolate : exposed portion of penis).

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

FIG. 34. — Ventral surface of the aedeagus of *Heterocheira fryeri mocambicola* KOCH, with opened parameres and after removal of the covering external membranes (dotted : inflexed alæ of the intermediate sclerite between basale and apicale; striolate : penis).

a : exact ventral view; b : diagonal view.

To this tribe belong the genera *Isocerus* LATREILLE, *Dendarus* LATREILLE, *Bioplanes* MULSANT & REY, *Phylan* STEPHENS, *Micrositus* MULSANT & REY, and *Heliopathes* DEJEAN ⁽¹⁾. With the exception of the Central-Mediterranean *Bioplanes* and the disjunct, West- and East Mediterranean *Micrositus* (cf. ESPAÑOL, 1947, Trab. Mus. Barcelona, nueva ser. zool., I., p. 15), all the other genera are also represented in the north-western part of the African Continent, there being strictly confined to the Atlasic Province and not extending eastwards beyond Tunis (map 2).

(1) Because of nomenclatoric reasons DEVILLE & MÉQUIGNON (L'Abeille, 1938, p. 319) proposed for *Heliopathes* the name *Heliochæx* BEDEL.

10. *Ædeagal tegmen* only partially tri-partite (figs. 36, 41, 51, 58, 63, 65, 66). The dorsal intermediate sclerite inserted at the base of parameres, overlapping the latter, exactly dorsal in position and not produced around tegmen towards the ventral surface of apicale, therefore without inflexed alæ ventrally; very small to minute, transverse, occupying only a very small part of the length of parameres. The base of parameres

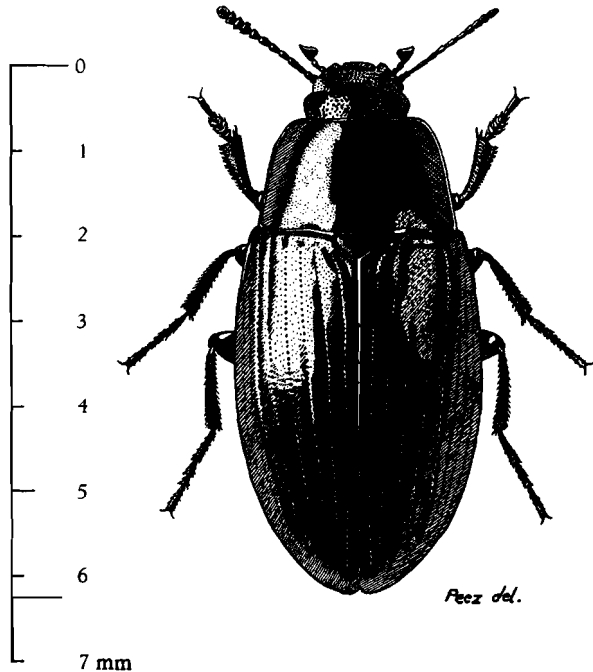


FIG. 35. — *Heterocheira fryeri mocambicola* KOCH.

- directly jointed to the articulation surface of basale, usually underneath the overlapping, dorsal intermediate sclerite (fig. 58). Anterior tarsi in the ♂ rarely dilated, but if so, then the tibiæ not spinose. **11**
- *Ædeagal tegmen* truly tri-partite (figs. 33, 34). The dorsal intermediate sclerite inserted at the base of apicale, very distant from parameres and with its apical sutures joining the base of parameres, but not overlapping them, dorso-latero-ventral in position, produced around tegmen towards the ventral surface of apicale and there with narrow inflexed alæ; very large and about a quarter longer than parameres. The base of parameres dorsally exposed, jointed to the apical margin of dorsal intermediate sclerite and not to the articulation surface of basale from which it is widely separated by the entire length of intermediate sclerite (figs. 33, 34). Anterior tarsi in the ♂ dilated, the tibiæ spinose.

XII. — **HETEROCHEIRINI** n. trib.

(Fig. 35.)

This new tribe, the species of which were misinterpreted and placed to the *Pedinini* sensu LACORDAIRE and auct., is isolated among all *Opatrinæ* by the unique and truly tri-partite structure of ædeagal tegmen. The inner sclerites of ædeagus are confined to the simple penis. The alate body, the epistomal emargination, the intersegmental membranes between the apical sternites of abdomen, the formation of body, as well as the movable and unclasping parameres of ædeagus place this new tribe into the relationship of the *Opatrini*.

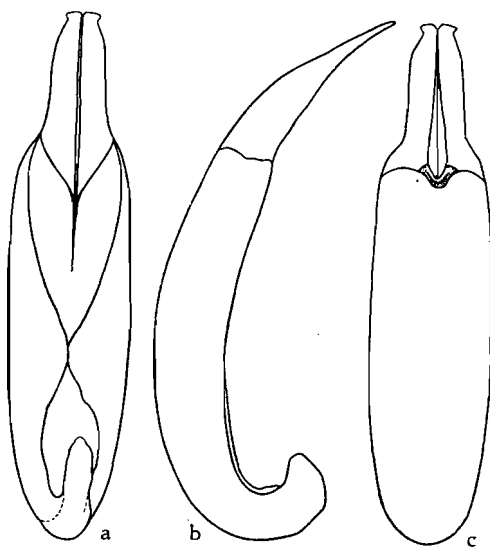


FIG. 36. — Ædeagus

of a *Heterotarsus* sp. from the Belgian Congo Elisabethville Province.
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : dorsal surface.

Erected on the genus *Heterocheira* LACORDAIRE (cf. also KOCH, 1953d, Bol. Soc. Estud. Moçambique, Lourenço Marques, n° 82, p. 5). To the same tribe belongs also *Diphyrrhynchus* FAIRMAIRE (cf. GEBIEN, 1922, Transact. Linn. Soc. London, XVIII, p. 261 and KOCH, 1935, Bull. Soc. R. Ent. d'Egypte, p. 77).

As is the case with the *Phalerini*, *Trachyscelini*, and *Opatrini* of the *Ammobius* group, the *Heterocheirini* display strictly littoral habits and are widely spread along the shores of Eastern Africa, India, Australia, the Madagascar-Malayan-Australian archipelagos, with one species, viz. *Diphyrrhynchus ænescens* FAIRMAIRE, entering into the Palæartic Region along the shores of the Red Sea.

11. Lacinia of ædeagus always developed, but grown together and forming a uni-partite, foliaceous sclerite, laying above outer surface of penis (fig. 37). Tarsi with rudimentary preapical segment; the latter extremely small and completely enclosed by the strongly dilated, bi-lobate prepenultimate segment; tarsal scheme therefore appearing as if 4-4-3. Tarsi in both sexes very strongly dilated.

XI. — **HETEROTARSINI** sensu novo.

(nec *Heterotarsini* GEBIEN, 1938-1942, p. 672).

The *Heterotarsini*, as interpreted by GEBIEN, 1938-42 (cf. also *Heterotarsinæ* GEBIEN, 1920, p. 11) are a most artificial and mixed group of genera, which, in actual fact, belong to different subfamilies.

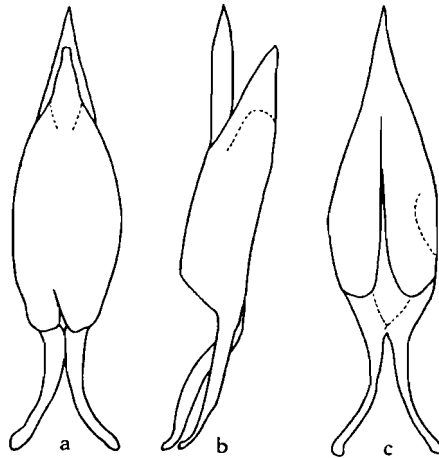


FIG. 37. — The extracted penis with the fused lacinia of ædeagus of *Heterotarsus* sp. from the Belgian Congo Elisabethville Province.
a : outer surface; b : lateral aspect; c : inner surface.

The genus *Heterotarsus* LATREILLE, however, exhibiting a deep opatrinoid emargination of epistome, agrees with the subfamily of *Opatrinæ* also in the similarity of structure of ædeagus (fig. 36) and in the formation of body. By these characters it is sharply separated from all the other genera of the *Heterotarsini* sensu GEBIEN. The latter are not only very different in the structure of ædeagus but disagree strongly with the *Opatrinæ* in the general build of body.

The genus *Heterotarsus* can not fall under the tribe of *Opatrini* because of the peculiar structure of inner sclerites of ædeagus, the formation of tarsi and many other particulars; it stands best for an independent tribe. Tropical African, Indian, Malayan, but also in China, Japan and Formosa. On the African Continent ranging from the southern limits of Sahara to the northern and eastern outskirts of Southern Africa.

- Lacinia of ædeagus rarely developed (figs. 43-45, 54-56); if so, then bipartite and forming a pair of styli or homologous bi-lateral structures. Tarsi with normal preapical segment; the tarsal scheme therefore distinctly 5-5-4. In the ♂ rarely dilated the anterior tarsi alone.

X. — **OPATRINI** sensu novo.

To the *Opatrini* in this new conception belong five sharply separated subtribes which all agree in the presence of intermediate sclerites between the apicale and the basale of ædeagus. This character is of great importance and very constant. ESPAÑOL, 1945, in his

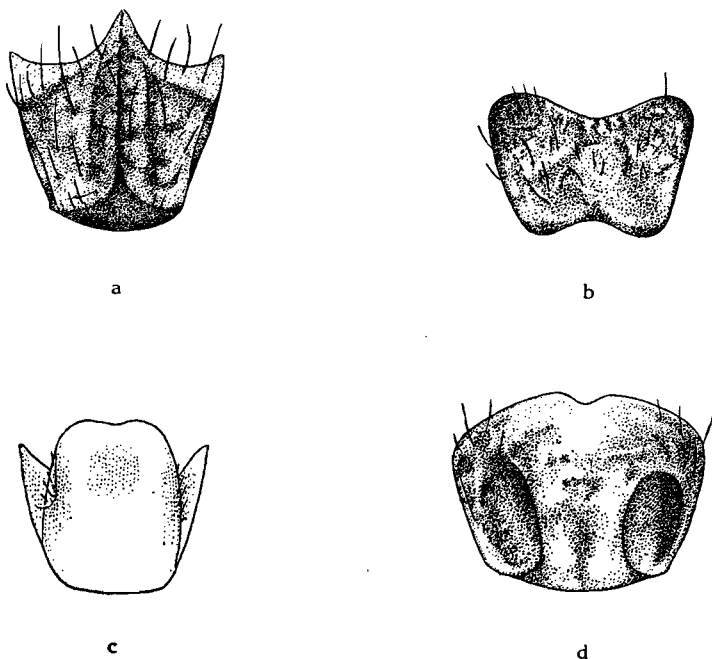


FIG. 38. — The mentum in a few *Opatrini*.
 a: *Pachypterus (Trachymetus)* sp. from Senegal (M'Bambey) (*Opatrina*);
 b: *Scleron orientale* (FABRICIUS) from Egypt (*Sclerina*); c: *Blenosia* sp.
 from South-west Africa (Windhoek) (*Stizopina*); d: *Stizopus* sp. from the
 Cape Province (Fraserburg) (*Stizopina*).

recent division of Palæarctic *Opatrinæ*, separated the *Opatrini* from all the other tribes (viz. *Litoborini*, *Pedinini* and *Dendarini*) by the supposed absence of lacinia of ædeagus. This conclusion does not hold, as there exist many species and genera of *Opatrini*, exhibiting lacinia or homologous structures within the ædeagal tegmen. For the greater part, however, these inner sclerites are entirely concealed, as they are closely attached to the penis, and, together with

the latter, entirely or partially enclosed in the alveated parameres of apicale, during the unopened state of rest. As to the great variability and complexity of the inner sclerites of aedeagus in the *Opatrini* I refer to the figures 41, 42, 43, 44, 45, 49, 51, 53, 54, 55, 56, 58, 63, 64, 65, 66. The criterion of the earlier authors and introduced by LACORDAIRE, viz. the non-dilated anterior tarsi in the ♂ of *Opatrini*,

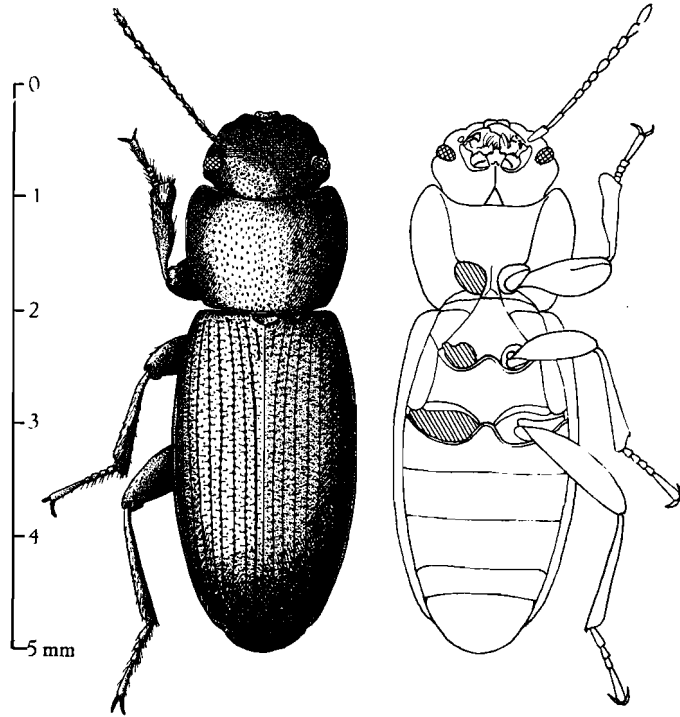


FIG. 39. — *Dilamus bottoi* KOCH, from Southern Africa.

is insufficient, as on the one hand many genera and species occur in the *Opatrini*, the ♂ of which exhibits often strongly dilated anterior tarsi (e.g. *Stenolamus*, *Sulpius*, *Dilamus*, *Pachypterus*, *Mesomorphus* etc.), whereas on the other hand ♂♂ with non-dilated anterior tarsi are frequently found in the *Platynotini*, *Oncotini*, *Litoborini*, *Pythiopini*, *Dendarini*, as well as in all *Leichenini* and *Melanimini*. In the African Continent occur the subtribes of *Sclerina*, *Opatrina*, *Stenolamina*, *Emmallina* and *Stizopina*. Of these groups only the *Emmallina* are exclusively Tropical, while the *Opatrina* are Pan African and the Palæartic *Sclerina* enter to a moderate extent the Ethiopian and Oriental Provinces of the Tropical African Region. The *Stenolamina* and *Stizopina* are Southern African (map 5). The *Stizopina*, although sharply separated from all the other *Opatrini* by the entirely exposed,

rather broad epipleura and strikingly broad, abruptly abbreviate pseudopleura (fig. 59), can not be regarded a different tribe (as was suggested by GEBIEN, 1938, p. 90). The structure of their aedeagus, with the same intermediate sclerites between apicale and basale (fig. 58) does not differ essentially from all the other *Opatrini*. Of these subtribes the following genera are African or represented also in Africa.

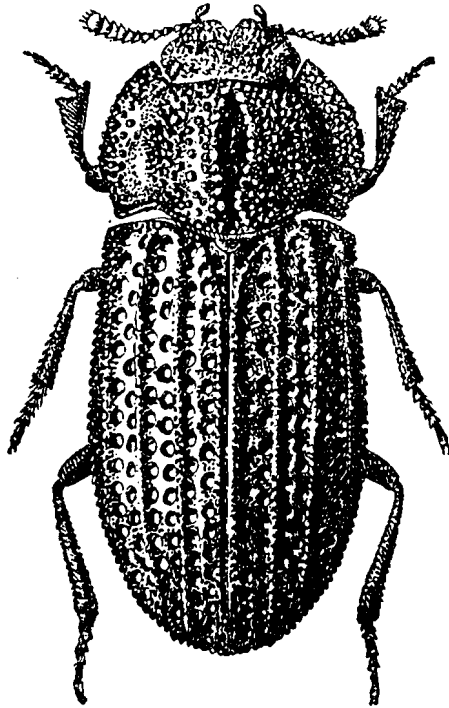


FIG. 40. — *Polycœlogastridium sexcostatum* MOTSCHOUJSKY
(after REICHARDT).

1. — *Opatrina*.

a) *Dilamus* JACQUELIN DU VAL (fig. 39). Previously known from Northern Africa and Abyssinia, this genus was recently recorded also from Southern Africa, the Senegal and Sudan (cf. KOCH, 1955a). It has probably a Pan African distribution.

b) *Pseudolamus* FAIRMAIRE. Northern African, but penetrating into the northern parts of Tropical Africa.

c) *Pachypterus* LUCAS. Northern and Tropical African.

d) *Mesomorphus* SEIDLITZ. Tropical African, in its range of distribution almost agreeing with that of *Opatrinus* of *Platynotini*. Occur-

ring also in the northern and eastern parts of Southern Africa, with a single species (viz. *Mesomorphus setosus* MULSANT & REY) entering along the Nile valley into the Palæarctic Region of Egypt.

e) *Sulpius* FAIRMAIRE. Madagascar. On account of the strongly dilated anterior tarsi in the ♂ erroneously placed to the *Pedinini* sensu GEBIEN (1938-1942), this genus exhibits the characteristic structure of ædeagus of *Opatrina*.

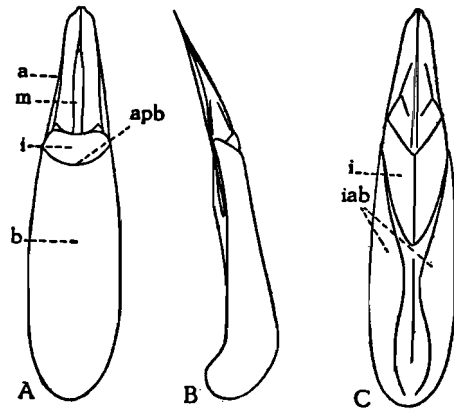


FIG. 41. — Ædeagus of *Gonocephalum gridellii* KOCH.

a : apicale; b : basale; m : median lobe or penis; i : intermediate sclerites between basale and apicale; apb : apical margin of basale; iab : inflexed alæ of basale.

A : dorsal surface; B : lateral aspect, with the ventral surface at left; C : ventral surface.

f) *Polycælogastridium* REICHARDT (fig. 40). As a relict occurring only on the Gebel Barca in the Northern African Cyrenaica (cf. KOCH, 1939 and 1940).

g) *Gonocephalum* SOLIER. In the whole African Continent.

h) *Opatrum* FABRICIUS. In Africa confined to the western and central parts of Northern Africa.

i) *Opatropis* REITTER. Probably Pan African.

j) *Opatroides* BRULLÉ, (fig. 46). Discontinuous Pan African, hitherto not recorded from the central parts of Tropical Africa.

k) *Lobodera* MULSANT & REY. Northern African and South-west Saharan.

l) *Proscheimus* DESBROCHERS (fig. 47). In Africa found only in Egypt.

m) *Ammotrypes* FAIRMAIRE. Endemic to the Western Sahara.

n) *Perithrix* FAIRMAIRE. Endemic to the Western Sahara.

- o) *Amphitrix* ESPAÑOL. Endemic to the Western Sahara.
 p) *Brachyesthes* FAIRMAIRE. Northern Africa.
 q) *Moralesia* KASZAB (fig. 48). Endemic to the Western Sahara.
 r) *Ammobius* GUÉRIN (fig. 50). In Africa only in the western part of Northern Africa.
 s) *Raynalius* CHATANAY. Endemic to the coast of Senegal.

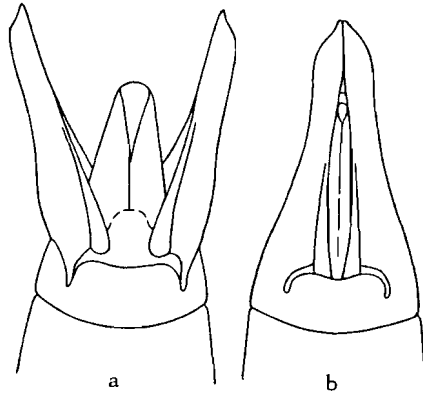


FIG. 42. — Apicale of the aedeagus of *Gonocephalum rusticum* OLIVIER.
 a : with opened parameres; b : in state of rest (after GRIDELLI, 1948).

t) *Corinta* KOCH. Littoral and endemic to the coast of Portuguese East Africa. There is some supposition that this genus is synonymous with the Philippine genus *Nesocædius* KOLBE.

u) *Cornopterus* KOCH. Littoral and occurring on the coasts of Portuguese East Africa, Natal and the South-eastern Cape Province.

v) *Cædius* MULSANT & REY. Practically Pan African, but absent from the western parts of Northern Africa and the south-western parts of South Africa.

w) *Mateuina* ESPAÑOL (fig. 52). Endemic to the Western Sahara.

x) *Ammidium* ERICHSON. Confined to the coast of South-western Angola.

y) *Clitobius* MULSANT & REY. Discontinuous Pan-African, but not in the central parts of Tropical Africa, nor in the southern parts of Southern Africa.

2. — *Stenolamina*.

The single genus *Stenolamus* GEBIEN (fig. 57), which is split up into a great number of sharply separable species, occurs only in the western area of Southern Africa, from the South-western Cape Province northwards as far as Lobito in Central-western Angola.

3. — **Stizopina.**

In a great number of genera of which many are not yet described occurring all over the Southern African Region, with the exception of the south-eastern parts of Portuguese East Africa, Natal and the South-eastern Cape Province (map 5).

a) *Nemanes* FAIRMAIRE (fig. 61). Southern Namib.

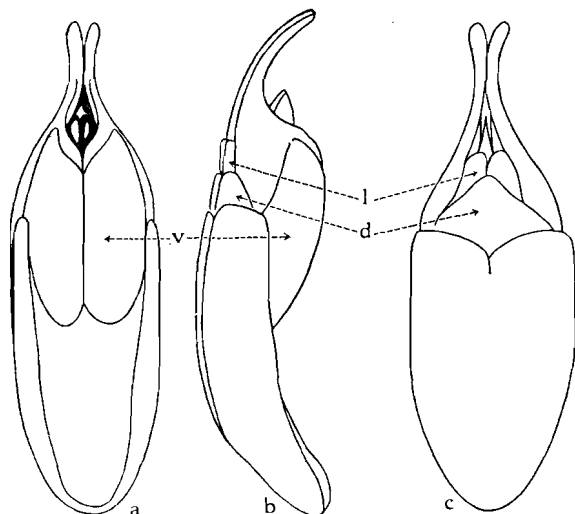


FIG. 43. — Aedeagus of a *Gonocephalum* sp. of the *perplexum* group.
 v : ventral intermediate sclerite between basale and apicale; d : dorsal intermediate sclerite between basale and apicale; l : exposed portion of dorsal pair of lacinia.
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : dorsal surface.

b) *Periloma* GEBIEN (fig. 62). Southern Namib.

c) *Psammogaster* KOCH (fig. 59). Southern Namib.

d) *Syntyphlus* KOCH. Southern Namib. The only known anophthalmous Opatrin.

e) *Parastizopus* GEBIEN (fig. 58). From Central Damaraland to the Northern and Central Cape Province.

f) *Stizopus* ERICHSON. Southern-west African (from the Southern Cape Province into South-western Angola) and Trans-Bechuanian (from Damaraland to Transvaal and Southern Rhodesia).

g) *Helibatus* MULSANT & REY. In the Cape Province, Orange Free State and Transvaal.

h) *Amathobius* GEBIEN. From the Northern Cape Province to Eastern Damaraland and North-western Bechuanaland.

i) *Planostibes* GEMMINGER & DE HAROLD. From the South-western Cape Province into Great Namaqualand.

j) *Blenosia* LAPORTE DE CASTELNAU. From the South-western Cape Province to South-western Angola.

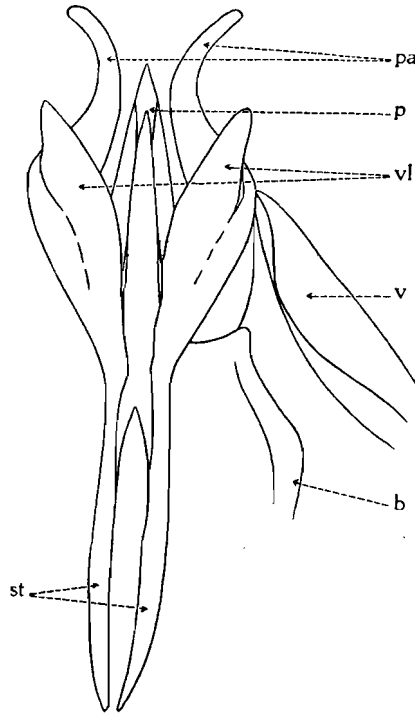


FIG. 44. — Outer surface of the extracted inner sclerites plus parameres of the aedeagus of a *Gonocephalum* sp. of the *perplexum* group. b : a part of the basale of aedeagal tegmen; p : penis; pa : the unfolded parameres of apicale; st : struts of inner sclerites; v : a part of the ventral intermediate sclerite between basale and apicale; vl : the ventral pair of lacinia, fastened to the inflexed alæ of parameres (as is the case in many *Platynotini*).

k) *Blacodes* BLANCHARD. Endemic to the southern part of the South-western Cape Province, the Cape Peninsula included.

4. — **Emmallina.**

With the single genus *Emmallus* ERICHSON (pl. I, fig. 3), occurring in the central and southern parts of Tropical Africa and the northern outskirts of Southern Africa.

5. — **Sclerina.**

a) *Scleron* HOPE. In the central and eastern parts of Northern Africa, and the northern part of Tropical Africa.

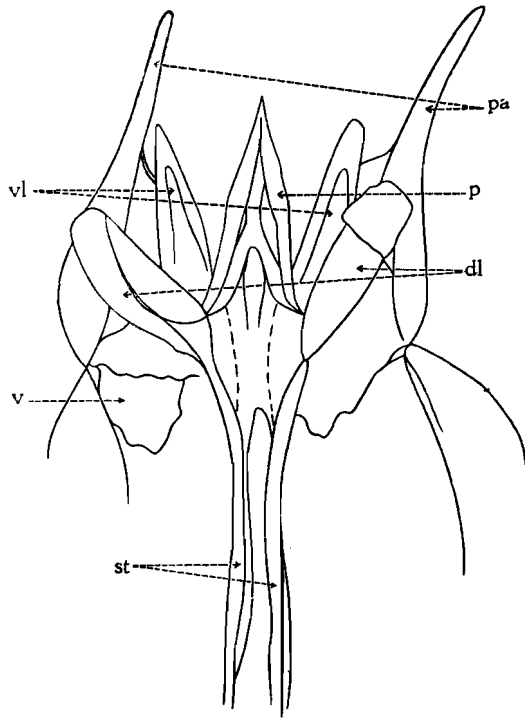
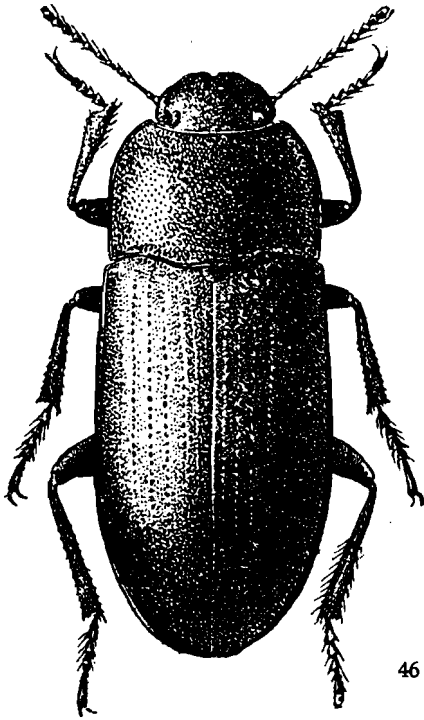


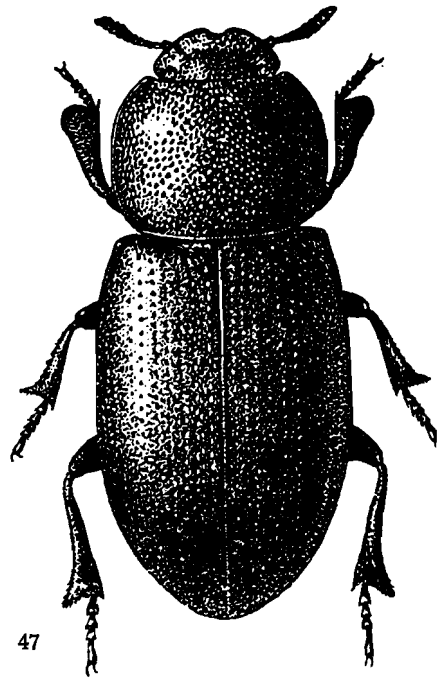
FIG. 45. — The dissected inner surface of the inner sclerites plus parameres of the aedeagus of a *Gonocephalum* sp. of the *perplexum* group. dl : the dorsal pair of lacinia, unfolded; p : penis; pa : the unfolded parameres of apicale; st : struts of inner sclerites; v : a part of the ventral intermediate sclerite between basale and apicale; vl : the ventral pair of lacinia.

b) *Eurycaulus* FAIRMAIRE. Northern African and in the Western Sahara.

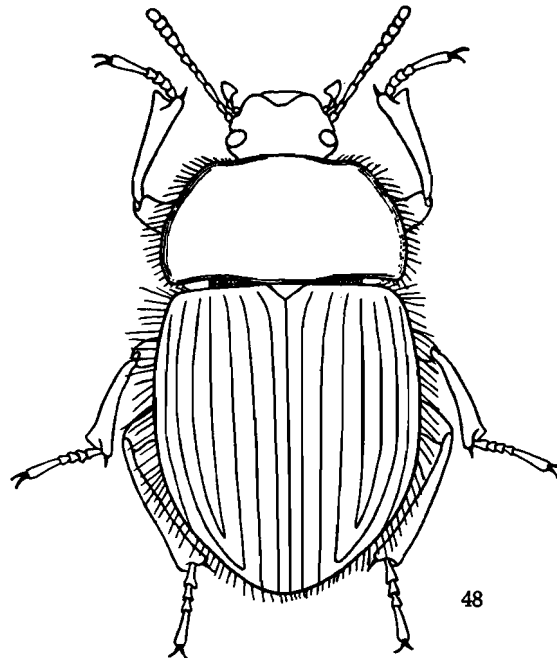
c) *Platynosum* MULSANT & REY (fig. 67). Hitherto only found in the central and eastern parts of Northern Africa, but also in the western part of the Belgian Congo and in South-western Angola.



46



47



48

FIG. 46. — *Opatroides punctulatus* BRULLÉ (after REICHARDT).
 FIG. 47. — *Proscheimus fulvipes* MÉNÉTRIES (after REICHARDT).
 FIG. 48. — *Moralesia longepilosa* KASZAB (after ESPAÑOL, 1944).

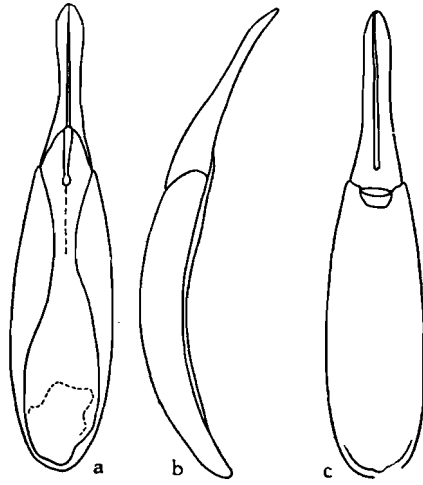


FIG. 49. — *Ædeagus* of *Moralesia longepilosa* KASZAB.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

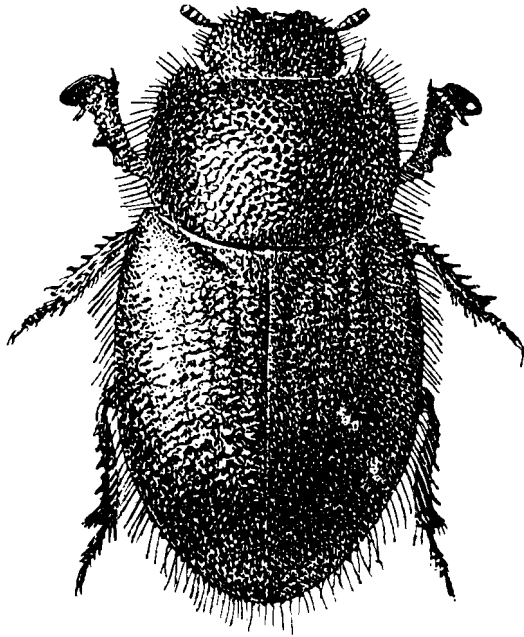


FIG. 50. — *Ammobius rufus* LUCAS (after REICHARDT).

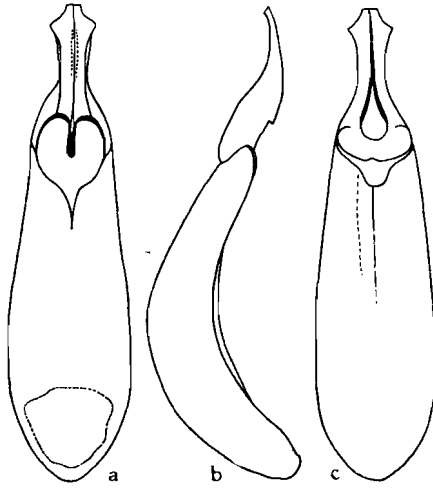


FIG. 51. — *Ædeagus* of a *Cædius* sp. from Ruanda-Urundi.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

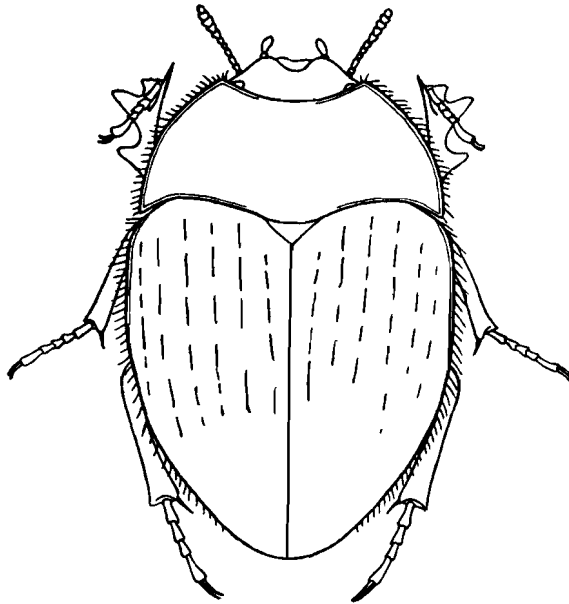


FIG. 52. — *Mateuina kaszabi* ESPAÑOL (after ESPAÑOL, 1944).

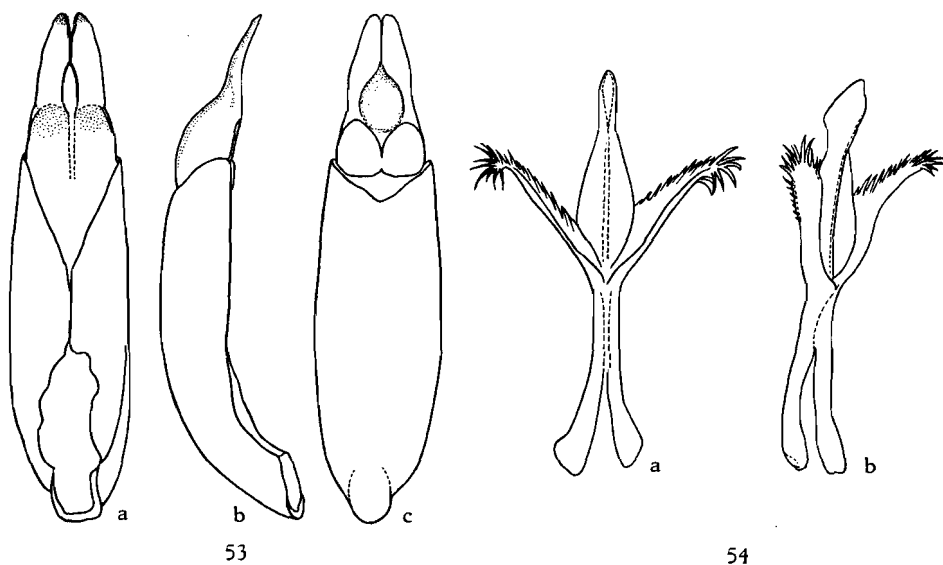


FIG. 53. — Ædeagus of an *Ammidium* sp. a : ventral surface; b : lateral aspect, with the ventral surface at right; c : dorsal surface.

FIG. 54. — The extracted penis and lacinia of ædeagus of a *Clitobius* sp. from the Cape Province. a : outer surface; b : diagonal view.

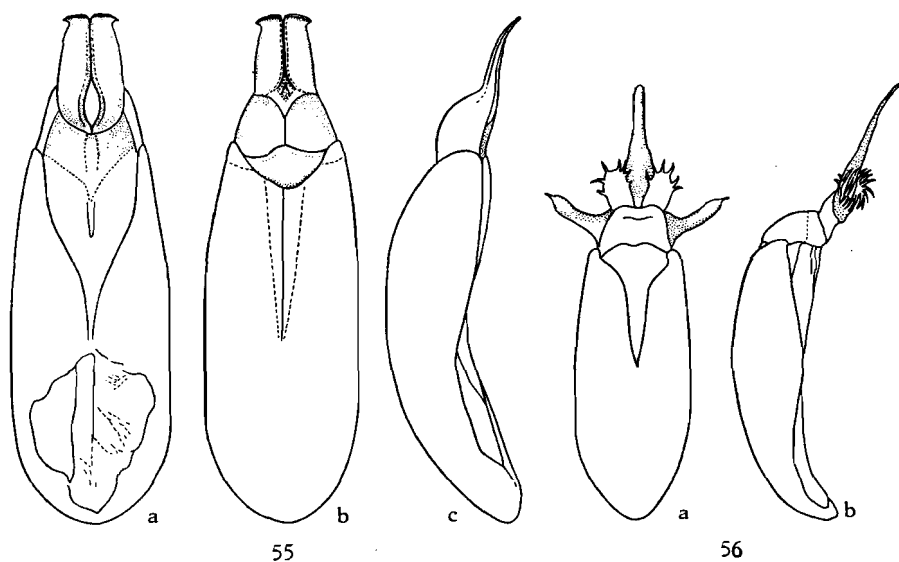


FIG. 55. — Ædeagus of a *Clitobius* sp. from Moçamedes. a : ventral surface; b : dorsal surface; c : lateral aspect, with the ventral surface at right.

FIG. 56. — Ædeagus of a *Clitobius* sp. from Moçamedes, with opened parameres. a : dorsal surface; b : lateral aspect, with the ventral surface at right.

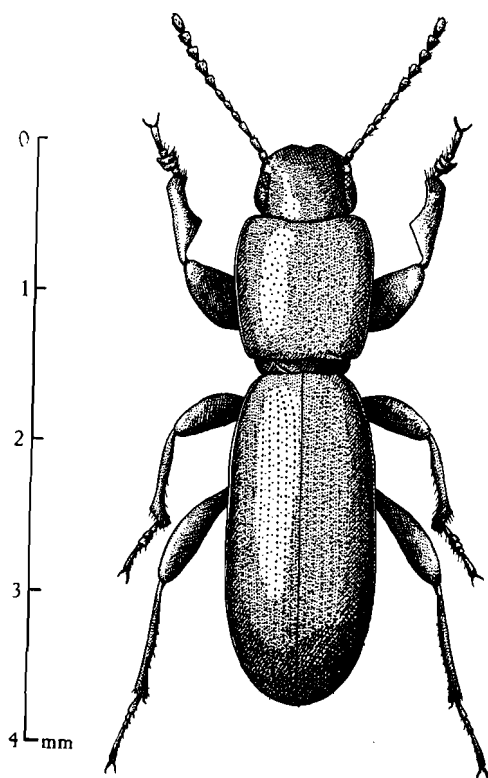


FIG. 57. — *Stenolamus furciphallus* KOCH.

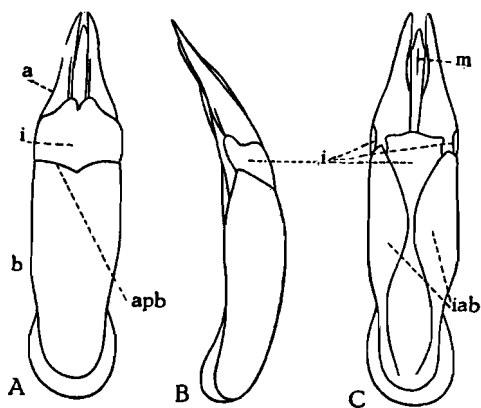


FIG. 58. — Aedeagus of *Parastizopus diehli* GEBIEN.

a : apicale; b : basale; m : median lobe or penis; i : intermediate sclerites between apicale and basale; apb : apical margin of basale; iav : inflexed alæ of basale.

A : dorsal surface; B : lateral aspect, with the ventral surface at left; C : ventral surface.

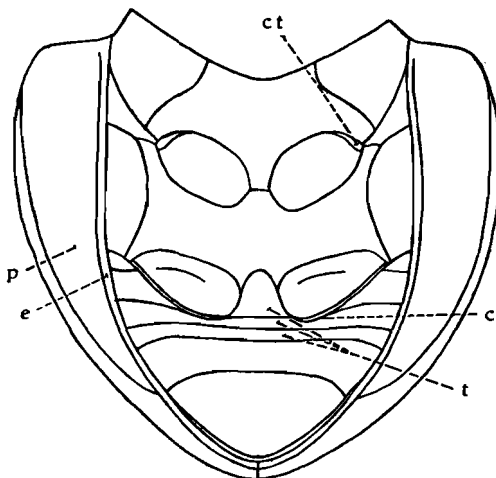


FIG. 59. — Underside of hind body in the Stizopin *Psammogaster malani* KOCH. e : the complete and entirely exposed epipleuron; p : the extremely broad and abruptly abbreviate pseudopleuron; c : the practically open metacoxal cavity; ct : the rudimentary mesocoxal trochantin; t : the reduced and somewhat telescoped proximal sternites of abdomen.

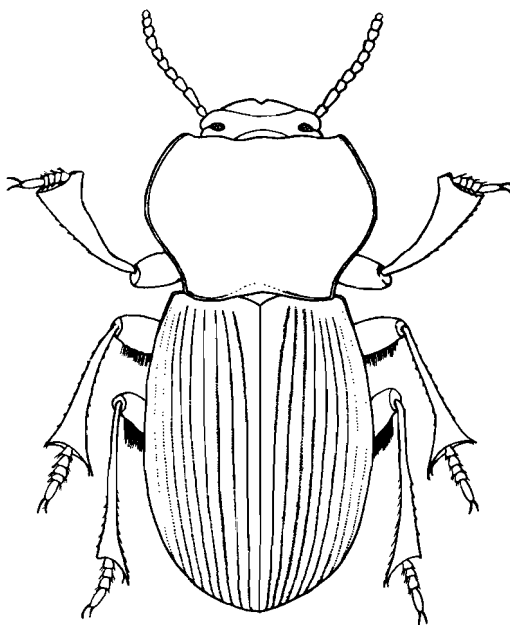


FIG. 60. — *Parastizopus armaticeps* PÉRINGUEY.

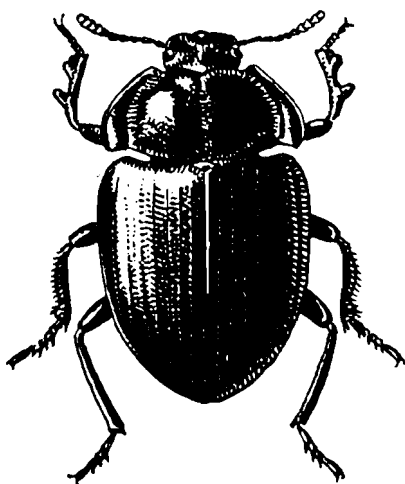


FIG. 61. — *Nemanes expansicollis* FAIRMAIRE (after GEBIEN, 1938).

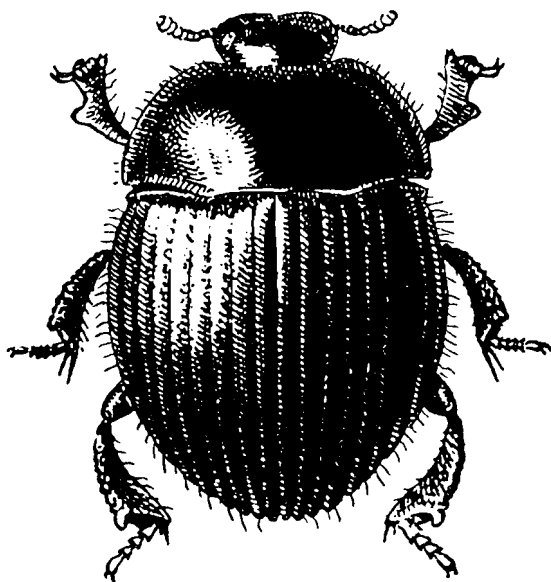


FIG. 62. — *Periloma alfkeni* GEBIEN (after GEBIEN, 1938).

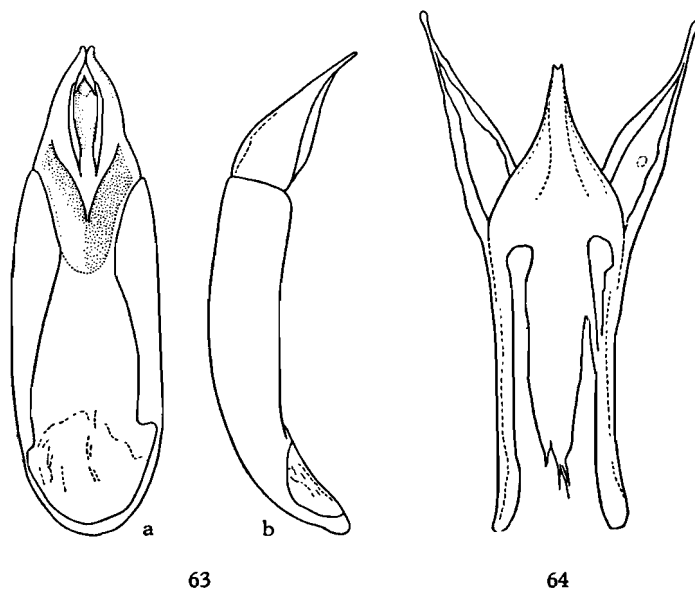


FIG. 63. — Aedeagus of *Emmallus* sp. from the Upemba Park (Mabwe).
 a : ventral surface; b : lateral aspect, with the ventral surface at right.
 FIG. 64. — The dissected portion of the parameres and penis of aedeagus
 of *Emmallus* sp. from the Upemba Park (Mabwe).

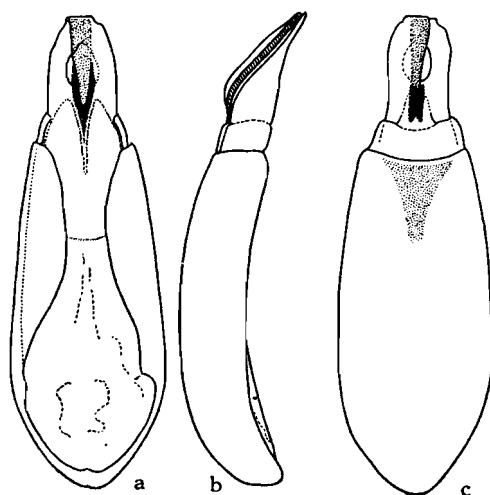


FIG. 65. — Aedeagus of *Emmallus* sp. from South-west Africa.
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : dorsal surface.

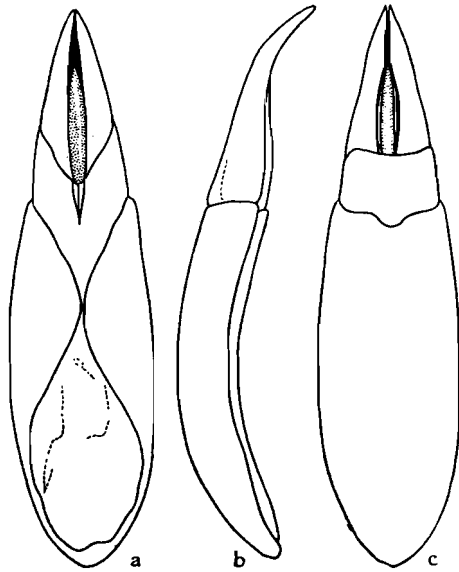


FIG. 66. — Aedeagus of *Eurycaulus pachecoi* ESCALERA.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

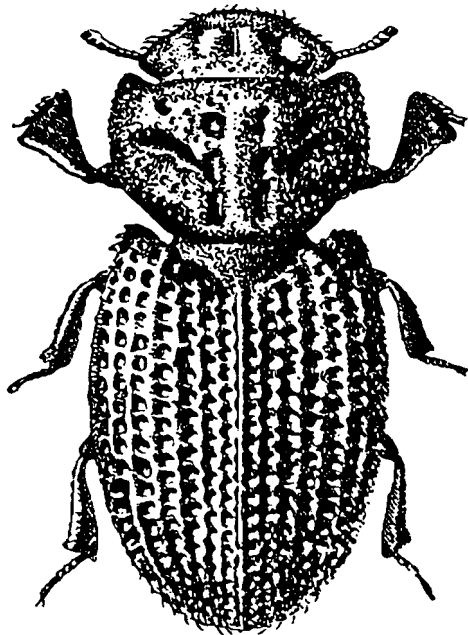


FIG. 67. — *Platynosum collare* MOTSCHOUJSKY (after REICHARDT).

A. — PLATYNOTINI⁽¹⁾

KOCH, 1953 *a*, Rev. Fac. Cienc. Lisboa, 2, III, p. 268. — KOCH, 1955 *a*, Ann. Transv. Mus., Pretoria, p. 426.

Platynotaires + Opatrinaires + Trigonopaires, p.p., MULSANT & REY, 1853 *b*, p. 37.

Platinotides + Gonopides, p.p., LACORDAIRE, 1859, pp. 233, 255; *Gonopini* + *Pedinini* + *Opatrini*, p.p., GEBIEN, 1938, p. 90.

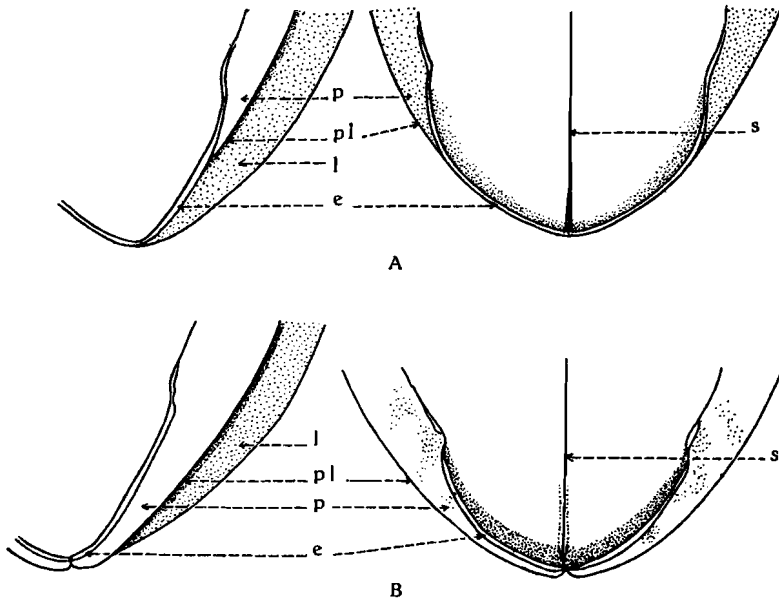


FIG. 68. — Apical construction of pseudopleura of elytra.
 Left : diagonal view of elytral apex; right : ventral surface of elytral apex.
 e : epipleura; l : lateral portion of elytral surface; p : pseudopleura;
 pl : pseudopleural crest; s : suture.

A : selinoid *Platynotina* (the pseudopleura are abbreviated); B : opatrinoid and anchophthalmoid *Platynotina* (the pseudopleura are complete and reach the apex of elytra).

Definition. — Body from fully winged to apterous. Epistome emarginate. Eyes constricted by genal canthus, exceptionally divided (*Angolositus*, fig. 176). Gula transformed into a stridulatory organ (fig. 3). Mentum either uni-partite (*Anomalipina*, fig. 74) or tri-partite and then

⁽¹⁾ The present paper does not deal with the Madagascar genera *Melanocratus*, *Styphacus* and *Madobalus*, a revision of which is in the press with the « Mémoires Institut de Recherche scientifique de Madagascar ».

with lateral wings (figs. 91, 123) which, however, sometimes are concealed by the expansion of the sides of middle section of mentum (fig. 80); apical margin rarely emarginate. Apical segment of maxillary palpi often securiform, sometimes strongly dimorphic and then strikingly dilated in the ♂ (e.g. *Anchophthalmus*, fig. 90). Antennæ with 11 segments. Pronotum transverse to square, with anteriorly narrowing sides and often strongly produced posterior angles. Prosternum emarginate, exceptionally collar-like and produced anteriorly, then concealing a large portion of the underside of head (*Gonopus*, fig. 71); intercoxal apophysis narrow, usually pro-



FIG. 69. — Some types of anterior tibiae in the *Anomalipina* of *Platynotini*.

duced horizontally. Elytra with nine or eight primary rows [exceptionally with a supplementary tenth row posteriorly in *Selinopodus* (pl. XXIV, fig. 1)]; the rows often obliterated or rarely altogether absent. Pseudopleura of variable shape, complete or abbreviate apically. Epipleura distinct at the best apically. Metasternum from very short to long. Intercoxal process of basal sternite of abdomen broad. Anal sternite often marginate. Legs moderately long to short, in the ♂ often with distinctive characters. Ædeagal tegmen bi-partite, composed of apicale and basale, the former much shorter than the latter; parameres always divided at least apically; inner sclerites composed of one to exceptionally two or three pairs of lacinia, plus the penis, usually exposed at least apically. Length of body varying from about 5 to 30 mm.

Relationship. — So far misinterpreted, the *Platynotini* represent a very sharply defined tribe of *Opatrinæ*. As there do not exist any recent links with other tribes, their age may be considered a considerable one.

The principal distinction of *Platynotini* consists in the stridulatory gula which is correlate to the structure of ædeagus. Without any exception all *Platynotini* possess a stridulatory gula, a short apicale and lacinia of ædeagus, whether coming from Africa, India or America.

They show somewhat allied only to the *Oncotini* on the basis of the

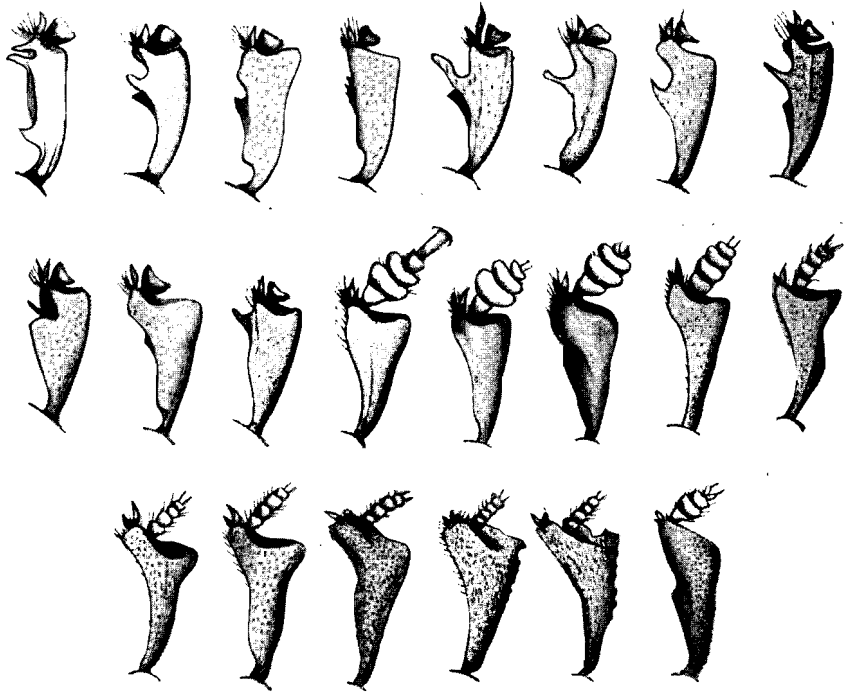


FIG. 70. — Some types of anterior tibiæ in the trigonopoid *Platynotina*.

same structure of stridulatory gula, without disclosing, however, any other characters of affinity besides those super-ordinate ones of the subfamily of *Opatrinæ*.

Intra-tribal Phylogeny. — The alate *Opatrinus* may be regarded the most primitive of all *Platynotini*, occurring in Africa, India and America, probably of a very ancient, Afro-Brazilian origin (sensu JEANNEL). Links between the *Opatrinus* and the apterous remainder of *Platynotini* are found in the anchophthalmoid genera which have maintained the complete, *Opatrinus*-like pseudopleura of elytra, although having lost the wings; even within the *Opatrinus* species with reduced or altogether absent wings occur. The centre of evolution of *Platynotini* is found in Tropical Africa, where apterous and alate genera live together. The many Southern African subtribes and genera are all apterous, extremely differ-

entiated and may belong to different paleontologic faunae, more or less overlapping one another in their recent distribution.

The *Platynotini* can be sub-divided into the three sharply separated subtribes of *Platynotina*, *Anomalipina* and *Gonopina*, with only the *Platynotina* occurring also in the Belgian Congo.

DIVISION OF PLATYNOTINI.

- 1. Pseudopleura of elytra gradually dilated towards base. Upper surface of anterior tibiae without median tooth (fig. 70), except for *Zophodes tristis* (fig. 266). Mentum small, tri-partite (figs. 76, 78, 81, 82). Prosternum emarginate anteriorly (fig. 90) 3

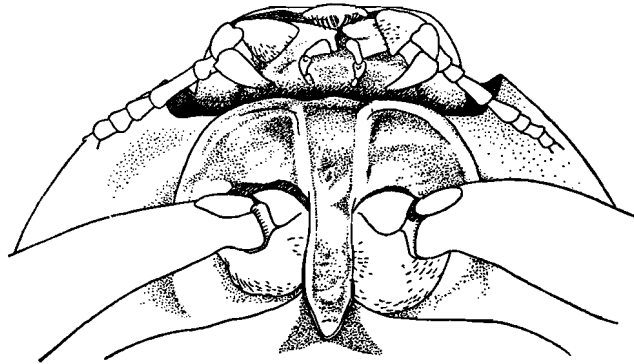


FIG. 71. — The under surface of head of *Gonopus* sp., amplected in the collar-like produced prosternum.

PLATYNOTINA

Koch, 1955 a, Ann. Transv. Mus., p. 428.

Tropical and Southern Africa, Madagascar, India, America.

- Pseudopleura of elytra abruptly dilated either basally or apically. Upper surface of anterior tibiae with one (fig. 69) or more teeth between apical tooth and base. Mentum either uni-partite, very large and concealing the basal portion of maxillary palpi (fig. 74), or small and tri-partite, when the prosternum is more or less strongly collar-like and produced anteriorly (fig. 71) 2
- 2. Pseudopleura of elytra narrow, but abruptly and very strongly dilated basally; the pseudopleural crest altogether ventral in position and bent dorsad only humerally, invisible from above; the lateral contours of

elytra are formed by the ninth costate secondary interval (dorsal aspect); the reflected portion of elytra with a broad, lateral, intervening space between ninth secondary interval and the pseudopleural crest. Anterior margin of prosternum collar-like and more or less strongly produced, usually amplexing the postgenal portion of the underside of head (figs. 71, 72). Elytra much broader than pronotum, strongly dilated backwards. Mentum small and tri-partite, with narrow lateral wings. Upper surface of anterior tibiae with two to six teeth or partially obtuse processes.

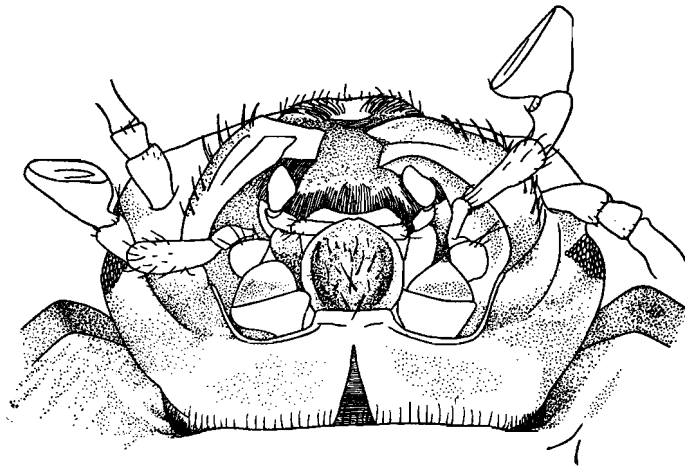


FIG. 72. — Under surface of head of *Stenogonopus* sp.

GONOPINA.

(Fig. 73.)

KOCH, 1955 *a*, Ann. Transv. Mus., p. 427.

Southern African, in the North expanding as far as Southern Tanganyika Territory in the East and South-western Angola in the West. Widely spread in South Africa but absent from Natal, the South-eastern Cape Province, the eastern part of the Orange Free State and Southern Transvaal (map 6).

Two genera: *Gonopus* LATREILLE and *Stenogonopus* GEBIEN.

- Pseudopleura of elytra abruptly dilated apically, thence very broad and occupying the entire latero-ventrally reflected portion of elytra; the pseudopleural crest dorsal in position and forming the lateral contours of elytra. Anterior margin of prosternum emarginate, leaving exposed the whole underside of head (fig. 75). Elytra narrower than pronotum or at the best as broad as the latter. Mentum very large, uni-partite (fig. 74) and concealing the basal portion of maxillary palpi (fig. 75). Upper surface of anterior tibiae with a single median tooth (fig. 69).

ANOMALIPINA.

KOCH, 1955 a, Ann. Transv. Mus., p. 427.

Southern African, in the North with a single species (*Anomalipus heraldicus*) penetrating into British East Africa, and found also in Southern Angola. In South Africa displaying a typically perikarroid distribution (map 6), occurring only in the Trans-Bechuana

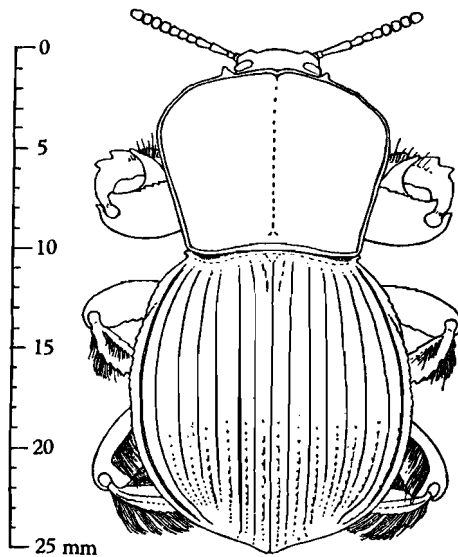


FIG. 73. — *Gonopus* (s. str.) *conpachysoma* KOCH.

and eastern parts, but absent from Great and Little Namaqualand, the southern Kalahari, Namib, and the Cape Province except for its south-eastern part.

The single genus of this group, *Anomalipus* LATREILLE, comprises only large species, among which there are found the most spectacular forms of *Opatrinæ*. The expansion of mentum, almost concealing the buccal organs, represents a unique feature within the subfamily and recalls some tribes of *Tentyriinæ*, as does also the large mandibular lobe of postgenal margin (fig. 75). In all the other *Platynotini* the mandibular portion of postgenal margin is simply edged (fig. 90), with the exception of *Melanopterus podagricus*, in which it is spiniform (fig. 267).

The ædeagus of *Anomalipus* in some groups deviates strikingly from the usual and generally homogeneous structure in the other *Platynotini* either by an extremely complicated build up of addi-

tional inner sclerites (sometimes with two or three pairs of lacinia, figs. 6, 7, and armatures of apical portion of basale, fig. 6), or by an extreme reduction of inner sclerites, culminating in the loss of lacinia and the sclerotization being confined to the apical orifice of penis (fig. 8).

- 3. Anterior tibiæ slender, scarcely to weakly dilated (figs. 93, 100, 146). Anal sternite of abdomen either immarginate or more or less completely marginate, when the base of pronotum is strongly bi-sinuate, and the posterior angles considerably produced backwards. Metasternum between meso and metacoxal cavities longer, with a distinct, more or less expanding intervening space between pre-metacoxal sclerite and the posterior margin of mesocoxal cavity. — Tropical group of *Platyno-*

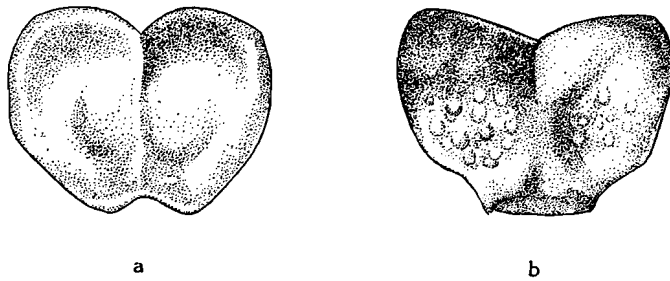


FIG. 74. — The mentum in *Anomalipus*.

a : spec. from Northern Transvaal, Zoutpansberg District (Chapudi);
 b : spec. from Eastern Transvaal (Nelspruit).

- tina*, in Southern Africa (map 6) overlapping the range of trigonopoid *Platynotina* only in the North (Ovamboland, Northern Bechuanaland) and East (Southern Rhodesia, Portuguese East Africa, Transvaal and Natal) **4**
- Anterior tibiæ strongly to triangularly dilated (fig. 70). Anal sternite of abdomen broadly and entirely marginate, with the exception of *Bantodemus*, in which it is entirely immarginate, but in this genus the base of pronotum truncate to very shallowly or inconspicuously bisinuate, with the posterior angles not or only weakly demarcated from middle section of base. Metasternum between meso- and metacoxal cavities very short, occupied by the pre-metacoxal sclerite and without distinct intervening space between the latter and the posterior margin of mesocoxal cavity. — Southern African group of *Platynotina*, not entering into Tropical Africa (map 6).
 Trigonopoid *Platynotina* **19**
 Southern and eastern parts of Southern Africa; not in the Kalahari, nor in Little Namaqualand and Bushmanland, absent from South-west Africa, in the East ranging as far northwards as Southern Rhodesia (map 6).

4. Pseudopleura of elytra broad, weakly dilated towards base, occupying either the entire ventrally reflected portion of elytra, or at least the basal two-thirds of the latter and in this case leaving exposed only a narrow portion of the ninth secondary interval of elytral surface posteriorly; the pseudopleural crest completely exposed dorsally or concealed only for a short distance behind middle. The ninth secondary interval of elytra dorsal in position and visible from above. The only exception is *Phallocentrion* (pl. VIII, fig. 4, pl. IX, fig. 1) with posteriorly very narrow pseudopleura and strongly convex to slightly re-entrant sides of elytra, but in this case the pseudopleura complete and reaching the apex of elytra 5

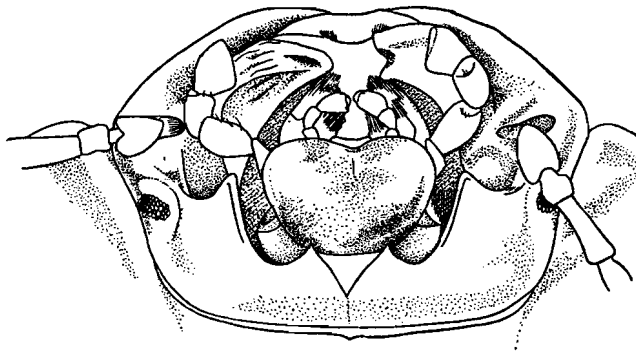


FIG. 75. — Under surface of head of *Anomalipus mastodon* FÄHRÆUS.

- Pseudopleura of elytra narrow, but strongly dilated on basal third, much narrower than the remaining portion of the ventrally reflected section of elytra; the latter formed by the broad ninth plus eighth secondary intervals; the pseudopleural crest entirely concealed dorsally, except for the humeral angle. The ninth secondary interval of elytra lateral in position and not visible from above. Pseudopleura abbreviated posteriorly or coalescent with epipleural carina.

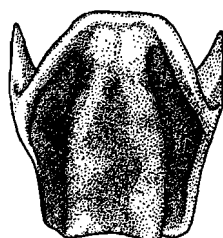
Platynotoid *Platynotina*.

Similar to the selinoid *Platynotina* but the elytra strongly convex to re-entrant laterally and in the structure of pseudopleura to a certain extent recalling the *Gonopina*. Of large size, 9 to 26 mm. long.

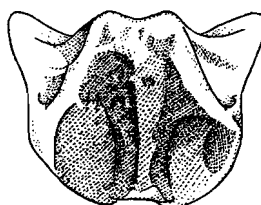
Exclusively Indian. Two genera: *Platynotus* FABRICIUS and *Pseudoblaps* GUÉRIN.

5. Pseudopleura of elytra complete, with the pseudopleural crest reaching the sutural angle of apex and there being sharply separated from the epipleural carina by a narrow, usually concave intervening space (fig. 68) 6

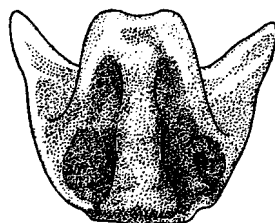
- Pseudopleura of elytra abbreviate posteriorly or fused with the epipleural crest, apically forming a uniform edge, delimited by a single carina on dorsal surface of elytral apex, but without any trace of an epipleural carina on ventral surface of apex (fig. 68).



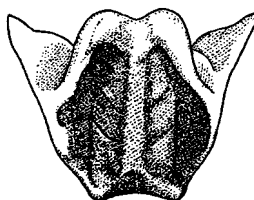
76



77



78



79

FIG. 76. — Mentum of *Bantodemus lugubris* (FÄHRAEUS).

FIG. 77. — Mentum of *Schelodontes immundus* (MULSANT & REY)

FIG. 78. — Mentum of *Atrocates* sp.

FIG. 79. — Mentum of *Eviropodus alternans* (FÄHRAEUS).

Selinoid *Platynotina* 10

Ethiopian and not crossing the Zambezi and Kunene Rivers to the South (map 6).

In part very similar to the anchophthalmoid *Platynotina*, but without any exception sharply separated by the different construction of the apex of pseudopleura of elytra and the loss of the epipleural carina. The many genera of this group are readily distinguished from the anchophthalmoid genera by sharply cut characters.

6. Metasternum long; about as long as the basal sternite of abdomen to only a quarter shorter than the latter; between meso and metacoxal cavities several times longer than the pre-metacoxal sclerite, or from one and two-thirds times as long as metacoxal cavities to about one-

third shorter than the latter. Wings fully developed, in some exceptional cases either reduced (*Opatrinus insularis*) or altogether absent (*Opatrinus exalatus*). Pronotum without submarginal depression (pl. III, fig. 3), the discal convexity uniform, reaching the lateral carina. The anterior tarsi dilated and soleate in both sexes, but in the ♂ much more strongly so than in the ♀. Episternum of prosternum densely and coarsely punctured. Anal sternite in a single case (*Opatrinus corvinus*, pl. III, fig. 1) shallowly to obsoletely marginate.

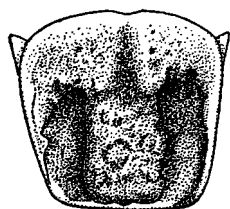
Opatrinoid *Platynotina*. Monotypical.

OPATRINUS LATREILLE.

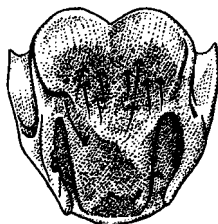
(Pl. III, Pl. IV, fig. 1.)

Trans-Sudanese and Trans-Tropical, in Southern Africa expanding to Natal in the East (map 6).

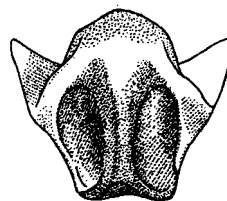
See p. 91.



80



81



82

FIG. 80. — Mentum of *Zophodes fitsimonsi* n. sp.

FIG. 81. — Mentum of *Melanopterus marginicollis* (MULSANT & REY).

FIG. 82. — Mentum of *Opatrinus latipes* (SAHLBERG).

— Metasternum short, about half the length of basal sternite of abdomen; between meso and metacoxal cavities only as long as the pre-metacoxal sclerite is laterally or a third the length of metacoxal cavities. Body apterous. Pronotum with more or less strong, broad, distinct submarginal depression, widely separating the discal convexity from the lateral carina (pl. IV, figs. 1-4); the only exception is *Cosmogaster* (pl. VIII, fig. 37). The anterior tarsi neither dilated nor soleate in the ♀, rarely strongly dilated and soleate in the ♂. Episternum of prosternum smooth or with shallow and scattered punctation, except for *Cosmogaster*, when the anal sternite is deeply sulcate along sides.

Anchophthalmoid *Platynotina* 7

Eastern- and North-central Tropical, in Southern Africa occurring only in Southern Rhodesia, Portuguese East Africa, Northern Transvaal and Central-eastern Bechuanaland (map 6), in the North reaching the southern parts of Abyssinia and the Anglo-Egyptian Sudan.

(Anchophthalmoid *Platynotina*.)

7. Mentum with entirely exposed lateral wings; middle section not carinate laterally, formed by a narrow, elongate, subparallel convexity (fig. 91). In the ♂ the apical segment of maxillary palpi very strongly dilated, strikingly securiform (fig. 90), at least as broad as the combined length of the second and third antennal segments; the anterior tibiæ without subtomentose stripe on underside; the anterior tarsi not or weakly dilated, except for a few species with strongly dilated segments, but in these cases the head on vertex with a short median carinula ... **8**
- Mentum with broadly oval middle section, the rounded and sharply carinate sides of which conceal the basal half of lateral wings; the middle section with obtusely raised median convexity and lateral cavities on proximal two-thirds (fig. 115). In the ♂ the apical segment of maxillary palpi weakly dilated, only slightly broader than in the ♀, moderately securiform and distinctly narrower than the length of the third antennal segment; the underside of anterior tibiæ with broad, yellowish, subtomentose stripe; the anterior tarsi strongly dilated, but the upper surface of head plane and without median carinula.

PHALLOGENTRION n. gen.

(Pl. VIII, fig. 4; Pl. IX, fig. 1.)

North-central Tropical, in the northern part of the Belgian Congo (map 4) and South-central French Equatorial Africa.

Erected on *Selinus edentatus* GEBIEN (Pl. VIII, fig. 4).

See p. 166.

8. Anal sternite of abdomen immarginate, or, in a few species having a median carinula on vertex of head, with a fine margination along basal half of sides. Middle section of mentum with the subparallel sides sharply demarcated from lateral wings by a steep, perpendicular declivity. Pronotum with strong, broad submarginal depression; lateral emarginations of base often strong, but not semi-circular, the basal carina complete (Pl. IV, figs. 2-4). Episternum of prosternum from smooth to shallowly punctured **9**
- Anal sternite of abdomen with very strong marginal sulcus, abruptly interrupted on both sides of middle of apex by a short, strongly raised, longitudinal, cariniform tubercle, delimiting the immarginate, subfoveate middle of apex of sternite. Upper surface of head plane, without median carinula on vertex. Middle section of mentum with the sides gradually sloping towards, and becoming continuous with, the surface of lateral wings. Pronotum without distinct submarginal depression; the lateral emarginations of base very deep, semi-circular; the basal carina confined to the middle section of base. Episternum of prosternum with coarse, deep punctures.

COSMOGASTER n. gen.

(Pl. VIII, fig. 3.)

East African, endemic to British East Africa.

Erected on *Achophthalmus impressicollis* FAIRMAIRE. Monotypical.

See p. 164.

9. Sides of pronotum with uniformly flat, broad submarginal depression. Parameres of apicale of ædeagus convex dorsally, concave and grooved ventrally, with distinct inflexed alae on ventral surface; their apices narrowed, taken together considerably to very much narrower than greatest width of basale of ædeagus (fig. 92).

ANCHOPHTHALMUS GERSTAECKER.

(Pl. IV, figs. 2-4; Pls. V-VII.)

Eastern African, reaching the Northern Transvaal and Southern Portuguese East Africa in the South (map 6), Southern Abyssinia and the Anglo-Egyptian Sudan in the North, and extending to the south-eastern parts of Belgian Congo in the West (map 4).

See p. 118.

- Sides of pronotum with double sulci which are separated one from another by an obtuse, rather broad, longitudinal convexity, running between the submarginal sulcus and the inner sulcus, with the latter demarcating the discal convexity from submarginal depression. Parameres of apicale of ædeagus entirely and very strongly complanate, laminiform, with equally shaped and flat dorsal and ventral surfaces, sharply edged laterally, without inflexed alæ on ventral surface; their apices truncate, broad, taken together only a little narrower than greatest width of basale of ædeagus (fig. 114).

ONGOTIPHALLOPS n. gen.

Southern East African, in Central Portuguese East Africa (map 6).

Erected on a new species, collected by my friend Dr. A. J. BARBOSA. Monotypical.

See p. 162.

(Selinoid *Platynotina*.)

10. Anal sternite of abdomen either entirely immarginate, or with very fine margination along basal half of sides, broadly interrupted around apical portion; in two cases the marginal sulcus complete and fine, then either (*Anchophthalmops maximus*, pl. IX, fig. 2) the apical segment of maxillary palpi strongly dilated, broadly securiform in the ♂ (as is the case in *Anchophthalmus*), the proximal sternites of abdo-

- men in the ♂, and sometimes also in the ♀, with median tubercle, and the parameres of apicale of ædeagus elongate, subparallel and spiniform, or (*Quadrideres simplicipes*) the submarginal depression of the sides of pronotum narrowing towards anterior margin. Sides of pronotum never with a longitudinal convexity on submarginal depression, or a such is weakly indicated on anterior half **11**
- Anal sternite of abdomen entirely marginate, with continuous marginal sulcus around apex; in a single species (*Selinus plicicollis*) the marginal sulcus is briefly interrupted on apex, when the sides of pronotum exhibit a strong, longitudinal convexity on submarginal depression. The maxillary palpi practically non-dimorphic, with the apical segment seldom slightly broader in the ♂ than in the ♀; the abdomen simple, inermous, and the parameres of apicale of ædeagus never spiniform. The submarginal depression of sides of pronotum, if distinct, of equal width **17**
- 11.** Sides of pronotum subparallel posteriorly or more or less distinctly dilated towards base; in a single case (*Glyptopteryx*, pl. XIII, fig. 1) often slightly narrowed in a straight line towards posterior angles, when the elytra are provided with sharply carinate costæ on alternating odd intervals. In the ♂ the intermediate femora inermous. Elytra subparallel, basally not or only slightly broader than pronotal base. The preapical segment of tarsi not strongly bi-lobate. In the only species having a median sulcus on pronotum (*Quadrideres stigmaticollis*, pl. XI, fig. 2), the body is very slender, subparallel and the legs are non-dimorphic **12**
- Sides of pronotum distinctly rounded and narrowed towards base; in two species [*Ectateus ghesquierei* (Pl. XIII, fig. 3) and *latipennis* (Pl. XIII, fig. 4)] the sides only slightly narrowed towards base to practically subparallel, but then the preapical segment of tarsi strongly bi-lobate, the elytra broad, distinctly rounded laterally and considerably broader than pronotal base basally, in one case furthermore the pronotum with broad median sulcus, but the legs strongly dimorphic (*Ectateus ghesquierei*), and in the other the intermediate femora in the ♂ with tooth (*Ectateus latipennis*). In all species the intermediate femora in the ♂ with median tooth on underside, except for *Ectateus ghesquierei* **16**
- 12.** Body of larger size, 6 ½ to 20 ½ mm long. Sides of pronotum with distinct, broad submarginal depression, but without deep and smooth justa-lateral canaliculation. Neither the pronotum of conical shape, nor the prosternal apophysis bent towards foramen, nor the angles of intercoxal emargination of metasternum dentate, nor the elytra with carinate costæ on alternating odd intervals **13**
- Body of small size, 5 to 8 ½ mm. Sides of pronotum without submarginal depression, but the discal convexity sharply separated from lateral

- carina by a deep and smooth justa-lateral canaliculation. Either the pronotum of conical shape, strongly dilated towards base, the prosternal apophysis bent towards foramen and not horizontally projecting, and the lateral angles of intercoxal emargination of metasternum minutely dentate (*Microselinus*), or the elytra with sharply carinate costæ on alternating odd intervals (*Glyptopteryx*). 15
13. Body of larger size, 11 $\frac{1}{2}$ - 20 $\frac{1}{2}$ mm long. Submarginal depression of pronotum broad, rather shallow, but of equal width from base to anterior margin. Supra-antennal surfaces on head plane, not distinctly impressed. Ædeagus, either with long, subparallel, thin and spiniform parameres (fig. 120), or strikingly large and broad, with completely exposed penis and lacinia, and the penis very broad, bi-partite, several times broader than one of the styli of lacinia (figs. 124, 125, 127, 129, 130) 14
- Body of smaller size, 6 $\frac{1}{2}$ - 12 $\frac{1}{2}$ mm long. Submarginal depression of pronotum rather strong, broad basally, but narrowing towards anterior margin. Supra-antennal surfaces on head deeply impressed. Ædeagus of simple shape, the parameres short, subtriangular, with the sides continuously converging towards apex, the inner sclerites not or only narrowly exposed, the penis baculiform and not or scarcely broader than one of the styli of lacinia (fig. 137)

QUADRIDERES n. gen.

(Pls. X-XII.)

East African, from Southern Rhodesia to the southern parts of Abyssinia. See p. 189.

14. Maxillary palpi non dimorphic; in the ♂ the apical segment weakly dilated, about as broad as the length of the third antennal segment. Anal sternite of abdomen entirely immarginate. Abdomen inermous. Ædeagus very large, with broad, short parameres of apicale, entirely open ventral groove and with very broad, bi-partite penis which is several times broader than one of the styli of lacinia; basale moderately broader than parameres of apicale (figs. 124, 125).

MONODIUS n. gen.

(Pl. IX, figs. 3, 4.)

Northern part of tropical West Africa.

See p. 180.

- Maxillary palpi strongly dimorphic; in the ♂ the apical segment dilated, securiform, distinctly broader than the length of third antennal segment. Anal sternite of abdomen marginate at least on basal half of sides, sometimes with practically complete marginal sulcus around apex of sternite. The proximal sternites of abdomen in the ♂, sometimes

also in the ♀, with median tubercle. *Ædeagus* of normal size, but with slender, elongate, subparallel and spiniform parameres of apicale; the ventral groove narrow, with baculiform penis which is scarcely broader than one of the styli of lacinia; the basale much broader than parameres (figs. 120, 121).

ANGHOPHTHALMOPS n. gen.

(Pl. IX, fig. 2.)

East African, from the south-eastern part of British East Africa to Portuguese East Africa and the northern parts of Southern Rhodesia.

See p. 173.

15. Elytra with sharply carinate costæ on alternating odd intervals, the sutural interval included. Sides of pronotum subparallel to slightly narrowed in a straight line towards base. Apex of prosternal apophysis horizontally produced. Anal sternite of abdomen entirely immarginate. Anterior tarsi in the ♂ simple, neither dilated nor soleate.

GLYPTOPTERYX GEBIEN.

(Pl. XIII, fig. 1.)

East African, endemic to the northern and central parts of Tanganyika Territory. Monotypical.

See p. 216.

- Secondary intervals on elytra uniform, flat to slightly convex on lateral portion. Sides of pronotum subconically dilated towards base. Apex of prosternal apophysis bent towards foramen, not projecting. Anal sternite of abdomen with sharp margination along basal two-thirds of sides. Anterior tarsi in the ♂ distinctly dilated and soleate below.

MICROSELINUS n. gen.

Northern East African, endemic to Italian Somaliland.

Erected on a new species which I received in communication by my friend Prof. E. GRIDELLI. Monotypical.

See p. 214.

16. Pronotum with strong and broad submarginal depression, irregularly impressed on disc (Pl. XIII, figs. 3, 4, Pl. XIV, fig. 1). Underside of prothorax smooth; prosternal apophysis of lanceolate shape, acuminate apically. Supra-antennal surfaces on head very deeply impressed. Antennæ slender, only moderately dilated distally. Elytra broad, with distinct justa-lateral canaliculation.

ECTATEUS n. gen.

(Pl. XIII, figs. 3, 4; Pl. XIV, fig. 1.)

West African.

See p. 230.

- Pronotum without any trace of a submarginal depression, with the discal convexity reaching the lateral carina; disc uniformly plane, without conspicuous impressions (Pl. I, figs. 4, 5; Pl. XIII, fig. 2). Under-side of prothorax coarsely punctured on episternum of prosternum; prosternal apophysis broadly rounded apically. Upper surface of head evenly plane, without impressed supra-antennal surfaces. Antennæ stout, with strongly dilated distal segments. Elytra less shortened, with obsolescent justa-lateral canaliculation.

UPEMBARUS n. gen.

(Pl. I, figs. 4, 5; Pl. XIII, fig. 2.)

Erected on a group of new species, all occurring exclusively in the Upemba National Park area of the Central Elisabethville Province of the Belgian Congo (map 4).

See p. 220.

- 17. Eyes, as usual in all *Platynotini*, strongly constricted by genal canthus, but not divided; their dorsal section communicating with the ventral section. Legs dimorphic 18
- Eyes completely divided by genal canthus into non-communicating dorsal and ventral sections. Legs non-dimorphic.

ANGOLOSITUS KOCH.

(Fig. 176.)

South-western Angola (map 6).

See p. 270.

- 18. Secondary intervals on elytra plane, with simple punctation. Pronotum without median sulcus. In the ♂ the inner contours of anterior tibiæ with distinctive characters.

SELINUS MULSANT & REY.

(Pl. XIV, figs. 2-4; Pl. XV, figs. 1-3.)

Tropical West and East African, but of disjunct dispersal.

Not extending beyond Italian Somaliland to the North, entering into Southern Africa at Portuguese East Africa and Southern Rhodesia (map 6).

See p. 242.

- Secondary intervals on elytra with a longitudinal row of small tubercles between punctation, particularly on posterior half. Pronotum with median sulcus. In the ♂ the anterior tibiæ non-dimorphic.

PHYMATOPLATA n. gen.

(Pl. XV, fig. 4.)

East African, endemic to the Tanganyika Territory.

Erected on *Selinus asperulus* FAIRMAIRE. Monotypical.

See p. 269.

(Trigonopoid *Platynotina*.)

19. Anal sternite of abdomen entirely marginate 20
 — Anal sternite of abdomen immarginate.

BANTODEMUS KOCH.

(Pl. II, fig. 1; Pl. XVI, figs. 1, 2.)

KOCH, 1955 a, Ann. Transv. Mus., XXII, 428.

Eastern parts of Southern Africa; in Natal, Zululand, the southern part of Portuguese East Africa, Swaziland, Transvaal and Southern Rhodesia (map 6). *Bantodemus* is the only genus within the trigonopoid *Platynotina* exhibiting an entirely immarginate anal sternite of abdomen, in this character agreeing with most of the tropical genera. The strongly dilated anterior tibiae, the very short metasternum and the whole habitus are very similar to all the other trigonopoid genera. From the selinoid and anchophthalmoid genera having an immarginate anal sternite of abdomen, it is furthermore readily recognised by the truncate to only very shallowly bi-sinuate base of pronotum. In the ♂ the anterior tarsi are constantly dilated very strongly and most of the species have spectacular, complicated, distinctive structures on anterior and intermediate tibiae.

Type species. — *Trigonopus lethæus* MULSANT & REY, 1853.

Composition. — Apart from the type species and the many species described in my revision, 1955a, the following previously described *Trigonopus* belong to *Bantodemus*: *moerens* FÄHRAEUS (= *micans* FÄHRAEUS), *dentipes* FÄHRAEUS, *lugubris* FÄHRAEUS, *typhon* MULSANT & REY, *caffer* FÄHRAEUS and *armatus* MULSANT & REY.

20. Elytra, as usual in all *Platynotini*, with nine primary rows; the secondary intervals either punctured or smooth or densely granulate (*Trigonopus*). The outer contours of intermediate and posterior tibiae more or less distinctly sinuate in front of apical angle; the latter minutely prominent. The only exception is *Trigonopus* in which the outer contours of intermediate and posterior tibiae are practically straight, but in this case the secondary intervals of elytra are very densely granulate 21
 — Elytra with a supplementary tenth primary row on posterior half; secondary intervals smooth, but finely granulate on apical declivity. The outer contours of intermediate and posterior tibiae straight, without any trace of sinuosity and with non-prominent apical angles.

SELINOPODUS n. gen.

(Pl. XXIV, fig. 1.)

Readily recognized from all the other trigonopoid genera by the above particulars. — Mentum (fig. 254) with moderately, only distally exposed, sharply acute lateral wings; the middle section about square, three times as broad as one of the lateral wings is apically, with rounded and edged sides, very broad and obtuse median convexity and minutely emarginate apical margin. Pronotum carinate peripherally, with very broad lateral carina; base with rather strongly produced posterior angles. Prosternal apophysis horizontally produced and attenuate apically. Elytra as broad as pronotum, with rectangular, non-prominent humeral angles; primary rows lineate, the supplementary tenth row fine, approximate to the ninth row and the justa-lateral canaliculation; the latter well developed, and together with pseudopleural crest entirely exposed dorsally; secondary intervals convex and smooth. Pseudopleura complete, occupying the entire ventrally reflected portion of elytra; epipleura not carinate apically. Anal sternite with strong margination. Upper surface of anterior tibiæ edged distally, that of intermediate and posterior tibiæ flattened. In the ♂ the anterior and intermediate tarsi soleate, the former rather strongly dilated; the anterior tibiæ on underside with small cavity close to apex, and with distally emarginate inner contours (fig. 255). Ædeagus simple (fig. 256). Size of body large, 17 to 22 ½ mm long.

Type species. — *Selinopodus giganteus* n. sp. (description see p. 416). Monotypical.

Distribution. — North-eastern Zululand and Southern Portuguese East Africa (map 6).

- 21.** Mentum with the lateral wings broadly exposed distally or sometimes entirely visible; the middle section elongate, narrowing anteriorly, neither depressed nor excavate apically, and usually with median carina (figs. 77, 78, 79). Mandibular portion of postgenal margin simply ridged. Apex of prosternal apophysis produced beyond coxal cavity. Posterior femora in the ♂ inermous or with an apical tooth **22**
- Mentum with the lateral wings scarcely or not exposed; the middle section transverse to square, but in the latter case always strongly depressed or excavate apically; the sides rounded to subparallel but not conspicuously narrowing anteriorly; usually without median carina (figs. 80, 81). Posterior femora in the ♂ never with apical tooth, seldom with basal tooth (*Melanopterus spinipes*, Pl. XXI, fig. 1) or median tooth (*Crypticanus edwardsi*, Pl. XXIII, fig. 4). In a few exceptional cases [viz. *Melanopterus spinipes* and *podagricus* (Pl. XX, fig. 4)] the middle section of mentum, although without median carina, resembles

the structure of mentum of the genera of opposite paragraph, but in these cases either the mandibular portion of postgenal margin produced into a long spiniform tooth on each side (fig. 267) and the apex of prosternal apophysis bent towards foramen, or the posterior femora in the ♂ with a small spine on base of underside 25

22. Elytra with smooth to densely and rugosely punctured secondary intervals; primary rows always distinct. Lateral wings of mentum broadly exposed only on distal half, more or less concealed proximally 23

— Elytra with very densely granulate secondary intervals; primary rows obsolescent to practically absent. Lateral wings of mentum entirely exposed from base to apex.

TRIGONOPUS sensu novo.

(Pl. XXIV, fig. 2.)

*1853 a, *Trigonopus* MULSANT & REY, p. 20. — 1853 b, MULSANT & REY, p. 104. — 1859, LACORDAIRE, p. 234. — 1870, GEMMINGER & DE HAROLD, p. 1911. — 1910 b, GEBIEN, p. 271. — 1938-1942, GEBIEN, p. 410.

Of large size, 14-22 mm long. In appearance and on account of the granulate elytra, somewhat similar to *Anomalipus*. Upper surface dull, with very densely, coarsely punctured head and pronotum, and very densely granulate, sometimes costate elytra. Pronotum with rather broad submarginal depression, fine lateral carina and completely carinate, distinctly bi-sinuate base. Apex of prosternal apophysis obtuse but produced. Elytra more or less strongly flattened, as broad as pronotum, with bluntly rectangular, non-prominent humeral angles, with entirely and broadly exposed pseudopleural crest but without distinct primary rows. Pseudopleura occupying the entire ventrally reflected portion of elytra. Anal sternite sharply marginate. Upper surface of anterior tibiæ edged distally, that of intermediate and posterior tibiæ more or less strongly flattened, spinose, with very shallowly sinuate to almost straight outer contours. In the ♂ the anterior tarsi from very strongly to weakly dilated; the tibiæ with moderate distinctive characters (fig. 282). Ædeagus simple.

Type species. — *Trigonopus capicola* MULSANT & REY, 1853.

Composition. — To this genus in its new conception belong only the type species and a moderate number of not yet described species (see p. 459).

Distribution. — Confined to the eastern part of the Southern Cape Province, from Knysna to Southern Natal (map 6).

23. Base of pronotum entirely carinate, truncate, shallowly emarginate or slightly bi-sinuate, never arcuate, with the posterior angles situated at about level with middle section of base or usually more or less conspicuously produced backwards beyond the latter. In a single case (*Eviopodus lawrenceus*) the pronotal base is immarginate, but its course is as described above, the base of elytra is carinate and the posterior femora are not dentate in the ♂. Inner lateral surface of anterior tibiæ without supplementary edge between outer edge and middle of surface proximally. In the ♂ the posterior femora always inermous 24
- Base of pronotum immarginate or the obsolescent marginal carina broadly interrupted on middle section; slightly arcuate, weakly to inconspicuously produced backwards, but always distinctly projecting backwards beyond level of posterior angles. In only two exceptional cases (*Schelodontes exceptionalis* and *oblitus*) the base of pronotum is obsolete carinate and practically truncate, when the posterior femora or anterior tibiæ are shaped as described in the following. Inner lateral surface of anterior tibiæ with carinate outer edge distally, plus an obtuse edge running along, and slightly outwards from, midline of surface, often confined to the proximal portion of tibia. In the ♂ the posterior femora usually with a sharply angular dilation or a more or less strongly developed perpendicular tooth (e.g. in *Schelodontes oblitus*) on inner edge of underside, situated at close distance from apex of femur; this structure rarely reduced to absent.

SCHELODONTES n. gen.

(Pl. II, figs. 4, 5; Pl. XVI, figs. 3, 4; Pl. XVII; Pl. XVIII, fig. 1.)

Of subparallel, rarely broad shape; on account of the rather convex and large pronotum recalling to a certain extent *Stizopus*. Upper surface from polished and practically impunctate to dull, densely and coarsely punctured. Antennæ short, often scarcely longer than the head is broad. Middle section of mentum narrowing in a straight line to the truncate apical margin, with carinate sides and complete median carina which in a few exceptional cases is flattened. Pronotum convex, transverse to slender, with variously shaped but always narrow to absent justa-lateral canaliculation and very narrow to strikingly broad lateral carina; anterior margin completely carinate; sides posteriorly subparallel to rather well rounded and narrowed towards base. Elytra convex, with distinct, often broadly suicate, exceptionally fine or badly marked primary rows, and with flat to subcostate secondary intervals; the ninth primary row usually bent inwards apically. Base immarginate, with obtuse to dentiform and prominent humeral angles. Sides subpa-

rallel to weakly rounded. Pseudopleural crest usually exposed dorsally, but sometimes evanescent apically. Pseudopleura in most of cases not entirely occupying the ventrally reflected portion of elytra, but leaving exposed a portion of the ninth and often also eighth intervals posteriorly. Anal sternite with broad and complete marginal sulcus. In the ♂ the anterior tarsi not dilated; the underside of anterior tibiæ excavate, the inner, rarely also the outer contours often with more or less distinct, arcuate, obtuse median dilation. The intermediate and posterior tibiæ with prominent outer apical angle and strongly sinuate outer contours; the upper surface of the former always, that of the latter sometimes sulcate; in the ♂ rarely with distinctive characters. Ædeagus homogeneous and simple.

Dimensions. — 6 ½ to 13 mm, in a single case (*Schelodontes grandis*) 14 to 15 mm long; 3 to 6 ½ mm broad.

Type species. — *Trigonopus immundus* MULSANT & REY, 1853.

Composition. — Apart from the many still undescribed species (see pp. 419-433), the following *Trigonopus* belong to *Schelodontes*: *immundus* MULSANT & REY, *verreauxi* MULSANT & REY, *amplicollis* FAIRMAIRE, *chevrolati* MULSANT & REY, *longulus* MULSANT & REY, *mannerheimi* MULSANT & REY, *morosus* MULSANT & REY and *nigerrimus* MULSANT & REY.

Distribution. — Endemic to the central part of the Southern Cape Province, absent from the Cape Peninsula and the Eastern Cape Province, in the West not extending beyond the Caledon District and remaining confined to the southern part, but towards the East spreading more northwards, as far as the Southern Orange Free State, in the South reaching the Albany District (map 6).

24. Base of elytra immarginate.

ATROGRATES n. gen.

(Pl. XVIII figs. 2, 3, 4; Pl. XIX, figs. 1, 2.)

Body subparallel and elongate to rather short, with polished, more or less strongly shiny, smooth to sparsely punctured upper surface. Head as in *Schelodontes*, but the antennæ more slender. The middle section of mentum (fig. 78) strongly narrowing in a straight line towards the truncate apical margin, with sharp, sometimes obsolescent to flattened median carina. Pronotum transverse to slender, with posteriorly subparallel or rounded and narrowing sides, and broad lateral carina; base truncate to shallowly bi-sinuate, with not or distinctly produced posterior angles, completely carinate,

but the marginal carina sometimes evanescent on posterior angles. Prosternal apophysis produced. Elytra about as broad as pronotum, subparallel to weakly rounded, with obtuse to dentiform humeral angles; primary rows lineate to punctured, sometimes evanescent on apical declivity; secondary intervals flat to moderately convex, appearing as if smooth. Pseudopleural crest usually concealed behind middle. Pseudopleura not occupying the entire ventrally

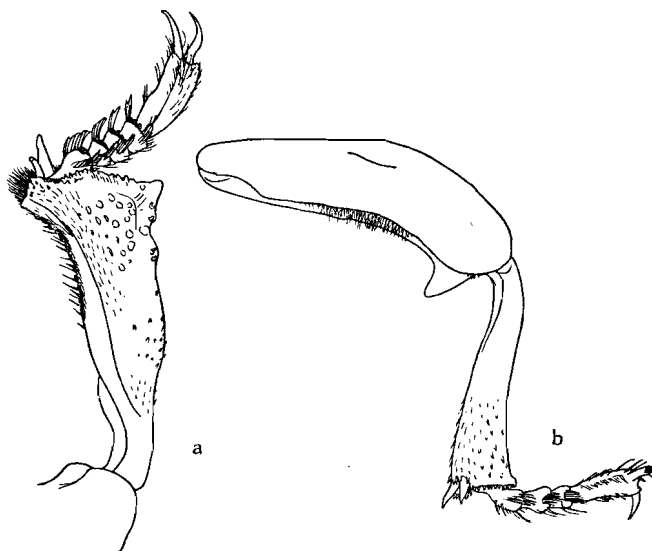


FIG. 83. — *Schelodontes immundus* (MULSANT & REY).
a : anterior tibia with tarsus of ♂; b : hind leg of ♂.

reflected portion of elytra, but leaving exposed a portion of the ninth interval on posterior half. Anal sternite strongly marginate. Anterior tibiæ strongly dilated, triangular, with carinate distal portion of upper surface; the intermediate and posterior tibiæ with weakly sinuate outer contours, the former more or less distinctly sulcate on upper surface, the latter compressed, with even upper surface. In the ♂ the anterior tarsi from strongly to inconspicuously dilated, the inner contours of anterior and intermediate tibiæ often with distinctive characters, the underside of posterior tibiæ usually with a median sulcus which is densely filled with a sessile, yellowish pilosity. Ædeagus homogeneous and simple.

Dimensions. — $7\frac{3}{4}$ to 17 mm long, $3\frac{1}{2}$ to $7\frac{1}{4}$ mm broad.

Type species. — *Trigonopus platyderus* MULSANT & REY, 1853.

Composition. — Many still undescribed species (see pp. 434-438) and the following previously known *Trigonopus*: *platyderus* MULSANT & REY, *latemarginatus* MULSANT & REY, *striatus* (QUENSEL) and *simius* MULSANT & REY.

Distribution. — Strictly confined to the southern part of the South-western Cape Province, the Cape Peninsula included; from the Cedarbergen and the Clanwilliam District in the North-west to the Willowmore District in the South-east (map 6).

— Base of elytra sharply carinate.

EVIROPODUS n. gen.

(Pl. II, fig. 2; Pl. XIX, figs. 3, 4.)

In shape of body similar to the broad species of *Schelodontes*. Upper surface more or less strongly shiny. The anteriorly narrowing middle section of mentum (fig. 80) always with sharp median carina. Pronotum transverse, moderately convex, completely carinate peripherally, but in one species (*Eviropodus lawrenceus*) the base immarginate; sides weakly to distinctly rounded and narrowed towards posterior angles, with broad lateral carina; the base shallowly emarginate. Punctuation distinct to rather coarse and dense. Prosternal apophysis obtuse but produced. Elytra strongly convex, not or slightly broader than pronotum, subparallel to very weakly rounded laterally, with sharply rectangular and non-prominent humeral angles; primary rows lineate to broadly sulcate, punctured; secondary intervals flat to strongly convex and subcostate, smooth to finely punctured. Pseudopleura leaving exposed a more or less broad portion of ninth interval on posterior half. Anal sternite strongly marginate. The anterior tibiae with sharp outer edge; the outer contours of intermediate and posterior tibiae distinctly sinuate in front of the minutely prominent apical angles, the upper surface of intermediate tibiae sulcate, that of posterior tibiae flattened to strongly sulcate. In the ♂ the anterior tarsi very weakly to inconspicuously dilated, the inner contours of tibiae without distinctive characters, but the underside of posterior tibiae usually with a distal brush of fine, squarrose and scattered yellowish hairs; the femora often with fringes of hairs. Aedeagus simple.

Dimensions. — 7 to 13 mm long, 3 $\frac{3}{4}$ to 6 $\frac{1}{2}$ mm broad.

Type species. — *Trigonopus alternans* FÄHRÆUS, 1870.

Composition. — *Trigonopus alternans* FÄHRÆUS, *Trigonopus funebris* MULSANT & REY and a few still undescribed species (see pp. 438-440).

Distribution. — Eastern South African : Transvaal, with the exception of the northern part beyond the Tropic of Capricorn, Orange Free State, Basutoland and the western part of Natal, southwards as far as Durban, slightly penetrating into the northern part of the Cape Province adjacent to the Orange Free State (map 6).

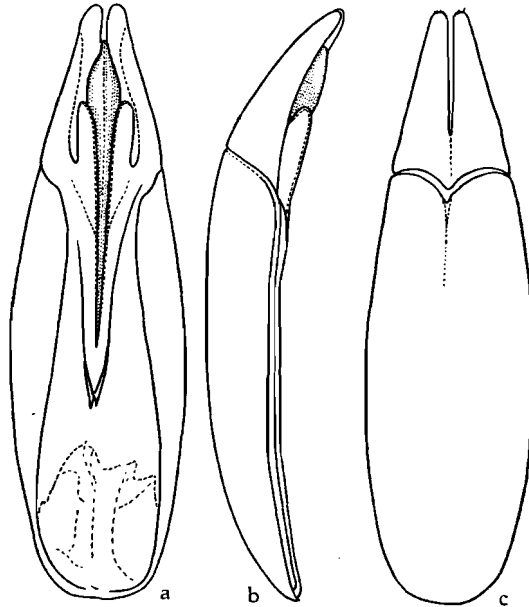


FIG. 84. — Aedeagus of *Eviropodus alternans* (FÄHRÆUS).

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

- 25. Upper surface of posterior tibiæ broadly flattened to sulcate, with sharp lateral edges on both sides, often with irregular carinæ or otherwise sculptured. Pronotum with uniform, conspicuous, moderately dense to rugosely confluent punctation. In the ♂ the anterior tarsi not or inconspicuously dilated 26
- Posterior tibiæ more or less strongly compressed, the upper surface narrowing towards apex, smooth and evenly convex, without any trace of lateral edges. Pronotum smooth to sparsely punctured, but in the latter case with very dense, abruptly demarcated, rugose sculpture along justa-lateral canaliculation. In the ♂ the anterior tarsi strongly to very distinctly dilated 27
- 26. The outer apical angle of anterior tibiæ strongly produced and dentiform, sometimes the outer contours of tibia also with a sharp median tooth. In the ♂ the posterior tibiæ strongly curved, provided with a series of prominent, dentiform tubercles and long, scattered hairs on inner contours.

ZOPHODES FÄHRAEUS.

(Fig. 80; Pl. II, fig. 3; Pl. XX, figs. 1, 2.)

*1870, *Zophodes* FÄHRAEUS, p. 298. — (nec *Zophodes* PÉRINGUEY, 1904, p. 297, and auct.).

Upper surface of body densely, coarsely to rugosely punctured. Antennæ short, scarcely longer than the head is broad. Mentum (fig. 80) practically uni-partite, with the lateral wings entirely concealed by the expansion of median section of mentum; the latter slightly broader than long, dilated and rounded towards the subtruncate apical margin, shallowly depressed anteriorly and with obtuse median convexity on basal half. Pronotum transverse, convex, with extremely fine margination peripherally and narrow justa-lateral canaliculation; sides weakly rounded and narrowed towards base; the latter subtruncate to shallowly emarginate. The tuberculate apex of prosternal apophysis slightly depressed. Elytra strongly convex, as broad as pronotum or even a little narrower, with rectangular, slightly demarcated humeral angles and sharply carinate base; primary rows weak, often badly demarcated from the densely sculptured secondary rows; the latter flat to weakly convex; pseudopleural crest dorsally exposed only basally. Pseudopleura strongly narrowed, leaving exposed a broad portion of the ninth interval on about four-fifths of the ventrally reflected section of elytra. Anal sternite completely marginate. The upper surface of anterior tibiæ sharply carinate, that of intermediate and posterior tibiæ broadly flattened to sulcate, with sharp lateral edges; the outer contours of the intermediate and posterior tibiæ distinctly sinuate and with prominent apical angle. Ædeagus simple.

This specialized genus was erroneously considered a Stizopin of *Opatrini* by PÉRINGUEY, GEBIEN and authors (cf. KOCH, 1953a, p. 269, footnote). It is related to *Eviropodus* and *Amblychirus*. The type species is readily distinguished from all the other *Platynotina* in general by the median tooth on upper surface of anterior tibiæ.

Dimensions. — 8 $\frac{3}{4}$ to 13 mm long, 4 to 6 $\frac{1}{4}$ mm broad.

Type species. — *Zophodes tristis* FÄHRAEUS, 1870.

Composition. — Apart from the type species with only a few closely related, still undescribed species (see p. 440).

Distribution. — Endemic to the western half of Transvaal, in the North not extending beyond the Tropic of Capricorn (map 6).

- The outer apical angle of anterior tibiæ broadly rounded and obtuse, continuous with the outer contours of tibia. In the ♂ the posterior tibiæ non-dimorphic, straight and simple.

AMBLYCHIRUS n. gen.

(Pl. XX, fig. 3.)

Very closely related to *Zophodes* and somewhat intermediate between this genus and *Melanopterus*. In shape of body, sculpture and the formation of intermediate and posterior legs very similar to *Zophodes*, but often of much larger size, the punctation on upper surface very variable and the structure of mentum slightly different. The lateral wings narrowly exposed distally; the median section transverse, with broadly rounded sides and minutely emarginate, more or less distinctly depressed apical margin, with the median convexity sometimes bearing a short carinula. The pronotum of similar shape, with very fine to moderately strong lateral carina and slightly emarginate, entirely carinate base. The punctation always coarse, varying in density from well separated and fairly scattered to very dense and rugosely confluent. The elytra about as broad as pronotum, strongly convex, with or without basal carina, with rectangular, sometimes slightly demarcated humeral angles. The primary rows from almost obsolescent to sulcate, punctured, striolate and sometimes composed of irregular, rugosiform, somewhat acuductate scratches; often arranged in approximated pairs of rows. Secondary intervals from flat to subcostate, with the alternating odd intervals sometimes forming obtuse costæ; from smooth to rugosely punctured, but usually with uneven cuticle which is often transversely rugose or covered with sparse, irregular scratches or wrinkles. Pseudopleura as in *Zophodes*. The legs as in this genus, but the anterior tibiæ with straight outer contours and broadly rounded, obtuse outer apical angle. In the ♂ the legs not or only poorly dimorphic; the anterior tarsi sometimes inconspicuously dilated, the tibiæ always simple, the underside of femora often with fine, short, yellowish pilosity. Ædeagus simple.

Dimensions. — 9 to 18 mm long, 4 to 8 mm broad.

Type species. — *Trigonopus brevior* FAIRMAIRE, 1897.

Composition. — The type species, *Trigonopus tenebrosus* MULSANT & REY, as well as numerous not yet described and strongly differentiated species.

Distribution. — Central South-eastern Cape Province, from the coast at East London northwards as far as the Herbert District (map 6).

27. Body of more or less subparallel shape, as usual in the trigonopoid genera; the pronotum broadest at, or slightly behind, middle, the elytra broadest at about middle; the elytra with broadly rounded apex. In the ♂ the posterior femora ineramous, except for *Melanopterus spinipes* in which they possess a fine, spiniform tooth at extreme base.

MELANOPTERUS MULSANT & REY.

(Fig. 81; Pl. XX, fig. 4; Pls. XXI, XXII, Pl. XXIII, figs. 1 2, 3.)

*1854 a, *Melanopterus* MULSANT & REY, p. 158. — 1854 b, MULSANT & REY, p. 14. — 1859, LACORDAIRE, p. 235. — 1870, GEMMINGER & DE HAROLD, p. 1912. — 1910 b, GEBIEN, p. 272. — 1938-1942, GEBIEN, p. 411.

The genus *Melanopterus* is the only case in which MULSANT & REY slipped off the trail of truth in their remarkable division of *Opatrinæ*. Mislead by the different structure of mentum they placed *Melanopterus* to their tribe of « Pandarites », whereas all the other trigonopoid species were considered « Pedinites ». Within the « Pandarites » they ranged *Melanopterus* with their subtribe of « Eurynotaires ». The latter represent the weakest part of MULSANT & REY's division, an artificial group, mainly based on the structure of mentum, to which both authors attributed an exaggerated and monophyletic significance. From the disentanglement of this subtribe followed that *Isocerus* belongs to the *Dendarini*, *Melanopterus* to the *Platynotini*, *Lasioderus* to the *Litoborini*, while *Eurynotus* appears to be composed of *Oncotini* as well as *Litoborini*.

The genus *Melanopterus* is the most heterogeneous of all trigonopoid genera and can be divided into sharply separated groups. It is closely related to *Atrocates*, but on account of the different structure of mentum showing allied also to *Amblychirus*.

Shape of body similar to *Atrocates*, with smooth, polished upper surface, but sometimes the elytra with very coarse sculpture, due to an excessive development of the punctures of primary rows (e.g. *Melanopterus porcatus*). Mentum (fig. 81) of variable shape, but always with reduced, not or scarcely exposed lateral wings, and transverse to square, anteriorly not narrowing, more or less strongly depressed to excavate middle section, exhibiting an obtuse and non-carinate median convexity; in a single case (*Melanopterus spinipes*) the middle section of mentum is narrowing anteriorly, thereby becoming similar to *Atrocates*, but in this case the median carina absent, the anterior portion distinctly depressed and the posterior femora possess in the ♂ a fine spine quite close to their base, a feature which is unique among all the *Platynotini* in general. The apical margin of postgenæ is simple and homogeneous as in all the other *Platynotina*, with the exception of a single, peculiar species (*Melanopterus podagricus*) in which a long, sharp mandibular tooth is developed, situated at each side of, and quite close to, the maxillary emargination of postgenæ. The pronotum is similar to *Atrocates*, but the range of variability is considerably wider; the lateral carina is usually very broad, of variable shape, the justa-lateral canaliculation more flattened, often very densely sculptured and rugose; the base

is completely carinate, truncate to distinctly sinuate, with the posterior angles not or rather strongly produced backwards beyond middle section of base. The prosternal apophysis is produced, but often obtuse apically, in a single case (*Melanopterus podagricus*) bent towards foramen between coxal cavities. The elytra as in *Atrocrates*, with obtuse to rectangular, always non-prominent humeral angles, the base sometimes more or less distinctly carinate. The primary rows are very variable, usually lineate, sometimes either with extremely fine, scattered elongate punctures or with very coarse, subfoveate punctures, sometimes also arranged in pairs of rows; the secondary intervals are smooth to very finely and densely punctured, varying from entirely flat to strongly convex and subcostate, sometimes with the alternating odd intervals much more strongly raised than the reduced and narrow even intervals. Pseudopleura, anal sternite and legs as in *Atrocrates*, the outer contours of intermediate and posterior tibiæ distinctly sinuate in front of the minutely prominent apical angle. In the ♂ the anterior tarsi always distinctly, more often very strongly dilated, and the tibiæ often with spectacular distinctive characters. Ædeagus simple, in the large species, however, often with gaping and apically differentiated parameres.

Dimensions. — 11 to 21 mm long, 5 to 10 mm broad.

Type species. — *Melanopterus porcatus* MULSANT & REY, 1854.

Composition. — Apart from numerous still undescribed species (see pp. 443-458), to this genus belong of *Melanopterus* the species *porcatus* MULSANT & REY, *marginicollis* MULSANT & REY, *amaroides* FÄHRAEUS, and of *Trigonopodus* the species *spinipes* MULSANT & REY, *porcus* MULSANT & REY, *exaratus* MULSANT & REY (of which *wahlbergi* FÄHRAEUS is a new synonym) and *trivialis* FÄHRAEUS.

Distribution. — Very similar to the range of *Schelodontes*, occurring in the central part of the Southern Cape Province, but absent from the Cape Peninsula. In the West not extending beyond the Caledon District, in the East reaching the East London District, but in the North not expanding more inland than to the Zwartbergen, the Graaff Reinet, Bedford- and Fort Beaufort Districts (map 6).

- Body of strongly *Crypticus*-like and broadly oval shape, with continuously rounded outlines, embracing the greatest width of body at the pronotal and elytral bases; the pronotum broadest basally, the elytra anteriorly; the latter attenuate posteriorly. In the ♂ the posterior femora with a triangular tooth proximad from middle.

CRYPTICANUS FAIRMAIRE.

(Pl. XXIII, fig. 4.)

*1897, *Crypticanus* FAIRMAIRE, p. 119. — 1910 b, GEBIEN, p. 271. — 1938-1942, GEBIEN, p. 410.

A monotypical genus which is very closely allied to *Melanopterus*, but strikingly characterized among all the *Platynotina* by the *Crypticus*-like shape of body. In the excavate anterior half of middle section of mentum and the structure of legs agreeing with

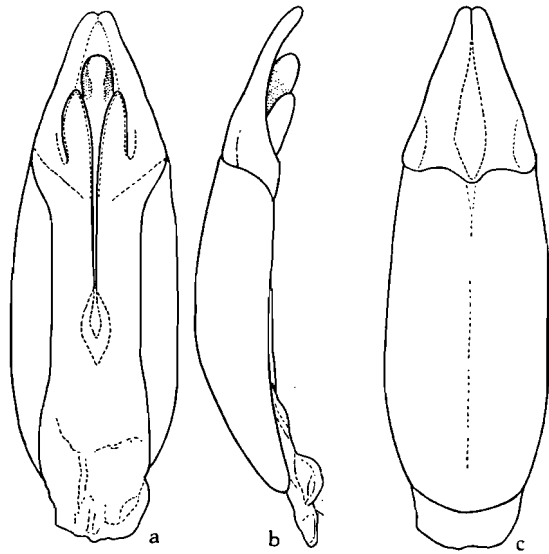


FIG. 85. — Aedeagus of *Crypticanus edwardsi* (MULSANT & REY).
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

Melanopterus, but the calcaria of posterior tibiae elongate and longer than in the other trigonopoid genera. In the ♂ the anterior and intermediate tarsi strongly dilated, the underside of intermediate and posterior tibiae with a small, penicilliform apical patch of golden, subtomentose hairs (as is the case also in some of the *Melanopterus* species), and the underside of posterior femora with a characteristic, small triangular tooth at the inner edge, situated at the end of the proximal third of femoral length. Aedeagus (fig. 84) as in *Melanopterus*.

Type species. — *Crypticanus cuneatus* FAIRMAIRE, 1897. This species, however, is a new synonym of *Melanopterus edwardsi* MULSANT & REY, 1854.

Dimensions. — 11 $\frac{1}{2}$ to 12 $\frac{1}{2}$ mm long, 6 $\frac{1}{2}$ to 7 $\frac{1}{2}$ mm broad.

Distribution. — Endemic to the Port Elizabeth District of the Central-southern Cape Province (map 6).

OPATRINOID PLATYNOTINA.

OPATRINUS LATREILLE.

*1829, LATREILLE, p. 19. — 1853 *a*, MULSANT & REY, p. 295. — 1853 *b*, MULSANT & REY, p. 70. — 1859, LACORDAIRE, p. 240. — 1870, GEMMINGER & DE HAROLD, p. 1914 (scr. *Hopatrinus*). — 1904, REITTER, pp. 51, 76. — 1910 *b*, GEBIEN, p. 276. — 1922, GEBIEN, p. 272. — 1938-1942, GEBIEN, p. 415. — 1947, GRIDELLI, p. 37. — 1953 *a*, KOCH, p. 269. — 1955 *a*, KOCH, p. 428.

Diagnosis (for African species). — Body alate, sometimes with reduced wings, exceptionally apterous (*O. exalatus*); elongate; bare or with very fine, short bristles which are scarcely discernible. Eyes strongly constricted by genal canthus. Mentum with largely exposed lateral wings; median section of variable shape, often with median carina. Apical segment of maxillary palpi non-dimorphic, triangular, not broader than long. Pronotum evenly convex, without submarginal depression or canaliculation, transverse; the posterior portion of sides subparallel, very weakly dilated or narrowed. Marginal carinæ of sides and base very fine and complete, that of anterior margin confined to lateral portions. Anterior margin emarginate, base strongly bi-sinuate. Integument with very dense punctation. Prosternal apophysis horizontally produced; episternum of prosternum with coarse, dense sculpture, shallow only in *Opatrinus insularis*. Elytra broader than pronotum, elongate, more or less distinctly subparallel, weakly convex, with rectangular to faintly obtuse, non-prominent humeral angles. Primary rows sharply impressed, narrow, composed of very fine, dense punctures; secondary intervals densely and finely punctured, flat to convex, sometimes slightly tectiform on sides. Pseudopleura complete, gradually narrowed apically, with sharply carinate and distinctly separated epipleural and pseudopleural crests apically; strongly dilated on apical third and occupying the entire ventrally reflected portion of elytra. Pseudopleural crest entirely exposed dorsally, complete, distinctly sinuate at about level of base of anal sternite. Metasternum long, about as long as basal sternite of abdomen to only a quarter shorter than the latter, between meso and metacoxal cavities several times longer than pre-metacoxal sclerite, or from one and two-thirds times as long as metacoxal cavities to about one-third shorter than the latter. Anal sternite immarginate, with shallow sulcus on middle section of apical margin only in *Opatrinus corvinus*. Legs slender. Tibiæ thin, weakly dilated, with non-prominent outer apical angle and evenly convex upper surface; in the ♂ the inner contours often with distinctive characters, the

underside of anterior tibiæ smoothed, depressed or excavate, the intermediate tibiæ with variously developed, often inconspicuous pre-apical to apical inner tooth, the posterior tibiæ often curved. Femora slender, inermous, except for *Opatrinus mirabilis*. Tarsi dilated in both sexes, with soleæ below, the penultimate segment more or less strongly bi-lobate, particularly that of anterior tarsi. In the ♂ the anterior and intermediate tarsi more strongly dilated than in the ♀ and the anterior tarsi much more strongly dilated than the intermediate ones; in the ♀ the anterior tarsi not or only slightly broader than the intermediate tarsi.

Ædeagus. — Simple and rather homogeneous. The apicale much shorter than the basale, with divided, usually converging parameres the apices of which are obtusely pointed to subtruncate, sometimes complanate. Ventral groove with more or less broadly exposed penis and lacinia. Basale about three to more than four times as long as apicale, and sometimes much broader than the latter.

Dimensions. — 8 to 15 mm long.

Relationship. — Very well characterized by the long metasternum, the usual presence of wings and the dilated and soleate tarsi in both sexes. The apical construction of pseudopleura agreeing only with *Anchophthalmus*, *Phallocentrion*, *Cosmogaster* and *Oncotiphallops*; the pseudopleura reaching the extreme apex of elytra and the pseudopleural crest sharply separated from the epipleural carina apically. With the exception of *O. exalatus*, the *Opatrinus* possess fully developed to reduced wings; they are the only alate group within the *Platynotini* and may therefore be regarded the most primitive and ascendent of all the other *Platynotini*. Their next allies are *Anchophthalmus*, *Phallocentrion*, *Cosmogaster* and *Oncotiphallops*, which all display a similar construction of the complete pseudopleura, although being constantly apterous and having a strongly abbreviate metasternum.

Type species. — *Opatrum clathratum* OLIVIER, 1784. The type species belongs to an American group of *Opatrinus* (*Opatrinus* s. str. sensu MULSANT & REY). Only a careful study may prove the generic identity of the American and African *Opatrinus*. The few species of American *Opatrinus*, preserved in the collections of the Transvaal Museum, differ strongly from the African *Opatrinus* by the convexity and lateral margination of pronotum, and the coarsely punctured primary rows on elytra. They agree, however, in all the main particulars, as are the stridulatory gula, the complete pseudopleura, dilated tarsi etc.

Distribution (maps 2, 4, 6). — Tropical in the African Continent, also in Madagascar and neighbouring islands. In the North with a single species (*O. corvinus*) entering into the Palæarctic Region along the Nile valley to Alexandria, in the South occurring in the northern outskirts of the Southern African Region, but expanding as far southwards as Natal in the East. The hitherto insufficiently studied extra-African *Opatrinus* have been recorded from America (Northern, Central and Southern America), as well as from tropical Asia.

KEY.

1. Lateral contours of eyes continuous and in line with those of tempora.

OPATRINUS (ZIDALUS Mulsant & Rey) 2

*1953 a, *Zidalus* Mulsant & Rey, p. 296. — 1853 b, Mulsant & Rey, p. 71. — (sensu novo).

I am referring Mulsant & Rey's *Zidalus*, suppressed by Lacordaire and the subsequent authors, to a group of species which are sharply separated from the remaining African *Opatrinus* by the posteriorly non-prominent eyes. Originally erected for a single species, viz. *O. corvinus*, this group in its new combination comprises also species of Mulsant & Rey's *Opatrinus* s. str. (*O. niloticus*), as well as *O. latipes* (= *O. ovalis*) which was placed to the *Zodinus*. The *Opatrinus* s. str., which seem to agree with the *Zidalus* sensu novo in the posteriorly non-prominent eyes, occur only in the American Continent, but differ from the African *Zidalus* by the strong lateral margination of pronotum, the presence of a submarginal depression on the sides of the latter, the coarsely punctured primary rows on elytra and many other particulars.

Type species. — *Opatrinus corvinus* Mulsant & Rey, 1853.

- Lateral contours of eyes distinctly projecting outwards beyond those of tempora.

OPATRINUS (ZODINUS Mulsant & Rey) 8

*1853 a, *Zodinus* Mulsant & Rey, p. 315. — 1853 b, Mulsant & Rey, p. 90. — (sensu novo).

This subgenus, likewise suppressed by Lacordaire and the subsequent authors, is only slightly changed in its original composition by transferring *O. latipes* (= *O. ovalis*) to *Zidalus*. The criterion on which I am basing both the re-established subgenera, has been overlooked by Mulsant & Rey and the subsequent authors.

Type species. — *Opatrinus servus* Mulsant & Rey, 1853.

2. Body of smaller and more slender shape. Pronotum with round, separated, rarely very dense, subrugose and finer punctation on disc; the sides posteriorly subparallel to narrowed, in the latter case more or less strongly sinuate in front of posterior angles. Elytra less convex, often flattened discally; the punctures of primary rows less dense, stronger to rather coarse, impinging the secondary intervals, distinctly

coarser than the discal punctures on pronotum, with about 25 to 30 punctures in the fourth row. Middle section of mentum with distinctly demarcated, subparallel, more or less elongate, somewhat lobiform apical portion. In the ♂ the posterior tibiæ straight and simple. Body with fully developed to reduced wings.

corvinus group 3

- Body of larger and broader shape. Pronotum with extremely dense, subconfluent to rugose, coarser punctation on disc; the sides posteriorly practically subparallel or only inconspicuously rounded and narrowed towards posterior angles, never distinctly sinuate. Elytra more strongly convex; the punctures of primary rows very dense and fine, not impinging the secondary intervals, about as strong as the discal punctures on pronotum, with 45 to 60 punctures in the fourth row. Middle section of mentum broadly rounded and truncate anteriorly, without distinctly demarcated, lobiform apical process. In the ♂ the posterior tibiæ either strongly curved, or with postmedian dilation and preapical emargination of inner contours, exceptionally straight and simple, when the body is apterous.

latipes group 6

3. Pronotum cordiform, with the sides strongly narrowed and sinuate in front of the elongate, subparallel posterior angles. Proximal sternites of abdomen very densely, almost rugosely sculptured; anal sternite with extremely dense to transversely confluent punctures 4
- Pronotum not cordiform; the sides posteriorly subparallel or weakly narrowed in a straight to inconspicuously sinuate line towards posterior angles. Proximal sternites of abdomen with densely rugose to very scattered sculpture; anal sternite with separated and round punctures 5
4. Anal sternite of abdomen with shallow marginal sulcus around middle section of apical margin; dull, very densely rugose. In the ♂ the inner contours of anterior tibiæ with strongly prominent, obtuse, arcuate, median dilation.

[**Opatrinus (Zidalus) corvinus** MULSANT & REY] ⁽¹⁾.

(Pl. III, fig. 1; Fig. 86.)

*1853 a, *Opatrinus (Zidalus) corvinus* MULSANT & REY, p. 296. — 1853 b, MULSANT & REY, p. 71. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1887, FAIRMAIRE, p. 283. — 1904, REITTER, p. 77. — 1910 b, GEBIEN, p. 276. — 1935, KOCH, p. 106. — 1938-1942, GEBIEN, p. 415, n° 5556. — 1939, GRIDELLI, p. 238. — 1943, ESPAÑOL, p. 138, fig. 3 b. — 1947, GRIDELLI, pp. 39, 40, figs. 1 and 2.

⁽¹⁾ The species between brackets have not been captured within the Upemba National Park.

Original description. — « Corps oblong ou suballongé; assez faiblement convexe; d'un noir mat. Tête ponctuée, un peu plus finement et plus densément sur l'épistome que sur le front, beaucoup plus finement sur le vertex. Antennes noires, avec l'extrémité un peu moins obscure. Prothorax arqué sur les côtés, sinué vers les cinq sixièmes, parallèle ou presque parallèle ensuite; à angles postérieurs prolongés en arrière en forme de dent aiguë; muni latéralement d'un rebord saillant, presque uniforme ou plus graduellement et faiblement plus épais, saillant, convexe, pointillé; bisinué à la base, avec les trois cinquièmes médiaires de celle-ci médiocrement et obtusément arqués et moins prolongés que les angles; muni d'un rebord basilaire très-étroit, parfois plus apparent, non interrompu; très-médiocrement convexe; couvert de points à peu près égaux à ceux du front, mais plus serrés, et de chacun desquels sort, moins indistinctement que de ceux de la tête, un poil très-court, livide, parfois usé. Écusson en triangle à côtés anguleux; près d'une fois plus large qu'il est long dans son milieu; ponctué. Élytres sub-arrondies aux épaules, faiblement élargies ou presque parallèles ensuite jusqu'aux trois cinquièmes; assez faiblement convexes; à stries très marquées, étroites, crénelées par des points ou petites raies transverses, séparés les uns des autres par un espace double au moins de leur diamètre longitudinal, (plus de trente de ces points sur la quatrième strie) : la troisième généralement liée à la sixième en enclosant les quatrième et cinquième : souvent les troisième, quatrième, cinquième et sixième graduellement plus courtes : les septième et huitième au moins aussi courtes que la cinquième et postérieurement unies. Intervalles peu convexes en devant, un peu plus convexes postérieurement; crénelés et ridés par les points des stries; rugueusement ponctués; glabres ou à peu près. Bord supérieur du repli en majeure partie un peu visible en dessus. Côtés de l'antépectus marqué de points assez gros, un peu unis en sillons. Prosternum rebordé et offrant les traces d'un sillon médiaire. Postépisternums parallèles, quatre fois environ aussi longs que larges. Ventre et pieds marqués de points donnant naissance à un poil très-court. Tarses garnis en dessous de poils d'un fauve roux. ♂ : Jambes grêles : les antérieures sensiblement arquées, munies sur leur arête inférieure d'une saillie en forme de dent, naissant au tiers et se terminant brusquement aux trois-cinquièmes de leur longueur. Jambes intermédiaires et postérieures, à peu près droites et simples. Quatre premiers articles des tarses antérieurs dilatés : les deuxième et troisième plus sensiblement que le quatrième et surtout le premier. Long. 11,2 mm, larg. 4,4 mm. »

Remarks. — Middle section of mentum with excavate basal half, there with fine median carina and strongly narrowed, carinate

sides; apical half lobiform, narrow, with subparallel sides, flat and sharply separated from basal half. Base of elytra with excavate, intra-humeral articulation surface; secondary intervals with dense micro-sculpture of cuticle. In the ♂ the anterior tarsi very strongly dilated, slightly broader than apical width of anterior tibiæ and about twice as broad as intermediate tarsi, as the latter with spongiöse soleæ below; posterior tarsi elongate, with dense, long bristles

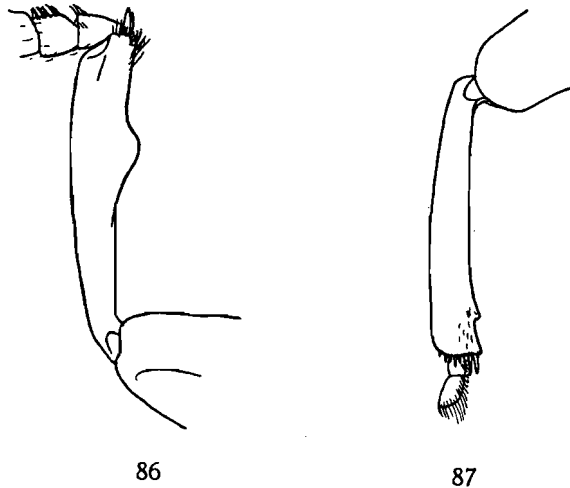


FIG. 86. — Anterior tibia of a ♂ of *Opatrinus (Zidalus) corvinus* MULSANT & REY.
 FIG. 87. — Intermediate tibia of a ♂ of *Opatrinus (Zidalus) niloticus* MULSANT & REY.

below, but not soleate; anterior tibiæ (fig. 86) excavate underneath, with strong, arcuate median or slightly postmedian dilation of inner contours; intermediate tibiæ with weak, little sensible, obtuse preapical dilation of inner contours, rarely with triangular, pointed, small preapical tooth at about halfway between middle and apex (var. *pinheyi* nov.); posterior tibiæ straight and simple. In the ♀ the anterior tarsi moderately dilated, slightly broader than the intermediate tarsi, with entire soleæ below; the soleæ on the underside of intermediate tarsi divided.

Ædeagus. — Apicale rather long, the sides moderately narrowed in a straight line towards apex; the parameres slightly complanate, with broadly rounded to subtruncate, weakly bent apices. Basale slightly broader than base of apicale, about three times as long as apicale. Ventral groove with broadly exposed penis and lacinia.

D i m e n s i o n s. — Length 10 to 12 mm, width 4 to 5 mm.

Type locality. — « Galam » (French Somaliland) and « l'Egypte ». Type (« Voyage de M. LEPRIEUR ») probably in Museum Paris.

D i s t r i b u t i o n. — Probably in the whole Trans-Sudanese Province, in the North reaching the Mediterranean coast at Alexandria along the Nile valley, in the South found in the south-western part of British East Africa. — French Somaliland: Galamo (*locus classicus*). — Nile Egypt: recorded from Assyut in Upper Egypt to Alexandria (KOCH, SCHUSTER, loc. cit.). — South-western British East Africa: in the Nyanza District at Homa, South of Kavirondo (XI-XII, 1934, H. J. ALLEN TURNER, 1 ♂, B.M.) and Ahero Kisumu (IV, 1941, E. OPIKO, 1 ♂, var. *pinheyi*, C.M.). — Gold Coast: Pundu, Upper Volta River (OLSUFIEW, 4 spec., M.St.). — Senegal: GRIDELLI mentions 1 ♀ from Senegal, the classification of which is doubtful in that it may belong to this species or *O. erythræus*.

- Anal sternite of abdomen without any trace of a marginal sulcus; slightly shiny, with less dense and finer sculpture. In the ♂ the inner contours of anterior tibiæ without prominent and dentiform median dilation.

[**Opatrinus (Zidalus) erythræus** GRIDELLI.]

*1939, *Opatrinus corvinus erythræus* GRIDELLI, p. 239. — 1947, GRIDELLI, p. 41, figs. 3 and 4.

Original description. — « Presenta tutti i caratteri del tipico *corvinus*, dal quale differisce per la punteggiatura degli urosterniti ancora più densa e per i caratteri sessuali secondari del maschio. ♂ Protibie incavate come nella forma tipica, ma il margine anteriore della zona incavata non è dilatato, bensì tagliente, rettilineo o appena convesso. Margine flessorio apparente delle mesotibie con un dente preapicale corto ma acuto. Fallo come nella forma tipica. Lunghezza 10 ½ to 11 ½ mm — Ritengo molto probabile che il mio *erythræus* rappresenti in realtà una specie diversa dal *corvinus*. Per quanto riguardo le protibie il *corvinus* presenta un carattere molto marcato, che nell'*erythræus* è fortemente ridotto, ossia la dilatazione mediana del margine anteriore. Ma il contrario avviene per le mesotibie, che sono inermi nel *corvinus* e dentate nell'*erythræus*. Bisognerebbe invocare uno spostamento distale della sinuosità ed uno sviluppo dentiforme del suo inizio prossimale. Ma tale accentuazione di un carattere delle mesotibie contrasta con la riduzione del carattere delle protibie. »

R e m a r k s. — I do not know GRIDELLI's typical material from Eastern Africa, but a ♂ from Senegal agrees completely with his findings. It is very closely related to *O. corvinus*, the pronotum is less strongly cordiform, the secondary intervals on elytra are shiny,

with scarcely discernible micro-sculpture of cuticle, the intra-humeral cavity of elytral base is slightly more reduced, and the distinctive characters of the legs in the ♂ agree exactly with GRIDELLI's description of *erythræus*. Taking into consideration the almost sympatric occurrence of *corvinus* and *erythræus*, I have no doubt in considering both forms independent species. There do not exist intermediate forms as to the very different structure of anterior tibiæ, whereas a similar development of intermediate tibiæ occurs in *erythræus* and the var. *pinheyi* of *corvinus*.

Type locality. — Erythræa and Abyssinia : Tessenei, Om Ager, Adi Ugri.

Distribution. — Probably Trans-Sudanese and of a similar distribution as *O. corvinus*. — Erythræa : Tessenei, Om Ager, Adi Ugri. — Italian Somaliland : Belet Amin, Villagio Duca Abruzzi, Gumbo, btwn. Dime and Bass Narok, Mogadiscio (teste GRIDELLI, 1947). — South-western Abyssinia : Gondaraba, Lake Stefanie region (teste GRIDELLI, 1947). — Senegal : without specified locality (1 ♂, coll. BURGEON, BCM).

5. Pronotum posteriorly with subparallel sides and very narrow, smoothed, but distinct justa-lateral canaliculation. Body fully winged; the metasternum long, decidedly as long as the basal sternite of abdomen and between meso and metacoxal cavities a third longer than the latter. Elytra with rather sharp humeral angles; the lateral portions of base straight, without intra-humeral cavity on articulation surface. Under surface of body densely punctured, the prosternum plus episternum included.

[***Opatrinus (Zidalus) niloticus*** MULSANT & REY.]

- *1853 a, *Opatrinus (Opatrinus) niloticus* MULSANT & REY, p. 312. — 1853 b, MULSANT & REY, pp. 74,87. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1906 a, GEBIEN, p. 15. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 415, n° 5557. — 1947, GRIDELLI, pp. 40, 51. — 1950, GRIDELLI, p. 170. — 1953, GRIDELLI, p. 57.
 *1887, *Opatrinus angulicollis* FAIRMAIRE, p. 283. — 1947, *Opatrinus niloticus angulicollis* GRIDELLI, p. 52, fig. 18.
 *1943, *Opatrinus niloticus zolotarevskyi* ESPAÑOL, p. 138, fig. 3 a. — 1950, GRIDELLI, p. 171.

Original description. — « Corps oblong; peu convexe; d'un noir mat ou peu luisant. Tête marquée de points assez petits, serrés et peu enfoncés. Partie médiale du menton, peu ou point entaillée en devant. Antennes à peu près aussi longuement prolongées que les angles postérieurs du prothorax; noires. Prothorax élargi en ligne courbe jusqu'aux deux cinquièmes, subparallèle ensuite; muni latéralement d'un rebord saillant, médiocrement épais; assez faiblement bisinué à la base, avec les trois cinquièmes médiales peu arqués en arrière et un peu moins prolongés que les angles;

rayé au devant de la base d'une ligne constituant un rebord étroit, uniforme, non interrompu; assez faiblement convexe; couvert de points aussi serrés que ceux de la tête, plus petits près du bord antérieur que postérieurement. Écusson en triangle à côtés curvilignes ou anguleux; un peu plus large à la base qu'il est long dans son milieu; ponctué. Élytres presque parallèles ou à peine élargies jusqu'aux trois-cinquièmes, postérieurement rétrécies d'une manière faiblement sinuée, avec l'extrémité obtuse; assez faiblement ou médiocrement convexes; à stries assez profondes, très-prononcées, marquées de points transverses, égaux au tiers ou presque à la moitié des intervalles, séparés les uns des autres par un espace plus grand que leur diamètre (environ trente à trente-trois de ces points sur la quatrième strie). Intervalles peu convexes en avant, graduellement plus convexes à leur partie postérieure; assez finement ponctués; crénelés et comme ridés par les points des stries. Bord supérieur du repli en majeure partie visible en dessus. Dessous du corps et pieds noirs ou d'un noir brun. Prosternum rebordé. Côtés de l'antépectus marqués de points assez gros, unis en sillons. Postépisternums peu profondément ponctués; plus de trois fois aussi longs que larges. Ventre couvert de points assez fins, presque disposés en rides longitudinales. (Les tarsi antérieurs manquaient à l'exemplaire que nous avons sous les yeux). »

Remarks. — Mentum as in *corvinus*. Metasternum longer than in *corvinus* (in which it is not longer than the space between meso and metacoxal cavities). In the ♂ the anterior and intermediate tarsi as strongly dilated and soleate as in *corvinus*; in the ♀ the intermediate tarsi without soleæ below, but with long, dense bristles on both sides. In the ♂ the underside of anterior tibiæ excavate, with only very weak to inconspicuous median dilation of inner contours, as is the case in *erythræus*; the inner contours of intermediate tibiæ either with preapical, sharp, small tooth (fig. 86) (as in *erythræus* and var. *pinheyi* of *corvinus*) or with only small preapical emargination, but without prominent tooth (var. *edentatus* nov.).

Ædeagus. — Similar to *O. opatrinus*, but the apicale shorter, more strongly narrowed towards apex, the parameres not complanate and with obtusely pointed apices. Basale about four times as long as apicale.

Dimensions. — Length 9 ½ to 11 mm, width 4 to 4 ¼ mm.

Type locality. — « l'Égypte ». Type (coll. DEYROLLE) probably in Museum Lyon.

Subspecies. — The formation of subtle geographic forms can be observed in all *Platynotini*, but it is impossible to separate

them from the typical form if not by absolute characters. *Angulicollis* FAIRMAIRE, described from Guelidi in Italian Somaliland, is such a slightly different geographic form which, according to GRIDELLI, 1947, disagrees slightly from the typical form by the posteriorly sometimes weakly dilated sides of pronotum and a little finer and denser punctation on primary rows on elytra. GRIDELLI adds that « singoli esemplari non sono distinguibili dalla forma tipica e i caratteri sessuali sono gli stessi ».

As to *zolutarevskyi* ESPAÑOL from Ifni, GRIDELLI, 1950, having examined material from the French Sudan and Mauritania, considers *zolutarevskyi* probably a synonym of the typical *niloticus*. The original description is quite insufficient, as ESPAÑOL compares his form carefully with *O. corvinus* but not with *niloticus* which « no conocemos ». Nevertheless he places his *zolutarevskyi* as a new subspecies to *niloticus*. His drawing of the pronotum (fig. 3a) agrees fairly well with *O. insularis* in the posteriorly shallow and long sinuosity of sides, but not with *niloticus*.

Distribution. — Trans-Sudanese, in the North expanding to the Anglo-Egyptian Sudan (but not to Egypt, cf. ANDRES, 1931, and KOCH, 1935), in the South reaching the south-western part of British East Africa, in the East entering into the south-western parts of Arabia. — Anglo-Egyptian Sudan: Khartoum (teste GRIDELLI, 1941); Sudanese Nile valley, VIII, Count GYLDENSTOLPE (Prince WILHELM Exped., 6 sp., M.St). — Erythraea: Tessenei (teste GRIDELLI, 1941). — Abyssinia: Omo valley, I.1942, T. H. E. JACKSON (9 spec., all var. *edentatus*, C.M.); Harar: Bubassa (teste GRIDELLI, 1941). — Italian Somaliland: Guelidi, Villaggio Duca degli Abruzzi, Gabredarre, Dolo, Belet Uen, Sceic Hosc, Merca, Garad, Belet Amin, Giumbo, Rahanuin, Margherita, Brava, btwn. Matagoi and Lugh, and Mogadiscio (teste GRIDELLI, 1941); Mogadiscio, XI.1941, A. F. J. GEDYE (1♀, C.M.); btwn. Belet Uen and Shillave, XI.1941, D. G. MACINNES (2♀♀, C.M.). — South-western Arabia: Yemen, Ta'izz (teste GRIDELLI, 1941); Aden Protectorate, Dhala (according to GRIDELLI, 1953, agreeing with var. *edentatus*). — British East Africa: Turkana Distr., XI.1940, T. H. E. JACKSON (1♀, C.M.); Magadi, V.1949, A. J. RHEAD (2♀♀, C.M.); Olgasalic, V.1944, MENEGHETTI (1♀, C.M.); Homa, South Kavirondo. XI-XII.1934, H. J. ALLEN TURNER (1♂, with very dense, subrugose punctation on pronotal disc, C.M.). — French Sudan and Mauritania: Air (Agadez, Téouar, Monts Baguezans); Mauritania (Akjouijt and Adrar des Iforas, Kerchoual) (all teste GRIDELLI, 1950).

- Pronotum posteriorly with very shallowly, elongately sinuate, slightly narrowed sides, without any trace of a justa-lateral canaliculation. Body with reduced to rudimentary wings; the metasternum short, a quarter shorter than the basal sternite of abdomen and between meso and metacoxal cavities more than a third shorter than the latter. Elytra with bluntly rectangular to slightly obtuse humeral angles; the lateral portions of base strongly sinuate, with well developed intra-humeral cavity on articulation surface. Under surface of body with fine, scattered punctures on proximal sternites of abdomen, almost smooth or only shallowly punctured on prosternum plus episternum.

[*Opatrinus (Zidalus) insularis* MULSANT & REY.]

- *1853 a, *Opatrinus (Zodinus) insularis* MULSANT & REY, p. 320. — 1853 b, MULSANT & REY, pp. 90, 95. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1910 b, GEBIEN, p. 277. — 1913, CHATANAY, p. 765, figs. 1 and 2. — 1922, GEBIEN, p. 273. — 1938-1942, GEBIEN, p. 415, n° 5552. — 1947, GRIDELLI, pp. 40, 50, figs. 14 and 15.
- *1887, *Opatrinus (Zodinus) ater* CL. MUELLER, p. 301, pl. 12, fig. 4. — 1922, GEBIEN, p. 273.
- *1947, *Opatrinus insularis somalicus* GRIDELLI, p. 51.

Original description. — « Corps oblong; médiocrement convexe; noir, mat et glabre en dessus. Tête finement ponctuée, rayée sur la suture frontale. Antennes prolongées à peu près jusqu'aux angles postérieurs du prothorax; pubescentes; noires, avec l'extrémité graduellement d'un noir grisâtre; grossissant à partir du sixième article: les septième à dixième un peu obconiques, plus larges en devant que longs. Prothorax faiblement élargi et en ligne peu courbe jusqu'à la moitié, un peu plus faiblement rétrécie ensuite; muni latéralement d'un rebord assez étroit, un peu saillant; assez faiblement convexe; très-finement ponctué, avec les intervalles presque unis. Écusson en triangle ogival, près d'une fois plus large que long; luisant; assez grossièrement ponctué; parfois sillonné sur son milieu. Élytres presque parallèles jusqu'aux trois-cinquièmes: médiocrement convexes; à stries rendues plus profondes par la convexité des intervalles; marquées de points un peu transverses qui crénelent les intervalles (environ 28 à 32 de ces points sur la quatrième strie). Intervalles médiocrement convexes; un peu plus convexes sur la moitié externe que sur l'interne; finement pointillés: le troisième postérieurement uni au septième et au neuvième. Bord supérieur du repli visible en dessus sur toute sa longueur. Dessous du corps un peu luisant; lisse ou superficiellement pointillé sur les côtés de l'antépectus, plus sensiblement ponctué sur le ventre. Postépisternums parallèles, trois fois et demie aussi longs que larges. Pieds assez finement ponctués et garnis de poils très-courts, peu distincts; grêles; simples (♂ ♀). ♂: Jambes antérieures à peine arquées; les postérieures légèrement échancrées vers le tiers de l'arête inférieure: quatre premiers articles des tarsi antérieurs dilatés: les deuxième à quatrième plus que le premier. ♀: Jambes droites. Tarsi antérieurs à peine dilatés. Long. 10 mm, larg. 3,6 mm. »

Remarks. — Shape of body as in *corvinus* and *niloticus*. In the ♂ the anterior and intermediate tarsi more strongly dilated than in the two preceding species, soleate below; the anterior tarsi distinctly broader than the apex of anterior tibiae; the posterior tarsi setiferous below, with the exception of the soleate preapical segment. In the ♀ the anterior and intermediate tarsi moderately dilated and soleate below, the anterior tarsi scarcely broader than the inter-

mediate ones, the posterior tarsi with soleate preapical segment. In the ♂ the anterior tibiae with excavate underside, with the inner contours inconspicuously emarginate on distal half (forma typica) or straight (ssp. *somalicus*); the intermediate tibiae with strong preapical tooth on inner contours; posterior tibiae straight or very slightly bent inwards in front of middle.

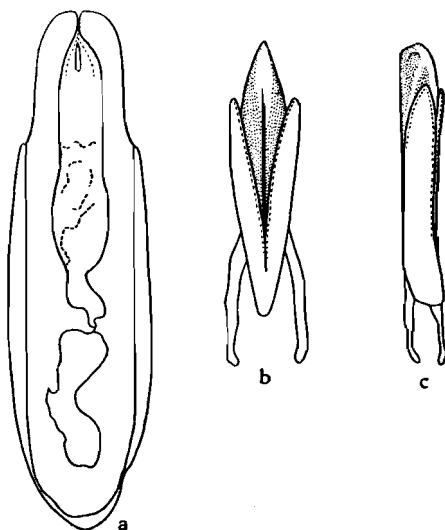


FIG. 88. — *Opatrinus (Zidalus) insularis* MULSANT & REY.

a : dissected and emptied aedeagal tegmen; b : the extracted penis plus lacinia of aedeagus, outer surface; c : ditto, in lateral view.

Ædeagus (fig. 87). — Apicale rather long, with very weakly converging, distally almost subparallel sides; parameres broad, flattened ventrally, with subtruncate, practically straight apices. Ventral groove with both the apically pointed penis and lacinia exposed. Basale broader than, and about three and a half times as long as, apicale.

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

Type locality. — « Madagascar ». Type (coll. CHEVROLAT) probably in Museum Paris.

Subspecies. — GRIDELLI's *somalicus* is unknown to me. Its description reads as follows.

« I punti delle strie delle elitre sono più numerosi a più piccoli, non intaccanti gli intervalli. Le ali sono ridotte rispetto alle altre specie,

ma in confronto a quelle della forma *typica* sono più sviluppate ed il loro apice supera la metà dell'elitra, spingendosi circa sino all'inizio del quarto apicale. Ed inoltre nei maschi le metatibie sono poco più grosse, diritte, con margine flessorio rettilineo, privo di sinuosità. Lungh. 9 ½ - 11 mm. »

The above description seems to be based on rather superficial, if not incorrect observations. According to GRIDELLI the typical form of *insularis* occurs in Madagascar as well as in the African Continent, having rudimentary to reduced wings which at any rate ought to be shorter than the wings described for his subspecies *somaticus*. My examination of specimens from the Comoro Islands and the Usambara District in the Tanganyika Territory, however, showed that the wings of these specimens agree completely with GRIDELLI's description of his *somaticus*, viz. extend to the apical quarter of elytral length. The other differential character which GRIDELLI claims for his *somaticus* is the shape of the posterior tibiæ in the ♂. It is possible that he refers only erroneously to the posterior tibiæ instead of correctly to the anterior tibiæ, but the posterior tibiæ of my *insularis* vary in their shape from straight through slightly bent inwards posteriorly to very weakly emarginate on distal third of inner contours. Without having in front of me topo-typical specimens from Madagascar, it is impossible to decide whether the populations from the Continent and the Comoro Islands are in actual fact different from those from Madagascar.

Distribution. — Eastern African, from Somaliland to the Zambesi River (as correctly stated already 1887 by CL. MUELLER) ⁽¹⁾, and Madagascar archipelago. — Madagascar archipelago: Madagascar, Comoro Islands, Seychelles (I know only specimens from the Comoro Islands, T.M.) — Zambesi Region (teste CL. MUELLER). — Tanganyika Territory: Nguela, Usambara District (a long series in I.R., mentioned also by GEBIEN, 1922). — Zanzibar (teste CL. MUELLER and GRIDELLI). — Italian Somaliland: Belet Amin (type locality of ssp. *somaticus*), Mogadiscio, Villaggio Duca Abruzzi, Margherita, Alessandra (all teste GRIDELLI).

6. Body fully winged; metasternum quite as long as the basal sternite of abdomen, between meso and metacoxal cavities about as long as the latter. Elytra long, less strongly attenuate apically; with distinct humeral callosity and intra-humeral cavity of articulation face; the pseudopleural crest very fine, neither dilated nor reflected humerally. In the

⁽¹⁾ GRIDELLI, 1941, makes an incorrect statement in saying « Anche questa caratteristica specie è molto più ampiamente diffusa di quanto si credeva finora, dato che con la sua razza, alquanto differenziata, essa si spinge fino alla Somalia italiana meridionale ». In actual fact, however, GRIDELLI's delimitation of the range of *insularis* on the African Continent, viz. from Somaliland to Zanzibar, comprises a smaller area than was known to CL. MUELLER already in 1887, viz. from Somaliland to the Zambesi River.

♂ the posterior tibiæ dimorphic, in one case the intermediate tibiæ with strong preapical tooth on inner contours, in the other the anterior tibiæ strongly dimorphic 7

- Body apterous; metasternum almost a third shorter than basal sternite of abdomen, between meso and metacoxal cavities considerably shorter than the latter. Elytra shorter, strongly attenuate apically; with depressed humeral surface and without intra-humeral cavity on articulation surface; the pseudopleural crest dilated and reflected humerally. In the ♂ the posterior tibiæ practically straight, the intermediate tibiæ with only very slight, inconspicuous preapical emargination of inner contours and the anterior tibiæ shallowly curved, with simple inner contours.

[**Opatrinus (Zidalus) exalatus** n. sp.]

Closely allied to *O. latipes* and agreeing with this species to a great extent in the shape and sculpture of body. Head and antennæ as in *latipes*. Middle section of mentum broadly oval, with distally rounded and strongly narrowed, carinate sides, and raised, almost complete median carina; the apical portion flat, small, occupying about a quarter of length of mentum. Pronotum densely and uniformly punctured, as in *latipes*, but of less strongly transverse shape, with deep anterior emargination, strongly produced, sharp anterior angles, and with posteriorly very slightly rounded and narrowed sides. Prosternum almost smooth, episternum with strong, dense, round punctures, becoming longitudinally rugose on anterior portion, but absent from submarginal area. Elytra shorter, less convex than in *latipes*, with obtuse humeral angles and distinctly rounded sides. Primary rows with fine punctures which are more scattered than in *latipes*; with about 45 punctures in the fourth row; all rows sharply impressed and more deeply lineate on sloping lateral and apical portions. Secondary intervals as in *latipes*, densely punctured, but less strongly convex laterally. Pseudopleural crest entirely visible from above, with distinct submarginal depression on basal half. Abdomen as in *latipes*, the proximal sternites more densely punctured. In the ♂ and ♀ the anterior and intermediate tarsi dilated and soleate as in *latipes*. In the ♂ the anterior tibiæ briefly excavate underneath, with straight inner contours; the intermediate tibiæ sulcate underneath, their inner contours with short, weak preapical emargination and obtusely, faintly projecting apical angle; the posterior tibiæ finely sulcate on under surface, with inconspicuously curved, simple inner contours.

Dimensions. — Length 10 ½ to 12 mm, width 4 ¾ to 5 ¾ mm.

Remarks. — This species is very striking by its wingless body, in this respect forming a transition from the alate *Opatrinus* to the apterous *Anchophthalmus*, although decidedly maintaining the habitus and main characters of *Opatrinus*. It agrees with *O. insularis* in the shortness of metasternum, but is sharply separated from this species by the *latipes*-like structure of mentum, the different shape and very dense, coarse punctation of pronotum, the different basal formation and sculpture of elytra, as well as by the entirely wingless, larger and broader body; the ♂ lacks the preapical tooth on inner contours of intermediate tibiæ, which is always strongly developed in *insularis*, as well as in *latipes*.

Distribution (map 4). — Oriental Province of the Belgian Congo. — North-central Uele District, country of the Sassa (about 25° E and 5° N), 1895-1896, COLMANT (2 ♂♂, 4 ♀♀, types BCM.).

7. Head shaped as in all the other *Opatrinus*, with more or less rounded and narrowing tempora which are at most briefly subparallel behind eyes; this subparallel portion of tempora much shorter than the subparallel portion of genae. Secondary intervals on elytra with fine, but conspicuous and very dense punctation. In the ♂, as in all the other *Opatrinus*, the antennæ non-dimorphic; the anterior tibiæ almost simple, with shallow and long emargination of distal half of inner contours; the inner contours of intermediate tibiæ with obtuse, arcuate postmedian dilation and large justa-apical tooth; the posterior tibiæ strongly curved inwards, excavate on under surface and with the weakly arcuate outer carina of excavation slightly projecting beyond inner contours behind middle; the anterior femora simple.

***Opatrinus (Zidalus) latipes* (SAHLBERG).**

(Pl. III, fig. 3; Fig. 82.)

*1823, *Opatrum latipes* SAHLBERG, p. 13.

*1853 a, *Opatrinus (Zodinus) ovalis* MULSANT & REY, p. 315. — 1853 b, MULSANT & REY, p. 90, pl. 2, figs. 8-10. — 1904 b, GEBIEN, p. 61. — 1907, GEBIEN, p. 404

*1904, *Opatrinus opacus* GEBIEN, p. 4, pl. 1, fig. 2.

1870, *Opatrinus* (scr. *Hopatriinus*) *latipes* GEMMINGER & DE HAROLD, p. 1915. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 415, n° 5550. — 1947, GRIDELLI pp. 40, 46.

*1885, *Opatrinus atratus* QUEDENFELDT, p. 8. — 1947, GRIDELLI, p. 46.

*1947, *Opatrinus latipes tanaensis* GRIDELLI, p. 47, figs. 10 and 11.

Original description. — *Ovalis* MULSANT & REY : « Corps oblong ou suballongé; assez faiblement convexe; d'un noir peu ou point luisant. Tête et prothorax uniformément et comme finement chagrinés; couverts de points serrés, donnant chacun naissance à un poil court, livide ou livide roussâtre, peu apparent. Partie médiane du menton presque en losange, non échancrée ou anguleuse

en devant, aussi longuement (σ) ou un peu moins longuement (φ) prolongée que les angles du prothorax; noire. Prothorax élargi en ligne courbe jusqu'à la moitié environ ou un peu plus, presque parallèle ou très-faiblement rétréci ensuite et ordinairement sans sinuosité sensible; muni sur les côtés d'un rebord un peu saillant, peu épais, presque uniforme; assez fortement bisinué à la base, avec les trois-cinquièmes médiaires de celle-ci obtusément arqués en arrière et un peu moins prolongés que les angles; muni à ladite base d'un rebord très-étroit, presque interrompu dans son milieu; assez faiblement convexe. Écusson en triangle à côtés anguleux; de moitié plus large à la base que long dans son milieu; ponctué. Elytres presque parallèles jusqu'aux trois-cinquièmes, rétrécies ensuite d'une manière peu sinuée, avec l'extrémité obtuse; assez faiblement convexes; à stries étroites, notées de points les dépassant à peine, séparés par un espace un peu plus grand que leur diamètre (au moins soixante de ces points sur la quatrième strie). Intervalles assez superficiellement pointillés; garnis de poils d'un livide roussâtre, peu apparents, généralement plus courts que l'intervalle des points; subconvexes en devant, un peu plus sensiblement en arrière, parfois légèrement en toit obtus. Bord supérieur du repli presque entièrement visible en dessus. Dessous du corps et pieds un peu luisants. Côtés de l'antépectus marqués de gros points presque unis et parfois unis en sillons. Prosternum rebordé, souvent rayé d'un sillon longitudinal médiaire plus ou moins marqué. Postépisternums parallèles, quatre fois environ aussi longs que larges. Tarses garnis en dessous d'un duvet fauve roux. σ : Jambes grêles : les antérieures faiblement arquées, simples : les intermédiaires graduellement et assez faiblement élargies jusqu'à la moitié, subparallèles ensuite, armées d'une petite dent à l'extrémité postérieure de leur arête inférieure : les postérieures plus grêles, arquées sur leur tiers ou leurs deux-cinquièmes basilaires, échancrées en dessous vers le tiers. Quatre premiers articles des tarsi antérieurs dilatés : les deuxième et troisième plus fortement que le premier surtout : quatre premiers articles des tarsi intermédiaires presque égaux, un peu plus larges que les postérieurs. φ : Jambes droites, simples. Tarses antérieurs peu et uniformément dilatés. Long. 12,3 à 13,5 mm, larg. 4,5 à 6,7 mm ».

R e m a r k s. — Mentum (fig. 82) as described in *O. exalatus*, the lateral wings very narrow, the middle section more strongly broadened, with well rounded and dilated sides. In the σ the anterior and intermediate tarsi strongly dilated, soleate below, the anterior tarsi distinctly broader than the apex of anterior tibiae; the underside of posterior tarsi very densely setiferous, with divided soleae on pre-penultimate segment and entirely soleate on preapical

segment. In the ♀ the anterior and intermediate tarsi rather strongly dilated, much less broad than in the ♂; the anterior tarsi moderately broader than the intermediate ones, underside of all tarsi soleate.

Ædeagus. — Stout. Apicale short, moderately narrowed in a straight line towards apex; parameres stout, straight and not bent ventrad, with broadly rounded to subtruncate apices. Ventral groove with narrowly exposed apical portion of penis and lacinia. Basale strongly dilated towards middle, with ventrally very broad inflexed alæ, much broader than, and about five times as long as, apicale.

Dimensions. — Length 10 ½ to 15 mm, width 4 ½ to 6 ¾ mm.

Type locality. — Sierra Leone.

Subspecies. — I do not know GRIDELLI's ssp. *tanaensis* from the Lake Tana in Northern Abyssinia. The description of this form reads as follows: — « Individui molto simili a quelli della razza tipica, con i quali hanno in comune la grande statura, la forma del corpo e i caratteri sessuali. Ma i tegumenti dorsali sono nettamente pubescenti, come in *costatulus*, opachi in seguito alla maggiore profondità della microscultura reticolare; la punteggiatura delle elitre è nettamente più densa e gli intervalli delle elitre sono soltanto debolmente convessi, non subcarenati. I caratteri sessuali maschili sono gli stessi; però il dente apicale delle mesotibie è più sottile e la dilatazione suddescritta delle metatibie è pochissimo pronunciata. Lungh. 12 a 12 ½ mm ».

The very abundant material of *O. latipes* at my disposal, coming from the whole of Tropical Africa, exhibits a rather wide range of variability as to the sculpture of body, more or less strongly convex to subtectiform lateral secondary intervals on elytra, length and density of the microscopical pubescence of body, as well as to the more or less strong development of the dimorphism of legs in the ♂. I do not know whether the differential characters of the ssp. *tanaensis* in actual fact extend beyond the range of variability of species, but they all refer to subtle alterations of sculpture.

Distribution (maps 4, 6). — Practically Trans-Tropical, but apparently less diffused in the East; ranging from Senegal to Abyssinia in the North and reaching the Okavango River in the South. — [Senegal: (type locality of *O. ovalis*);] [Khayes, VIII.1882, NODIER (1 spec., S.A.M.).] — [Portuguese Guinea (teste GRIDELLI).] — [Sierra Leone (type locality of *O. latipes*).] — [Liberia: Cape Palmas (type locality of *O. atratus*).] — [Ivory Coast (teste GRIDELLI).] — [Gold Coast: Pundu, Upper Volta River, OLSUFIEW (a long

series, M.St.)] — [Dahomey : Oyo, Yoruba, P. FRANÇOIS (1 spec., S.A.M.)] — [Nigeria : Lokoja and Kabba, II.1949, B. MALKIN (2 spec., M.C.A.)] — [Cameroons : without specified locality, Y. SJÖSTEDT (type locality of *O. opacus*);] [Mukonje, Mundame (1 spec., T.M.);] [Joko, Ebolowa and Bamum (teste GRIDELLI).] — [Principe Islands (teste QUEDENFELDT).] — Belgian Congo (1) : [Léopoldville Province (Makaya Tete, Temvo, Thysville, Congo da Lemba, Lemfu, Kisantu, Mayidi, Léopoldville, Kalina, Mpese, Ngowa, Kunzulu, Kibenga, Leverville, Kikwit)]; [Equator Province (Bolobo, Lukolela, Bokala, Eala, Libenge, Flandria, Gemena, Karawa, Likimi, Mandungu)]; [Oriental Province (Barumbu, Mobwasa, Yangambi, Buta, Tukpwo, Bambesa, Stanleyville, Zobia, Sassa country, Ibenbo, Amadi, Poko, Dundo, Faradje, Moto, Madyu, Watsa, Mahagi, Djugu, Nioka, Fataki, Blukwa, Nizi)]; [Albert National Park region (Beni, Ituri forest, Kawa forest, Mutsora, Mutwanga)]; [Ruanda-Urundi (Uvira, Kitega)]; [Kivu province (Kindu, Nyangwe, Kasongo, Mulungu, Katana, Costermansville)]; [Kasai Province (Makumbi, Lusambo, Katoka, Luluabourg, Kondue, Mwene Ditu, Kabinda)]; [Elisabethville Province (Kapanga, Tshibamba, Sandoa, Tshibalaka, Kafakumba, Kaniama, Bukama, Bunkeya, Lukuga, Elisabethville, Albertville)]; Upemba National Park : Mabwe, Mission G. F. DE WITTE. — [North-eastern Angola : Dundo, II.1949, A. DE BARROS MACHADO (6 spec., M.D.)]; [Saurino, XI.1949, Padre EDUARDO (1 spec., M.C.A.)]. — [North-western Bechuanaland : Andara, Bagani, XI.1951, R. G. STREY (1 spec., T.M.)]. — [Tanganyika Territory : Bukoba and Mwamgongo, XI.1943, MENEGHETTI (5 spec., C.M.)]; [Bismarckberg and Dar es Salaam (teste GRIDELLI).] — [Uganda : Kampala, I.1920, R. DUMMER (1 spec., S.A.M.)]; [Mubende, I.1923, H. HARGREAVES (1 spec., T.M.)]; [Bwamba forest, III.1948, J. G. WILLIAMS (1 spec., C.M.)]. — [Abyssinia : Lake Tana (Bakar-dagh, type locality of sp. *tanaensis*, teste GRIDELLI)].

- Head of peculiar shape, strikingly quadrangular; the tempora very long, exactly parallel, one and a half times as long as the subparallel portion of genae, and almost rectangularly bent towards the neck posteriorly. Secondary intervals on elytra with fine, scattered, inconspicuous punctation. In the ♂ the antennæ with the third to seventh segments thickened, abbreviate, attenuate towards the apex and with flattened, shiny, pubescent under surface; the anterior tibiæ with strongly broadened upper surface, very deeply excavate underneath, with the inner contours forming a strong premedian tooth, a short and semi-circular emargination at the bent middle, and slightly emarginate, subparallel

(1) From the Belgian Congo altogether 1.402 specimens were examined, preserved in the « Institut des Parcs Nationaux du Congo belge », « Institut royal des Sciences naturelles de Belgique » and « Musée royal du Congo belge ». These specimens have been collected by FR. ANASTASE, P. BASILEWSKY, P. DE BEIR, J. BEQUAERT, BORGERHOFF, H. J. BRÉDO, M. BROUWERS, BUCKINCKX, L. BURGEON, P. CALLEWAERT, A. COLLART, COLMANT, J. COOREMAN, R. CREMER, DOUTRELEPONT, R. C. ELOY, A. FAIN, FLORIDON, M. FONTAINE, P. GÉRARD, J. GHESQUIÈRE, DE GIORDI, L. HACKARS, P. HENRARD, P. HULSTAERT, HUTEREAU, FR. HUTSEBAUT, P. LEFÈVRE, N. LELEUP, LEONTOVITCH, J. V. LEROY, J. LISFRANC, P. LOOTENS, E. LUJA, R. MASSART, R. MAYNÉ, P. J. MERIENS, SH. NEAVE, N. NEUMAN, G. F. OVERLAET, PUTNAM, C. SCOOPS, H. SCHOUTEDEN, H. TAZIEFF, P. VANDERIJST, P. VANDERPLAS, P. VANEYEN, P. VANKERCKHOVEN, VANHEEKE, J. VRIJDAGH, Q. WALLIN and Mission G. F. DE WITTE.

on distal half; the inner contours of intermediate tibiæ almost simple, slightly curved and shallowly emarginate on distal half; the posterior tibiæ almost straight, but with weak, elongate postmedian dilation and rather strong preapical emargination of inner contours; the anterior femora with small apical tooth on inner lateral surface and extremely broadened, excavate, densely pubescent under surface, the outer edge of which is strongly, triangularly enlarged and reflected distally.

Opatrinus (Zidalus) mirabilis n. sp.

(Fig. 89.)

Allied to *O. latipes* and agreeing with this species in the fully winged body, large size, shape and sculpture, but, apart from the unique dimorphism of the antennæ and legs in the ♂, readily distinguished as follows. Mentum with broader lateral wings and narrower middle section; the latter one and a half times as long as broad, with almost complete median carina, but only shallowly impressed surface each side of carina; the sides of middle section edged, narrowed from base to middle, thence sinuate and almost subparallel at the constricted apical fourth or fifth, with truncate apical margin. Pronotum similar to *latipes*, but considerably more strongly convex, with depressed anterior angles, very dense, coarser punctation and posteriorly subparallel to shallowly sinuate sides. Elytra as in *latipes*, with the same dense, fine punctation of primary rows, but with very sparsely, inconspicuously punctured, flat to slightly convex secondary intervals. Under surface of hind body as in *latipes*, the abdomen a little more densely punctured and more elongately setiferous. The tarsi as strongly dilated and soleate as in the ♂ and ♀ of *latipes*.

The new species represents the only species within the genus, exhibiting dimorphic anterior femora and antennæ.

Ædeagus. — Rather differentiated from all the other species. Apicale broad, moderately narrowed in a slightly rounded line towards apex, with complanate, almost laminiform distal half; parameres flattened dorsally and ventrally, with obliquely cut apices; ventral groove broad, with almost entirely exposed, long penis and lacinia. Basale moderately broader than apicale and about three and a half times as long as the latter.

Dimensions. — Length 13 to 14 mm, width $5\frac{3}{4}$ to $6\frac{1}{4}$ mm.

Distribution (map 4). — Elisabethville Province of the Belgian Congo. — Upemba National Park: Mabwe, I.1949, G. F. DE WITTE (1♂, 3♀, types I.P.N., collected together with *O. setuliger* and *O. latipes*).

8. In the ♂ the inner contours of anterior tibiæ with conspicuous to obtusely dentiform median dilation, the inner contours of intermediate tibiæ with strong preapical tooth 9
- In the ♂ the inner contours of anterior tibiæ straight and simple, those of intermediate tibiæ with minute, inconspicuous apical spine, either simple or with very weak postmedian emargination 10

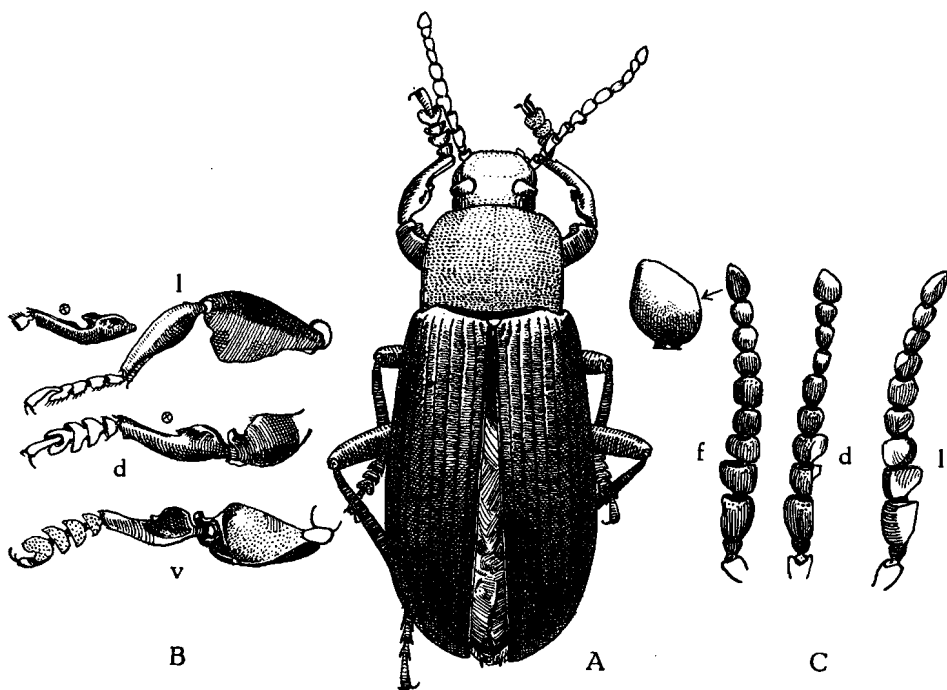


FIG. 89. — *Opatrinus (Zidalus) mirabilis* n. sp.

A : dorsal view. — B : anterior leg of ♂ (l : in lateral view; d : in dorsal view, v : in ventral view). — C : antenna of ♂ (f : inner lateral surface; d : dorsal surface; l : outer lateral surface).

9. In the ♂ the inner contours of intermediate tibiæ with strong, triangular preapical tooth, those of anterior tibiæ with arcuate, non-dentiform and not prominent median dilation.

[*Opatrinus (Zodinus) costulatus* (GUÉRIN).]

(Pl. III, fig. 4.)

*1849, *Opatrum costulatum* GUÉRIN, p. 321, pl. 5, fig. 3.

1870, *Opatrinus costulatus* GEMMINGER & DE HAROLD, p. 1915. — 1910 b, GEBIEN, p. 276. — 1938-1942, GEBIEN, p. 415, n° 5555. — 1939, GRIDELLI, p. 239. — 1947, GRIDELLI, pp. 40, 48, figs. 8 and 9.

GRIDELLI has the merit of introducing this forgotten species into modern systematics. In his revision of *Opatrinus* he reproduced GUÉRIN's original diagnosis, but added the following re-description.

Description (*sensu* GRIDELLI, 1941). — « Perfettamente riconoscibile per la forma del corpo e, soprattutto, per la pubescenza cortissima, subcoricata, giallo bruna, dei tegumenti dorsali, perfettamente visibile anche a debole ingrandimento. Anche le zampe, le antenne ed i tegumenti delle parti ventrali presentano una pubescenza analoga. Tegumenti dorsali subopachi. Il pronoto è pochissimo arrotondato ai lati, con la massima larghezza un poco dietro alla metà, a lati pochissimo convergenti posteriormente ed ivi subparalleli, non sinuati; la base è bisinuata e quindi gli angoli posteriori sono acuti. I lati convergono notevolmente all'innanzi; a visione dorsale l'orlo anteriore appare uniformemente concavo e gli angoli anteriori leggermente acuti, poco sporgenti. Margine laterale orlato, notevolmente ispessito; orlatura del margine basale fina, completa (ma sottilissima nel tratto mediano), mentre quella del margine orale è presente (poco evidente) solo ai lati, dietro agli occhi. Punteggiatura piuttosto grossa, densissima, con tendenza a formare rugosità longitudinali. Una leggera depressione trasversale corre ad una certa distanza dal margine posteriore. Parte ripiegata con punteggiatura densa, a punti grossi, isolati o più o meno confluenti; è presente una zona liscia in corrispondenza alla convessità articolare ed una zona marginale esterna a punteggiatura fina. Strie delle elitre molto sottili, a punti finissimi e molto numerosi, non intaccanti in alcun modo gli intervalli, i quali sono opachi, leggermente convessi (specialmente gli esterni), a punteggiatura finissima e piuttosto densa. Ali completamente sviluppate. Mento piano, opaco, densamente rugoso-punteggiato, con linea mediana longitudinale irregolare liscia. Addome lucido, con punteggiatura fina, più o meno ridotta sulla zona centrale degli sterniti anteriori. ♂ : Protibie ingrossate, leggermente curve, con la faccia flessoria scavata e dilatata come in *corvinus*. Mesotibie dilatate, con dente preapicale interno molto vistoso, acuto. Metatibie leggermente curve, con ampio tratto mediano della faccia flessoria leggermente incavato, a punteggiatura meno densa e quindi lucido. Trocanteri delle zampe del secondo paio con apice distale acuto, simile ad una spinetta. Addome appiattito nel mezzo, appena depresso in corrispondenza al tratto mediano del primo sternite visibile ed al tratto mediano basale del secondo e del terzo, e ivi con alcune lievi rugosità longitudinali. — Lungh. 9-9,5 mm. »

Æ d e a g u s. — Apicale narrowed towards apex. but the apical portion almost subparallel and weakly demarcated from the basal portion by a shallow, long sinuosity; parameres stout, rather convex,

with narrowly rounded, slightly bent apices; ventral groove rather broad, with exposed apical portions of penis and lacinia. Basale with subparallel sides, only slightly broader than apicale, about three and a half times as long as the latter.

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

Type locality. — Abyssinia.

Distribution (map 4). — Northern East African, from the Anglo-Egyptian Sudan southwards to the north-eastern parts of the Belgian Congo. — Anglo-Egyptian Sudan: btwn Khartoum and Gondokoro, Erer valley, btwn. Bongo and Uata. — Abyssinia: Shoa, Cialalaka. — Erythræa: Adi Ugri, Saganeiti (all teste GRIDELLI, 1947). — North-eastern Belgian Congo: Kibali-Ituri District (Nioka, VII. 1934, J. LEROY, 15 spec., BCM.; btwn. Blukwa and Nizi, XI.1929, A. COLLART, 25 spec., I.R.; Mahagi, Odongo, III.1929, A. COLLART, 1 spec., I.R.); Uele District (Bambesa, VI.1937, J. VRIJDAGH, 5 spec., I.R. and BCM.).

- In the ♂ the inner contours of intermediate tibiæ with fine, spiniform apical tooth, those of anterior tibiæ with strongly prominent, arcuate, obtusely dentiform median dilation.

[**Opatrinus (Zodinus) servus** MULSANT & REY.]

*1853 a, *Opatrinus (Zodinus) servus* MULSANT & REY, p. 317. — 1853 b, MULSANT & REY, pp. 90, 92. — 1870, GEMMINGER & DE HAROLD, p. 1914. — 1904 b, GEBIEN, p. 61. — 1910 b, GEBIEN, p. 277. — 1920, GEBIEN, p. 21. — 1938-1942, GEBIEN, p. 415, n° 5553. — 1947, GRIDELLI, pp. 40, 45, figs. 16 and 17.

Original description. — « Corps oblong; peu ou assez faiblement convexe; brun ou d'un brun noir, un peu soyeux. Tête densément ponctuée, un peu plus finement sur l'épistome que sur le front, beaucoup plus finement sur le vertex. Partie médiane du menton ovalaire, ou rapprochée de cette forme, et non échancrée en devant. Antennes prolongées environ jusqu'aux angles postérieurs (♂); noires. Prothorax échancré en arc assez régulier, en devant, avec les angles avancés en forme de dent, élargi en ligne peu courbe jusqu'au tiers aux deux-cinquièmes, très-faiblement élargi ou sub-parallelè ensuite; fortement bisinué à la base, avec la partie médiane arquée et à peine aussi prolongée en arrière que les angles; muni latéralement d'un rebord peu ou point saillant, graduellement moins étroit vers les angles postérieurs; rayé au devant de la base d'une ligne non interrompue, constituant un rebord presque également étroit; peu convexe; couvert de points assez fins, épais, surtout près des bords latéraux: chacun de ces points, comme ceux de la tête, donnant naissance à un poil court. Écusson en demi-hexagone, de moitié plus large que long; ponctué. Élytres subparallelèles jusqu'aux deux tiers; à stries très-marquées, étroites, notées de points ronds, petits, égaux à peine au sixième de la largeur des intervalles média-

res, très-rapprochés les uns des autres (environ cinquante de ces points sur la quatrième strie). Intervalles finement ponctués : ces points donnent naissance chacun à un poil très-court; plans ou presque plans en devant, faiblement convexes à leur extrémité. Bord supérieur du repli en partie visible en dessus. Dessous du corps un peu luisant. Prosternum offrant les traces de trois sillons. Côtés de l'antépectus marqués de points assez gros unis en sillons. Ventre finement ponctué. Postépisternums parallèles, quatre fois aussi longs que larges. Pieds marqués de points donnant, comme ceux du ventre, naissance à un poil très-court. Tarses garnis en dessous d'un duvet flave roussâtre, en forme de brosse, surtout sur les tarses antérieurs ♂ : Jambes grêles : les antérieures et intermédiaires presque droites : les postérieures droites; sans dent ni échancrure : celles de devant garnies d'un duvet flavescent vers l'extrémité de leur arête inférieure. Quatre premiers articles des tarses dilatés : les mêmes des intermédiaires presque semblables aux postérieurs. Long. 10 à 11,2 mm, larg. 4,5 mm. »

Remarks. — I am accepting GRIDELLI's interpretation of this species, although the description of the legs in the ♂ by MULSANT & REY does not agree with GRIDELLI's species. But there is a strong probability that MULSANT & REY's ♂ in actual fact is a ♀, as the original description refers to the dilated intermediate tarsi as being almost equal to the posterior tarsi, a proportion which fits in all the *Opatrinus* exclusively the ♀, but not the ♂. — This species is very closely related to *O. costulatus*, agreeing with the latter in the posteriorly prominent eyes, length of metasternum, structure of mentum, as well as sculpture. But it is considerably more oblong, with a slender pronotum and more strongly elongate elytra. In the ♂ the anterior tarsi are very strongly dilated and all tarsi are soleate below, as is the case also in the ♀; the posterior tibiae are strongly curved as in *costulatus*.

Æd e a g u s. — Similar to *O. costulatus*, but the apicale more slender, with narrow and subparallel distal half.

D i m e n s i o n s. — Length 10 to 11 $\frac{1}{4}$ mm, width 4 to 4 $\frac{1}{4}$ mm.

T y p e l o c a l i t y. — « La Guinée ». Type (coll. DEYROLLE) probably in Museum Paris.

D i s t r i b u t i o n (map 4). — Trans-Sudanese. — French Guinea. — Dahomey : Zanganado (teste GRIDELLI). — Gold Coast : Pundu, Upper Volta River, OLSUFIEW (3 spec., M.St.). — Cameroons : Mundame (teste GRIDELLI). — North-western Abyssinia : Gambela (teste GRIDELLI). — Anglo-Egyptian Sudan : Malakal, L. BURGEON (2 spec., BCM.); Kosti, L. BURGEON (2 spec., BCM.). GENIEN's record (1920) from Kisantu (Belgian Congo, Léopoldville Province, Bas Congo District) may have to be confirmed.

10. Secondary intervals on elytra appearing as if smooth, as the punctuation is extremely fine, less dense, scarcely discernible; primary rows usually with more distinct, less concentrated punctures. Middle of prosternum with fine and scattered punctures. In the ♂ the inner contours of intermediate tibiae with very shallow and weak median emargination.

[**Opatrinus (Zodinus) attenuatus** KLUG.]

- *1833, *Opatrinus attenuatus* KLUG, p. 88. — 1922, GEBIEN, p. 273. — 1938-1942, GEBIEN, p. 415, n° 5551. — 1947, GRIDELLI, pp. 39, 44, fig. 7.
 *1853 a, *Opatrinus (Zodinus) madagascariensis* MULSANT & REY, p. 319. — 1853 b, MULSANT & REY, pp. 90, 94. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1910 b, GEBIEN, p. 277. — 1913, CHATANAY, p. 766, fig. 3.
 *1870, *Eurynotus inops* FÄHRAEUS, p. 289. — 1953 a, KOCH, p. 272.
 *1947, *Opatrinus attenuatus bottegoi* GRIDELLI, p. 45, figs. 6 and 7.

Original description. — *Madagascariensis* MULSANT & REY : « Corps oblong; faiblement convexe; noir ou d'un brun noir; mat et garni en dessus de poils indistincts, surtout sur les élytres. Tête densément ponctuée. Partie médiane du menton presque ovulaire. Antennes au moins aussi largement prolongées que les angles postérieurs du prothorax; noires. Prothorax élargi en ligne peu courbe jusqu'aux deux-cinquièmes, légèrement rétréci ensuite en ligne à peine courbe et à peine sinuée près des angles postérieurs; muni latéralement d'un rebord étroit à peine saillant en avant, graduellement moins étroit et plus sensiblement saillant vers les angles postérieurs; fortement bisinué à la base, avec la partie supérieure arquée et un peu moins prolongée en arrière que les angles; rayé en avant de la base d'une ligne légère constituant un rebord très étroit; peu ou très-médiocrement convexe; densément ponctué : ces points, comme ceux de la tête, donnant naissance à un poil très-court. Écusson en demi-hexagone; ponctué. Élytres élargies en ligne à peine courbe jusqu'aux deux tiers de la longueur; à stries très-marquées; étroites, notées de points ronds, petits, égaux à peine au septième de la largeur des intervalles médianes, séparés les uns des autres par des intervalles plus courts que leur diamètre (quarante-cinq à cinquante de ces points sur la quatrième strie). Intervalles pointillés ou marqués de points petits, presque glabres ou donnant naissance à un poil presque indistinct; un peu convexes : le juxtaposé déprimé : les premier, troisième, cinquième et septième sensiblement plus élevés et plus larges. Bord supérieur du repli en majeure partie visible en dessus. Dessous du corps un peu luisant; ponctué sur les côtés de l'antépectus. Prosternum rebordé. Postépisternums parallèle, quatre fois environ aussi longs que larges. Tarses garnis en dessous de poils d'un roux testacé, en forme de brosse sur les quatre premiers articles des antérieurs, les trois articles intermé-

diaires des tarsi suivants, et les deuxième et troisième des tarsi postérieurs. ♂ : Jambes assez grêles : les antérieurs un peu arquées : toutes sans dent ni échancrure. Quatre premiers articles des tarsi antérieurs dilatés : le premier un peu moins largement : tarsi intermédiaires un peu moins étroit que les postérieurs. Long. 10 mm, larg. 3,9 mm ».

Remarks. — Agreeing with the two preceding species of *Opatrinus* (*Zodinus*) in the shape of body, structure of mentum and the posteriorly prominent eyes, but readily recognized in the ♂ by the practically simple anterior tibiae, the only slightly dimorphic, inermous intermediate tibiae (the minute apical spine of which is inconspicuous) and the more strongly curved posterior tibiae.

Eurynotus inops FÄHRÆUS is a simple synonym of this species, agreeing with its typical form from Madagascar.

Dimensions. — Length 8 to 11 mm, width $3\frac{1}{2}$ to $4\frac{3}{4}$ mm.

Type locality. — Madagascar. Type in Museum Berlin.

Subspecies. — Description of ssp. *bottegoi* GRIDELLI : — « La massima larghezza del pronoto è spostata verso la base. I lati convergono caudalmente per un tratto più corto ed in grado minimo o nullo e quindi gli angoli posteriori sono più acuti. Oralmente essi convergono per un tratto più lungo ed in grado maggiore e di conseguenza il pronoto è nettamente conico. La sua punteggiatura è più sottile e quindi meno densa. Nei maschi le metatibie presentano una curvatura molto più accentuata, spostata alquanto distalmente ed il tratto apicale è più ingrossato; il tratto concavo della faccia flessoria mostra una pubescenza molto corta, bruno chiara, aderente, e relativamente densa, più sviluppata che nei maschi della forma tipica esaminati. Lungh. 9-10 $\frac{1}{2}$ mm ».

I do not know either the types or the ♂ of this form, but 3 ♀♀ from British East Africa and the north-eastern part of the Belgian Congo agree very well with GRIDELLI's description. They are considerably stouter than *attenuatus*, the secondary intervals on elytra are smooth, more convex and the punctures of primary rows are coarse. I have little doubt that *bottegoi* represents an independent species, belonging to the subgenus *Zodinus* on behalf of the posteriorly prominent eyes, but probably more closely related to *setuliger* than to *attenuatus*.

Distribution (maps 4, 6). — Madagascar archipelago and eastern part of Southern Africa. from Southern Portuguese East Africa through Transvaal to Natal and Zululand. The ssp. *bottegoi* in British East Africa, Zanzibar and the north-eastern part of the Belgian Congo.

a) *attenuatus*. — Madagascar (type locality of *attenuatus* and *madagascariensis*): 4 spec. T.M. and S.A.M. — Aldabra Island (teste GRIDELLI). — Comoro Islands (teste GRIDELLI). — Southern Portuguese East Africa: Beira, 1903, P. A. SHEPPARD (10 ♀ ♀, S.A.M.); Busi River, P. A. SHEPPARD (1 ♂, S.A.M.); Umbeluzi, XI.1949, W. G. FERREIRA (1 ♀, M.A.C.). — Union of South Africa: Caffraria (type locality of *inops*); Natal (Durban, 1891, C. N. BARKER, 2 ♂ ♂, 1 ♀, S.A.M.; Congella, III.1915, H. W. BELL MARLEY, 1 ♂, S.A.M.); Transvaal (Zoutpansberg, XI.1924, H. J. HESKE, 1 ♂, T.M.).

b) *bottegoi*. — British East Africa: P. Sancurar (probably Sankuri), type locality of *bottegoi*; Wajù (teste GRIDELLI); Kalin, Northern Turkana, IX.1941, T. H. E. JACKSON (1 ♀, C.M.). — Belgian Congo, Oriental Province, Kibali-Ituri District: Kasenye, V.1935, H. J. BRÉNO (2 ♀ ♀, BCM.).

- Secondary intervals on elytra with dense, conspicuous punctation; primary rows with very dense, fine, often obsolescent punctures. Middle of prosternum with more concentrated, denser, often asperate punctures. In the ♂ the inner contours of intermediate tibiae without any trace of emargination, slightly curved and more strongly dilated towards apex.

Opatrinus (Zodinus) setuliger CL. MUELLER.

(Pl. IV, fig. 1.)

*1887, *Opatrinus (Zodinus) setuliger* CL. MUELLER, p. 301. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 415, no 5554. — 1947, GRIDELLI, pp. 39, 43, figs. 12 and 13.

*1947, *Opatrinus setuliger camerunensis* GRIDELLI, p. 44.

Original description. — « Oblongus, nigricans, opacus, subtiliter setulosus; capite thoraceque dense punctatis; elytris punctato-striatis, interstitiis convexis, minus dense subtiliter punctulatis; pedes simplices. — Der Untergattung *Zodinus* angehörend. Länglich, grau-schwarz, durch die zahlreichen anliegenden feinen braunen Börstchen etwas bräunlich matt. Kopf und Halsschild dicht punktiert, bei letzterem an den Seiten noch gedrängter und die Punkte zu Runzeln zusammenfliessend. Halsschild ein halbmal breiter als lang, wenig gewölbt, fein gerandet, bis etwas über die Mitte gleichbreit, dann stark nach vorn verschmälert, der Vorderrand ziemlich stark ausgerandet, der Hinterrand stark zweibuchtig, die Hinterecken sehr spitz, etwas nach auswärts gerichtet. Flügeldecken wenig gewölbt, punktiert-gestreift, Punkte in den Streifen klein und sehr dicht aneinander stehend (65-70 im vierten Streifen), Zwischenräume leicht gewölbt, der 3., 5. und 7. kaum merklich höher, nicht dicht aber fein punktiert. Auf der Unterseite die Seitenteile des Halsschildes dicht grob längsrundlich punktiert. Prosternalkiel an den Seiten gerandet, hinterwärts stark gerundet und ungerandet. Hinterleib glänzend zerstreut punktiert, in jedem Punkte ein feines braunes Börstchen. Beine einfach, ohne Zähne an den Mittelschienen beim Männchen, die Schienen leicht gebogen. Long. 9-10 $\frac{1}{2}$ mm. lat. 4-4 $\frac{1}{2}$ mm ».

R e m a r k s. — Very closely related to *O. attenuatus*. In the ♂ the inner contours of intermediate tibiae without median emargination or sinuosity, but sometimes curved in a continuous line or the constricted proximal half is somewhat angularly demarcated from the dilated distal half.

D i m e n s i o n s. — Length $8 \frac{1}{2}$ to $12 \frac{3}{4}$ mm, width $3 \frac{1}{2}$ to $5 \frac{1}{4}$ mm.

T y p e l o c a l i t y. — « Zambesi Gebiet, leg. BRADSHAW ». Type probably in Museum Amsterdam.

S u b s p e c i e s. — Description of ssp. *camerunensis* GRIDELLI : — « Presenta tutti i caratteri del tipico *setuliger*, dal quale differisce per i tegumenti glabri, per la punteggiatura del pronoto ad elementi un poco più piccoli e quindi un poco meno densa, ma specialmente per le elitre più strette ed il pronoto più stretto, conico, a lati meno arrotondati, convergenti oralmente in grado maggiore e per un tratto più lungo (e quindi gli angoli orali sono più acuti). Caudalmente i lati non convergono affatto, anzi essi divergono leggermente; talora essi sono rettilinei, tal'altra essi presentano una debole e lunga sinuosità (e quindi gli angoli posteriori sono più acuti). Lungh. : 9-10 mm ».

GRIDELLI, when describing his subspecies, possessed only a very poor material of this species, viz. 6 paratypes from the Zambesi, a couple from the southern part of the Tanganyika Territory and probably a few specimens, if not only a couple, from the Cameroons. With about 500 specimens of this species in front of me, coming from the whole of Tropical and the northern parts of Southern Africa, I am able to confirm the exactness of GRIDELLI's observation, but on the other hand no sharp morphological line can be drawn between the slender, smaller and practically bare western specimens (*camerunensis*) and the stout, larger and very distinctly pilose eastern specimens (*setuliger*). The transitions between both groups occur in the Southern Belgian Congo, but individually also in more western parts. A detailed study of the copulatory organ of ♂ and of the probably existing minute differences in the formation of intermediate tibiae of ♂ may result in a split up into several subtle geographic forms of this species, a task, however, which I do not consider very advisable to taxonomy.

D i s t r i b u t i o n (map 4). — Trans-Tropical, in the North reaching the Cameroons and British East Africa, in the South penetrating into the Southern African Region at Northern Bechuanaland and Southern Rhodesia. — [Zambesi Region (2 paratypes, S.A.M.).] — [Northern Bechuanaland : Maun, VII.1938, MUS. STAFF (1 spec., S.A.M.).] — [Southern Rhodesia : Umtali, 1939 (5 spec., S.A.M., the ♂ with strongly curved and dilated intermediate tibiae)]; [Bulawayo, IX.1938 (1 spec., M.S.Rh.)]; [Penkridge, Melssetter District,

II. 1928, R. H. R. STEVENSON (1 ♂, T.M., with the intermediate tibiae as in Umtali specimens.) — Belgian Congo : [Elisabethville Province (Kapanga, III.1939, F. G. OVERLAET, 58 spec., BCM.; Kafakumba, II.1933, F. G. OVERLAET, 16 spec., BCM.; Tshibamba, XII.1931, F. G. OVERLAET, 8 spec., BCM.; Elisabethville, VII.1912, STAPPERS (8 spec., BCM)]; Upemba National Park (Mabwe, VIII.1947, 346 spec., I.P.N.; Masombwe, VII.1948, 1 spec., I.P.N.; Munoi, VI.1948, 12 spec., I.P.N.; Lusinga, VII.1947, 3 spec., I.P.N.; Mukana, I.1948, 2 spec., I.P.N.; [Dipidi River, I.1948, 1 spec., I.P.N.]; Mubale River, V.1947, 1 spec., I.P.N.; Kaswabilenga, IX.1947, 1 spec., I.P.N.]; [Kampokotwe, V.1949, 9 spec., I.P.N.]; all collected by the Mission G. F. DE WITTE. — Kivu Province (Costermansville, VII.1937, H. J. BRÉDO, 21 spec., BCM.; Mulungu, V.1935, J. V. LEROY, 54 spec., BCM.; Ibanda, 1935, M. VANDELLANOITE, 18 spec., BCM.; Rutshuru, V.1937, J. GHESQUIÈRE, 4 spec., BCM.; Kasai Province (Luebo, 1 spec., BCM.); Léopoldville Province (Kisantu, P. GILLET, 33 spec., BCM.; Thysville, VII.1949, N. LELEUP, 84 spec., BCM.; Lemfu, VI.1945, P. L. DE BEIR, 4 spec., BCM.; Mayidi, 1942, P. VANEYEN, 24 spec., BCM.); Urundi-Ruanda (Rukoma, I.1953, P. BASILEWSKY, 3 spec., BCM.; Gitarama, I.1953, P. BASILEWSKY, 1 spec., BCM.). — [Northern Rhodesia : Mweru-Wantipa, Lac Chisi, XII.1943, H. J. BRÉDO (1 spec., I.R.). British East Africa : Nairobi, I.1923, coll. BABAULT (6 spec., BCM.; Naivasha, V.1936, H. J. ALLEN TURNER (5 spec., C.M.); Kaimosi, IV.1932, H. J. ALLEN TURNER (6 spec., C.M.). Tanganyika Territory : Bismarckberg (teste GRIDELLI). Cameroons : Bamum (type locality of ssp. *camerunensis*).]

ANCHOPHTHALMOID PLATYNOTINA.

ANCHOPHTHALMUS GERSTAECKER.

*1854, *Anchopthalmus* GERSTAECKER, p. 533. — 1859, LACORDAIRE, p. 240. — 1873, GERSTAECKER, p. 175. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417. — 1953 a, KOCH, p. 269. — 1955 a, KOCH, p. 428.

1859, *Opatrinus* LACORDAIRE, p. 241. — 1870, GEMMINGER & DE HAROLD, p. 1914.

*1870, *Oxythorax* FÄHRAEUS, p. 288.

Diagnosis. — Body apterous, more or less strongly depressed, elongate to roundish; bare or with short, rarely conspicuous bristles. Upper surface dull to weakly shining. Eyes strongly constricted by genal canthus. Mentum with entirely exposed, broad lateral wings; median section peculiar, formed by a narrow, elongate, subparallel convexity, with perpendicular, steep, but non-carinate sides. Apical segment of maxillary palpi extremely dimorphic, in the ♂ twice as broad as in the ♀, strikingly securiform, much broader than long and about as broad as the combined length of the third and fourth antennal segments. Antennæ often very strongly accrescent and compressed towards apex, with strongly to very transverse distal segments. Pronotum weakly convex to flattened, with broad submarginal depression, transverse; the posterior portion of sides usually rounded and narrowed towards base, rarely quasi subparallel or sinuate in front of posterior angles. Marginal carina of sides strong, often very thick and slightly reflected. Anterior margin deeply emarginate, usually immarginate on middle, with produced anterior angles. Base strongly bi-sinuate, com-

pletely carinate, exceptionally the marginal carina becoming obsolescent on top of lateral emarginations; posterior angles more or less strongly produced backwards and sharp. Integument densely, often rugosely punctured. Prosternal apophysis horizontally produced; episternum of prosternum with distinct to evanescent, separated punctures on inner portion. Elytra moderately broader than pronotum, but sometimes and particularly in the ♂, as broad as pronotum or even slightly narrower, elongate to broadly rounded, weakly convex to entirely flattened, with rectangular to obtuse, sometimes obtusely projecting humeral angles. Primary rows usually

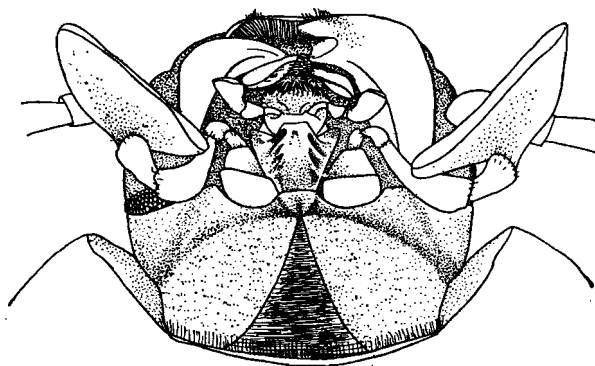


FIG. 90. — Under surface of head of *Anchophthalmus plicipennis* PÉRINGUEY (drawn after a ♂ specimen from Elisabethville).

distinct, very variable in sculpture, composed of round to transverse, fine to subfoveate punctures, or striolæ; secondary intervals with fine, scattered, sometimes inconspicuous to very dense, strong punctation, flat to subcostate, the alternating or lateral intervals often sharply costate. Pseudopleura complete, narrowed apically, there with sharply carinate and distinctly separated epipleural crest; dilated basally, occupying the ventrally reflected portion of elytra at least on basal half, but sometimes leaving exposed a narrow portion of the ninth secondary interval posteriorly. Pseudopleural meso and metacoxal cavities only a little longer than the pre-metacoxal of elytra along the middle section, sometimes entirely exposed and with submarginal depression on basal half, running around dorsal portion of apex of elytra, apically straight or shallowly sinuate. Metasternum very short, about one half the length of basal sternite of abdomen and between meso and metacoxal cavities only a little longer than the pre-metacoxal sclerite is laterally or at the best about one-third the length of metacoxal cavity. Abdomen with fine punctation, the anal sternite sometimes with very fine marginal sulcus on basal third of sides. Legs moderately slender. Tibiæ inconspicuously dilated, with non-prominent outer apical angle, the

upper surface of intermediate and posterior tibiae evenly convex, that of anterior tibiae more or less distinctly edged; in the ♂ the inner contours sometimes with moderately developed distinctive characters, the under surface simple, sometimes the underside of posterior tibiae with a stripe of subtomentose yellowish hairs. Tarsi never dilated or soleate in the ♀; in the ♂ variable, the anterior tarsi from simple and non-dimorphic to rather strongly dilated and soleate below. Femora slender, usually non-dimorphic, in some exceptional cases with a fine fringe of hairs in the ♂.

Ædeagus. — Simple and rather homogeneous. The apicale much shorter than the basale, with divided, converging to subparallel or spiniform parameres. Ventral groove variable, the penis and lacinia therefore sometimes almost concealed, sometimes entirely and broadly exposed. Basale from one and a half times to about four times as long as apicale.

Dimensions. — 9 to 20 mm long.

Relationship. — LACORDAIRE, in his mania of synthesis, considered *Anchophthalmus* a simple synonym of *Opatrinus*. In actual fact, however, *Anchophthalmus* is one of the best characterized genera of *Platynotini*, clearly cut from all the other genera by the complete pseudopleura in association with the winglessness of body, as well as by the unique dimorphism in the structure and size of the apical segment of maxillary palpi. Phylogenetically *Anchophthalmus* may be regarded a direct descendent from the alate and primitive *Opatrini*. As one of the most important paleogenetic particulars the *Anchophthalmus* have maintained the complete pseudopleura of elytra, but lost the wings. They demonstrate the first step from the detritivorous, winged opatrinoid *Platynotina* to the many xerophilous, geophilous, specialized, phylogenetic lines of the selinoid and trigonoid *Platynotina*. Their deviation from *Opatrinus* must be a rather ancient one, for there are no more transitional forms between both genera. The only apterous *Opatrinus* (viz. *O. exalatus*) does not show more closely related to the *Anchophthalmus* than the other *Opatrinus* are, exhibiting clearly the features of *Opatrinus* (e. g. large metasternum, absence of submarginal depression of pronotum etc.).

Type species. — *Anchophthalmus silphoides* GERSTAECKER, 1854.

Distribution (maps 4, 6). — East African, from the southern parts of the Anglo Egyptian Sudan to Southern Rhodesia, Transvaal and Southern Portuguese East Africa, in the West not expanding beyond Eastern Bechuanaland and the eastern parts of the Belgian Congo.

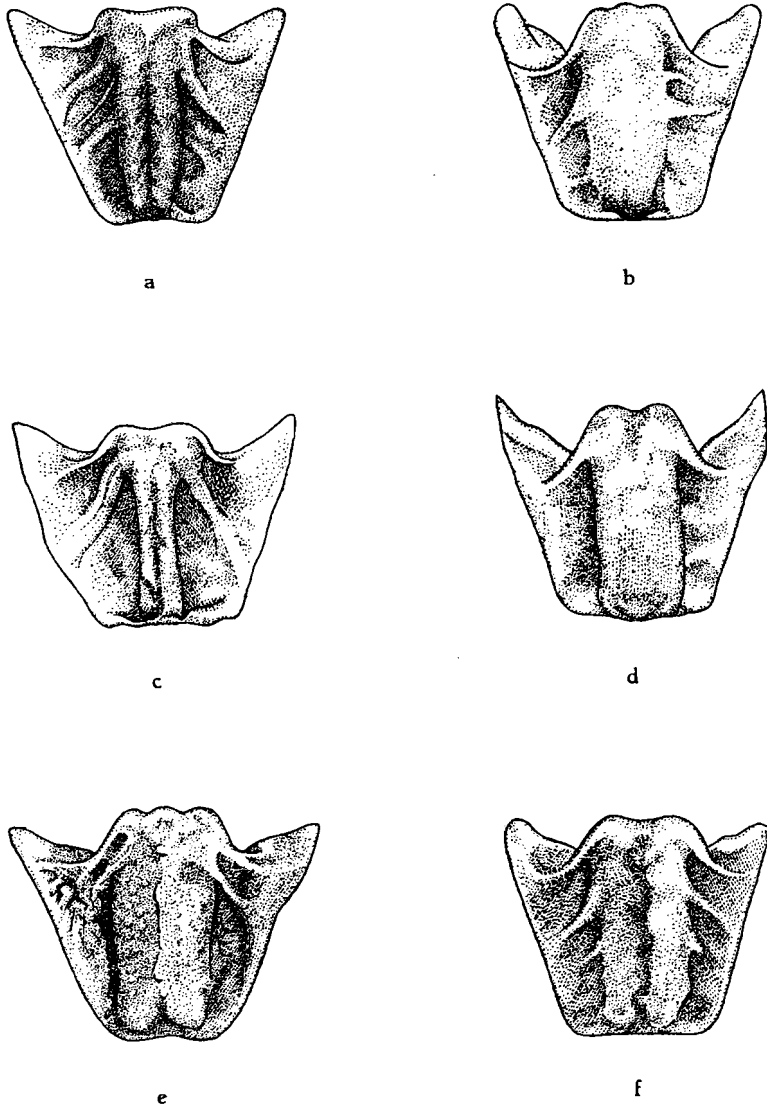


FIG. 91. — The mentum in a few species of *Anchophthalmus*.
a : *A. altiicola* n. sp.; b : *A. oncotipes* n. sp.; c : *A. plicipennis* PÉRINGUEY;
d : *A. algoensis* PÉRINGUEY; e : *A. striolipennis* n. sp.; f : *A. simplex* n. sp.

KEY.

1. Lateral carina of pronotum very broad, about as broad as the third antennal segment or slightly broader. Elytra with even cuticle, never with transverse wrinkles running across primary rows
silphoides group. 2
- Lateral carina of pronotum fine to moderately broad, considerably narrower than the third antennal segment, exceptionally as broad as the latter, when the cuticle of elytra is uneven, forming slightly convex, transverse wrinkles running across primary rows and uniting more or less the convex secondary intervals 4
2. At least the seventh secondary interval on elytra strongly convex to subcostate apically; the seventh, eighth and ninth primary rows with strong punctures, not narrower than the subcostate alternating intervals ... 3
- All secondary intervals on elytra almost flat, also apically; there the seventh interval not more strongly raised than the adjacent intervals; the seventh, eighth and ninth primary rows with very fine punctures, much narrower than the flat to very weakly convex secondary intervals.

[*Anchophthalmus dentipes* GERSTAECKER.]

(Pl. IV, fig. 2; Figs. 92, 93.)

*1854, *Anchophthalmus dentipes* GERSTAECKER, p. 533. — 1862, GERSTAECKER, p. 288, pl. 17, fig. 5 (Θ). — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 418, n° 5616.

1870, *Hopatrinus dentipes* GEMMINGER & DE HAROLD, p. 1915.

*1905, *Anchophthalmus indigus* PÉRINGUEY, p. 237. — (=syn. nov.).

Original description. — « *Anchophthalmus niger*, opacus, ore, antennis tarsisque piceis; elytris punctato-sulcatis, interstitiis convexis, punctulatis; tibiis mediis intus subdentatis. Long. lin. 8. — Dem *Anchophthalmus silphoides* sehr ähnlich, doch grösser und durch die Bildung der mittleren Schienen ausgezeichnet. Der Kopf ist dicht und zum Theil runzlig punktirt, wie die ganze Oberseite matt schwarz. Die Mundtheile und Fühler sind pechbraun, mit dünner greiser Pubescenz bekleidet. Das Halsschild ist auf der Scheibe etwas gewölbter als bei *Anch. silphoides* und der Eindruck zu beiden Seiten mehr in die Breite gezogen, der Seitenrand stärker aufgebogen und gewulstet, die Hinterecken kürzer and stumpfer; die Punktierung ist fast dieselbe, nur ist von einer glatten Mittellinie keine Spur vorhanden. Das Schildchen ist dicht punktirt. Die Flügeldecken sind mehr als um die Hälfte länger als breit, an den Seiten hinter den Schultern ein wenig eingebuchtet, dann leicht

gerundet und nach hinten allmählig verengt; flach gewölbt, punktirt gefurcht, die Punkte deutlich von einander getrennt und etwas in die Quere gezogen, die Zwischenräume gewölbt und mit zerstreuten Pünktchen besetzt. Die Unterseite ist matt glänzend, leicht gerunzelt. Die Vorderschenkel sind an der Unterseite mit dichten goldgelben Haaren besetzt, die Mittelschienen gegen die Mitte des Innenrandes zahnförmig erweitert, die Hinterschienen innen lang behaart. »

R e m a r k s. — Antennæ short, the preapical segments not quite one and a half times as broad as the third segment; the apical segment transverse, with truncate apical margin. In the ♂ the apical segment of maxillary palpi almost as broad as the third and fourth segments of antennæ are long together. Pronotum rounded and narrowed towards base, with broad submarginal depression of sides, but this depression not reaching the base, as a slight, oblique convexity runs from posterior angles towards disc; lateral carina very broad, shiny, but disappearing on posterior angles; the latter not or only minutely demarcated. Underside of prothorax practically impunctate, the lateral submarginal area of episternum transversely wrinkled; intercoxal apophysis with pointed, weakly reflected apex of horizontally produced portion. Elytra almost subparallel in the ♂, slightly rounded in the ♀, a little broader than pronotum. Base broader than pronotal base, with bluntly rectangular humeral angles which project a little beyond sides of elytra in the ♀. Primary punctures very fine, the ninth primary row situated on the extremely narrow, submarginal depression. Pseudopleural crest visible from above; pseudopleura smooth. Abdomen with very fine, scattered punctures. In the ♂ the anterior and intermediate tarsi distinctly dilated, with the underside of the four proximal segments provided with densely poriferous, divided soleæ, the anterior tibiæ (fig. 93) slightly curved, their underside excavate for entire length of tibia and densely covered with erect, fine yellowish hairs; intermediate tibiæ (fig. 93) with the outer lateral surface produced into an obtusely dentiform, strongly arcuate, carinate postmedian dilation, the inner contours with a slight, obtuse preapical dilation; posterior tibiæ straight, the outer lateral surface with fine, rather long, scattered yellowish hairs, the underside with a distal stripe of subtomentose, yellowish hairs along inner edge; underside of anterior femora with a strong and dense brush of testaceous hairs, that of posterior femora with much less conspicuous, short, yellowish hairs.

Very closely allied to *A. silphoides*, with which *A. dentipes* agrees in the unique structure of legs in the ♂. None of the other *Anchophthalmus* exhibits a similar formation of the intermediate tibiæ in the ♂.

Ædeagus (fig. 92). — Large, with entirely exposed penis and lacinia. Apicale much shorter than basale, broad, in dorsal aspect appearing as if truncate apically, as the pointed parameres are angularly bent ventrad apically, forming a transversely projecting hook, if viewed from the sides. Basale about three times as long as apicale. Lacinia baculiform, with sharply pointed apices which are directed outwards. Penis with dilated apical orifice.

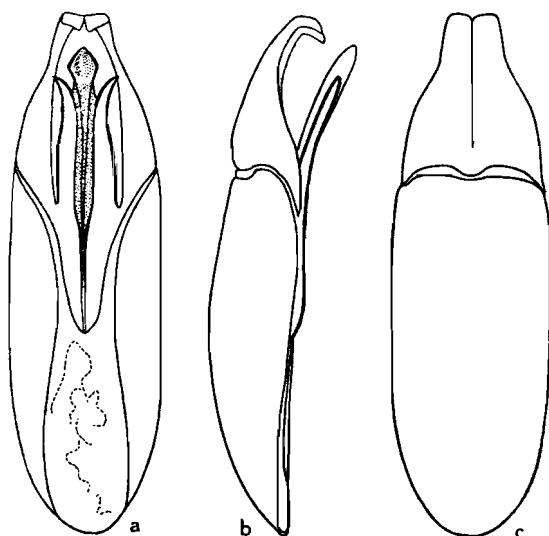


FIG. 92. — *Ædeagus* of *Anchophthalmus dentipes* GERSTAECKER.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

Dimensions. — Length $14 \frac{3}{4}$ to $19 \frac{1}{2}$ mm, width $6 \frac{3}{4}$ to 9 mm.

Synonymy. — There are no other differences between the holotype of *indigus* and the practically topotypical specimens of *dentipes* from Chemba than the slightly more depressed elytra and the apically flat seventh interval of elytra. In the Chemba specimens the seventh interval is equally and weakly convex from base to apex; among specimens from Umtali, however, this character shows intermediate. The structure of legs in the ♂, as well as the aedeagus are identical in both forms.

Type locality. — « Sena » (Manica e Sofala Province of Portuguese East Africa). Types probably in Museum Berlin.

Distribution. — Portuguese East Africa and Southern Rhodesia. — Portuguese East Africa, Manica e Sofala Province: Chemba, 1931, A. RAVET (1♂, 4♀♀, BCM.); Bopira, Buzi, Mossurize District, III.1942, B. LEBOD (1♂, T.M.). — Southern Rhodesia: Christmas Pass. Manica, J. C. Selous (1♂♀, types of *Anch. indigus*, S.A.M.); 25 miles south of Umtali, XI.1950, A. MITTON (1♀, T.M.); Umtali, A. BODONG (2♂♂, S.A.M.), XI.1932, P. A. SHEPPARD (1♀, T.M.); Kaia, XII.1908 (1♀, S.A.M.).

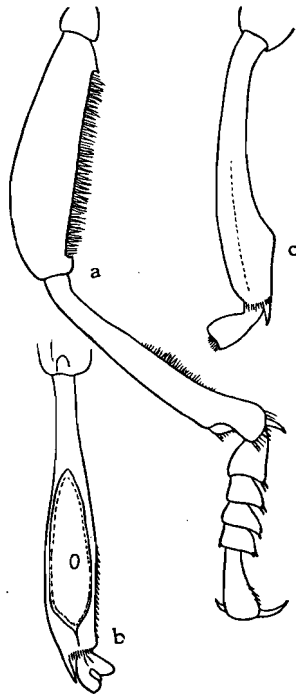


FIG. 93. — *Anchophthalmus dentipes* GERSTAECKER.

a : anterior leg of ♂; b : underside of anterior tibia of ♂;
c : intermediate tibia of ♂.

3. Pseudopleura smooth. On elytra also the distal portion of inner secondary intervals more or less distinctly convex; the three inner intervals of practically equal width; primary rows with distinct punctures, becoming strong towards sides; humeral angles slightly projecting outwards beyond sides. In the ♂ the anterior and intermediate tarsi dilated, with soleæ below; the femora and tibiæ with the same distinctive characters as in *A. dentipes*.

[*Anchophthalmus silphoides* GERSTAECKER.]

*1854, *Anchophthalmus silphoides* GERSTAECKER, p. 533. — 1862, GERSTAECKER, p. 288. — 1910 b, GEBIEN, p. 279. — 1938-1942, GEBIEN, p. 418, n° 5614.
1870, *Hopatrinus silphoides* GEMMINGER & DE HAROLD, p. 1915.

Original description. — « *Anchophthalmus niger*, opacus, ore antennarum basi tarsisque piceis; capite thoraceque rugoso-punctatis, elytris fortiter punctato-striatis, interstitiis convexis, punctulatis. Long. lin. 6. — Die Oberfläche des Körpers ist matt schwarz, flach gedrückt. Der Kopf ist dicht runzlig punktirt. Die Mundtheile so wie die zwei ersten Fühlerglieder sind pechbraun, die Fühler gegen die Spitze dünn greis behaart. Der Thorax ist breiter als lang, vorn und hinten tief ausgeschnitten, die Hinterecken etwas nach aussen gebogen, an den Seiten regelmässig gerundet und nach vorne stärker als nach hinten verengt, abgeflacht, jederseits innerhalb des Seitenrandes mit einem Längseindruck, dicht runzlig punktirt, mit schmaler, glatter, nach vorn abgekürzter Mittellinie. Schildchen dicht punktirt. Die Flügeldecken um die Hälfte länger als zusammen breit, hinter der Mitte allmählich verengt, sehr flach gewölbt, mit Reihen tiefer und grosser, quergestellter Punkte, welche zu beiden Seiten in Fältchen ausgezogen sind; die Zwischenräume gewölbt, mit zerstreuten Pünktchen besetzt. Die Unterseite ist matt glänzend, auf der Brust stärker, auf dem Abdomen schwächer punktirt. Die Beine sind schwarz, mit pechbraunen Tarsen. »

Remarks. — Very closely related to *A. dentipes*, but constantly distinguished by the distinctly shiny upper surface, a sometimes developed, extremely fine, smooth median line on basal portion of pronotal disc, and by the more or less strongly convex, apically subcostate secondary intervals on elytra. Legs in the ♂ and aedeagus as in *dentipes*. According to GERSTAECKER *silphoides* ought to be distinguished easily from *dentipes* by the simple legs. However, this observation is based on an error, as GERSTAECKER did not recognize the strong dimorphism in the structure of legs and maxillary palpi, describing in actual fact a ♂ in the case of *dentipes*, but a ♀ in that of *silphoides*.

Dimensions. — Length 16 to 17 ½ mm, width 7 ¾ to 8 ¾ mm.

Type locality. — « Inhambane » (Sul do Save Province of Portuguese East Africa). Type probably in Museum Berlin.

Distribution. — Southern Portuguese East Africa, Transvaal, South-eastern Bechuanaland. — Northern Transvaal: Middle Limpopo, I.1892, C. W. WEST (1 ♂ ♀, S.A.M.); Great Saltpan, Zoutpansberg District, I.1931, G. VAN SON (1 ♀, T.M.); Makgabeng, II.1903, A. J. T. JANSE (2 ♀ ♀, T.M.). — South-eastern Bechuanaland: Macloutsie B, XI.1901, C. FRY (1 ♀, T.M.).

- Pseudopleura distinctly, rather densely punctured. On elytra only the lateral secondary intervals convex to subcostate; the second interval distinctly to considerably narrower than the third interval; humeral angle obtuse, in line with the sides of elytra. In the ♂ the anterior and intermediate tarsi not dilated, without soleæ below, the femora and tibiæ non-dimorphic.

[**Anchophthalmus nyassicus** n. sp.]

Very similar to *A. silphoides* but related to *A. plicipennis*. Differing from *silphoides* as follows: — Upper surface of body dull, as in *dentipes*. Head identical, only the antennæ slightly more slender. Pronotum almost of the same shape, slightly more strongly rounded laterally, with thick lateral carina, very dense, rugosely confluent sculpture and with broad, strong submarginal depression, but without any trace of a median line. Posterior angles more strongly produced backwards. Episternum of prosternum with distinct punctures on inner portion of anterior half; intercoxal apophysis strongly produced horizontally. Elytra more strongly flattened, with the sides weakly narrowed towards base, without prominent humeral angle, with flattened but densely punctured secondary intervals and finely punctured primary rows. On apical declivity only the lateral intervals seven to nine subcostate; the discal portion of the third and fifth intervals flat or very slightly more convex than the adjacent even intervals. Pseudopleural carina, in dorsal aspect, distinctly visible only anteriorly and apically (as in *silphoides*, but not agreeing with *dentipes*, in which the entire pseudopleural crest is exposed). Pseudopleura densely punctured. Underside of hind body as in *dentipes*. Legs simple in both sexes. In the ♂ the anterior and intermediate tarsi small, scarcely broader than in the ♀, with a narrow area of yellowish bristles along sides of underside; femora and tibiæ simple, the apical portion of inner contours of anterior and intermediate tibiæ inconspicuously curved inwards.

R e m a r k s. — *A. nyassicus*, although much resembling *silphoides* and *dentipes*, agrees with *plicipennis* in the structure of ædeagus, the punctured pseudopleura of elytra and the non-dimorphic legs in the ♂. It is easily distinguished from *plicipennis* and the other allied species by the thick lateral carina of pronotum and the absence of transverse wrinkles on elytra.

Æ d e a g u s. — Slender. The apicale elongately acuminate, with very fine median division only on distal half of dorsal surface; the apices of parameres appearing as if grown together, compressed and obtusely bent ventrad. Ventral groove broad, with only the penis being exposed. Basale short, one and a half times as long as apicale.

Dimensions. — Length $16 \frac{1}{4}$ to $16 \frac{3}{4}$ mm, width 8 to $8 \frac{1}{4}$ mm.

Distribution. — Northern Portuguese East Africa. — Southern Nyassa Province: Mutuali, IV.1954, A. J. BARBOSA (1♂ ♀, types Centro Investigaçao Cient. Algodoeira, Lourenço Marques).

4. Primary rows on elytra composed of subfoveate, very coarse, transverse punctures; all secondary intervals more or less strongly subcostate, but the alternating even intervals sometimes reduced to fine crests due to the expansion of the foveate punctures of adjacent primary rows

algoensis group. 5

- Primary rows on elytra formed by round to slightly transverse or elongate punctures or striae; punctures or striae fine to coarse but never subfoveate; sometimes the alternating odd inner intervals and often the lateral ones more or less strongly convex, the latter rarely subcostate

6

5. In the ♂ the apical segment of maxillary palpi with a broad impression on posterior half of outer surface and there covered with a fine, subtomentose yellowish pubescence; the inner apical angle of intermediate tibiae curved inwards and produced into an obtuse spine; underside of posterior femora with a fringe of yellowish bristles along inner edge.

[**Anchophthalmus algoensis** PÉRINGUEY.]

(Pl. IV, fig. 3; Figs. 91 d, 94, 95.)

*1904, *Anchophthalmus algoensis* PÉRINGUEY, p. 237. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5610.

Original description. — « ♀ : Black, somewhat shining; head closely and somewhat roughly punctate; prothorax rounded laterally, but straighter in the posterior than in the anterior part, convex in the middle with the sides broadly depressed and the outer margin reflexed, narrowly and somewhat finely scrobiculate-punctate; scutellum deeply punctate; elytra slightly sinuate laterally behind the humeral angle, somewhat ampliate, short, convex at about the median part, strongly dehiscent thence, highly costate with the third, fifth and seventh costæ more raised than the others, the first and second are broader and subtectiform, the others very sharp, and the intervals are filled with deep, transverse foveæ impinging on the whole side of the costæ but not on the sharp, carinate part; underside striolate. — Differs from the other South African species by its shorter appearance due to the greater convexity of the elytra. Length 16 to 17 mm, width 9 to 10 mm. »

R e m a r k s. — Genæ distinctly demarcated from eyes. Antennæ strongly dilated towards apex, but the proximal segments slender. In the ♂ the apical segment of maxillary palpi about as broad as the third and fourth antennal segments are long taken together. Mentum, fig. 91*d*. Pronotum with posteriorly rounded and narrowed sides, strong and broad submarginal depression and rather narrow lateral carina; the latter distinctly narrower than the third

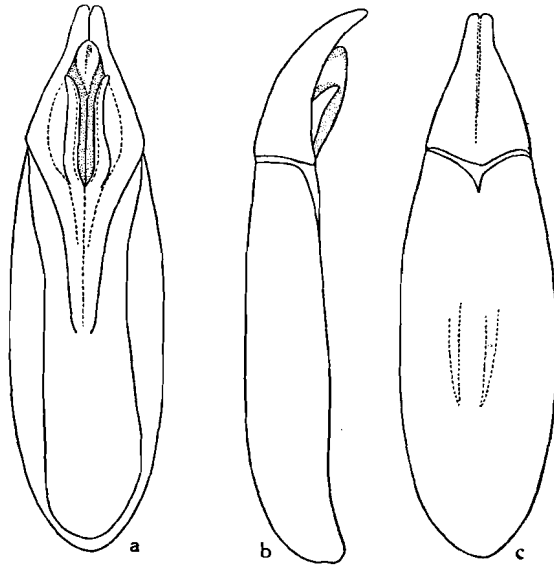


FIG. 94. — Aedeagus of *Anchophthalmus algoensis* PÉRINGUEY.

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

segment of antennæ. Prosternum transversely rugose; episternum almost smooth; intercoxal apophysis with dentiform reflected tubercle on apex of horizontal portion. Elytra with bluntly rectangular humeral angles. In dorsal aspect the pseudopleural crest not quite visible behind middle. In the ♂ the anterior tarsi moderately but distinctly dilated, their underside with more or less strongly divided, rarely entire soleæ; anterior tibiæ slightly more strongly dilated towards apex than in the ♀, but simple and almost straight; intermediate tibiæ (fig. 95) with straight outer contours, the apical angle of inner contours strongly curved inwards and produced into a short, obtuse spine; posterior tibiæ inconspicuously bent inwards distally; underside of posterior femora with a fringe of fine, yellowish bristles along inner edge.

Ædeagus (fig. 94). — Large, similar to *A. dentipes*, with exposed penis and lacinia, but the lacinia with straight apices and grown together with inflexed alæ of apicale basally. The apices of parameres only slightly and continuously bent ventrad, without forming a hook.

Dimensions. — Length 13 to 18 mm, width $6\frac{1}{2}$ to 10 mm.

Type locality. — « Mozambique (Algoa Bay). J. DE COSTER ». Type in South African Museum. The species was named erroneously « *algoensis* », as the material collected by J. DE COSTER comes from Delagoa Bay in Portuguese East Africa, where *algoensis* frequently has been collected subsequently, but not spreading more southwards.

Distribution. — Southern Portuguese East Africa and Northern Transvaal. — Sul do Save Province of Portuguese East Africa: Lourenço Marques, I.1953, M. C. FERREIRA (1♀, T.M.); Namaacha, I.1950, J. VALENTE (3♂♂, 1♀, M.A.C.); Maputo, III.1949, S. CARREIRA (1♀, M.A.C.); Umbeluzi, V.1949, M. C. FERREIRA (1♂♀, M.A.C.). — Northern Transvaal: Lekkerwater, XII.1903, A. J. T. JANSE (1♂, T.M.); Potgietersrus, XII.1924, G. VAN DAM (1♀, T.M.); Mokeetse, I-III.1922, STREETER (1♂, T.M.); Three Sisters, III.1911, A. J. T. JANSE (1♂, T.M.); Nyl to Seleka, II.1903, A. J. T. JANSE (1♀, T.M.); Waterval, XI.1899, A. J. T. JANSE (1♀, T.M.); Moorddrift, XII.1914, C. J. SWIERSTRA (1♂, T.M.); Leydsdorp Road, II.1927, G. VAN SON (1♀, T.M.); Louis Trichardt, I-II.1928, R. F. LAWRENCE (1♀, S.A.M.); Zoutpansberg, XI.1907 (1♂, S.A.M.).

- In the ♂ the apical segment of maxillary palpi as strongly dilated as in *algoensis*, but with simple, evenly plane and uniformly sculptured outer surface; the intermediate tibiæ inermous, non-dimorphic; underside of posterior femora bare.

[*Anchophthalmus fahraei* PÉRINGUEY.]

*1870, *Oxythorax clathratus* FÄHRAEUS, p. 288.

*1904, *Anchophthalmus fahraei* PÉRINGUEY, p. 238. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5609.

Original description. — *Clathratus* FÄHRAEUS : « Oblongus, depressus, ater, supra opacus. Caput rotundatum, depressum, crebre ruguloso-punctatum, epistome emarginato, linea transversa, obsoleta, a fronte separato; labrum transversum piceum. Antennæ latitudine capitis duplo longiores, articulo 3:o sequente dimidio longiore. Thorax basi longitudine media fere duplo latior, ante medium rotundato-dilatatus, postice bisinuatus, angulis supra humeros fortiter acuminato-productis; antice profunde emarginatus, angulis acuminatis; supra valde depressus, densissime ruguloso-punctatus, lateribus deplanatis, margine nonnihil elevato, carinato. Scutellum minutum, transversum. Elytra antice basi thoracis parum

latiora, humeris prominulis, pone humeros ad medium linearia, apice conjunctim rotundata, latitudine vix duplo longiora, supra antice depressa, postice modice declivia, sulcis novem cancellato-punctatis exarata, punctis plerisque transversis, interstitiis angustis, subundulatis, coriaceis et obsolete punctulatis, 2:0, 4:0 et 6:0 paullulum distinctioribus. Corpus subtus parum convexum, antice

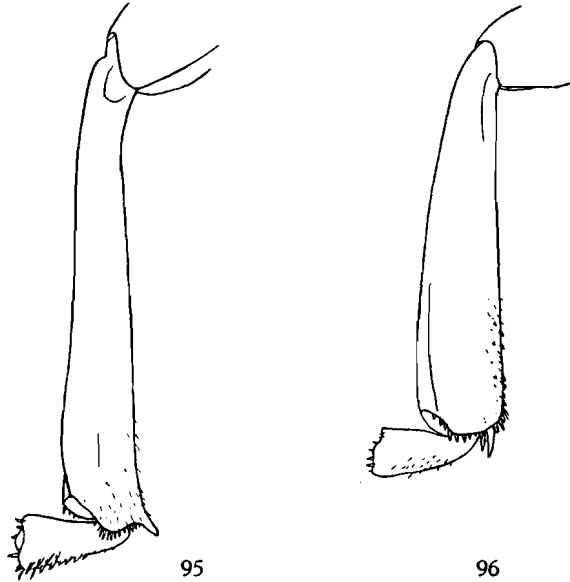


FIG. 95. — The intermediate tibia of a ♂ of *Anchophthalmus algoensis* PÉRINGUEY.

FIG. 96. — The intermediate tibia of a ♂ of *Anchophthalmus fahraei* PÉRINGUEY.

distinctius punctatum, abdominis segmentis 3 anterioribus strigosis, reliquis tenuiter punctulatis. Pedes subtenuis, subtiliter punctati, tarsiis anticis ♂ distinctius, ♀ parum dilatatis. Long. 12 - 12 $\frac{1}{2}$, lat. 5 $\frac{2}{3}$ - 6 millim. »

R e m a r k s. — This species is very closely related to *A. algoensis* and forms with the latter an easily recognizable group, exhibiting a luxurious development of elytral sculpture by the formation of foveate primary rows and costate secondary intervals. The differences between *algoensis* and *fahraei* are confined to the smaller size of body of the latter and the reduced secondary sexual characters in the ♂. In this sex the anterior tarsi are very faintly dilated,

bearing small, divided soleæ on underside, and all the tibiæ are non-dimorphic (fig. 96). The ædeagus resembles *algoensis*, but is smaller in size, the lacinia are less broadly exposed and the apicale is shorter.

Dimensions. — Length 12 to 13 $\frac{3}{4}$ mm, width 5 $\frac{3}{4}$ to 7 mm.

Type locality. — « Caffraria ». Types in Naturhistoriska Riksmuseum, Stockholm (examined!).

Distribution. — Northern Transvaal and Eastern Bechuanaland. — Northern Transvaal: Zoutpan, Zoutpansberg District, IV.1950, G. VAN SON (1♂ ♀, T.M.); Junction Crocodile and Marico Rivers, II.1918, R. TUCKER (1♂, S.A.M.). — Eastern Bechuanaland: Metsimaklaba, III.1930, VERNAY-LANG Kalahari Exped. (1♀, T.M.); without specified locality, 1895 (1♂, S.A.M.).

6. Apicale of ædeagus with elongate, subparallel and spiniform parameres. Primary rows on elytra always composed of fine, sharply impressed striae. In the ♂ the inner apical angle of intermediate tibiæ often produced and then sharply spiniform. Pseudopleura always smooth ...

striolipennis group. 7

- Apicale of ædeagus with the sides of parameres converging in a straight line from base to apex. Primary rows on elytra with round, transverse or elongate punctures, rarely with striae. Pseudopleura smooth or punctured. In the ♂ the inner apical angle of intermediate tibiæ not or only obtusely dilated, never spiniform 11

7. Body slender, the elytra elongate, dull, with very fine to obsolescent punctures on secondary intervals. Pseudopleural crest narrowed in a straight line towards apex. In the ♂ the inner angle of intermediate tibiæ produced and sharply spiniform

subgroup of *curvipes*. 8

- Body short, the elytra broad, not much longer than broad, distinctly shiny, with very dense, rather strong punctures on secondary intervals. Pseudopleural crest inconspicuously sinuate preapically. In the ♂ all tibiæ simple and inermous (subgroup of *striolipennis*).

[*Anchophthalmus striolipennis* n. sp.]

(Figs. 91 c, 97, 98.)

Head rugosely punctured, in part longitudinally rugose on vertex. Mentum fig. 91 c. Pronotum depressed, strongly transverse, about twice as broad as long, very densely and uniformly rugose, broadest at about middle, with rather strongly, evenly rounded sides which are well rounded and narrowed also towards base. Anterior margin

deeply emarginate, with strongly produced, sharp anterior angles. Base deeply bi-sinuate, with produced, lobiform, sharp posterior angles which project strongly beyond level of middle section of base; marginal carina fine, obsolescent on top of lateral emarginations. Lateral carina rather narrow, only half the width of third antennal segment. Submarginal depression of sides strong and broad. Prosternum with fine punctures; episternum almost smooth, the

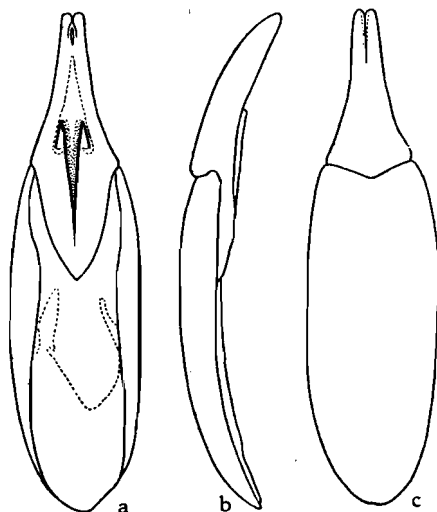


FIG. 97. — Edeagus of *Anchophthalmus striolipennis* n. sp.

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

flattened submarginal depression of sides broad and transversely rugose; intercoxal process obtusely tuberculate on apex of horizontally produced portion. Elytra broad, not or only slightly broader than pronotum, with weakly rounded sides and shallow post-humeral sinuosity; humeral angles rounded and slightly obtuse. Lateral portions of base obliquely sloping. Lateral convexity rather strong, with the ninth secondary interval almost perpendicular and lateral in position. Primary rows composed of fine, sharply impressed, scattered striae, but the lateral and ninth rows with dense, rather coarse punctures. Secondary intervals uneven, with transverse wrinkles running across primary rows, the alternating odd intervals broad, faintly convex; densely and strongly punctured, the lateral intervals much broader than primary rows. Pseudo-pleura smooth to obsoletely punctured. Abdomen shiny, with very fine, scattered punctures. In the ♂ the legs practically non-

dimorphic; the anterior tarsi not dilated, with small lateral patches of yellowish bristles below, but not soleate; the inner contours of anterior tibiæ very shallowly curved inwards apically, those of intermediate and posterior tibiæ almost straight, inconspicuously curved inwards apically; all tibiæ inermous.

Ædeagus (figs. 97, 98). — Well characterized by the sub-parallel contours of the strongly narrowed distal half of parameres, in this respect agreeing only with the following species of the

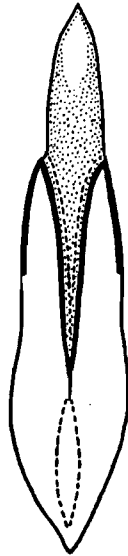


FIG. 98. — Outer surface of the extracted penis plus lacinia of ædeagus of *Anchophthalmus striolipennis* n. sp.

subgroup of *curvipes*. Penis and lacinia narrowly exposed ventrally. Apices of parameres broadly rounded, practically straight and not bent ventrad. Basale slightly more than twice as long as apicale.

Dimensions. — Length $11 \frac{1}{4}$ to 15 mm, width $5 \frac{3}{4}$ to $8 \frac{1}{2}$ mm.

Distribution (map 4). — South-eastern Belgian Congo. — South-eastern Elisabethville Province: Elisabethville, banks of the Lubumbashi River, V.1911, STAPPERS (8 spec., types BCM.), XII. 1925, VAN SACEGHEM (8 spec., BCM.); Elisabethville, J. BEQUAERT, TERNEST, G. F. OVERLAET, M. LIPS, M^{me} MERKVOORDE (22 spec., BCM.); savanna east of Elisabethville, V.1911, STAPPERS (9 spec., BCM.); Lomami, Mwene Ditu, DOUTRELEPONT (1 spec., BCM.).

8. In the ♂ the anterior tibiæ straight 9
 — In the ♂ the anterior tibiæ rather strongly curved inwards on distal half.

[*Anchophthalmus curvipes* n. sp.]

(Pl. IV, fig. 4; Figs. 99, 100.)

Allied to *A. striolipennis*, but the body very slender and the elytra elongate. Upper surface very dull. Head above densely rugose, usually with two minute, specular spots on middle of vertex. Outer contours of genæ in line with those of eyes and tempora. In the ♂ the apical segment of maxillary palpi almost as broad as the third

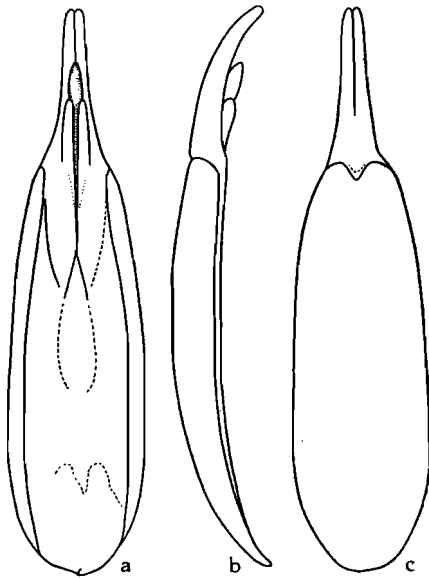


FIG. 99. — Aedeagus of *Anchophthalmus curvipes* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

and fourth antennal segments are long taken together. Antennæ rather short, very strongly accrescent towards apex; the apical segments strongly transverse, about twice as broad as the third segment. Pronotum strongly rounded laterally, densely and uniformly rugose, with obsolete smoothed, narrow median line, with broad, strong and complete submarginal depression, two irregular impressions on each side of discal convexity and with narrow lateral carina. Prosternum with scattered, fine sculpture; episternum practically smooth; intercoxal apophysis moderately produced, with pointed apex. Elytra subparallel anteriorly, with bluntly rectangular, not projecting humeral angles. Pseudopleural crest just visible from above. Primary rows formed by sharply impressed, lineate striae, closely following one another, becoming deeper on lateral portions. Secondary intervals densely punctured, uniformly

flat to weakly convex, not subcostate either apically or laterally, with scattered, irregular transverse wrinkles running across primary rows between striae; the seventh interval apically scarcely more strongly convex than the adjacent intervals. Pseudopleura smooth. Abdomen with scattered fine punctures. In the ♂ (fig. 100) the anterior tarsi inconspicuously dilated, bearing tomentose soleae on underside of second and third segments; inner contours of anterior tibiae more or less strongly curved on distal half, with rectangular to acute apical angle; both the intermediate and posterior tibiae straight, but the inner apical angle produced into a strong, inwardly bent spine; femora simple.

Ædeagus (fig. 99). — Of the peculiar shape of *A. striolipennis*, but the parameres more strongly spiniform. Apicale small, very slender, with extremely fine median division dorsally, strongly narrowed from base to about basal third, thence with very narrow, subparallel, almost spiniform and practically coalescent parameres; the latter straight, obtuse and scarcely bent ventrad apically. Ventral groove very narrow, with only the baculiform penis being clearly exposed. Basale large, about five times as long as apicale, narrowed in a straight line towards apicale on distal half.

Dimensions. — Length 14 to 15 ½ mm, width 6 ½ to 6 ¾ mm.

Distribution (map 4). — South-eastern Belgian Congo. — South-eastern Elisabethville Province: Elisabethville, 1935, RICHARD (1 ♂, holotype BCM.); Kapolowe, 1935, RICHARD (2 ♂ ♂, BCM.); Jadotville, XII.1936, M. PRINZ (1 ♂ ♀, allotype BCM.).

9. In the ♂ the inner apical angle of posterior tibiae strongly produced inwards **10**
 — In the ♂ the inner contours of posterior tibiae straight from base to apex, the apical angle simple, neither dilated nor spiniform.

[*Anchophthalmus katangicus* n. sp.]

(Pl. V, fig. 1; Fig. 101.)

Very closely related to *A. curvipes*, but of smaller size, the antennae more strongly dilated towards apex, with the three preapical segments very strongly transverse, somewhat subcordiform and distinctly more than twice as broad as the third segment, the elytra with obliquely sloping lateral portions of base and differing in that the lateral secondary intervals are slightly more convex and forming an obsolescent and widely meshed reticulation together with the transverse wrinkles between striae of primary rows. In the ♂ the apical segment of maxillary palpi more strongly securiform, the inconspicuously dilated anterior tarsi with a fine fringe of yellowish bristles only on extreme sides of underside, all tibiae (fig. 101) straight, but the anterior and intermediate tibiae with a short, sharp, inwardly bent apical spine on inner contours.

Dimensions. — Length $10 \frac{1}{2}$ to 13 mm, width 5 to $5 \frac{3}{4}$ mm.

Distribution (map 4). — South-eastern Belgian Congo. — Elisabethville Province: Lubudi, IX.1936, M. PRINZ (1♂♀, types, BCM.), IV.1945, R. CLOSE (1♂, BCM.).

10. In the ♂ the anterior and intermediate tarsi distinctly dilated, in part soleate below; anterior tibiae with simple inner apical angle; the inner apical spine of posterior tibiae small, shorter than the conspicuous spine of intermediate tibiae.

Anchophthalmus soleatus n. sp.

(Fig. 102.)

Very closely related to *A. curvipes*, but of larger size and the elytra with very uneven cuticle. The secondary intervals on elytra are somewhat swollen, becoming more strongly convex towards sides and forming together with the transverse branches a kind of irregular reticulation, the meshes of which are enclosing more or less the deeply impressed striae of primary rows. In the ♂ (fig. 102) the underside of the basal, second and third segments of anterior tarsi with entire poriferous soleae, as well as the underside of the second, third and the lateral portions of the basal and fourth segments of intermediate tarsi; underside of intermediate and posterior femora with fine, erect and scattered bristles.

Dimensions. — Length 15 to $16 \frac{3}{4}$ mm, width 7 to $8 \frac{1}{4}$ mm.

Distribution. — South-eastern Belgian Congo. — Upemba National Park: [Kimiala s/Sampwe, Kundelungu, IV.1949, Mission G. F. DE WITTE (2♂♂, 1♀, types I.P.N.)].

- In the ♂ the anterior and intermediate tarsi not dilated, without soleae below; all tibiae with sharp, inwardly bent inner apical spine; the spines of intermediate and posterior tibiae of equal size.

Anchophthalmus spinipes n. sp.

(Pl. V, fig. 2; Fig. 103.)

Very similar to *A. soleatus*, but of smaller size, the sides of elytra shallowly sinuate behind humeral angles and the femora bare in both sexes. Tibiae in the ♂ fig. 103. Aedeagus almost identical with *A. curvipes*, but the spiniform parameres somewhat pointed apically and the penis exposed together with apical third of lacinia.

Dimensions. — Length 12 to $14 \frac{3}{4}$ mm, width 5 to 7 mm.

Distribution. — South-eastern Belgian Congo. — Upemba National Park: R. Lusinga, III.1947 (2♂♂, 4♀♀, types I.P.N.); Lusinga, XII.1947, Mission G. F. DE WITTE (3♂♂, 1♀, I.P.N.); [Kishuwa, VII.1925, C. SEYDEL (1♂, BCM.)].

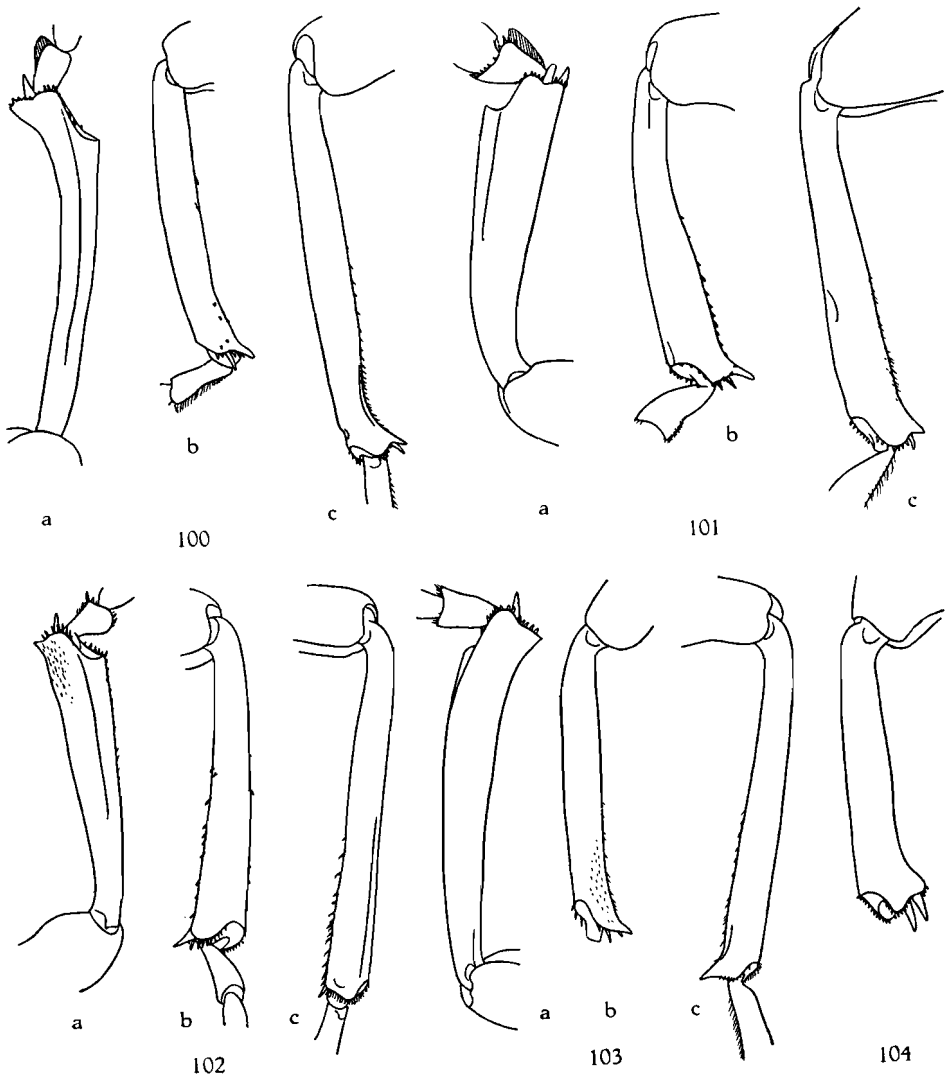


FIG. 100. — *Anchophthalmus curvipes* n. sp. — FIG. 101. — *Anchophthalmus katangicus* n. sp. — FIG. 102. — *Anchophthalmus soleatus* n. sp. — FIG. 103. — *Anchophthalmus spinipes* n. sp. — FIG. 104. — The intermediate tibia of a ♂ of *Anchophthalmus plicipennis* PÉRINGUEY from Pemba.

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

11. Secondary intervals on elytra with very fine and sparse punctures, often appearing as if smooth; cuticle even *clathratus* group. 12
 — Secondary intervals on elytra with dense, strong, conspicuous, sometimes rugose punctation; cuticle often with transverse wrinkles 17
12. In the ♂ the underside of posterior tibiæ simple, without stripe of yellowish hairs 13
 — In the ♂ the underside of posterior tibiæ with a broad stripe of sub-tomentose, dense yellowish hairs on distal two-thirds.

[**Anchophthalmus oncotipes** n. sp.]

(Pl. V, fig. 3; Figs. 91 b, 105.)

Very opaque, of elongate shape. Head above densely rugose, with longitudinally confluent rugosities on vertex. Mentum fig. 91 b. Antennæ strongly dilated towards apex. Apical segment of maxillary palpi in the ♂ distinctly broader than the combined length of the second and third antennal segments and almost as broad as the third and fourth antennal segments are long taken together. Pronotum broadest slightly in front of middle, strongly transverse, about twice as broad as long, uniformly, densely rugose, transversely rugose on submarginal depression. Anterior margin deeply emarginate, with produced anterior angles. Sides considerably rounded and narrowed towards base, sometimes shallowly sinuate in front of posterior angles; lateral carina rather narrow, much narrower than the third antennal segment, becoming flattened and indistinct on posterior angles; submarginal depression broad and strong. Base deeply bi-sinuate, finely carinate, with strongly projecting, rather sharp, lobiform posterior angles. Disc uniformly, weakly convex, without conspicuous impressions. Prosternum with fine, scattered punctures; episternum with shallow, scattered, coarse punctures on inner portion of anterior half, the flattened submarginal depression with dense transverse wrinkles; intercoxal apophysis produced and tuberculate apically. Elytra flattened, slightly broader than pronotum, with the sides weakly rounded and dilated towards middle. Humeral angles not projecting beyond sides of elytra, bluntly rectangular to slightly obtuse, sometimes with very weak post-humeral sinuosity of sides. Primary rows with rather fine, slightly transverse, well separated punctures, of which about 30 to 35 are found in the fourth row. Secondary intervals with very fine, sparse, almost inconspicuous punctures, weakly convex to almost flattened on inner intervals, but becoming gradually more strongly convex towards sides. Pseudopleural crest sharp, entirely exposed dorsally, but in the ♂ with flattened and narrow justa-marginal depression and therefore better visible than in the more strongly convex ♀.

Pseudopleura with shallow, rather dense punctures. Abdomen with fine punctures, concentrated on anal sternite. In the ♂ the anterior tarsi weakly dilated, with divided soleæ below; the anterior tibiæ very slightly curved, with a scarcely discernible, small patch of fine, aggregated, yellowish hairs on middle section of underside; the intermediate tibiæ simple, but rather robust and dilated towards apex; the posterior tibiæ robust, with the inner contours inconspicuously curved inwards on distal third, and the underside provided with a broad sulcus, filled with a dense, sessile and subtomentose yellowish pilosity.

The *Oncotini*-like structure of the posterior tibiæ in the ♂ is unique among all the other species of *Anchophthalmus*.

Ædeagus (fig. 105). — Simple, with exposed penis and lacinia. Parameres of apicale converging towards apex, with obtuse, faintly curved apices. Basale about three times as long as apicale.

Dimensions. — Length 11 to 13 $\frac{1}{4}$ mm, width 5 $\frac{1}{2}$ to 6 $\frac{3}{4}$ mm.

Distribution. — Southern Rhodesia. — Bulawayo, XII.1921 (8 spec., types T.M.), VI.1925, R. H. R. STEVENSON (2 spec., T.M.); Penkridge, XII.1927, R. H. R. STEVENSON (5 spec., T.M. and N.M.S.R.); Insiza, I.1919, G. FRENCH (4 spec., S.A.M.); Matabele, HARD AF SEGERSTAD (1 ♂, M.St.).

13. Pronotum not or only slightly narrower than elytra, with the sides posteriorly from almost subparallel to more or less strongly narrowed in a straight or rounded course towards posterior angles 14
 — Pronotum considerably narrower than elytra, of subcordiform shape, with the sides strongly and deeply sinuate in front of posterior angles.

[*Anchophthalmus mittoni* n. sp.]

Related to *A. oncotipes*, this new species is readily recognized from all the other *Anchophthalmus* by the strongly cordiform shape of pronotum and the broad elytra, recalling the habitus of *Ectateus*. Agreeing with *oncotipes* in the very opaque upper surface and sculpture, it is furthermore distinguished from this species by the shape of pronotum, the discal punctation on which is fine, round and well separated, and by the flattened elytra, exhibiting evenly flat secondary intervals which are inconspicuously more strongly convex on lateral portions. The punctures on the proximal sternites of abdomen and pseudopleura are very fine and scattered. The pseudopleural crest is entirely exposed dorsally. The ♂ is unknown.

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

Distribution. — Southern Rhodesia. — 25 miles south of Umtali, XI.1950, A. MITTON (1 ♀, holotype T.M.).

Dedication. — Named in honour of Mr. A. MITTON of the Coryndon Museum, Nairobi.

14. Primary rows of elytra with round to elongate, fine to moderately strong punctures; the third and fifth secondary intervals often broader than the second, fourth and sixth intervals, but the sixth interval always much broader than one of the adjacent primary rows; the six inner primary rows not arranged in approximated pairs; the third and fifth secondary intervals not or only faintly more strongly convex than the adjacent even intervals 15
- Primary rows of elytra with rather coarse, distinctly transverse punctures; the third and fifth secondary intervals much broader than the second, fourth and sixth intervals; the sixth interval reduced, constricted and much narrower than one of the adjacent primary rows to about as broad as the latter; the six inner primary rows are clearly arranged in approximated pairs; the third and fifth secondary intervals obtusely subcostate, much more strongly convex than the adjacent even intervals.

[*Anchophthalmus clathratus* GERSTAECKER.]

(Pl. V, fig. 3; Fig. 108.)

*1871, *Anchophthalmus clathratus* GERSTAECKER, p. 60. — 1873, GERSTAECKER, p. 176. — 1897, FAIRMAIRE, p. 120. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5608.

Original description. — « Obtuse ovatus, niger, parum nitidus, glaber, prothoracis margine deplanato sat lato, extus ruguloso, disco convexiusculo, subtiliter punctato, elytris seriatim foveato-punctatis, interstitiis 3., 5., 7. costatim elevatis. Long. 13, lat. 6 mill. — Bei gleicher Breite beträchtlich kürzer als *A. silphoides*, auch nicht matt kohlschwarz, sondern mit sichtbarem, wenngleich geringem Glanz besonders auf der Oberseite des Prothorax. (Fühler fehlen). Kopf etwas schmaler als bei der genannten Art, in übereinstimmender Weise dicht gedrängt punktiert, vor den Augen etwas stärker aufgewulstet. Prothorax merklich kürzer, mit etwas stärker ausgezogenen Vorder- und Hinterecken, flach abgesetztem und sogar leicht aufgebogenem Seitenrand, stärker kissenartig gewölbter Scheibe und sehr viel feinerer, in der Mitte sogar deutlich sperriger Punktierung; dieselbe fließt selbst zu beiden Seiten der Scheibe, wo sie beträchtlich dichter ist, nirgends zu Runzeln zusammen, nur die Seitentheile lassen solche zunächst dem aufgeworfenen Aussensaum deutlich erkennen. Schildchen mit gleicher Punktierung wie der Prothorax. Flügeldecken nur um ein Viertel länger als zusammen breit, bis zum letzten Drittheil parallel, sodann eiförmig zugerundet. Die gewöhnlichen neun Punktstreifen der auf der hinteren Hälfte stärker gewölbten Oberfläche furchenartig vertieft, die Punkte selbst sehr grob, grubenartig, etwas in die Quere gezogen, die Zwischenräume sehr fein und zerstreut punktiert, gewölbt, der dritte, fünfte und siebente schon für das unbewaffnete Auge deutlich rippenartig

erhöht, der dritte und siebente hinten miteinander schleifenartig verbunden, die dazwischenliegenden daher verkürzt. Vorder- und Hinterbrust gleich dem Hinterleib deutlicher, die Epipleuren dagegen verloschen fein und zerstreut punktirt, die Oberfläche zwischen den Punkten stellenweise leicht gerunzelt. Alle drei Schienenpaare einfach und gerade. »

Remarks. — This species has been interpreted quite incorrectly by subsequent authors, and practically all specimens with a clathrate sculpture on elytra have been classified as *clathratus*. In actual fact *A. clathratus* does not exhibit but a slightly indicated clathrate elytral sculpture, as the cuticle is even and does not form the transverse wrinkles usually found in the *plicipennis* and *striolipennis* groups.

A. clathratus is well characterized by the small size of body, the distinctly shiny upper surface particularly of pronotum, the only weakly rounded, medially almost subparallel sides of pronotum, the not or only slightly confluent pronotal punctation, the rather coarse primary punctures on elytra, arranged in clearly approximated pairs, and the even, impunctate, alternating, subcostate secondary intervals on elytra. In the ♂ the apical segment of maxillary palpi is strongly dilated, but distinctly less broad than the length of the third and fourth antennal segments combined; the anterior and intermediate tarsi are not dilated, nor provided with soleæ below; the tibiæ are simple, except for the intermediate ones, the inner apical angle of which is slightly to inconspicuously dilated and minutely curved inwards.

Ædeagus (fig. 108). — Slender, of simple shape, but the ventral groove very strongly constricted by the broadened inflexed alæ, concealing the penis as well as the lacinia. Parameres of apicale long, strongly narrowed proximally, weakly so distally, with obtuse, slightly bent apices. Basale about twice as long as apicale.

Dimensions. — Length 11 ¼ to 14 ½ mm, width 5 to 7 ½ mm.

Type locality. — « Am Jippe See » (North-eastern Tanganyika Territory). Types probably in Museum Berlin.

Distribution. — North-eastern Tanganyika Territory and Central-southern British East Africa. — Kilimandjaro area : Lake Yipe; Ngang Forest, 1.900 m (12 spec., I.R.); Nairobi (2 spec., C.M.); Thika Road, Nairobi, I.1950, E. PINHEY (2 spec., C.M.); Embakasi, VII.1933, C. G. MACARTHUR (1 spec., C.M.).

15. On elytra at least the seventh secondary interval distinctly convex to subcostate apically 16
 — All secondary intervals on elytra flat, not or inconspicuously convex on lateral portions, the seventh interval scarcely more strongly raised than the adjacent intervals.

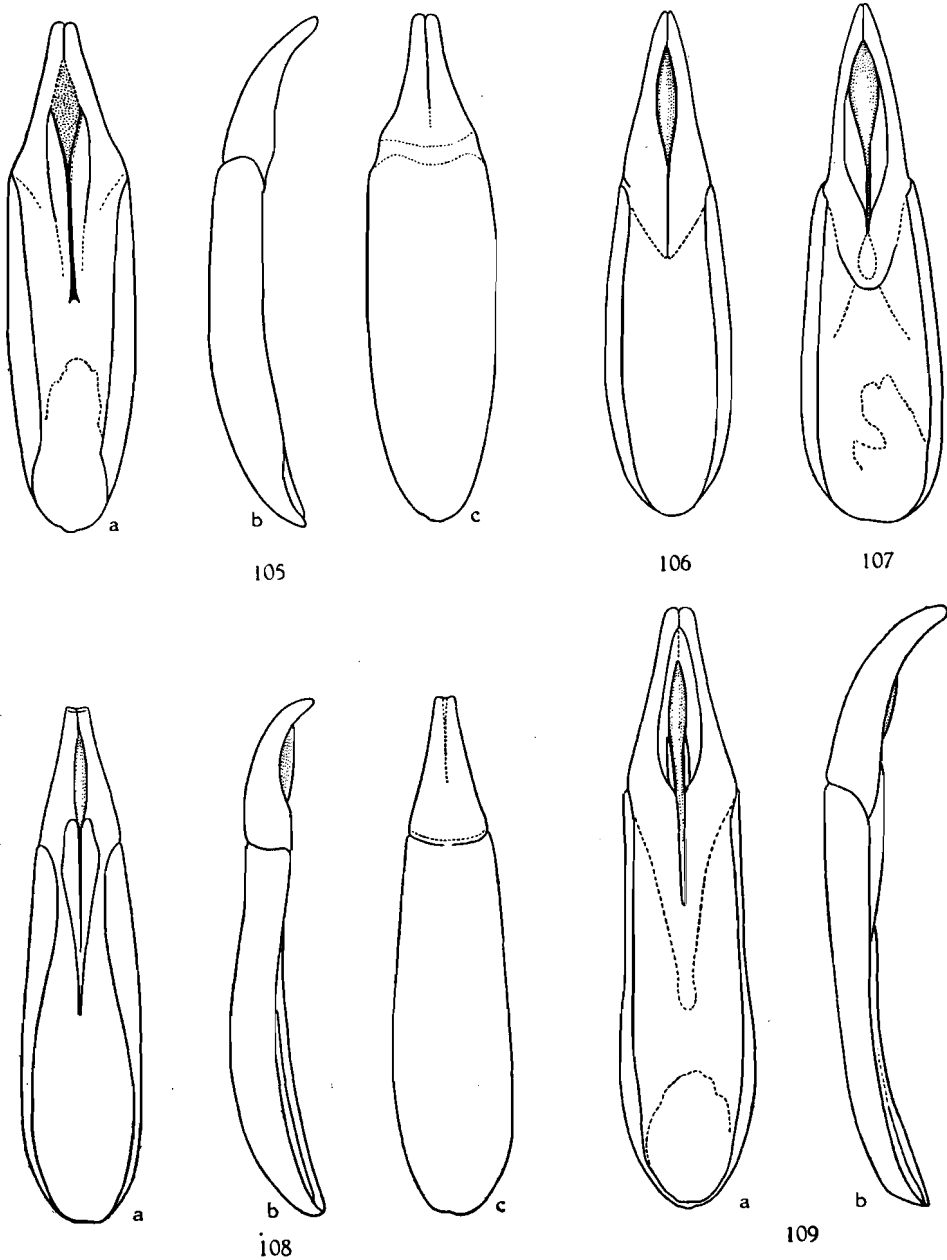


FIG. 105. — Aedeagus of *Anchophthalmus oncotipes* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 106. — Ventral surface of the aedeagus of *Anchophthalmus altioricola* n. sp. — FIG. 107. — Aedeagus of *Anchophthalmus plicipennis* PÉRINGUEY, typical form from Salisbury (ventral surface). — FIG. 108. — Aedeagus of *Anchophthalmus clathratus* GERSTAECKER (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 109. — Aedeagus of *Anchophthalmus basilewskyi* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right).

[*Anchophthalmus altioricola* n. sp.]

(Pl. VI, fig. 1; Figs. 91 a, 106.)

Related to *A. clathratus*, but readily distinguished by the small size of body and the flat secondary intervals on elytra. Mentum fig. 91 a. Pronotum as in *clathratus*, slender, with weakly rounded, medially almost subparallel sides; punctures on disc dense, strong, round and separated. Elytra almost dull, with obliquely sloping lateral portions of base and faintly rounded sides. The primary rows with moderately strong, round punctures, becoming fine and evanescent on apical portion; secondary intervals broad, with hardly discernible punctation, flat, very weakly convex towards sides. Pseudopleural carina entirely exposed dorsally. Pseudopleura smooth. Legs robust; in the ♂ the anterior tarsi distinctly dilated, with spongiose soleæ below; the inner apical angle of intermediate tibiæ dilated and rather strongly, abruptly bent inwards. Ædeagus (fig. 106) stouter than in *clathratus*, with continuously narrowed outer contours of apicale and slightly more broadened groove, leaving exposed the apical portion of penis. ♀ unknown.

Dimensions. — Length 10 $\frac{1}{2}$ to 11 $\frac{1}{4}$ mm, width 5 to 5 $\frac{1}{2}$ mm.

Distribution. — South-central British East Africa. — Limuru, III.1941 (3 ♂, holotype C.M.); Ngong, 6.000 ft., VI.1939, VAN SOMMEREN (1 ♂, C.M.).

16. Body of smaller size, 10 to 14 $\frac{1}{4}$ mm long. Primary rows on elytra with fine to moderately strong, more or less well separated punctures; there are about 25 to 40 punctures in the fourth row. In the ♂ the inner apical angle of intermediate tibiæ more or less distinctly dilated and curved inwards.

(1) Unknown to me. The description reads as follows: — « Viel breiter und gewölbter als die Stammform; Halsschild flacher und breiter, nach hinten stärker gerundet verengt, die Hinterecken weniger nach hinten ausgezogen, etwas gerundet, stumpfwinklig. Flügeldecken in der Querrichtung gleichmässig gewölbt, in der Mitte neben der Naht nicht eingedrückt, die Zwischenräume fast flach, der 3., 5. und 7. etwas breiter, aber nicht kielförmig über die Wölbung der Flügeldecken erhaben. Schultern breit abgerundet, Seitenrand viel breiter abgesetzt. Länge: 12,5-15,5 mm; Breite: 7,3-8,2 mm. — 3 Exemplare von Ugano, 1500-1700 m, XII.1935-I.1936, H. ZERNY; ein Exemplar von Kigonsera, westlich von Songea. — Der Typus befindet sich in der Sammlung des Ungarischen Nationalmuseums in Budapest, Cotypen im Wiener Naturhistorischen Museum ».

[Anchophthalmus variabilis GEBIEN, sensu novo.]

1910 a, *Anchophthalmus variabilis* GEBIEN, p. 373. — 1910 b, GEBIEN, p. 279. —
1938-1942, GEBIEN, p. 418, n° 5617.
1947, *Anchophthalmus variabilis curtus* KASZAB, p. 168 (1).

Original description. — « Gedrungen gebaut, schwarz, wenig glänzend oder matt, unbehaart und unbeschuppt. Kopf sehr dicht und fein punktiert, der Clypeus oft nur gering, meist aber deutlich und ziemlich tief, etwa im Viertelkreisbogen ausgeschnitten. Die Augen in der Mitte nur wenig eingeschnürt, die letzten 4 bis 5 Fühlerglieder quer. Der Halsschild in der Form sehr variabel, etwa doppelt so breit wie in der Mittellinie lang, die grösste Breite liegt in der Mitte, von dort ist er nach hinten sehr oft parallel, d.h. kaum merklich verengt, oft aber sind die Seiten ziemlich stark gebogen und nach hinten kräftig verengt, der Seitenrand ist fein kielig aufgeworfen, die Vorderecken sind rechtwinkelig, kurz verrundet, die Hinterecken, die weiter nach hinten reichen als die Mitte der Basis, sind gerandet, auch die basale Randung fast immer ganz, wenn auch sehr fein, Oberfläche dicht und fein, aber nicht gedrängt punktiert, nur der flach gedrückte Seitenrand fein runzlig. Neben dem Seitenrand läuft ein kräftiger Längseindruck, welcher die Scheibe von den Seiten absetzt. Flügeldecken etwa in der Mitte am breitesten, der Seitenrand von oben überall sichtbar, die Schultern schräg abgeschnitten, nicht nach aussen gezogen, sie bilden mit dem Seitenrand einen Winkel von ca. 120°, der Seitenrand dort nicht oder nur wenig breiter abgesetzt. Die Oberfläche in der Skulptur unglaublich variabel : entweder sind (in selteneren Fällen) die Zwischenräume fast gleichmässig schwach konvex, oder aber scharf rippenartig erhaben, oder der 3., 5., 7. Zwischenraum sind breiter und meist stärker erhaben, und zwar tritt das zuerst am 7. Zwischenraum auf, besonders an der Spitze fällt der Höhenunterschied auf, die Verbindung der erhöhten Rippen an der Spitze ist ganz verschieden, verbunden sind 3 und 7 und 5 eingeschlossen, oder 5 und 7 und 3 schliesst sich an. Die Punkte der Streifen sind ziemlich gross, ca. 30 im vierten Streifen, die Punkte stehen oft in kleinen Grübchen, die besonders seitlich auf die Interstitien greifen. Mentum in der Mitte kräftig erhöht, die Pleuren der Vorderbrust vom Sternum durch eine Furche ähnlich wie auf der Oberseite abgesetzt, der abgesetzte flache Teil meist deutlich gerunzelt. Prosternum zwischen den Hüften jederseits gefurcht, am Ende schwach niedergedrückt und dann senkrecht abfallend. Abdomen glänzend, fein längsstrigos, die Seiten der Segmente ohne eingeschnittene Linie. Beine in beiden Geschlechtern ohne Auszeichnung : die Erweiterung der Vordertarsen des ♂ so gering, dass man sie nur beim Vergleich mit dem ♀ sieht. — Es giebt wenig Insekten, die es an Veränderlichkeit mit dieser Art

aufnehmen können. Vielleicht sind auch *Anch. clathratus*, *obsoletus* und *alternatus* nur Formen einer ebenso variablen Art. *Anch. silphoides* aus dem Küstengebiet scheint mir die nächstverwandte Art zu sein, doch sind hier die Zwischenräume ganz gleichmässig, der Halsschild ist gedrängt runzlig punktiert und das Prosternum ganz wagrecht. — L. 10-15 mm. »

Remarks. — GEBIEN's description, although very detailed, is confusing and seems to be based on different forms which he did not care to analyse. On the one hand he describes details of morphology, which are common to the whole genus, while he is not aware of the strong dimorphism in the size of the apical segment of maxillary palpi. His conclusions as to the systematic position of his artificial species are quite erroneous, as he assumes *A. silphoides* to be the nearest allied species (which in actual fact belongs to a different phylogenetic line), whereas *A. clathratus*, *alternatus* and *obsoletus* are considered simple « forms » of an identical species. However, *clathratus* and *obsoletus* belong to two different groups, and an « *alternatus* » has never been described.

It is impossible to refer GEBIEN's description to a single species, but in part his description agrees almost literally with the description of *A. clathratus*, in part with species which may be distinguished from the latter. Two paratypes of *variabilis* differ strongly from *A. clathratus*, but also from GEBIEN's own description by the dimorphism of elytral sculpture, a particular which is unknown among all the other *Anchophthalmus*. On these two specimens I am basing the following diagnosis of *A. variabilis* sensu novo.

A. variabilis is very closely allied to *A. clathratus* and *A. altioricola*, agreeing with both in the slender shape of pronotum, the well separated punctures on the disc of the latter and the practically impunctate secondary intervals on elytra. The latter are flat to slightly convex, but in the ♀ more strongly convex laterally than in the ♂, with particularly the seventh interval subcostate from base to apex. In the ♂ the apical segment of maxillary palpi is as much dilated as in *clathratus*, but not broader than the second and third antennal segments are long taken together; the anterior tarsi are faintly dilated, with poriferous patches on lateral portions of underside; the intermediate tibiæ with slightly dilated, inner apical angle.

Dimensions. — Length 11 to 12 $\frac{1}{2}$ mm, width 5 $\frac{1}{2}$ to 6 mm.

Type locality. — « Kilimandjaro : Mwika und Meru Niederung ». Type probably in Museum Frey.

Distribution. — North-eastern Tanganyika Territory : Meru lowland, XII, Y. SJÖSTEDT (1 ♀ ♂, paratypes T.M.).

(Several new species are known to me from Central-northern Tanganyika Territory to Southern Abyssinia, all more or less closely allied to *A. clathratus*. The material available of these species, however, is too scarce as to allow for a serious study of the variability of distinguishing characters. *Anchophthalmus densaticollis* FAIRMAIRE (1), described from the Bar-el-Gazal region of the Anglo Egyptian Sudan, may probably belong to this group of northern species.)

- Body of large size, 15 ½ mm long. Primary rows on elytra with extremely fine and dense punctures which follow very closely one another; there are about 60 punctures in the fourth row. In the ♂ the inner apical angle of intermediate tibiæ without any indication of dilation or curvature, the inner contours of tibia consequently straight from base to apex.

[*Anchophthalmus basilewskyi* n. sp.]

(Fig. 109.)

The largest species of the *clathratus* group and because of the elongate shape of body recalling certain species of the *plicipennis* group. Related to *A. clathratus*, but the upper surface entirely sericeous, the size of body larger, the pronotum broader and much more coarsely punctured, the lateral carina of pronotum broader and the elytral sculpture different. The primary rows are sharply impressed and composed of extremely fine, dense punctures; third secondary interval broadened and considerably broader than the adjacent even intervals; the seventh interval similarly subcostate in both sexes.

Æ d e a g u s. (fig. 109). — Simple, with only apically exposed penis. Parameres moderately long, continuously narrowed towards apex, with obtuse, rather broad and almost straight apices. Basale a little more than twice as long as apicale.

D i m e n s i o n s. — Length 15 ½ mm, width 7 to 7 ½ mm.

D i s t r i b u t i o n. — Ruanda-Urundi. — Rumonge, 800 m, III.1953, P. BASILEWSKY (1♂ ♀, types BCM.).

D e d i c a t i o n. — Named in honour of Mr P. BASILEWSKY, chief entomologist to the Musée royal du Congo Belge, Tervueren.

(1) *Anchophthalmus densaticollis* FAIRMAIRE, 1887, p. 282. — « Oblongo-ovatus, fuscus, parum nitidus, capite prothoraceque subtiliter densissime punctato-rugulosus et setulis minutissimis fulvis sat dense vestitis; prothorace longitudine duplo latiore. lateribus rotundatis, basi leviter sinuatis, intus haud depressis, antice paulo angustiore, angulis anticis sat latis, acute rectis, margine postico utrinque sinuato, angulis posticis latis, postice productis et apice sat acutis, humeros obtegentibus; scutello late triangulari, punctato; elytris ovatis basi late truncatis, postice angustatis, fortiter striatis, striis dorsalibus lævibus, externis punctatis, intervallis subtilissime punctulatis, modice convexis, externis paulo angustioribus et magis convexis; subtus cum pedibus dense punctulatus, prosterno apice breviter dentiforme. — Long. 13 ½ mm — l'orme peu caractérisée, semblant établir un passage aux *Selinus*. »

17. Upper surface of head plane, without median carinula. In the ♂ the anterior tarsi not dilated 18
 — Upper surface of head with fine median carinula on frons. In the ♂ the anterior tarsi distinctly to rather strongly dilated
cariniceps group. 24
18. Cuticle of elytra with transverse wrinkles running across primary rows and irregularly communicating with the more or less convex secondary intervals; the elytra therefore appearing as if obsoletely to distinctly clathrate. Secondary intervals convex at least apically. Body either elongate or broad, but in the latter case the primary rows formed by elongate striae *plicipennis* group. 19
 — Cuticle of elytra entirely even, without transverse wrinkles and not appearing as if clathrate. Body roundish to broadly oval, the primary rows of elytra always densely punctured, the secondary intervals uniformly flat *obsoletus* group. 20
19. Body elongate. Sides of pronotum rounded and narrowed towards base, but without or with scarcely indicated sinuosity in front of posterior angles. Primary rows on elytra with round to elongate, more or less coarse punctures; the seventh and eighth primary rows at least as broad as the convex adjacent secondary intervals. Pseudopleural crest straight apically.

[*Anchophthalmus plicipennis* PÉRINGUEY.]

(Pl. VI, figs. 2, 3; Figs. 91 c, 104.)

*1904, *Anchophthalmus plicipennis* PÉRINGUEY, p. 238. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 418, n° 5612.

1904, *Anchophthalmus salisburyensis* PÉRINGUEY, pl. 13, fig. 16.

Original description. — « ♀ : Black, opaque, covered on the upper side with most minute greyish hairs; head deeply and closely punctate; prothorax nearly equally rounded laterally, the sides are not very broadly ampliate, but the margin is well raised, the discoidal part is only slightly convex and bears two faint, median impressions, it is covered with somewhat small, moderately deep punctures separated by a very narrow, irregular, only slightly raised wall; scutellum deeply punctate; elytra, slightly ampliate past the median part where they are one-fifth wider than across the base, acuminate in the posterior part, almost plane from the base to the posterior declivity, slightly convex there, and slanting thence to the apex, finely striate, but the striæ are shallow, the first three intervals are plane, the fifth and sixth are raised, the whole surface is deeply punctate and covered with irregular, wrinkle-like, transverse, foveate punctures, shallow in the dorsal part, deeper and more seriate on

the sides, these folds are produced by the raised walls of these foveæ and the two raised supra-lateral intervals are very plainly wavy and wider than the intervening one; under side glabrous; legs minutely hairy. Length $13 \frac{1}{2}$ - 17 mm, width $6 \frac{1}{2}$ - $8 \frac{1}{2}$ mm. »

Remarks. — Mentum fig. 91c. *A. plicipennis* is closely allied to *A. nyassicus* on the one hand, to the *curvipes* subgroup of the *striolipennis* group on the other. It seems to be widely spread and subject to the development of the following subtle geographic forms.

a) Elytra dull; the seventh and eighth secondary intervals subcostate and wavy; transverse wrinkles moderate. Pseudopleura densely, rather deeply punctured. Pronotum with very broad lateral carina; the latter almost as broad as the third antennal segment. In the ♂ the apical segment of maxillary palpi very strongly dilated, about as broad as the third and fourth antennal segments are long taken together; the anterior tarsi not dilated, without soleæ below; the inner apical angle of intermediate tibiæ faintly dilated. *Ædeagus* (fig. 108) as in *nyassicus*. — Typical form, described from Salisbury, examined from Southern Rhodesia (Salisbury, Bindura) and South-western Tanganyika Territory (Lake Rukwa and Dodoma).

b) As the typical form, but the lateral carina of pronotum very broad, slightly broader than the third antennal segment, and in the ♂ the inner apical angle of intermediate tibiæ abruptly, strongly, obtusely dilated and curved inwards (fig. 104). — 2 identical ♂♂ from Northern Rhodesia (Feira, Zambesi Region and Pemba).

c) (Pl. VI, fig. 2). Elytra dull; the seventh and eighth secondary intervals less convex, not distinctly wavy; transverse wrinkles reduced, the surface of elytra therefore more even. Pseudopleura with obsolescent, fine, scattered punctures. Pronotum with rather narrow lateral carina which is considerably narrower than the third antennal segment. In the ♂ the apical segment of maxillary palpi less strongly dilated and narrower than the combined length of the third and fourth antennal segments; the anterior tarsi not dilated; the inner apical angle of intermediate tibiæ inconspicuously curved. *Ædeagus* very similar to the typical form but the apicale shorter. — A series from North-western Tanganyika Territory (Ukerewe Island).

d) (Pl. VI, fig. 3). Elytra distinctly shiny; the seventh and eighth secondary intervals strongly wavy and subcostate; transverse wrinkles usually strongly developed, often forming a kind of widely meshed reticulation around subfoveate punctures of primary rows, and the elytra appearing as if strongly clathrate. Pseudopleura with fine punctures. Pronotum as in the form from Ukerewe

Island, but more shiny and the sides subparallel to very faintly sinuate in front of posterior angles. In the ♂ the apical segment of maxillary palpi strongly dilated, as in the typical form; the anterior tarsi not dilated; the intermediate tibiæ with entirely straight inner contours from base to apex and without any trace of apical dilation. *Ædeagus* with slender and moderately long apicale. — South-eastern Belgian Congo, in the Elisabethville Province (Baudouinville, Saint-Louis, Moliro, Kafwanka and Lukuga valley).

- Body short and broad. Sides of pronotum distinctly though shallowly sinuate in front of posterior angles. The seventh and eighth primary rows on elytra much narrower than the flattened adjacent secondary intervals; primary rows with fine, elongate striae. Pseudopleural carina weakly sinuate apically.

[**Anchophthalmus brevis** n. sp.]

In shape and sculpture of body almost identical with *A. striolipennis*, but the sides of pronotum distinctly sinuate in front of posterior angles and the *ædeagus* similar to *A. plicipennis*. Apicale of *ædeagus* very short, in ventral view scarcely longer than broad between basal articulations, with triangularly converging lateral contours; parameres with narrow, obtuse, rather strongly bent apices, and with narrow, almost subparallel, inflexed alæ ventrally. Ventral groove with exposed penis and lacinia. Basale about four and a half times as long as apicale. In the ♂ the apical segment of maxillary palpi and the legs shaped as in *striolipennis*.

Dimensions. — Length 12 $\frac{3}{4}$ to 15 mm, width 6 $\frac{3}{4}$ to 8 mm.

Distribution (map 4). — South-eastern Belgian Congo. — Central-southern Elisabethville Province: Kanzenze, 1932, R. P. LEFEBURE (1♂, 3♀, types BCM.), VI.1924, C. SEYDEL (1♂, BCM.).

20. Elytra distinctly shiny; secondary intervals with dense and rather strong punctures 21
 — Elytra very opaque; secondary intervals with very fine and more scattered punctures.

Anchophthalmus obsoletus (ANCEY).

(Pl. VI, fig. 4; Fig. 110.)

*1877, *Selinus obsoletus* ANCEY, p. 468. — 1887, FAIRMAIRE, p. 286. — 1910 b, GEBIEN, p. 278.
 1938-1942, *Anchophthalmus obsoletus* GEBIEN, p. 418, n° 5613.

Original description. — « Ater haud nitidus, sub-
 tus levior; caput prothoraxque densissime punctulata; ille depres-

sus, medio leviter convexus, lateribus carinatus, rotundatus, apice attenuatus, postice minus; angulis anticis et posticis valde productis, non acutis; marginatus et ad marginem convexior. Scutellum parvum, punctatum, triangulare. Elytræ lateribus carinatæ, rotundatæ, tenuissime punctulatæ, singula 9 sulcis linearibus, punctigeris, quorum unus prope carinam, instructa, intervalli fere plani. Pars inferior corporis nitida, parum dense punctulata, pedes graciles. — Long. 14 $\frac{1}{2}$ mill — Le *S. obsoletus* est tout-à-fait à part par sa forme arrondie, son aspect mat, la sculpture très fine de ses élytres, enfin par la forme de son thorax arrondi latéralement et fortement bisinué à sa base. »

R e m a r k s. — This species is very well distinguished from all the preceding *Anchophthalmus* by the strongly flattened and roundish body, the very opaque upper surface, the depressed elytra and the fine sculpture of the latter. Head above rugosely punctured, with long, subparallel genæ and subparallel tempora. Epistome well demarcated from genæ. In the ♂ the apical segment of maxillary palpi strongly dilated, at least as broad as the combined length of the third and fourth antennal segments. Antennæ short, strongly accrescent towards apex; the two preapical segments strongly enlarged, at least twice as broad as long. Pronotum strongly transverse, broadest a little behind middle, depressed, uniformly and very densely covered with extremely fine rugosities, becoming somewhat smoothed along midline, transversely confluent on submarginal depression. Anterior margin deeply emarginate, with sharply produced anterior angles, carinate only on lateral portions. Sides rather strongly rounded and narrowed towards base; lateral carina fine and much narrower than third antennal segment; submarginal depression strong and broad. Base finely carinate, rather shallowly bi-sinuate, but with strongly produced, lobiform posterior angles. Disc weakly convex, with irregular, shallow impressions. Prosternum with rather strong punctures; episternum practically smooth and very opaque, except for the large submarginal depression which is shiny and strongly rugose transversely; intercoxal apophysis immarginate, with broadly rounded and flat apex of horizontally produced portion. Elytra not or only slightly broader than pronotum, depressed, with rectangular to weakly obtuse humeral angles. Sides weakly rounded and dilated towards middle, without posthumeral sinuosity. Primary rows sharply and linearly impressed, composed of fine, dense punctures which are scarcely larger than those on disc of pronotum; there are about 50 punctures in the fourth row, but on apical declivity the background of all rows is uniformly smooth, lineate, without discernible punctation; the first and second primary rows, as well as the third and fourth ones

are somewhat arranged in pairs and each of these pairs coalesce basally. Secondary intervals uniformly flat, becoming weakly convex towards sides and apex, very broad, densely micro-sculptured, and with fine, rather dense punctures which are only indistinctly visible on account of the dense micro-sculpture; the lateral intervals several times broader than the adjacent primary rows. Pseudo-

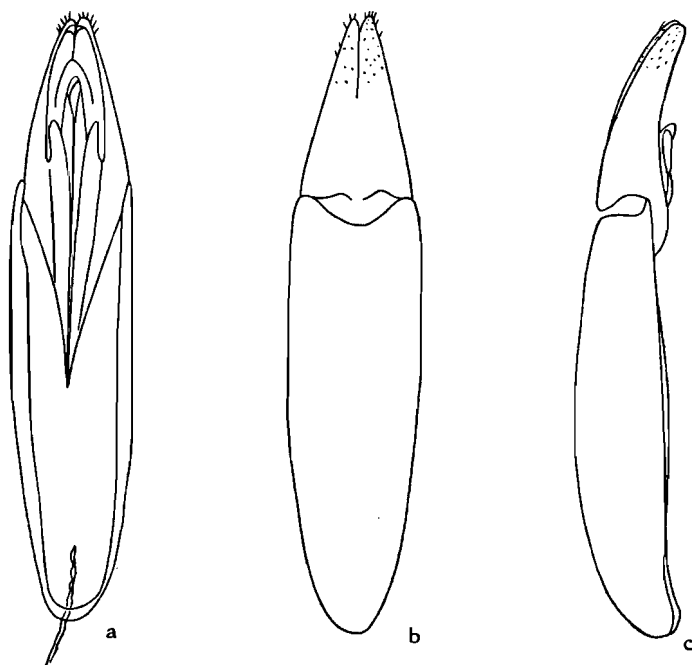


FIG. 110. — *Ædeagus* of *Anchophthalmus obsoletus* (ANCEY).
a : ventral surface; b : dorsal surface; c : lateral aspect,
with the ventral surface at right.

pleural crest entirely exposed dorsally, with fine submarginal canaliculation, on which the ninth primary row is situated. Pseudopleura very broad, flat, shallowly punctured. Abdomen with fine, scattered punctures, concentrated only on anal sternite. Legs practically non-dimorphic. In the ♂ the anterior tarsi inconspicuously dilated, and, as the intermediate tarsi, with small, broadly divided soleæ on median segments; the intermediate and posterior tibiæ with entirely straight inner contours.

Ædeagus (fig. 110). — Simple. Apicale moderately long, rather stout, with continuously narrowed, broad parameres, the apices of which are rounded and almost straight; ventral groove with exposed penis and lacinia. Basale about two and a half times as long as apicale.

Dimensions. — Length 11 to 15 mm, width 6 to 9 mm.

Type locality. — « Uzagara » (Central Tanganyika Territory). Type probably in Museum Paris.

Distribution (map 4). — Central Tanganyika Territory and South-eastern Belgian Congo. — [Central and North-eastern Elisabethville Province: Albertville, XII.1918, R. MAYNÉ (2 spec., BCM.), I.1933, L. BURGEON (1 spec., BCM.); Bassin Lukuga, IV-VII.1934, H. DE SÆGER (1 spec., BCM.); Lusindoi, VI.1911, L. BURGEON (1 spec., BCM).] — Upemba National Park: Kankunda, XI.1947 (72 spec., I.P.N.); River Kateke, XII.1947 (9 spec., I.P.N.); Munoi, VI.1948 (15 spec., I.P.N.); Lupiala, X.1947 (4 spec., I.P.N.); gorges de la Pelenge, VI.1947 (10 spec., I.P.N.); Kaswabilenga, X.1947 (8 spec., I.P.N.); Luanana River, pistes Pelenge—Lufira, XI.1947 (1 spec., I.P.N.); all collected by the Mission G. F. DE WITTE.

- 21.** Pronotum broadest in front of, or at about, middle, with the sides more or less strongly narrowed towards base **22**
 — Pronotum broadest basally, with the sides gradually dilated from middle towards base

***Anchophthalmus straeleni* n. sp.**

(Pl. VII, figs. 1, 2; Pl. I, fig. 2; Fig. 111.)

Upper surface moderately shiny, appearing as if bare, as the setæ of punctures are microscopically short. Head above very densely, rather coarsely punctured, longitudinally confluent on middle. Epistome shallowly emarginate, weakly separated from genæ by a small sinuosity of sides. Genæ subparallel, shallowly impressed on supra-antennal surfaces. Eyes strongly constricted by genal canthus; dorsal section more than twice as broad as long. Tempora almost subparallel behind eyes, briefly narrowed towards neck, with very faint and shallow post-ocular depression. Apical segment of maxillary palpi in the ♂ strongly dilated, distinctly broader than the combined length of the third and fourth antennal segments and about three times as broad as long; in the ♀ only one and a half times as broad as long. Antennæ short, slender, scarcely extending beyond middle of pronotum, strongly dilated and compressed distally; third segment about two and a half times as long as broad; eighth segment triangular, only slightly broader than long; the two preapical segments moderately transverse, about one-half broader than long; apical segment large, almost square, distinctly longer but barely narrower than the penultimate segment. Pronotum strongly transverse, in both sexes slightly more than twice as broad as long, depressed, with strong, broad submarginal depression which is separated from disc by a longitudinal and sulciform impression. Disc with several irregular impressions. Anterior margin deeply emarginate, finely carinate also on middle, with very strongly produced,

sharply rectangular anterior angles, enclosing the head up to level with genæ. Sides strongly narrowed and rounded anteriorly, very slightly dilated from middle to base. The latter strongly bi-sinuate, with the posterior angles produced backwards beyond level of middle section of base. Integument covered with an extremely dense punctation, in a rather peculiar way growing together obliquely towards the usually smoothed centre of disc, more or less transversely rugose on lateral portions. Prosternum coarsely punctured; episternum distinctly less densely punctured, with smoothed to densely and transversely rugose submarginal areas; intercoxal apophysis rugosely punctured, with the apex of horizontal portion rounded and rotundate with apical declivity. Elytra broad, only slightly longer than broad, depressed, basally slightly broader than pronotal base. Base with obliquely sloping lateral portions and bluntly rectangular to slightly oblique humeral angles. Primary rows sharply impressed, with fine, round, separated punctures, becoming smooth and lineate on apical declivity; with about 50 punctures in the fourth row. Secondary intervals broad, flat, very densely, rather coarsely punctured, with a few transverse impressions on disc; third interval slightly broader than the adjacent intervals. Pseudopleural crest entirely visible dorsally, with distinctly canaliculate submarginal depression. Pseudopleura very broad, flat, rather densely and coarsely punctured. Abdomen with fine, scattered, distinctly setiferous punctures, forming longitudinally acuductate striae on sides of basal sternite. Legs practically non-dimorphic, shaped as in *A. obsoletus*, but the underside of tarsi densely setiferous laterally and non-soleate.

R e m a r k s. — This specialized species is well characterized by the basally broadest pronotum, the peculiar discal sculpture on pronotum, which is obliquely directed towards centre, and the very dense, strong punctation on secondary intervals of elytra. It resembles *A. obsoletus* on account of the roundish and broad, strongly depressed shape of body, but is easily distinguished by the smaller size, the distinctly shiny upper surface, shape and sculpture of pronotum, and particularly by the strong and dense punctures on secondary intervals of elytra.

Æ d e a g u s (fig. 111). — Almost identical with *A. obsoletus*, the apicale slightly shorter and the basale about three times as long as apicale.

D i m e n s i o n s. — Length $9 \frac{3}{4}$ to $11 \frac{1}{2}$ mm, width $5 \frac{1}{4}$ to 7 mm.

D i s t r i b u t i o n (map 4). — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park: Lusinga, XI-XII.1947 (7 spec.,

types I.P.N.); Mukana, I.1948 (5 spec., I.P.N.); Kapelwa River, XII.1948 (1 spec., I.P.N.); Kamitunu River, III.1947 (1 spec., I.P.N.); Buye-Bala, III.1948 (1 spec., I.P.N.); Kabwekanono, III.1948 (1 spec., I.P.N.); all collected by the Mission G. F. DE WITTE.

D e d i c a t i o n. — Named in honour of Prof. V. VAN STRAELEN, Honorary Director of the Institut royal des Sciences naturelles de Belgique and President of the Comité de Direction de l'Institut des Parcs Nationaux du Congo Belge.

22. Sides of pronotum distinctly to strongly rounded and narrowed towards base **23**
- Sides of pronotum with a long, shallow but distinct sinuosity in front of posterior angles.

[**Anchophthalmus bredoi** n. sp.]

Very closely related to *A. straeleni*, but readily distinguished as follows : — Body less strongly broadened, with more elongate elytra. Head above more strongly sculptured, covered densely with coarse rugosities. Epistome sharply demarcated from genæ; the latter rounded and narrowed towards eyes, including a re-entrant angle with the outer contours of eyes. Antennæ stout, considerably thicker than in *straeleni*. Apical segment of maxillary palpi strongly dilated, as in *straeleni*. Pronotum broadest at about middle, less strongly transverse, densely covered with a rather coarse, rugose sculpture which is quite irregular and does not tend to grow together towards the centre of disc. Sides strongly rounded and narrowed towards base, with a long, shallow sinuosity in front of posterior angles; lateral carina broader; submarginal depression strong, broad, densely rugose transversely, and separated from discal convexity by a longitudinal, shallow sulcus. Episternum of prosternum with scattered, shallow punctures. Elytra less broad, produced apically, with very dense to rugosely confluent punctation on secondary intervals and less dense, but stronger punctures of primary rows; the latter sometimes badly defined on account of the dense and coarse sculpture of secondary intervals; the third and fifth intervals sometimes very slightly convex. Pseudopleural crest as in *straeleni*, but apically very shallowly sinuate and not straight. Pseudopleura densely and coarsely punctured. The legs as in *straeleni*.

Dimensions. — Length $11 \frac{1}{4}$ to $12 \frac{3}{4}$ mm, width 6 to $7 \frac{1}{4}$ mm.

D i s t r i b u t i o n. — Northern Rhodesia. — Abercorn, XII.1942, H. J. BRÉDO (1♂, 2♀, types I.R.); Mweru—Wantipa, Buleya, IV.1944, H. J. BRÉDO (1♀, I.R.).

D e d i c a t i o n . — Named in honour of its discoverer, Mr. H. J. BRÉDO, Assistant Chief Scientist to the Scientific Council for Africa South of the Sahara, Bukavu.

23. Elytra strongly depressed; the pseudopleural carina subcanaliculate and entirely exposed dorsally; the ninth secondary interval entirely dorsal in position, and in caudal aspect only weakly sloping towards pseudopleural canaliculation; primary rows with dense, fine, round punctures. Discal convexity of pronotum separated by a shallow sulcus from submarginal depression.

[**Anchophthalmus eurychoroides** n. sp.]

(Pl. VII, fig. 3.)

Very closely related to *A. straeleni* and agreeing with the latter even in the peculiar, fine sculpture on pronotum, but upper surface of body more strongly shiny, the pronotum more slender, broadest a little behind middle and with the sides distinctly to strongly rounded and narrowed towards base, the elytra distinctly broader than pronotum, the primary rows composed of less dense and stronger punctures, the secondary intervals less densely punctured, and the sutural, third and fifth intervals weakly convex and broader than the alternating even intervals. The legs and maxillary palpi in the ♂ as in *A. straeleni*. In all remaining characters very similar to *straeleni*.

D i m e n s i o n s . — Length 9 ½ to 12 mm, width 5 ½ to 6 ½ mm.

D i s t r i b u t i o n (map 4). — South-eastern Belgian Congo. — South-eastern Elisabethville Province: southern part of the Kundelungu Mountains, II.1950, N. LELEUP (1♂, 4♀♀, types BCM.).

- Elytra convex; the pseudopleural carina very narrowly demarcated from lateral convexity, becoming concealed and indistinct behind middle (dorsal aspect); the ninth secondary interval lateral in position, in caudal aspect practically perpendicular; primary rows with scattered, elongate to lineate punctures. Discal convexity of pronotum not clearly demarcated from submarginal depression, without longitudinal sulcus along sides.

[**Anchophthalmus simplex** n. sp.]

Belonging to the *obsoletus* group, but strongly recalling the species of the *plicipennis* group on account of the more elongate shape and stronger convexity of body. Among the species of the *obsoletus* group only related to *A. bredoi*, but of larger size, the

elytra longer and much more strongly convex, the epistome scarcely demarcated from genæ, the genæ subparallel in front of eyes and continuous with ocular contours, the pronotum more strongly transverse, with less deeply sinuate anterior margin, broader lateral carina, less dense but also coarse sculpture, and posteriorly simply rounded and narrowed sides, the underside of prothorax practically smooth, impunctate, without transverse rugosities on submarginal depression, the pseudopleura with very sparse, extremely fine punctures, the pseudopleural crest without submarginal canalization and not entirely exposed dorsally, and the sculpture of elytra different. The primary rows are composed of elongate punctures which are rather scattered, distinct and well separated also apically, with only about 25 punctures in the fourth row; the inner six rows are arranged in clearly approximated pairs, becoming coalescent basally. Secondary intervals with less dense, much finer punctation, the alternating odd intervals broader than the adjacent even intervals and slightly convex. In the ♂ the apical segment of maxillary palpi slightly less strongly dilated than in *bredoi*; the legs non-dimorphic, as in *bredoi*, but of more robust build. Mentum fig. 91 f.

Ædeagus. — Simple; the apicale long, narrowed in a continuous line from base to apex, with distinctly bent and narrow apices of parameres. Basale only one and a half times as long as apicale.

Dimensions. — Length $13 \frac{3}{4}$ to 16 mm, width $6 \frac{1}{2}$ to $8 \frac{1}{2}$ mm.

Distribution. — Central Tanganyika Territory. — Kigonsera (10 spec., types T.M.); Ukerewe Island (5 spec., BCM.).

24. Upper surface of body appearing as if bare, with only inconspicuous, microscopically short bristles. Anal sternite of abdomen with extremely fine margination along basal third of sides 25
- Upper surface of body with conspicuous, dense, sessile yellowish bristles. Anal sternite of abdomen entirely immarginate, as usual in *Anchophthalmus*.

***Anchophthalmus pulvereus* n. sp.**

(Pl. VII, fig. 4; Pl. I, fig. 1; Fig. 112.)

Upper surface dull, covered uniformly and densely with fine, short, depressed yellowish bristles. Body elongate. Head above coarsely punctured, with distinct, smooth, fine, longitudinal median carinula. Epistome shallowly emarginate, well separated from genæ; clypeal and epistomal sutures sharply impressed. Genæ subparallel, strongly constricting eyes, with anteriorly subfoveate supra-antennal surfaces. Dorsal section of eyes about two and a half times as broad

as long. Tempora long, moderately rounded, with shallow, oblique post-ocular sulcus. Apical segment of maxillary palpi in the ♂ very strongly securiform, about two and a half times as broad as long

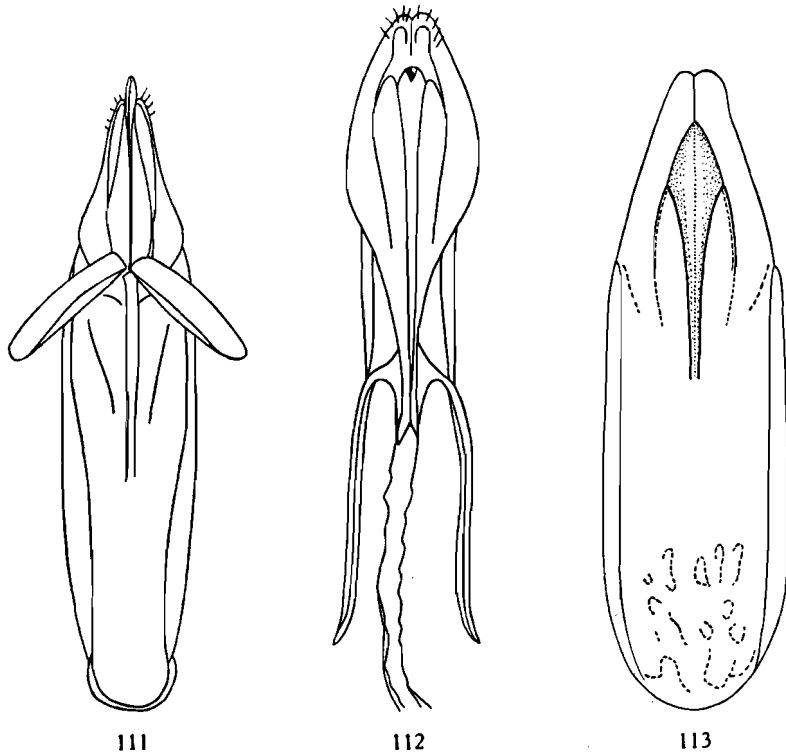


FIG. 111. — *Anchophthalmus straeleni* n. sp.

Ventral surface of aedeagus with the unclashed lacinia stretched outwards.

FIG. 112. — *Anchophthalmus pulvereus* n. sp.

The apical part of aedeagus with the extracted basal parts of inner sclerites (basal part of aedeagal tegmen removed).

FIG. 113. — Aedeagus of *Anchophthalmus carinceps* n. sp.

Ventral surface.

and almost as broad as the combined length of the third and fourth antennal segments; in the ♀ moderately securiform, only about one and a half times as broad as long. Antennae extending beyond middle of pronotum, strongly dilated and compressed distally; third segment about two and a half times as long as broad, the median segments becoming gradually shorter, the three preapical segments

strongly transverse and twice as broad as long; the apical segment distinctly longer but slightly narrower than the penultimate segment, briefly pointed at one side of apical margin. Pronotum slender, in the ♂ about two-thirds broader than long, in the ♀ almost twice as broad as long, depressed, with broad submarginal depression, deeply emarginate anteriorly and bi-sinuate basally. Anterior margin with strongly produced, sharply rectangular to acute anterior angles, enclosing head up to level with genæ; marginal carina very fine to evanescent on middle section. Sides strongly rounded and narrowed from about middle towards anterior margin, straight and subparallel to faintly narrowing posteriorly. Base finely and completely carinate, deeply bi-sinuate, with the posterior angles strongly produced backwards, sharp and acute. Integument with rather fine but very dense, round, separated, setiferous punctures, becoming more concentrated, slightly to obliquely rugose on submarginal depression. Prosternum punctured; episternum with obsolescent, fine, shallow, sparse punctures; more or less transversely rugose on the flattened submarginal area; intercoxal apophysis obsoletely marginate, obtusely triangular on apex of horizontally produced portion. Elytra depressed, about one and a half times as long as broad, basally only slightly broader than pronotal base, practically subparallel on basal third. Base faintly oblique laterally, with bluntly rectangular humeral angles. Primary rows with fine, dense, round punctures, of which there are about 50 to 60 in the fourth row; all rows very fine and linearly impressed posteriorly; ninth row more coarsely punctured. Secondary intervals flat, much broader than primary rows, with extremely fine, moderately dense and elongately setiferous punctures; the third interval not broader than the adjacent intervals. Pseudopleural crest subcanaliculate and entirely visible dorsally. Pseudopleura very broad, flat, practically smooth. Abdomen with fine, scattered punctures, becoming coarser and more concentrated on proximal sternites, elongate and somewhat acuductate on lateral portions of basal sternite; anal sternite immarginate. In the ♂ the anterior and intermediate tarsi moderately dilated, with entire soleæ below; the tibiæ simple, except for the underside of anterior tibiæ, which exhibits a rather broad stripe of fine, yellowish pilosity on distal two-thirds.

Remarks. — This new species, allied to the depressed species of the *obsoletus*-group, is well characterized among all the other *Anchophthalmus* by the conspicuous yellowish bristles on upper surface of body. It belongs to the *cariniceps*-group, the species of which are all well distinguishable by a longitudinal median carinula on upper surface of head.

Ædeagus (fig. 112). — Simple. Apicale rather stout, with continuously converging sides. Apices of parameres almost straight, broadly obtuse. Ventral groove with exposed penis and lacinia. Basale about three times as long as apicale.

Dimensions. — Length $9\frac{1}{2}$ to $12\frac{1}{2}$ mm, width 5 to $6\frac{1}{4}$ mm.

Distribution (map 4). — South-eastern Belgian Congo. — Entire Elisabethville Province : Upemba National Park (Mabwe, XI.1948, 11 spec., types I.P.N.; Kalule River, north facing Mujinga Kalenge, III.1949, 1 spec., I.P.N.; Kaswabilenga, X.1947, 1 spec., I.P.N.; Kanonga, II.1949, 1 spec., I.P.N.; Munoi, VI.1948, 3 spec., I.P.N.; all collected by the Mission G. F. DE WITTE; Mulongo, Mafinge, VII.1930, P. GÉRARD (1 spec., BCM.; Kinda, X.1914, L. CHARLIERS (3 spec., BCM.), XII.1926 (2 spec., I.R.); Kanzenze, 1932, R. P. LEFEBURE (2 spec., BCM.); Kamina, Lomami, 1930, R. MASSART (1 spec., BCM.); Kayambo-Dikulwe, VI.1907, SH. NEAVE (1 spec., BCM.).

25. In the ♂ the anterior tarsi only weakly dilated, much narrower than the preapical segments of antennæ and only half the width of apex of anterior tibiæ; the tibiæ slender, without fringe of long hairs on inner side; the inner contours of intermediate and posterior tibiæ straight from base to apex.

[**Anchophthalmus cariniceps** n. sp.]

(Pl. VIII, fig. 1; Fig. 113.)

Related to *A. pulvereus*, but the body broader and shorter, approximately of the shape of *A. straeleni*. Readily distinguished from *pulvereus* as follows. Upper surface of body as dull as in *pulvereus*, but the bristles extremely short, fine, inconspicuous and microscopical. Head, antennæ and maxillary palpi as in *pulvereus*; in the ♂ the apical segment of maxillary palpi extremely dilated and as broad as the combined length of the third and fourth antennal segments. Pronotum broader, distinctly transverse, broadest at, or behind, middle, with posteriorly subparallel or very slightly constricted or inconspicuously dilated sides. Punctuation round and separated as in *pulvereus*, but not elongately setiferous. Elytra much shorter, broader, only about one and a quarter times as long as broad, as strongly depressed as in *pulvereus* and with almost identical, fine sculpture. Humeral angles broadly rectangular; the intra-humeral depressions more spacious and smoothed. Secondary intervals becoming slightly more convex towards sides and apex. The anal sternite with fine margination on basal third of sides. Legs very similar to *pulvereus*, but more slender. In the ♂ the anterior tarsi less strongly to weakly dilated; the underside of anterior tibiæ more strongly flattened and broadened on distal two thirds, but there with only scattered, erect bristles.

Ædeagus (fig. 113). — Very similar to *A. pulvereus*, but the apicale short and broad, triangularly converging towards apex. Basale about four and a half to five times as long as apicale.

Dimensions. — Length 9 to 11 mm, width $4\frac{3}{4}$ to 6 mm.

Distribution (map 4). — South-eastern Belgian Congo. — Elisabethville Province: Sandoa, VI-VIII.1932, G. F. OVERLAET (52 spec., types BCM.); Muteba, XI.1931, G. F. OVERLAET (19 spec., BCM.); Kapanga, VI.1933, G. F. OVERLAET (5 spec., BCM.); Tshibanba, XII.1931, G. F. OVERLAET (2 spec., BCM.); Kafakumba, XI.1933, G. F. OVERLAET (13 spec., BCM., I.R.); Katombe, VI.1930, P. GÉRARD (1 spec., BCM.).

- In the ♂ the anterior tarsi rather strongly dilated, about as broad as the preapical segments of antennæ and only a little narrower than the width of apex of anterior tibiæ; the tibiæ robust, thick, with a fringe of dense, long yellowish hairs on inner side; the inner contours of intermediate and posterior tibiæ with more or less strongly dilated and inwardly curved apical angle.

[**Anchophthalmus pedestris** n. sp.]

(Pl. VIII, fig. 2.)

In the ♂ readily distinguished from all the other *Anchophthalmus* by the long fringe of hairs on all tibiæ and the strongly dilated anterior and intermediate tarsi. Very closely related to *A. cariniceps* and in most of characters agreeing with this species. Body of the same shape and sculpture, the pronotum slightly broader and with finer, discally often more scattered punctures. In the ♂ the apical segment of maxillary palpi as strongly dilated as in *cariniceps*; the strongly dilated anterior and intermediate tarsi with entire soleæ below; the anterior tibiæ with thickened upper surface, broadly flattened and densely pilose below, with the inner contours shallowly emarginate on distal two-thirds and bearing a dense fringe of squarrose, yellowish hairs; the intermediate and posterior tibiæ sulcate below, with a fringe of dense hairs; the inner contours of intermediate tibiæ slightly curved, with inconspicuously to strongly dilated and projecting apical angle; the inner contours of posterior tibiæ shallowly emarginate on distal three-quarters, with the apical angle very weakly to rather strongly curved inwards, but not dilated.

Ædeagus. — Almost identical with *A. cariniceps*.

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

Distribution (map 4). — South-eastern Belgian Congo. — Elisabethville Province: Luashi, XI.1933, F. FREYNE (5 spec., types BCM.); Lukoshi-Luco,

XI.1937, F. FREYNE (1 spec., BCM.); Bassin Lukuga, IV-VII.1934, H. DE SAEGER (2 spec., BCM.); Mukunkoto, XI.1937 (2 spec., I.R.); source Sosoka, II.1932, G. F. OVERLAET (1 spec., BCM.); source Lubilash, XI.1937, F. FREYNE (1 spec., BCM.).

ONCOTIPHALLOPS n. gen.

Agreeing in all main characters with *Anchophthalmus*, but readily distinguished by the double sulci on lateral portions of pronotum. Generically differentiated by the *Oncotini*-like structure of apicale of aedeagus.

Type species is *Oncotiphallops barbosai* from Central Portuguese East Africa. Monotypical.

[*Oncotiphallops barbosai* n. sp.]

(Fig. 114.)

Of the elongate shape of the *silphoides* group of *Anchophthalmus*. Upper surface dull to sericeous. Head above densely rugose. In the ♂ the apical segment of maxillary palpi very strongly dilated, about as broad as the combined length of the second and third antennal segments. Mentum as in *Anchophthalmus*. Antennæ long, strongly accrescent and compressed distally; the two preapical segments transverse; apical segment transverse, with obliquely truncate apical margin. Pronotum transverse, broadest a little in front of middle, very densely and coarsely rugose, with the sides rounded and narrowed towards base. Anterior margin and base strongly emarginate and bi-sinuate, respectively. Lateral carina complete, much narrower than the third antennal segment. Lateral portions with a longitudinal convexity, extending from base to anterior margin, flanked by a longitudinal sulcus on both sides. Base completely marginate. Underside of prothorax impunctate, but the flattened submarginal area of episternum of prosternum rugose; intercoxal apophysis horizontally produced, with obtusely pointed apex of horizontal portion. Elytra slightly broader than pronotum, convex laterally, with subparallel to weakly rounded sides which are shallowly sinuate behind the obtusely rounded to bluntly rectangular humeral angles. Primary rows with rather strong, more or less transverse, dense punctures, becoming fine and scattered on apical declivity; there are about 35 punctures in the fourth row. Secondary intervals covered densely with extremely fine punctures; the four inner intervals flat to slightly convex apically, the lateral intervals convex to subcostate apically; the eighth and ninth intervals narrower than the adjacent primary rows; the third, fifth and seventh intervals usually broader than the alternating even intervals. Pseudopleural crest dorsally concealed by the lateral convexity of elytra along middle section. Pseudopleura constructed as in *Anchophthalmus*, complete and with sharply separated epipleural and pseudopleural

carinæ apically; sericeous, densely micro-sculptured and punctured. Metasternum short, as in *Anchophthalmus*. Abdomen with very fine and scattered punctures on proximal sternites, densely and distinctly punctured on anal sternite; the latter immarginate. Legs non-dimorphic. In the ♂ the anterior tarsi inconspicuously larger than in the ♀, on underside with scarcely larger tomentose patches on extreme sides of segments; anterior tibiæ very faintly curved; intermediate and posterior tibiæ with entirely straight inner contours.

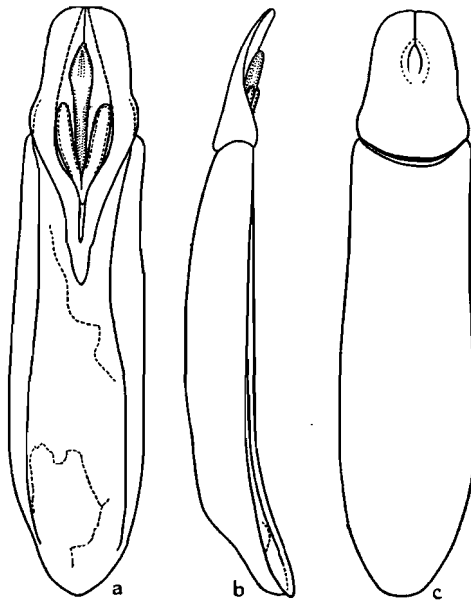


FIG. 114. — Aedeagus of *Oncotiphallops barbosai* n. sp.

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

Aedeagus (fig.114). — Apicale only slightly narrower than basale, broad, with complanate and lamini-form parameres. The latter subparallel to very slightly dilated towards the broadly rounded to subtruncate apex, with sharp median division, very strongly shiny, polished dorsally and ventrally, transversely impressed across middle on dorsal portion, with abruptly demarcated ventral groove distally, entirely complanate and sharply lamini-form, in lateral aspect with thin, very sharp edges which are straight or very slightly curved dorsad (and not ventrad as in most of the *Anchophthalmus*). Penis and the distal portion of lacinia exposed, enclosed by the inflexed and basally produced alæ of base of apicale. Basale long, with

almost subparallel sides, about four times as long as apicale, with broad ventral groove, enclosing the basally produced inflexed alæ of apicale with the penis plus lacinia.

Dimensions. — Length 13 to 14 $\frac{1}{2}$ mm, width 6 $\frac{1}{4}$ to 7 mm.

Relationship. — *O. barbosa* is very closely allied to the *Anchophthalmus* of the *silphoides* group. It recalls strongly the sympatric *A. nyasicus*, with which it agrees in the similar sculpture and even cuticle of elytra, the similar shape of body and the non-dimorphic legs, but is readily distinguished by the double sulci and longitudinal convexity of pronotal sides and the narrow lateral carina of pronotum. The structure of ædeagus is quite unique and the formation of the laminiform apicale is the same as in the *Oncotini*; the presence of lacinia, however, as well as the general morphology of body agree completely with the *Platynotini*.

Distribution (map 6). — Central Portuguese East Africa. — Southern Nyassa Province: Mutuali, IV.1954, A. J. BARBOSA (2♂♂, 1♀, types Centro Investigação Cient. Algodoeira, Lourenço Marques).

Dedication. — Named in honour of its discoverer, Dr A. J. BARBOSA, chief entomologist to the above Institut.

COSMOGASTER n. gen.

Although in appearance very different from *Anchophthalmus* by the elongate and shiny body, this new genus exhibits many important features of *Anchophthalmus*, such as the apical construction of pseudopleura, the strongly dilated apical segment of maxillary palpi in the ♂, similar shape of mentum and the practically non-dimorphic tarsi. It differs generically from *Anchophthalmus* by the following characters: —

Mentum similar to *Anchophthalmus*, with broadly and entirely exposed lateral wings, but the subparallel, strongly raised middle section is sharply carinate, without perpendicular lateral declivities, with the sides gradually sloping and continuous with the surface of lateral wings; the truncate apical portion of middle section is broadened, flat and there are some traces of oblique lateral carinæ running basad on to the surface of lateral wings. The pronotum is rather strongly convex, without a distinct submarginal depression of sides, consequently the discal convexity is practically in contact with the lateral carina; the basal carina is confined to the middle section of base; the small but lobiform posterior angles are sharply demarcated from base of pronotum by two very deep, semi-circular lateral emarginations of base, which are, together with the posterior angles, immarginate. The episternum of prosternum is coarsely and densely punctured. The elytra are long, subparallel, strongly shiny, slightly narrower than pronotum, strongly convex laterally, with coarsely punctured primary rows and alternating, convex

to subcostate, finely punctured, secondary intervals. The base is peculiar by exhibiting a prominent, arcuate lobe, formed by the produced and coalescent fourth and sixth secondary intervals; it is tri-sinuate between both lobiform processes. Pseudopleura and metasternum as in *Anchophthalmus*. Anal sternite specialized, with a deep and broad sulcus around apical margin, interrupted on middle of the latter and there with a minute, but strongly convex, tuberculiform carinula on each side, with both the carinulae enclosing a small, immarginate, slightly concave space on middle of apical margin of sternite. Legs as in *Anchophthalmus*, with slender tibiae, distinguished in the ♂, and with simple, non-dimorphic tarsi. Aedeagus as in *Anchophthalmus*.

Type species is *Anchophthalmus impressicollis* FAIRMAIRE, 1897, from British East Africa.

Monotypical.

[***Cosmogaster impressicollis*** (FAIRMAIRE).]

(Pl. VIII, fig. 3.)

*1897, *Anchophthalmus impressicollis* FAIRMAIRE, p. 121. — 1940 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 418, n° 5619.

Original description. — «Oblongus, convexiusculus, niger, nitidulus; capite prothoraceque subtiliter densissime punctatis, fere strigosulis, hoc lateribus rugosulo; capite arcuatim impresso, antennis prothoracis medium haud superantibus, apice rubiginosis, articulo 3° quarto sesquolongiore, penultimis transversis; prothorace transverso, antice tantum angustato, lateribus medio utrinque et basi impressiusculo, angulis posticis sat latis, modice productis, apice paulo obtusis; scutello brevissimo; elytris oblongo-ovatis, striato-punctatis, punctis magnis, sat profundis, intervallis convexis, crenatis, externis magis costatis, 3° postice magis elevato; subtus cum pedibus nitidior, subtiliter punctulatus, abdomine subtiliter striolato, prosterno medio fortius punctato, inter coxas impresso. — Long. 14 mill. — Plus petit, plus étroit, plus parallèle que le précédent (*Anchophthalmus clathratus*) et ressemblant un peu aux *Selinus*, se rapproche surtout du *densaticollis* FAIRMAIRE, mais le corps est plus brillant, plus étroit, les angles postérieurs du corselet sont échancrés en dedans et plus saillants, les stries des élytres sont bien plus fortement ponctuées avec les intervalles relevés.»

Remarks. — Head above rugosely punctured. Antennae dilated distally, with strongly transverse preapical segments. Apical segment of maxillary palpi in the ♂ slightly less strongly dilated than in *Anchophthalmus*, but a little broader than the combined length of the second and third antennal segments. Pronotum slender, broadest in front of middle, there about one and a half times as broad as long, with the sides weakly narrowed in an almost straight line towards the inwardly bent outer contours of posterior

angles. Anterior margin deeply emarginate, with very strongly produced, sharply acute anterior angles. Lateral carina much narrower than third antennal segment. Integument covered densely with deep, rather coarse, round and separated punctures on disc, becoming slightly and longitudinally wrinkled towards anterior margin, very densely rugose on lateral portions. Prosternum with rather fine, deep, round punctures; episternum with coarse, deep punctures, becoming densely rugose towards sides; intercoxal apophysis rugose, horizontally produced, with pointed, subtuberculate apex of horizontal portion. Elytra subparallel, shiny as is the pronotum, with obliquely rounded humeral angles. Primary rows with coarse, round, well spaced punctures, the fourth row with about 20 to 25 punctures; slightly arranged in pairs. Secondary intervals with very fine, scattered punctation, impinged by the coarse punctures of primary rows; the alternating even intervals less convex than the subcostate odd and lateral intervals; the latter narrower than the adjacent primary rows. Pseudopleural crest concealed by lateral convexity of elytra behind middle (dorsal aspect). Pseudopleura densely punctured. Legs slender. In the ♂ the anterior tarsi not dilated, on underside of segments with small lateral patches of a poriferous tomentosity; the anterior tibiæ excavate and smoothed below, but with simple, shallowly curved inner contours; the underside of intermediate and posterior tibiæ broadly excavate and smoothed; the inner contours of intermediate tibiæ very shallowly emarginate on distal two-thirds, but with strongly prominent, obtusely dilated and inwardly curved apical angle; the inner contours of posterior tibiæ with very shallow emargination on distal two-thirds and the apical angle slightly to inconspicuously curved inwards.

Ædeagus. — Large. The apicale with continuously converging outer contours. Apices of parameres obtusely rounded and strongly bent ventrad. Ventral groove with exposed penis and apically pointed lacinia. Basale very long, only slightly broader than apicale, weakly dilated in a straight line towards base, about four and a half times as long as apicale.

Dimensions. — Length 14 mm, width 5 $\frac{1}{4}$ mm.

Type locality — «Ikouta» (South-eastern British East Africa). Type probably in Museum Paris.

Distribution. — South-eastern British East Africa. — Ukamba District: Luitpold Mountains (1♂, T.M.); Ikutha. — Sejidie District: Tsavo River, V.1913, BAYER (1♂, BCM.).

PHALLOCENTRION n. gen.

Diagnosis. — Upper surface dull. Eyes strongly constricted by genal canthus. Antennæ slender, with moderately dilated and compressed distal segments. Apical segment of maxillary palpi in the ♂ only little broader than in the ♀, about one-third broader than long and as broad as the third

antennal segment is long. Mentum with broadly exposed distal half of lateral wings; the middle section twice as broad as lateral wings, with sharply carinate lateral margins and very fine median carinula; the sides broadly rounded and dilated proximally, and narrowed in a straight line towards the subtruncate apical margin. Pronotum depressed, with broad submarginal depression, transverse, with deeply emarginate anterior margin, posteriorly narrowing sides and deeply bi-sinuate base. Lateral carina rather broad, weakly raised; basal carina complete. Integument covered with rather scattered to aggregated, moderately strong to coarse punctures. Prosternum together with episternum only shallowly, sparsely punctured; inter-

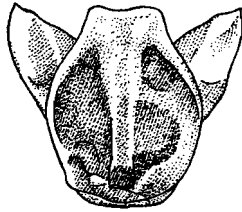


FIG. 115. — Mentum of *Phallocentrion praelacinatum* n. sp.

coxal apophysis horizontally produced. Elytra strongly flattened discally, very strongly convex on sides, with almost re-entrant ninth interval, reflected humeral angle, intra-humeral cavity of articulation surface, and with weakly rounded sides. Primary rows lineate and finely punctured; secondary intervals broad, weakly to strongly convex laterally, with fine, scattered punctures. Pseudopleura complete, with the apical construction as in *Anchophthalmus*, but narrow and occupying practically only the inner half of the ventrally reflected portion of elytra, whereas the outer half is composed of the ninth interval on basal part, of the ninth plus eighth intervals on posterior part. Pseudopleural crest distinctly visible only basally and apically (dorsal aspect). Metasternum short. Anal sternite of abdomen immarginate. In the ♂ the anterior and intermediate tarsi distinctly, the former strongly dilated, soleate below; the underside of anterior tibiae with broad subtomentose stripe of yellowish hairs.

Ædeagus. — Of quite peculiar, but very different structure in both hitherto known species. The penis and lacinia entirely exposed, the latter extremely long and complanate in one species, short and subcylindrical in the other. Parameres complanate and laminiform in one species, convex and with inflexed alae ventrally in the other.

Dimensions. — 11 $\frac{3}{4}$ to 18 mm long.

Relationship. — On account of the complete and similarly constructed pseudopleura of elytra only allied to *Anchophthalmus* and similar in habitus. Sharply separable from this genus by the entirely different formation of mentum, the peculiar structure of ædeagus, the only slightly dimorphic maxillary palpi, and particularly by the narrow pseudopleura, leaving exposed a rather wide portion of elytral surface ventrally. On account of the last character *Phallocentrion* is differentiated from all the other African *Platynotina*, recalling to a certain extent the Indian platynotoid *Platynotina*.

Distribution. — The only existing Trans-Tropical group within the anchophthalmoid *Platynotina*, occurring in the northern part of the Belgian Congo, the Ubangi-Chari region of the French Congo, and apparently extending as far west as the Gold Coast.

Type species. — *Selinus edentatus* GEBIEN, 1914.

KEY.

- Pronotum less strongly narrowed posteriorly, with the sides not or only very shallowly sinuate in front of posterior angles; punctuation fine, well separated to rather scattered on disc, concentrated but not distinctly confluent on submarginal depressions. Secondary intervals on elytra rather strongly convex laterally and apically; the bristles of setiferous punctures extremely short and of microscopical size. Ædeagus with very broad, entirely complanate, laminiform parameres; lacinia short and subcylindrical throughout, extending only to the basal quarter of parameres.

[*Phallocentrion edentatum* (GEBIEN).]

(Pl. VIII, fig. 4; Fig. 116.)

*1914, *Selinus edentatus* GEBIEN, p. 47. — 1938-1942, GEBIEN, p. 417, n° 5587.

Original description. — «Oval, schwarz, matt, ♂ vorne flachgedrückt, ♀ kräftig convex. Kopf flach, fein und dicht, tief und gleichmässig punktiert, jeder Punkt mit einem mikroskopischen, silberweissen Härchen; Clypealsutur kaum angedeutet, Fühler ziemlich kurz, gegen die Spitze kräftig compress, die angegebenen Maasse von der Breitseite genommen: Glied 3 etwas kürzer als 4 und 5, 4 ist fast $1\frac{1}{2}$ mal so lang wie 5, noch ganz cylindrisch, 5 erweitert sich schon gegen die Spitze, vom 4. ab nehmen die Glieder allmählich an Länge ab, an Breite zu, das vierte ist viel länger als breit, das 8. so lang wie breit, 9.-11. quer, das letzte mit schräger Endkante und nach aussen gerichteter Spitze. Mentum wie bei *planus*, *convexipennis*, *plicicollis*, trapezisch, Seiten ganz gerade, Vorderecken sehr spitz, etwas nach vorne gerichtet, die Mittellinie ist von der Basis bis zum ersten Drittel stark erhöht, aber nicht gekielt, vorn ist eine starke,

umgekehrt trapezische Erhabenheit, deren hohe Kanten nach der Mitte der Seiten laufen, und deren starker, vorderer Absturz fast gerade ist, die vorderen Flügel des Mentums sind flach, die Basis jederseits der Mitte mit länglicher Grube. Der Kehleinsatz ist höchst fein querverieft, er bildet ein Stridulationsorgan. Auch am toten Tier lässt sich durch Auf- und Niederneigen des Kopfes der zirpende Ton erzeugen. Das Organ in beiden Geschlechtern vorhanden. Halsschild stark quer, fast doppelt so breit als in der Mittellinie lang, die Winkel stark und spitz nach vorn, resp. hinten gezogen, die Seiten stark gerundet, vor der Mitte oder etwas dahinter am breitesten, auch nach hinten verengt, und mehr oder weniger deutlich ausgeschweift, Basis $1 \frac{1}{2}$ mal so breit wie die Spitze, die Basis ist vollständig, die Spitze nur in den seitlichen Dritteln fein gerandet. Die Seitenrandung ist etwas dicker, wulstiger, die Randlinie ist aber im letzten Drittel undeutlich oder ganz erloschen; Punktierung fein, tief, dicht, seitlich wenig gröber, die Hinterecken treten sehr viel weiter nach hinten als die Mitte der Basis. Schildchen halbkreisförmig, glänzend, fein punktiert. Flügeldecken mit abgeschrägten Schultern, die aber, schwach vortretend, gut prononciert sind, die Punkte der Streifen sind sehr fein. Die sehr fein und wenig dicht punktierten Interstitien sind auf der Scheibe wenig, seitlich stark konvex, der Grund ist, wie der des Pronotums, mikroskopisch fein lederrunzlig und in den Punkten mit äusserst kurzen, nur bei starker Vergrößerung sichtbaren Haaren versehen. Prosternum waagrecht, mit senkrechtem Absturz, undeutlich oder nicht gefurcht. Alle Schenkel und Schienen einfach, die Hinterschenkel nicht ausgerandet, die Vorderschienen auch beim ♂ gerade. Die Vordertarsen der ♂♂ nur schwach, Mitteltarsen nicht erweitert. Länge : $13 \frac{1}{2}$ - $16 \frac{1}{2}$ mm — Von weitaus den meisten westafrikanischen Arten *angulatipes*, *crenatus*, *convexipennis*, *planus*, *striatus*, *plicicollis*, *calcaripes*, *curtulus*, durch ungezähnte Beine der ♂♂ verschieden; bei *laevistriatus* sind die Vordertibiae innen winklig erweitert. Es bleibt der mir unbekannt *S. punctatostratus* GERSTÄCKER, über dessen sexuellen Dimorphismus der Autor nichts sagt, aber der hinten parallele Halsschild, die etwas glänzende Oberseite und die andere Gestalt des Hinterkörpers lassen eine Vereinigung der beiden Arten nicht zu. »

Remarks. — GEBIEN describes the dilation of anterior tarsi in the ♂ as being weak. This relative observation results from his comparison of *edentatus* with only West African species which, however, belong all to the selinoid *Platynotina*, usually exhibiting very strongly dilated anterior tarsi in the ♂. On account of the same wrong opinion, he attributed a great importance to the non-dimorphism of tibiae and femora, as in the selinoid *Platynotina* these parts of

body usually are dimorphic. In actual fact, *Phallocentrion edentatum*, is a typical representative of the anchophthalmoid *Platynotina*, as a such displaying an only weak dimorphism of legs, but relatively strongly dilated anterior tarsi in the ♂, if compared with the other anchophthalmoid *Platynotina*. However, GEBIEN's misinterpretation of the systematic position is quite understandable, as his species is the only existing West African member of the generally East African group of anchophthalmoid genera.

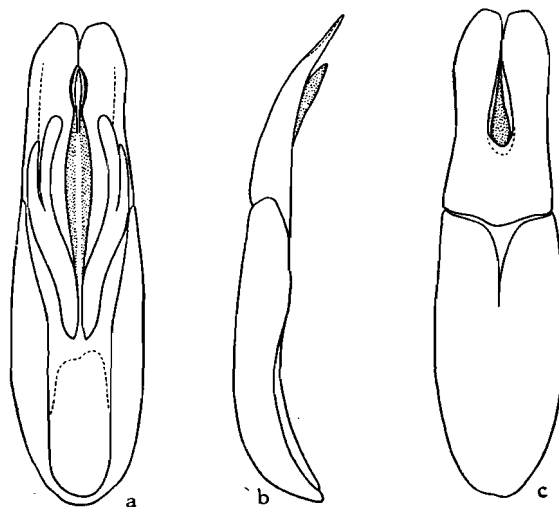


FIG. 116. — Aedeagus of *Phallocentrion edentatum* (GEBIEN).
 a : ventral surface; b : lateral view, with the ventral surface at right;
 c : dorsal surface.

In the ♂ the underside of anterior tibiae is provided with a longitudinal sulcus, densely filled with a subtomentose, yellowish pilosity.

Aedeagus (fig. 116). — Of quite peculiar construction. The apicale entirely complanate and laminiform, in this respect similar only to *Oncotiphallops*; the parameres strongly divided, broadly gaping, with the sides practically subparallel from base to apical quarter, the latter constricted, with straight and broadly truncate apices. Ventral groove entirely open; the penis slender, subparallel, sharply pointed apically, extending to the apical quarter of parameres; the lacinia subcylindrical, but compressed, rather strongly curved, considerably shorter than penis, inserted at about beginning of the median third of length of tegmen, with obtuse apices. Basale with

slightly rounded sides, very little broader than apicale and only moderately broader than the parameres are apically, less than twice as long as the apicale.

Dimensions. — Length $13 \frac{1}{2}$ to 15 mm, width $6 \frac{1}{2}$ to $7 \frac{1}{2}$ mm.

Type locality. — « Fort Crampel » (Ubangi-Chari territory of the French Congo). Type probably in Museum Berlin.

Distribution. — From Central French Equatorial Africa probably to the Gold Coast. — French Equatorial Africa: Fort Crampel (1♂ cotype ex Museum Frey); btwn. Fort Crampel and Fort Possel (teste GEBIEN); Fort Sibut (1♀, BCM.). — Gold Coast: Upper Sanga River (1♂, 2♀ ♀, T.M.).

- Pronotum strongly narrowed posteriorly, with the sides sensibly sinuate in front of posterior angles; integument covered with an extremely dense, coarse and partially rugose punctation, becoming aggregated on submarginal depression. Secondary intervals on elytra weakly convex laterally; the bristles of setiferous punctures very short, but well perceptible. Ædeagus with normal, apically converging parameres, convex dorsally and concave ventrally; lacinia extremely prolonged, strongly complanate and foliaceous on distal two-thirds, almost reaching the apex of parameres.

[**Phallocentrion prælacinatum** n. sp.]

(Pl. IX, fig. 1; Figs. 115, 117, 118.)

Externally almost identical with *Ph. edentatum* and clearly separable only by the above mentioned differences, but the ædeagus (figs. 117, 118) of quite different and very peculiar construction. The ædeagal tegmen is much more elongate than in *edentatum*; the parameres are not complanate and laminiform as is the case in *edentatum*, but convex, grooved and with narrow inflexed alæ ventrally, strongly gaping, with the sides practically subparallel on proximal two-thirds, converging on distal third, with obliquely cut and slender apices. The ventral groove is entirely open; the penis baculiform, very long, and, as are the lacinia, inserted at the end of the basal quarter of the length of tegmen; the lacinia of very peculiar shape, as long as the penis, almost extending to the apex of parameres, subcylindrical basally, but becoming strongly complanate and foliaceous on the subparallel, distal two-thirds, with broadly rounded apices. The basale slender, with almost subparallel sides, not broader than the base of apicale and considerably broader than the acuminate apex of parameres, but short and only one and a half times as long as apicale.

In the ♂ the maxillary palpi and legs as in *edentatus*, but the inner apical angle of all tibiæ very slightly, almost inconspicuously dilated (as is the case in many species of *Anchophthalmus*). Mentum fig. 115.

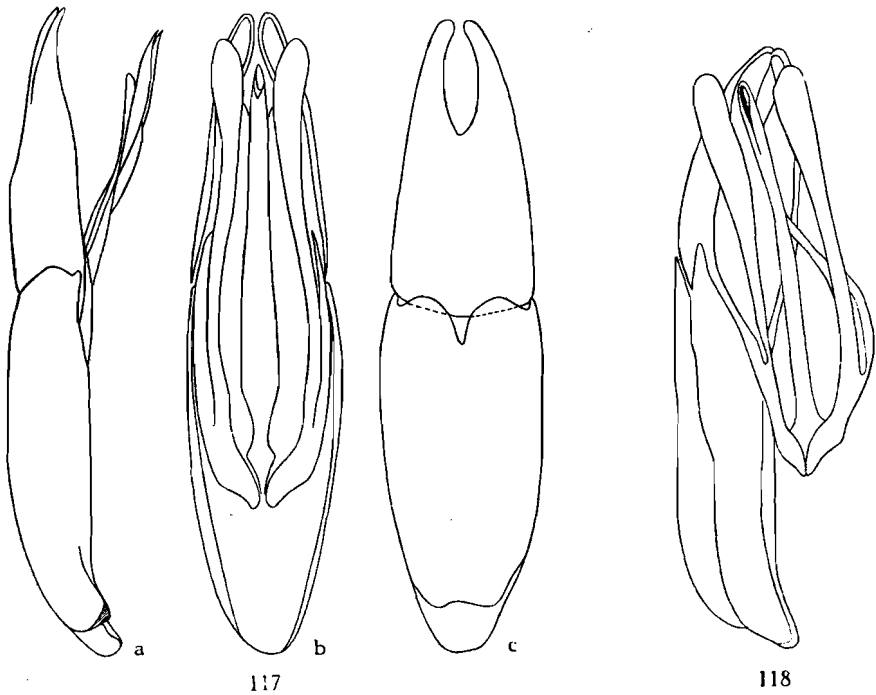


FIG. 117. — Aedeagus of *Phallocentrion praelacinatum* n. sp.

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

FIG. 118. — *Phallocentrion praelacinatum* n. sp.

Aedeagus in diagonal view, with lifted inner sclerites and inflexed alae of parameres, at which the lacinia are fastened.

Dimensions. — Length $12 \frac{1}{2}$ to 18 mm, width 6 to $8 \frac{1}{4}$ mm.

Distribution (map 4). — Central-northern Belgian Congo. — Northern Oriental Province: Tukpwo, Uele, VII.1937, J. VRIJDAGH, L. LECONTE (a long series, types BCM.); Gwane, Bas Uele, 1930, J. WALKIERS (4 spec., BCM.); Bambesa, II.1939, J. VRIJDAGH (15 spec., BCM.); Sassa country, 1895-1896, COLMANT (5 spec., BCM.); Dungu-Nyangara-Doruma, V.1912, M^{me} HUTEREAU (2 spec., BCM.); Doruma-Sili, V. 1912, M^{me} HUTEREAU (2 spec., BCM.). — Northern Equatorial Province: Banzyville, IV.1897, HERMANS (2 spec., I.R.).

SELINOID PLATYNOTINA.**ANCHOPHTHALMOPS** n. gen.

Diagnosis. — Upper surface sericeous, with fine, scattered punctation. Head above flat, with strongly constricted eyes. Antennæ with strongly compressed, transversely dilated distal segments. The apical segment of maxillary palpi strongly dilated in the ♂, almost as broad as the combined length of the second and third antennal segments. Mentum with narrow, sharply acute, only distally exposed lateral wings; the median section elongate, large, with slightly rounded and distally narrowing, edged sides, truncate apical margin and broadly, obtusely convex middle portion. Pronotum flat, transverse, with posteriorly subparallel sides, very weak submarginal depression, complete lateral and basal carinæ, emarginate anterior margin and bi-sinuate base. Integument from smooth to rather densely punctured. Prosternal apophysis horizontally produced, marginate and with broadly rounded apex. Elytra flattened discally, convex laterally, subparallel, with bluntly rectangular, non-prominent humeral angles. Primary rows lineate and finely punctured, secondary intervals broad, flat to convex. Pseudopleura occupying the entire ventrally reflected portion of elytra on basal half, leaving exposed a portion of the ninth secondary interval towards apex; abbreviate posteriorly, there with strongly sinuate pseudopleural crest and coalescent with epipleura. Metasternum short, about half the length of basal sternite of abdomen, between meso and metacoxal cavities much shorter than metacoxal cavities and about as long as the pre-metacoxal sclerite. Proximal sternites of abdomen in the ♂, sometimes also in the ♀, with a small tubercle on middle; anal sternite with fine margination along basal half of sides, sometimes entirely marginate. Legs slender; the tibiæ weakly dilated towards apex, with subcylindrical, uniformly convex upper surface. In the ♂ the anterior and intermediate tarsi moderately dilated and soleate below; anterior tibiæ, often also the intermediate tibiæ and posterior femora, with distinctive characters.

Ædeagus. — Basale more or less strongly dilated, broader than the spiniform, very narrow and elongate parameres of apicale. Penis and lacinia baculiform and narrowly exposed.

Dimensions. — 12 to 20 ½ mm long.

Relationship. — On account of the abbreviate pseudopleura of elytra belonging to the many genera of the selinoid *Platynotina*. The only character which still shows somewhat related to *Anchophthalmus* is the

strongly dimorphic apical segment of maxillary palpi. Allied to *Monodius* and *Selinus*, very similar in the general habitus of body, somewhat intermediate between both genera with regard to the margination of anal sternite of abdomen, but sharply separated by the strongly dimorphic maxillary palpi and the spiniform parameres of apicale of ædeagus.

Type species. — *Anchophthalmops brevipleurum* n. sp.

Distribution. — East African, from South-eastern British East Africa spreading southwards as far as Southern Rhodesia and Central Portuguese East Africa.

KEY.

1. In the ♂ the intermediate tibiæ with preapical tooth on inner contours 2
 — In the ♂ the intermediate tibiæ inermous, with simple and straight inner contours.

[*Anchophthalmops brevipleurum* n. sp.]

(Figs. 119, 120.)

Of elongate shape, sericeous and bare above. Head above covered densely with round, deep punctures, becoming very fine, aggregated on frons and epistome. Epistome not separated from genæ. The latter subparallel and in line with outlines of eyes and subparallel tempora. Apical segment of maxillary palpi strongly dilated and securiform in the ♂, only slightly broader than long in the ♀. Mentum fig. 119. Pronotum large, somewhat quadrangular, broadest at, or a little in front of, middle, about two-thirds broader than long, with micro-sculptured cuticle and uniform, fine, rather scattered punctures, becoming only slightly more concentrated on submarginal depression. Anterior margin finely carinate only laterally, moderately emarginate, with produced anterior angles. Sides rounded and narrowed anteriorly, but subparallel on basal half, with shiny lateral carina; the latter much narrower than the third antennal segment; submarginal depression rather broad, weak, separated from the flattened disc by a shallow longitudinal sulcus. Base broadly bi-sinuate, with produced, very sharp, acute posterior angles. Underside of prothorax smooth, with only a few extremely fine punctures on sides of prosternum. Elytra subparallel, broader than pronotum, about two-thirds longer than broad, flattened discally, with convex sides. Base considerably broader than pronotal base, with rectangular, blunt humeral angles. Primary rows sharply impressed, composed of very fine, dense punctures, of which about 45 to 50 are in the fourth row. Secondary intervals broad, with extremely fine, rather scattered, almost inconspicuous punctures,

flat, but becoming more or less strongly convex towards sides and apex; on apical declivity the coalescent ninth + seventh + third intervals forming a kind of obtusely bunched up, broad edge, running obliquely towards apex. Pseudopleural crest concealed behind middle (dorsal aspect). Pseudopleura practically smooth, only with a few obsolescent, shallow punctures. Abdomen with fine, scattered punctures, concentrated on anal sternite; the latter finely marginate along sides. In the ♂ the middle of apical margin of basal and second sternites with a minute, slightly dentiform, prominent tubercle, sometimes also the middle of base of intercoxal process of basal sternite callose or with a flattened tubercle. In

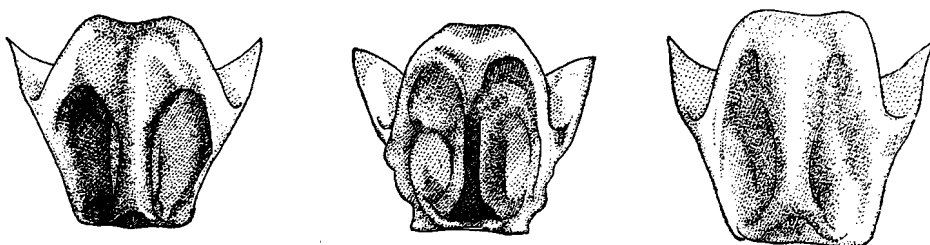


FIG. 119. — Mentum of various specimens of *Anchophthalmus brevipleurum* n. sp.

the ♂ the anterior tarsi moderately dilated, considerably narrower than the apex of anterior tibiae, about as broad as the penultimate segment of antennae; the anterior tibiae with very deep, hairy distal excavation on underside, curved, and the inner contours with strong emargination on apical third, sharply and angularly demarcated proximally; the underside of intermediate and posterior tibiae sulcate, the inner contours straight and inermous; posterior femora with a dense brush of reddish brown to testaceous hairs on proximal two-thirds.

Ædeagus (fig 120). — Basale strongly dilated, several times broader than the spiniform, narrow and elongate parameres of apicale. Penis and lacinia baculiform, narrowly exposed.

Dimensions. — Length 12 to 17 mm, width 6 to 8 ½ mm.

Distribution. — From Southern Rhodesia and Portuguese East Africa to Southern Tanganyika Territory. — North-eastern part of Southern Rhodesia: Bindura, Mazoe District, D. COGHILL (2♀♀, allotype S.A.M.). — Central and Northern Portuguese East Africa: Pungwe Bay, Sofala e Manica Province, XII.1903, P. KRANTZ (1♂, holotype T.M.); Beira (1♀, BCM.); Mutuali, Southern Nyassa Province, IV.1954, A. J. BARBOSA (1♂, Centro Investigação Cient. Algodoeira, Lourenço Marques). — Southern Tanganyika Territory: Lukuledi (1♀, M.St.).

2. In the ♂ the basal sternite of abdomen with a strongly raised, somewhat lamelliform, transverse, median tubercle in front of apical margin, becoming flattened towards the latter. Size of body smaller, 13 ½ to 15 mm long.

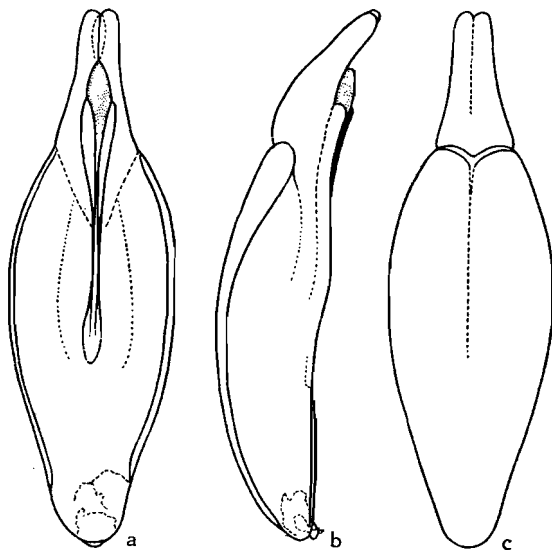


FIG. 120. — Aedeagus of *Anchophthalmus brevipleurum* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

[**Anchophthalmops ventralis** (GEBIEN).]

*1910 a, *Selinus ventralis* GEBIEN, p. 375, figs. 1-3. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5605.

Original description. — « Ziemlich lang oval, mattschwarz, ohne Schüppchen. Kopf äusserst fein und dicht punktiert, am Clypeus fast unpunktiert, der Ausschnitt bogig, tief, er nimmt vorn die ganze Breite des Vorderrandes ein, seine Vorderecken deutlich gewinkelt. Der Canthus ist um ein geringes breiter als die Augen, diese hinter ihm sehr schmal; Innenrand der Augen nicht gefurcht. Die Fühler erreichen lange nicht die Basis des Halsschildes, das dritte Glied nur wenig länger als das vierte, beide zylindrisch, das 5. und 6. deutlich konisch, die folgenden Glieder bilden eine deutlich flach gedrückte Keule, sie sind sämtlich quer, die beiden vorletzten fast doppelt so breit wie lang. Das Mentum in der Mitte der Länge nach kräftig erhöht, nicht gehöckert. Halsschild nur

1 $\frac{1}{3}$ mal so breit als in der Mitte lang, seine Seiten in den letzten zwei Dritteln parallel, der glänzende Seitenrandkiel ziemlich dick, gleichmässig; die Seiten vor den Vorderecken unmerklich ausgeschweift, diese selbst einen scharfen, ca. 80° grossen Winkel bildend, die Hinterwinkel reichen soweit nach hinten wie der basale Mittellappen, die Basis jederseits neben den Winkeln fein, oft undeutlich gerandet, meist die Randlinie längs der ganzen Basis deutlich; der seitliche Ausschnitt breit verrundet, nicht sehr tief; die Oberfläche ganz glatt, seitlich liegen jederseits zwei flache Längseindrücke. Die Schultern der Flügeldecken sind deutlich breiter als die Basis des Halsschildes, der Seitenrand ist beim ♂ ganz, beim ♀ nur im ersten Drittel übersehbar, er ist an den Schultern etwas breiter und schwach aufgebogen; der Nahtstreifen ist flach, alle übrigen sind sehr stark gewölbt, die Punkte der Streifen fein und eng. die Zwischenräume glatt, der Nahtstreif ist an der Spitze ganz kurz hervorgehoben. Epipleuren und Propleuren ganz glatt, die ganze Unterseite glänzend, Prosternum ungefurcht, der Fortsatz am Ende ganz verrundet, der Absturz gerundet senkrecht. ♂ : Erstes Bauchsegment vor dem Hinterrand in der Mitte mit einer hohen, von vorn nach hinten etwas verflachter, fast etwas lamellenförmiger Tuberkel (ganz wie bei manchen *Blaps*-Arten), das zweite Segment in der Mitte mit einem feinen Längskiel von ca. $\frac{1}{6}$ Segmentlänge, bei einem der ♂♂ statt des Kieles eine feine rundliche Tuberkel. Die Hinterchenkel flach ausgehöhlt und unten in den ersten $\frac{2}{3}$, die Mittelchenkel in der Basalhälfte mit gelbem, kurzem Haartoment (wie bei vielen *Pedinus*-Arten). Vorderschienen gegen das Ende verdickt, innen in der Endhälfte vorn mit tiefem Ausschnitt, dessen oberes Ende von der Basalhälfte scharf stumpfwinkelig abgesetzt ist (ähnlich wie bei *trivialis*, nur ist der Bogen und Winkel viel kräftiger), der vertiefte Eindruck innen mit Behaarung; die Mittelschienen innen vor dem Ende mit kurzem, spitzem Zahn. ♀ : Abdomen und alle Beine einfach. L. 13 $\frac{1}{2}$ - 15 mm — Diese Art ist *Selinus trivialis* am ähnlichsten. Sie ist aber wesentlich grösser, die Interstitien der Flügeldecken sind stark erhaben, die Spitze beim Nahtstreifen ausgezeichnet. »

Type locality. — Dar-es-Salaam.

Distribution. — North and Central-western Tanganyika Territory. — Dar-es-Salaam (1♂ cotype ex Museum Frey); Mombo in the Usambara District (teste GEBIEN).

- In the ♂ the basal sternite of abdomen with a strong, roundish tubercle on the middle of intercoxal process, very close to anterior margin, plus a very fine, elongate, somewhat cariniform, weakly raised tubercle in front of the middle of apical margin of sternite. Size of body larger : 16 to 20 $\frac{1}{2}$ mm long.

[*Anchophthalmops maximus* n. sp.]

(Pl. IX, fig. 2; Figs. 121, 122.)

Very closely related to *A. ventralis*, but of larger size, the pronotum distinctly punctured and the formation of abdominal tubercles in the ♂ different. The apical segment of maxillary palpi is strongly dimorphic, in the ♀ about as broad as the third antennal segment is long, in the ♂ considerably more strongly securiform

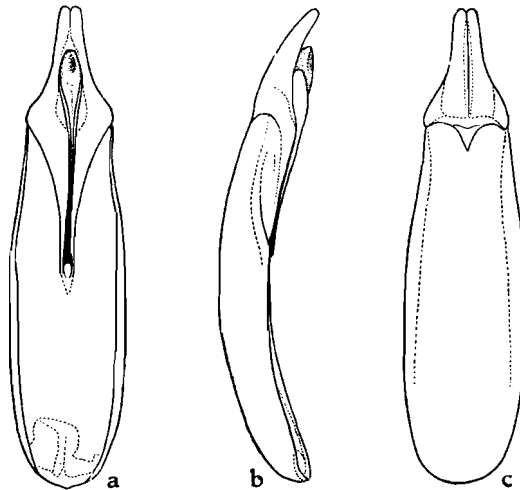


FIG. 121. — Aedeagus of *Anchophthalmus maximus* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

than in the ♀, about one and a half times as broad as long and slightly broader than the combined length of the second and third antennal segments. The middle section of mentum with the sides rounded and slightly narrowed towards the truncate and not demarcated apical margin; the median carina ending in front of the latter. In the ♂ also the second sternite of abdomen with a fine, elongate tubercle in front of middle of apical margin; in the ♀ the middle of intercoxal process of basal sternite with the same tubercle as in the ♂ or there simply callose. The legs (fig. 122) as in *ventralis*; the tooth on inner contours of intermediate tibiæ rather strong, triangular, sharply pointed, situated a little proximad from halfway between middle and apex. The anal sternite entirely marginate or with the fine marginal sulcus more or less widely interrupted on apex.

Strongly differentiated from *A. brevipleurum* by the larger size of body, the much finer punctation of pronotum, the convex and laterally subcostate secondary intervals on elytra, and in the ♂ by the more strongly dilated anterior tarsi, the deep distal emargination of inner contours of anterior tibiæ, sharply angular and dentiform on proximal end, the preapical tooth on inner contours of intermediate tibiæ, and the absent brush on underside of posterior femora. Agreeing with *brevipleurum* in the formation of abdominal tubercles in the ♂.

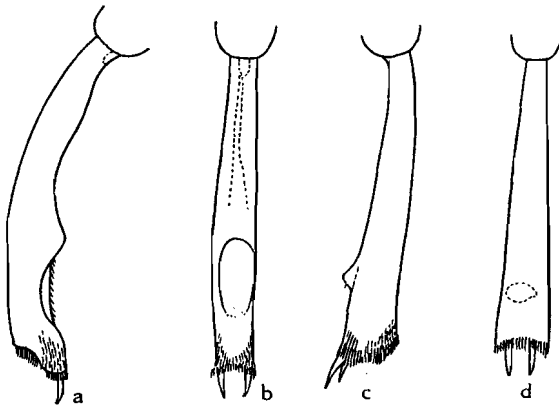


FIG. 122. — *Anchophthalmus maximus* n. sp.

a : anterior tibia of ♂ ; b : underside of anterior tibia of ♂ ; c : intermediate tibia of ♂ ;
d : underside of intermediate tibia of ♂ .

Ædeagus (fig. 124). — The basale not strongly dilated, but with the sides subparallel on proximal two-thirds, thence converging in a straight line towards apicale. The latter with narrowing sides of basal quarter, but the long, subparallel and spiniform parameres occupying the distal three-quarters; the parameres almost completely and deeply divided, with obtuse apices. Penis and lacinia narrowly exposed. The basale very long, five to six times as long as apicale.

Dimensions. — Length 16 to 20 $\frac{1}{2}$ mm, width 7 $\frac{1}{2}$ to 9 $\frac{3}{4}$ mm.

Distribution. — South-eastern British East Africa. — Merifano, IX.1932, C. G. MACARTHUR (3 ♂ ♂, holotype C.M.); Ziwani, IV.1933, C. G. MACARTHUR (1 ♀, allotype, C.M.); same locality, VI.1913, BAYER (1 ♀, BCM.); Nibulola, V.1913, BAYER (1 ♂, 2 ♀ ♀, BCM.).

MONIDIUS n. gen.

In general habitus very similar to *Anchophthalmops* and related to this genus, but confined to Tropical West Africa. Generically differentiated from *Anchophthalmops* by the unique structure of the large ædeagus, the non-dimorphic maxillary palpi, the simple and non-dimorphic abdomen, the entirely immarginate anal sternite of abdomen, the very strongly dilated anterior tarsi in the ♂, the distinctly dilated and soleate anterior tarsi in the ♀, and the triangularly narrowed middle section of mentum. Agreeing

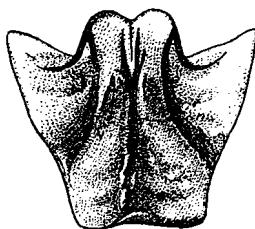


FIG. 123. — Mentum of *Monodius malaisei* n. sp.

with *Anchophthalmops* in the elongate shape of body, the subparallel posterior half of pronotum, the subparallel elytra, the fine and scattered sculpture on upper surface, the apically abbreviated pseudopleura, and the short metasternum.

Ædeagus very large, with very broad, almost bi-partite penis, and broad, apically differently shaped parameres.

Dimensions. — 11 ½ to 17 mm long.

Relationship. — The only selinoid Platynotina having an immarginate anal sternite of abdomen, abbreviate pseudopleura, subparallel posterior portions of pronotal sides, associated with large size of body. Isolated on account of the peculiar structure of ædeagus.

Type species. — *Selinus convexipennis* GEBIEN, 1904.

Distribution. — Western Tropical Africa.

Dedication. — Named in honour of Prof. THÉODORE MONOD, director of the Institut Français d'Afrique Noire and eminent student of the problems of the Sahara desert.

KEY.

1. Elytra shiny, with flat, densely and conspicuously punctured secondary intervals and very fine to narrowly lineate primary rows. In the ♂ the inner contours of intermediate tibiæ either inermous or with strongly projecting, large apical tooth 2
- Elytra sericeous, with convex, practically smooth and only microscopically punctured secondary intervals, and with strong, subsulcate primary rows. In the ♂ the inner contours of intermediate tibiæ with a strongly projecting, large preapical tooth between middle and apical angle 3
2. Body of smaller size : 11 ½ to 14 mm long. Extreme apex of elytra briefly caudate and distinctly demarcated from apical portion of sides, particularly so in the ♀; primary rows sharply lineate and impressed, without clearly discernible punctures, but usually smooth background of sulci. In the ♂ the inner contours of anterior tibiæ with pre-median tooth, the inner contours of intermediate tibiæ with inwardly curved apical angle.

[*Monodius convexipennis* (GEBIEN).]

(Pl. IX, fig. 3; Figs. 124, 125, 126.)

*1904, *Selinus convexipennis* GEBIEN, p. 2, pl. 1, figs. 1 a and 1 b. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 416, n° 5580.

Original description. — «Ungeflügelt. Oval, tiefschwarz, oben und unten glänzend. Kopf gleichmässig, dicht und fein punktiert, mit schwacher Spur eines Mittelkiesels, Clypeus in etwa $\frac{1}{6}$ Kreisbogen ausgeschnitten, Augen bis über die Hälfte eingeschnürt; Fühler lang, die Hinterecken des Halsschildes erreichend, Glied 3 $1\frac{1}{3}$ mal so lang wie 4, die folgenden bis zum zehnten konisch, länglich, dieses so lang wie breit, wie das letzte. Halsschild quer, im ersten Drittel nach vorn stark verengt, hinten parallelseitig, Vorderwinkel spitz, etwa 70° gross; Randung vorn unterbrochen, an den Seiten stärker als hinten. Oberfläche gewölbt, so dass zwischen dem Halsschild und den Flügeldecken ein leichter Eindruck entsteht; uneben : durch eine feine Mittellinie, zwei schräg in die Hinterecken laufende Längseindrücke und mehrere Gruben. Punktierung gleichmässig und sehr fein. Die Propleuren glatt und matt. Schildchen stark quer, grösser als bei *Selinus trivialis* GERSTAECKER. Flügeldecken mit stumpfen, etwas abgerundeten Schultern, Zwischenräume auf dem Diskus fast eben, an den Seiten und besonders hinten an den Verbindungsstellen der Streifen stark

konvex, deutlich und dicht punktiert; die tiefen, einfachen Streifen beginnen hinter der Basis und sind vorn nicht verbunden. Der Skutellarstreif ist ein kurzes, eingegrabenes Strichelchen. Epipleuren weitläufig aber deutlich punktiert. Unterseite glänzend, Prosternalfortsatz spitz, vorragend, nur an den Seiten fein gerandet. Vorderchenkel nach unten etwas verbreitert. An den Hintertarsen ist das erste Glied so lang wie die beiden folgenden zusammen. ♂ : Vorder-schienen gekrümmt, mit einem scharfen, nach unten gerichteten Zahn oberhalb der Mitte der Innenseite; Mittel- und Hinterschienen einfach, ungezähnt. Die Flügeldecken sind sehr breit, gemeinsam abgerundet; Vordertarsen verbreitert. ♀ : Schienen und Tarsen einfach. Flügeldeckenspitze in der Breite zweier Zwischenräume gemeinsam kurz schwanzförmig ausgezogen. Der Forceps ist sehr charakteristisch. Von oben gesehen ist er durchaus normal, einfach nach hinten verengt, die Spitze etwas niedergedrückt, er erscheint nur etwas plumper als gewöhnlich. Von unten aber ist er tief kahnförmig ausgehöhlt, in dieser Höhlung liegt ein sehr langer zarter Löffel und daneben liegen zwei kürzere Chitinspitzen. — Die Art ist aufs Nächste mit *Selinus planus* FABRICIUS verwandt, von derselben Grösse, aber zwischen Halsschild und Flügeldecken mehr sattelförmig eingedrückt, glänzender, mit unebenem Halsschild und vor allem durch den Forceps und beim ♀ durch die Bildung der Flügeldeckenspitze ausgezeichnet. — Länge $11 \frac{1}{3}$ - 14 mm, grösste Breite in der Mitte der Flügeldecken $6 \frac{1}{4}$ - 7 mm. »

Remarks. — In the ♂ the apical segment of maxillary palpi very slightly more strongly dilated than in the ♀, about as broad as the third antennal segment is long. Mentum with distally exposed triangular lateral wings; the middle section with strongly narrowed, carinate sides, distinctly demarcated small apical lobe and sharp, but very fine median carina. Pronotum with very fine, uniformly scattered punctures; submarginal depression moderately broad, very weak, separated from discal convexity by a very fine, shallow longitudinal sulcus. Pseudopleural crest concealed behind middle dorsally, inconspicuously sinuate to practically straight posteriorly. Apex of elytra caudate in both sexes (and not only in the ♀ as GEBIEN reports), but the caudate lobe minute in the ♂, conspicuous in the ♀. In the ♂ (fig. 126) the anterior and intermediate tarsi rather strongly dilated and soleate below; the anterior tarsi slightly narrower than apex of anterior tibiae, but considerably broader than the slender preapical segment of antennae; the second and third segments of posterior tarsi soleate below; the posterior tibiae with straight contours, the posterior femora with very fine fringe of scattered, short, yellowish hairs. In the ♀ all tarsi simple, but soleate below.

Ædeagus (figs 124, 125). — GEBIEN's drawing of the ædeagus (loc. cit., pl. 1, fig. 1a) is quite incomprehensible, as erroneously also portions of the last genital segment have been figured as parts of the ædeagus. — The ædeagal tegmen is very large, with continuously rounded outer contours of basale plus apicale. The apicale is broad, of triangular shape, with very strongly and in a

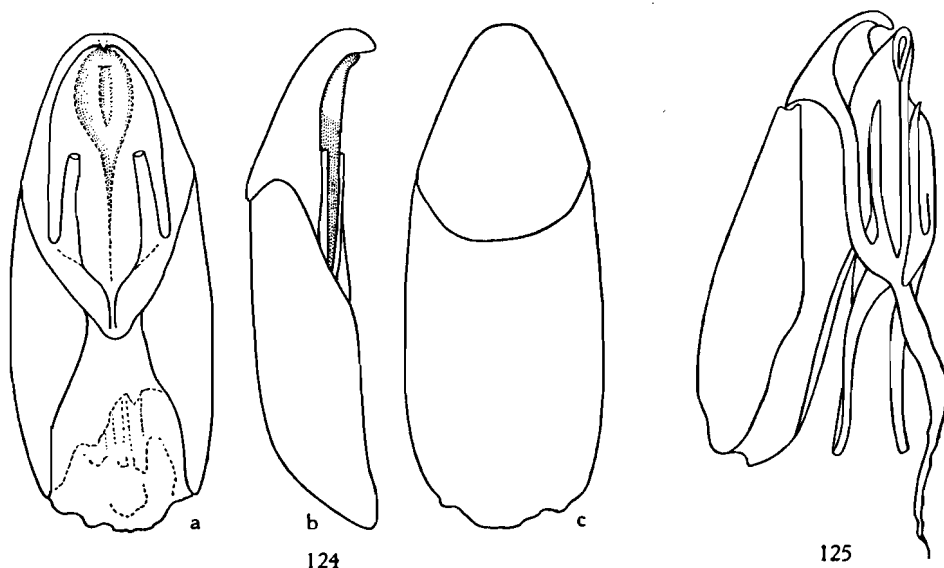


FIG. 124. — Ædeagus of *Monodius convexipennis* (GEBIEN) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 125. — *Monodius convexipennis* (GEBIEN) (ædeagus in diagonal view, with lifted inner sclerites and inflexed alæ of parameres, at which the lacinia are fastened).

straight line converging lateral outlines, smooth on dorsal surface and there with almost fused parameres, as the median division is extremely fine and confined to the extreme apex; apex pointed and strongly bent ventrad, forming a transverse hook in lateral aspect. Ventral groove very broad, with entirely exposed penis and lacinia. Penis very broad, several times broader than one of the lacinia, with lateral excavations for lacinia and with spoon-shaped apical portion of orifice. Lacinia moved to the sides of groove, styliform, subcylindrical, sharply pointed and straight apically. Basale about three times as long as apicale.

Dimensions. — Length $11 \frac{1}{2}$ to 14 mm, width $5 \frac{3}{4}$ to 7 mm.

Type locality. — « Camerouns », without specified locality, leg. Y. SJÖSTEDT. Type probably in Naturhistoriska Riksmuseum, Stockholm.

Distribution. — Cameroons, Gold Coast and Nigeria. — Gold Coast (teste GEBIEN). — Cameroons: Mukonje Farm, R. ROHDE (10 spec., I.R.); Abonando (2 spec., T.M.). — Nigeria: Mabeta, Victoria Div., VIII.1949, S. TITA (1 spec., M.C.A.); Mamfe, X.1949, B. MALKIN (1 spec., M.C.A.).

- Body of larger size : 17 mm long. Apex of elytra broadly rounded, without caudate lobe; primary rows composed of fine, round, closely following, conspicuous punctures, well visible also apically. In the ♂ the inner contours of anterior tibiae with post-median tooth, the inner contours of intermediate tibiae with the apical angle produced into a large, inwardly bent tooth.

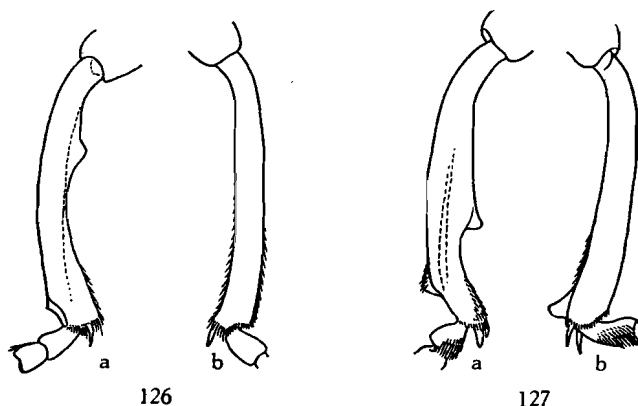


FIG. 126. — *Monodius convexipennis* (GEBIEN). — FIG. 127. — *Monodius gravis* n. sp.
a : anterior tibia of ♂; b : intermediate tibia of ♂.

[*Monodius gravis* n. sp.]

(Figs. 127, 128.)

Closely related to *M. convexipennis*, but of large size, strongly convex, the discal punctation of pronotum extremely fine, scarcely discernible, the primary rows on elytra much finer, not lineate, becoming evanescent on apical declivity (there sharply impressed in *convexipennis*), the secondary intervals with much finer punctation, entirely flat also laterally and apically (distinctly convex on sloping lateral portions in *convexipennis*). In the ♂ (fig. 128) the anterior and intermediate tarsi dilated as in *convexipennis*; the inner contours of intermediate tibiae with a strong tooth behind middle (in front of middle in *convexipennis*), thence deeply emarginate; the posterior tibiae very slightly curved; the posterior femora with dense brush of reddish brown hairs on proximal three-quarters of underside.

Ædeagus (fig. 127). — Very similar to *A. convexipennis*, but of larger size, the apicale with deep and complete median division dorsally, the penis much broader and bi-partite, the lacinia more strongly thickened basally, with the sharply pointed apices slightly curved outwards. Basale shorter, only two and a half times as long as apicale.

Dimensions. — Length 17 mm, width 8 ½ mm.

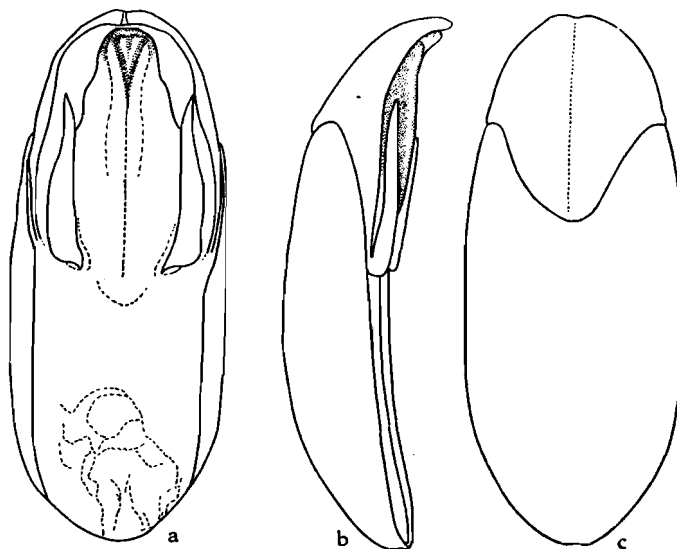


FIG. 128. — Ædeagus of *Monodius gravis* n. sp.

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

Distribution. — « Guinea WESTERMAN », a single ♂, holotype M.St.

3. In the ♂ the inner edge of underside of anterior tibiæ with angularly projecting median tooth, the inner contours therefore with more or less strong median dilation, depending on the angle of vision.

[***Monodius medius*** (FAIRMAIRE).]

(Figs. 129, 130, 131.)

*1897, *Selinus medius* FAIRMAIRE, p. 122. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 416, n° 5582.

*1920, *Selinus angulatipes* GEBIEN, p. 21. — 1938-1942, GEBIEN, p. 416, n° 5579. — (=syn. nov.).

Original description. — « Tout à fait intermédiaire entre *Selinus lævistriatus* et le *planus*; un peu plus court et plus petit que

le premier, plus étroit et un peu plus grand que le second. Le corselet est presque semblable à celui du *plicicollis*, seulement le pli latéral est effacé et n'est indiqué que par une espèce de sillon ou dépression parallèle au bord externe; les élytres sont un peu plus brillantes, plus atténués en arrière, les stries et les intervalles sont semblables; en dessous l'abdomen est très finement striolé au lieu d'être ponctué, et enfin les tibias antérieurs forment au milieu, en dessous, un angle très obtus mais bien marqué et les tarses sont plus larges. Long. : 12 mm ».

Synonymy. — To this species *Selinus angulatipes* GEBIEN is a simple synonym. GEBIEN's fine and complete description reads as follows : —

« Matt, schwarz, flach, hinten ziemlich stark abschüssig. Kopf sehr fein und regelmässig punktiert, Clypealsutur kaum angedeutet, die Seiten fein gewinkelt. Halsschild stark quer, seitlich von der Mitte nach hinten parallel oder schwach verengt, vor den Hinterecken nicht ausgebuchtet, die Seiten dick, etwas wulstig gerandet, Basis und Spitze sehr fein, vollständig gerandet, die Vorderecken scharf recht- oder selbst etwas spitzwinklig vortretend, die Hinterecken lang und spitz nach hinten gezogen, die Basis in der Mitte in flachem Bogen vorgezogen. Die Punktierung ist äusserst fein, nicht gedrängt, gleichmässig, neben dem Seitenrand ein flacher, oft undeutlicher Längseindruck, ferner ist der Halsschild durch einige flache, individuell verschiedene Eindrücke etwas uneben. Flügeldecken nach hinten deutlich erweitert, der Seitenrand von oben überall breit sichtbar, die scharf stumpfwinkeligen Schultern sind oben verflacht und die Streifen reichen dort bis an die Basis, die scharfen, mit feinen Punkten versehenen Streifen sind kräftig vertieft, die Interstitien überall gewölbt, nicht querrunzlig, so fein wie der Halsschild punktiert. Prosternum wagerecht, fein und vollständig gerandet, das Ende von oben gesehen halbkreisförmig verrundet. Abdomen blank, äusserst fein punktiert und kaum wahrnehmbar längsrnuzlig, Analsegment ungerandet. Schenkel staubartig, weitläufig punktiert, die vorderen mit scharfer, vollständiger Vorder- randkante, die hinteren beim ♂ innen mit Haarsaum, Mittelschenkel ungezähnt. Vordertibien des ♂ innen in der Mitte mit schwacher, rundlicher Erweiterung, die Mitteltibien am Ende mit dünnem, scharf rechtwinkeligem, grossem Zahn, dessen Spitze etwa im letzten Drittel liegt. Hintertibien gerade. Vordertarsen beim ♂ und ♀ stark verbreitert, beim ♂ etwas mehr, in diesem Geschlecht auch die Mitteltarsen, aber schwächer verbreitert. — L. 11 ½ - 13 mm — Die Art ist dem *Selinus planus* sehr ähnlich, aber grösser, sofort durch die mit starkem Zahn an den Mitteltibien versehenen ♂♂ zu unterscheiden. Das ♀ unterscheidet sich von allen mir bekannten Arten durch die stark verbreiterten Vordertarsen. »

Remarks. — Differing from *M. convexipennis* and *M. gravis* by the sericeous and differently sculptured elytra, the distally more strongly dilated antennæ, the more strongly securiform apical segment of maxillary palpi, which in the ♂ is broader than the third antennal segment is long, the broader and sericeous pronotum, the more strongly dilated anterior tarsi in both sexes and by the different structure of tibiæ in the ♂ (fig. 131). In the ♂ the anterior tarsi

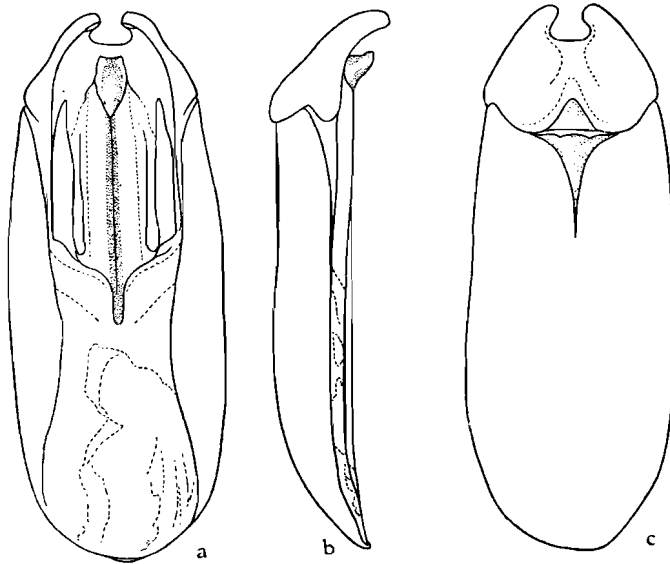


FIG. 129. — Aedeagus of the holotype of *Monodius medius* (FAIRMAIRE).
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

are very strongly dilated, much broader than the preapical segment of antennæ, but also distinctly broader than the apex of anterior tibiæ; in the ♀ they are narrower than the apex of anterior tibiæ and about as broad as the preapical segment of antennæ or broader.

Aedeagus (figs. 129, 130). — Large and as broad as in the preceding species, with peculiar formation of the apex of apicale. The broad apicale does not show a median division, but is very deeply, broadly, almost semi-circularly emarginated on apical third, with the two lobes of parameres widely gaping and produced into obtuse apices which are strongly bent ventrad. Penis and lacinia as in *M. convexipennis*. Basale as broad as apicale and almost four and a half times as long as the latter.

Dimensions. — Length 13 mm, width 6 ½ mm.

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

Distribution. — Gold Coast: Ashanti, Asenté Akem (type locality of *angulatipes*); Ashanti (1♂, T.M.).

- In the ♂ the inner carina of the excavation on underside of anterior tibiæ straight, without any trace of median dilation, the inner contours with shallow, but distinct emargination on distal two-thirds.

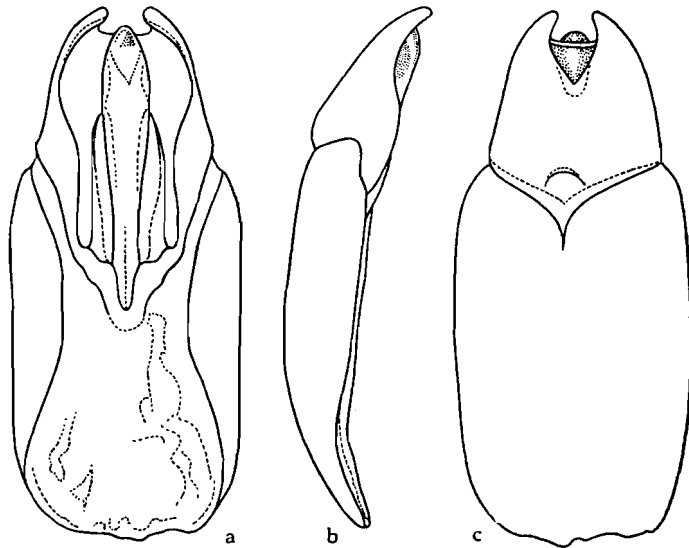


FIG. 130.

Ædeagus of a specimen of *Monodius medius* (FAIRMAIRE) from Ashanti.
a: ventral surface; b: lateral view, with the ventral surface at right;
c: dorsal surface.

[*Monodius malaisei* n. sp.]

(Pl. IX, fig. 4; Figs. 123, 132, 133, 134.)

Very closely related to *M. medius* and practically identical in shape and sculpture of body, but the anterior tibiæ in the ♂ constantly different (fig. 132) and the lobes of parameres of ædeagus with sharply pointed apices. Occurring in two subspecies: — ssp. *malaisei* with the underside of posterior tibiæ in the ♂ broadened, flattened and covered with dense, asperate punctures, the inner contours of posterior tibiæ distinctly curved and slightly dilated on distal half, the parameres of ædeagus with longer and strongly

accuminate apices and the dorsal surface of apicale with complete and deep median sulcus (Gold Coast); ssp. *nigeriensis* nov. with straight and below not broadened posterior tibiæ in the ♂ (as is the case in *M. medius*), the apices of parameres of ædeagus less sharply pointed and with triangular impression on middle of dorsal surface of apicale (Nigeria). Mentum fig. 123.

Ædeagus. — Figs. 133, 134.

Dimensions. — Length $13 \frac{1}{4}$ to $14 \frac{3}{4}$ mm, width $6 \frac{1}{4}$ to $7 \frac{1}{2}$ mm.

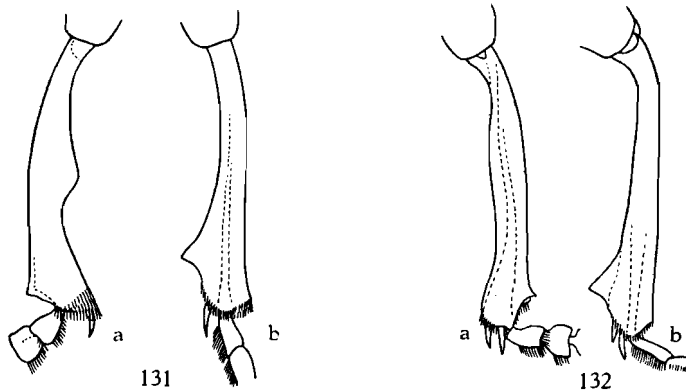


FIG. 131. — *Monodius medius* (FAIRMAIRE).

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

FIG. 132. — *Monodius malaisei* n. sp.

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

Distribution. — Gold Coast: Pundu, Upper Volta River, OLSUFIEW (12 spec., types of ssp. *malaisei*, M.St.). — Nigeria: Kabba, II.1949, B. MALKIN (1♂, holotype of ssp. *nigeriensis*, M.C.A.).

Dedication. — Named in honour of Dr. RENÉ MALAISE, Naturhistoriska Riksmusem, Stockholm.

QUADRIDERES n. gen.

Diagnosis. — Of subparallel and elongate shape, upper surface sericeous to shiny. Eyes strongly constricted by genal canthus. Antennæ stout, with very strongly dilated distal segments. Apical segment of maxillary palpi slightly securiform, in the ♂ not or only slightly broader

than in the ♀. Supra-antennal portions of head rather strongly impressed; middle of frons often obsolete tectiform. Mentum with exposed distal half of lateral wings; the middle section more or less strongly narrowed distally, with slightly lobiform or rounded apex, sharply or obtusely carinate at midline, with the surface more or less strongly excavate on both sides of median carina proximally. Pronotum depressed, transverse to almost square, with the posterior half to three quarters of sides subparallel

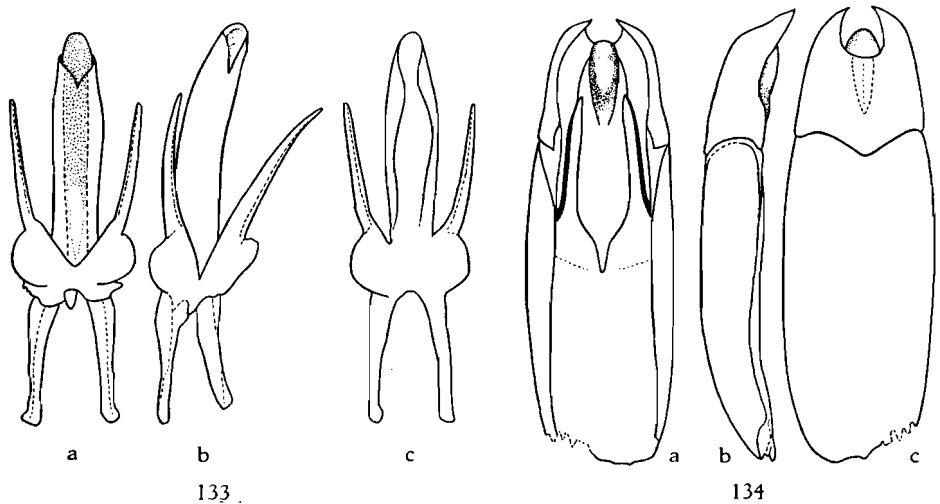


FIG. 133. — The extracted penis plus lacinia of *Monodius malaisei* n. sp. (a: outer surface; b: diagonal view; c: inner surface). — FIG. 134. — Aedeagus of *Monodius malaisei* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface).

or weakly dilated towards base. Integument with fine and rather scattered to exceptionnally very dense and subrugose punctation (only *Qu. robynsi*). Submarginal depression always distinct, strongly narrowing towards anterior margin and often with a fine, smoothed justa-lateral canaliculation. Anterior margin moderately emarginated, immarginate on middle section; lateral and basal carinae complete and narrow. Base deeply to rather shallowly bi-sinuate, with acute to almost rectangular lobes of posterior angles. Underside of prothorax almost smooth, sometimes with very fine punctures or transverse wrinkles on prosternum; the intercoxal apophysis produced, completely marginate and rounded apically. Elytra convex to strongly depressed, about as broad as pronotum, more or less strongly elongate, with rectangular, non-prominent humeral angles and subparallel to slightly rounded sides. Primary rows with fine to almost subfoveate punctures, in a single case (*Qu. montis-kenyæ*) evanescent on apical declivity; secondary intervals with inconspicuous to very dense and strong punctation,

usually becoming more strongly convex towards sides and apex, but often subcostate on the alternating odd intervals, laterally or throughout; the third intervals of both elytra usually more or less strongly bunched up apically, there oblique and coalescent. The pseudopleural crest almost always exposed dorsally, rarely concealed behind middle, with more or less strong justa-lateral canaliculation which is often broadened basally, forming a more or less developed, tenth marginal interval. Pseudopleura abbreviated apically, smooth to densely punctured, occupying practically the entire ventrally reflected portion of elytra. Metasternum short, as in *Monodius*, but sometimes with a median tubercle. Abdomen with fine and scattered punctures, slightly more concentrated on anal sternite. The latter usually immarginate, but in a few species (*Qu. femineus*, *lesnei*) with more or less distinct traces of a very fine marginal sulcus along basal half of sides, in a single species (*Qu. simplicipes*) completely carinate around margin. In the ♂ the anterior tarsi not, inconspicuously or rather strongly dilated, soleate below; the underside of anterior tibiæ usually more or less strongly excavate below (except in *Qu. witteanus*, *elegans*, *simplicipes* and *stigmaticollis*); all tibiæ often with distinctive characters, sometimes non-dimorphic, only in one case (*Qu. volcanicus*) with a fringe of hairs on posterior tibiæ; the posterior femora in a few cases with weakly pronounced distinctive characters.

Ædeagus. — Very homogeneous and simple. Apicale always short and with continuously converging sides; parameres straight, rather strongly divided, with obtuse apices; ventral groove narrowly exposing penis and often also lacinia. Basale about three to four times as long as apicale.

Dimensions. — 6 $\frac{3}{4}$ to about 12 mm long.

Relationship. — On account of the subparallel sides of pronotum, the abbreviated pseudopleura of elytra and the usually immarginate basal sternite of abdomen allied only to *Monodius*, although phylogenetically very different by the simple structure of ædeagus, the anteriorly narrowing submarginal depression of pronotum, the impressed supra-antennal surfaces and the constantly smaller size of body.

Type species. — *Anchophthalmus scutatus* GERSTAECKER, 1871.

Distribution. — Strictly East African, from the northern part of Southern Rhodesia to Southern Abyssinia, but in the West not expanding beyond the eastern parts of the Oriental-, Kivu- and Elisabethville Provinces of the Belgian Congo. (I have established the southern distribution of genus on a few ♀♀ of yet undescribed species from southern Tanganyika Territory, Northern and Southern Rhodesia.)

KEY.

1. In the ♂ the inner contours of anterior tibiæ straight or with small, very shallow preapical emargination, never with prominent postmedian dilation **2**

- In the ♂ the inner contours of anterior tibiæ with strongly projecting, arcuate to angular or dentiform postmedian dilation 13
2. Secondary intervals of elytra with very fine, scattered, sometimes evanescent punctures, the cuticle appearing as if smooth or almost so. Pseudopleura smooth or with indistinct punctures 3
- Secondary intervals of elytra with dense, strong, conspicuous punctation. Pseudopleura densely and coarsely punctured 11
3. Metasternum with a tubercle on centre 4
- Metasternum entirely plane 5
4. Upper surface distinctly shiny. Primary rows on elytra composed of well separated, rather coarse punctures which are much coarser than the discal punctures on pronotum; the rows are only indistinctly lineate. Anal sternite of abdomen with traces of a lateral margination on basal third. In the ♂ the posterior femora with the lower edge of outer lateral surface weakly dilated behind middle and emarginate between dilation and apex, the middle section of underside with a very fine fringe of scattered, short yellowish hairs on both the lateral edges; the anterior tarsi weakly dilated, considerably narrower than the preapical segment of antennæ, the intermediate tarsi not dilated, without poriferous soleæ below.

[**Quadrideres femineus** (LESNE), sensu novo.]

(Pl. X, fig. 1; Fig. 135.)

*1922, *Selinus femineus* LESNE, ♀, p. 701, pl. 1 c 37, fig. 2. — 1938-1942, GEBIEN, p. 417, n° 5597.

Original description. — « Corpus oblongo-elongatum, parallelum, nigrum, nitidum. Caput supra dense tenuiter punctatum, linea media antice (in frontis parte antica clypeique parte postica) obsolete cariniformi, antennis brevibus, medium prothoracis vix superantibus. Pronotum subquadratum, leviter transversum, lateribus reflexis a basi usque ad tertiam partem anticam rectis parallelisque, antice arcuatis, angulis anticis prominentibus, subrectis; disco minute ac dense punctato. Elytra humeris suboblique truncatis, striis fortiter punctatis, interstriis minutissime punctulatis, plus minusve convexis, 7° costiformi; margine externo usque ad apicem reflexo. Metasternum medio tuberculo minuto elongato, subcostiformi, instructum. ♂ : Tibiæ anticæ inflatulæ, longitudinis medium versus intus dilatatæ. Femores postici margine interno glabro. ♀ : Tibiæ anticæ subgraciles, ad medium haud dilatatæ. Femora postica margine interno pilis erectis brevissimis hirsuto, sæpius glabro (fricato?). Long. 8,5-11 mm — L'espèce actuelle a été identifiée à tort par GEBIEN, 1910, avec le *S. parallelus* ANCEY qui habite l'Ousagara et Kipalapala. Elle diffère de ce dernier par son

corps notablement plus court, ses téguments dorsaux plus brillants, par la ponctuation moins dense du pronotum qui n'offre pas de renflement costiforme parallèle et adjacent au bord latéral, et dont le bord latéral est lui-même plus fortement réfléchi; par les points des stries élytrales moins serrés; enfin par la présence d'un tubercule médian sur le métasternum. Le mâle paraît être fort rare. Sur 185 individus examinés, il ne s'est rencontré que 6 mâles. »

Remarks. — LESNE's description of *S. femineus* refers to two different species. His ♂, of which he found only a few specimens among the large series in front of him, is *Quadrideres lesnei* n. sp., whereas his ♀ is in actual fact the ♂ of *Quadrideres femineus*. The ♀ of this species can be referred to those specimens which he reported as having the short hairs on posterior femora probably rubbed off (« *sæpius glabro, fricato?* »). As he did not designate a holotype, I am proposing a ♂ of his supposed ♀ ♀ with erect hairs on posterior femora as neo-holotype of *Quadrideres femineus* sensu novo; I am basing my choice on the fact that he figured such a supposed ♀ of *femineus* in his paper but not the ♂ of *lesnei*.

Head above sometimes with a fine, rather inconspicuous, longitudinally linear median convexity, as is the case in most species of *Quadrideres*. Median section of mentum elongate, carinate and narrowed in a straight line towards the truncate apical margin laterally, with fine and sharp median carina. Apical segment of maxillary palpi non-dimorphic, slightly broader than long. Pronotum uniformly covered with dense, but separated, round punctures; anterior emargination moderately deep; submarginal depression of sides strongly narrowing towards anterior margin, with obsolescent justa-lateral canaliculation. Underside of prothorax smooth. Elytra subparallel, scarcely broader than pronotum, with practically rectangular humeral angles. Primary rows with round, rather coarse and separated punctures; there are about 30 to 35 punctures in the fourth row, slightly impinging the adjacent secondary intervals; the ninth row inwardly bent basally, with the humeral portion of tenth interval being about as broad as the ninth interval basally. Secondary intervals variable in convexity, more or less strongly convex and usually becoming more strongly convex to subcostate towards sides and apex; the fifth intervals of both elytra prolonged posteriorly, obliquely directed towards apical angle of suture and there coalescent. Pseudopleural crest entirely visible dorsally and with fine justa-lateral canaliculation. Pseudopleura with obsolescent punctation. The central tubercle on metasternum usually well developed, shiny, elongate, rarely abraded and evanescent. In the ♀ the underside of tarsi not soleate. In the ♂ (fig. 135) the underside of anterior tibiæ excavate on distal third, but the inner contours

very shallowly curved, simple or with extremely shallow, scarcely perceptible emargination preapically; the inner contours of intermediate and posterior tibiæ simple, very slightly curved and straight respectively.

Ædeagus. — Simple. The apicale with continuously converging lateral contours, the parameres obtuse apically and completely divided. Ventral groove strongly constricted by the broadly dilated inflexed alæ, leaving exposed usually only the apical portion of penis. Basale three to three and a half times as long as apicale.

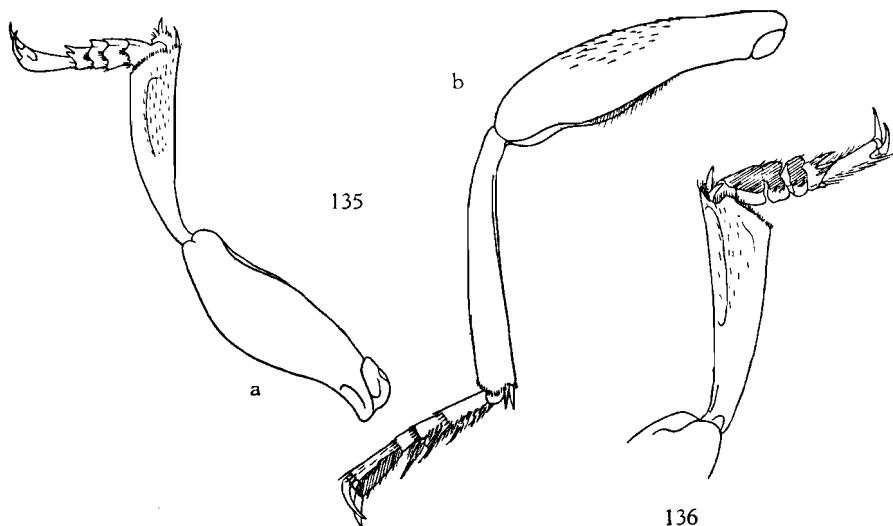


FIG. 135. — *Quadrideres femineus* (LESNE) (a: anterior leg of ♂; b: posterior leg of ♂). — FIG. 136. — Anterior tibia with tarsus of a ♂ of *Quadrideres lineatus* n. sp.

Dimensions. — Length $7\frac{1}{2}$ to 11 mm, width $3\frac{1}{4}$ to $4\frac{1}{2}$ mm.

Type locality. — « Naivasha ». Neo-holotype in Transvaal Museum.

Distribution. — South-eastern British East Africa and North-eastern Tanganyika Territory. — Naivasha, J. H. ALLEN TURNER, E. PINHEY, LOVEN (numerous specimens, C.M., M.St.); Nairobi, G. BABAULT, LOVEN, CH. ALLUAUD, A. F. J. GEDYE (numerous specimens C.M., BCM., T.M., M.St.); Thika Road, Nairobi, I.1950, E. PINHEY (2 spec., C.M.); Ngang Forest, Nairobi (a rich series, I.R.); Karai Swamps, Kikuyu, III.1940 (1 spec., C.M.); Limuru, III.1941 (10 spec., C.M.); Stony Athi, IV.1940 (2 spec., C.M.); Masai District, IX.1947, Mus. Staff (15 spec., C.M.); Kilimanjaro, Y. SJÖSTEDT (1 spec., T.M.).

- Upper surface sericeous. Primary rows on elytra sharply impressed and lineate, with smooth background of lineæ or very fine punctures which are only slightly stronger than those on disc of pronotum. Anal sternite of abdomen uniformly plane, without any trace of lateral margination. In the ♂ the posterior femora non-dimorphic, with straight lower edge of outer lateral surface, with the usual fine and adherent yellowish pilosity on the latter, but without fringe of erect bristles; the anterior tarsi rather strongly dilated, about as broad as the preapical segment of antennæ, the intermediate tarsi distinctly dilated and with soleate median segments.

[*Quadrideres lineatus* n. sp.]

(Pl. X, fig. 2; Fig. 136.)

Related to *Qu. femineus*, but the body shorter, broader and sericeous above. Head as in *femineus*, the antennæ more strongly dilated distally, the apical segment of maxillary palpi in the ♂ distinctly a little more strongly securiform than in the ♀. Pronotum broader than in *femineus*, not shiny, but with dense microsculpture and much more concentrated, but finer, laterally slightly confluent punctation. The elytra broader, less convex, shaped as in *femineus*. The primary rows, if with discernible punctation, very finely punctured; in such a case the fourth row with approximately 30 to 40 punctures; the course of ninth row as in *femineus*. Secondary intervals broader, densely micro-sculptured and with extremely fine, sparse punctation; uniformly flat discally, becoming broadly convex, but never subcostate on sloping sides and apically. Pseudopleural crest and pseudopleura as in *femineus*. Metasternum with central tubercle which is often roundish and abraded above. Abdomen with fine, scattered punctures, the anal sternite included. Legs more robust, the tibiae in the ♂ (fig. 136) shaped as in *femineus*.

Ædeagus. — Very similar to *Qu. femineus*, but the apicale shorter, the parameres slightly gaping apically and the ventral groove with exposed penis and lacinia.

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

Distribution (map 4). — North-eastern Belgian Congo. — Eastern Oriental Province: Mahagi, Ogena, III.1929, A. COLLART (3 ♂ ♂, 3 ♀ ♀, types I.R.); Nizi-Ozeguru, III.1929, A. COLLART (2 ♂ ♂, 1 ♀, I.R.); btwn. Stanleyville and Kilo, L. BURGEON (2 ♀ ♀, BCM.); Mahagi, Niarembe, IX.1935, C. SCOPS (2 ♂ ♂, BCM.); Aba, VIII.1938, P. LEFÈVRE (1 ♂, BCM.). — North-eastern Elisabethville Province: Albertville, J. DUVIVIER (1 ♀, I.R.).

5. The third, fifth and seventh secondary intervals on elytra also basally not more strongly convex than the alternating even intervals. Pronotum

- never with fine longitudinal median sulcus; the sides subparallel or with a slight tendency to become inconspicuously narrowed towards base. Elytra with subparallel to very weakly rounded sides, but between humeral angles very slightly narrower than behind middle **6**
- The third, fifth and seventh secondary intervals on elytra at least basally more strongly convex than the alternating even intervals, but sometimes entirely and obtusely subcostate. Pronotum with a fine median sulcus, when the third, fifth and seventh secondary intervals on elytra are only basally more strongly convex than the adjacent intervals; the sides distinctly, though weakly dilated in an almost straight line from middle to base. Elytra with subparallel sides, but between humeral angles either broader than behind middle or as broad as behind middle, but in the latter case the pronotum with fine median sulcus **10**
- 6.** The posterior angles of pronotum strongly produced backwards beyond level of median section of base; the lateral emarginations of base deep and the lateral lobes of posterior angles forming a strongly acute angle. Legs dimorphic; in the ♂ the anterior tarsi dilated and soleate below, the anterior tibiae with distal excavation on underside **7**
- The posterior angles of pronotum weakly produced backwards and only slightly projecting beyond median section of base; the lateral emarginations of base shallow and the lateral lobes of posterior angles forming almost a right angle. Legs non-dimorphic **9**
- 7.** Pronotum and elytra strongly shiny and polished. Pronotum and primary rows on elytra with strong punctures. Body shorter **8**
- Pronotum and elytra sericeous. Pronotum with dense and very fine punctures; primary rows on elytra sharply impressed and lineate, with smooth background of lineae or with dense and very fine punctures.

[*Quadrideres schoutedeni* n. sp.]

On account of the almost identical sculpture on upper surface very similar only to *Qu. lineatus*, but readily distinguished by the much smaller size, slender shape of body and the absence of the metasternal tubercle. Differing from *lineatus* as follows: — Middle section of mentum more strongly narrowed towards the briefly demarcated apical margin, with strongly raised, sharp median carina. Pronotum much more slender, only about one and a third times as broad as long (about two-thirds broader than long in *lineatus*): the subparallel portion of sides extending much more towards the anterior section of pronotum, occupying about three-quarters of the pronotal length (in *lineatus* less than two-thirds); the submarginal depression narrow, weakly demarcated from discal convexity, occupying about one-tenth of pronotal width and separated from lateral carina by a

very narrow, but distinct and smooth justa-lateral canaliculation (in *lineatus* the submarginal depression is broader, better demarcated from discal convexity, without justa-lateral canaliculation, and occupies about one-sixth of the pronotal width or slightly less). Elytra almost identical in sculpture, but considerably narrower, with the subparallel portion of sides extending more backwards than in *lineatus*. Metasternum entirely plane, without any trace of a central tubercle. Legs more slender. In the ♂ the anterior tarsi distinctly dilated, but much narrower than the preapical segment of antennæ; the intermediate tibiæ not distinctly soleate on underside of median segments; posterior femora non-dimorphic; constricted apically; tibiæ as in *lineatus*, but the distal excavation on underside of anterior tibiæ deeper and consequently the inner contours of anterior tibiæ with discernible, though very weak preapical emargination. *Ædeagus* almost identical with *lineatus*, of smaller size.

Dimensions. — Length $6 \frac{3}{4}$ to $7 \frac{1}{2}$ mm, width 3 to $3 \frac{1}{4}$ mm.

Distribution (map 4). — North-eastern Belgian Congo. — Eastern Oriental Province: Mahagi, Niarembe, V.1935, CH. SCOPS (3♂♂, 2♀♀, types BCM.).

Dedication. — Named in honour of Dr HENRI SCHOUTEDEN, honorary director to the Musée royal du Congo Belge, Tervueren.

8. Disc of pronotum with very dense, in part slightly confluent punctation; the intervening spaces between punctures smaller than diameter of punctures. Primary rows on elytra subsulcate, with dense and closely following punctures, sharply impressed also on apical declivity; secondary intervals convex, subcostate laterally and apically.

[*Quadrideres modestus* (LESNE).]

*1922, *Selinus modestus* LESNE, p. 702, pl. 1 c 37, fig. 3. — 1938-1942, GEBIEN, p. 417, n° 5598. — 1940, GRIDELLI, p. 126, pl. XII, fig. 1.

Original description. — «Corpus oblongum, parallelum, nigrum, nitidum. Species præcedenti (= *Qu. femineus*) affinisissima, sed statura minore, capite supra omnino ecostato, elytris antice recte truncatis, margine externo ad apicem angustissimo, subnullo, haud reflexo, metasterno in medio haud tuberculato, pedibusque paullo crassioribus facile dignoscenda. ♂ ignotus. Long. 7-8,5 mm. »

Remarks. — Very similar to *Qu. femineus*, of almost identical sculpture and shape, but readily distinguished by the absence of metasternal tubercle and in the ♂ by slightly more dilated anterior tibiæ and the simple, non-dimorphic posterior femora which lack

the fringe of short hairs on underside, as well as the postmedian dilation of lower carina of outer lateral surface. The couple in front of me agrees also in the small size of body with LESNE's description.

Type locality. — « Sud du lac Rodolphe, entre le chemin de fer et le lac. » Holotype (♀) probably in Museum Paris.

Distribution. — Central and Northern British East Africa and Southern Abyssinia. — British East Africa: Turkana Province, south of Lake Rudolf (typical specimens); Kikuyu Province, Nyeri, VI.1949, E. PINHEY (1♂ ♀, C.M.). — Abyssinia: Boran Province, Neghelli (teste GRIDELLI).

- Disc of pronotum with very scattered punctures, with the intervening spaces between punctures much larger than diameter of punctures. Primary rows on elytra neither sulcate nor impressed, but composed of round, less dense punctures, becoming obsolescent to altogether absent on apical declivity; secondary intervals flat, sometimes weakly convex on sloping lateral portions but never apically.

[**Quadriдерes montis-kenya** n. sp.]

Very closely related to *Qu. modestus*, of identical shape and size of body, but readily recognized from all *Quadriдерes* by the plane and only obsolete sculptured apical declivity of elytra, and the very scattered punctation on pronotum. Antennæ short and stout. Middle section of mentum as in *modestus*, with strongly raised and sharp median carina. Metasternum plane and inermous. Legs as in *modestus*; in the ♂ the anterior tarsi distinctly dilated and soleate, the intermediate tarsi below without distinct soleæ, the posterior femora non-dimorphic, with straight and not ciliate lower edge of outer lateral surface. Ædeagus as in *Qu. femineus*, but the apicale shorter and broader, almost triangular.

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

Distribution. — Central British East Africa. — Mount Kenya area: Sagassa River, 7,400 ft., XII.1942, H. COPLEY (1♂ ♀, types C.M.); Sirimon River, 8,000 ft., XII.1942, H. COPLEY (1♂, C.M.); Naro Moru, I.1941 (1♂, C.M.).

9. Elytra convex, with strongly convex sides; in exact dorsal aspect and examined at the point of the initiation of apical constriction (viz. behind middle) the eighth secondary interval entirely visible, the ninth interval more or less distinctly visible, the pseudopleural crest not or just visible, but the very narrow tenth interval (or justa-pseudopleural canaliculation) scarcely visible and if so, much narrower than the ninth or eighth intervals. Body slender, the pronotum rather strongly transverse, about two-thirds broader than long.

Quadrideres witteanus n. sp. ⁽¹⁾.

(Pl. X, fig. 3; Figs. 137, 138.)

Differing from all the preceding species by the slender shape of body and the elongate elytra. Black to reddish brown, upper surface moderately shiny. Head above densely and rugosely punctured. Epistome sharply demarcated from genæ. Middle section of mentum narrowing towards the apical margin, with fine, sharp carinula on basal two-thirds. Apical segment of maxillary palpi securiform, distinctly broader than long, but non-dimorphic. Antennæ slender, but with strongly dilated and transverse preapical segments. Pronotum about two-thirds broader than long, depressed, covered with a very dense, rather strong, round but not confluent or rugose punctation. Subparallel portion of sides occupying two-thirds of pronotal length or slightly more; disc uniformly convex, sometimes with shallow irregular impressions or with a very fine, obsolescent median line; submarginal depression shallow, narrow, occupying on middle about one-tenth of pronotal width. Prosternum uniformly covered with scattered, fine, asperate punctures, becoming transversely confluent and forming more or less transverse wrinkles on sides; episternum with obsolescent punctures. Elytra elongate, about two-thirds longer than broad, not broader than pronotum, subparallel, with sharply rectangular humeral angles. Secondary intervals with very fine, more or less sensible punctures, flat to weakly convex on disc, becoming rather strongly convex towards sides and apex; the third intervals of both elytra obliquely coalescent apically and bunched up. Primary rows sharply impressed, with rather fine, very dense punctures; there are about 50 to 60 punctures in the fourth row; ninth row very closely following the pseudopleural crest and not leaving room for the development of a tenth marginal interval, basally the intervening space between it and the pseudopleural crest not broader than the ninth secondary interval. Pseudopleural crest more or less concealed behind middle dorsally, with extremely narrow and fine submarginal canaliculation posteriorly. Metasternum plane. Abdomen with fine, scattered punctures, slightly stronger and a little more concentrated on anal sternite. Legs slender and practically non-dimorphic; in the ♂ the anterior tarsi scarcely broader than in the ♀, with lateral patches of long and aggregated bristles below, but without distinct soleæ; all tibiæ non-dimorphic, the anterior tibiæ without any trace of excavation on underside, there

⁽¹⁾ Erroneously *dewitteanus* on Plate X, fig. 3.

densely sculptured as in the ♀ and slender, not more strongly dilated towards apex than are the intermediate tibiae; posterior femora simple, the lower edge of outer lateral surface very shallowly and elongately emarginate distally.

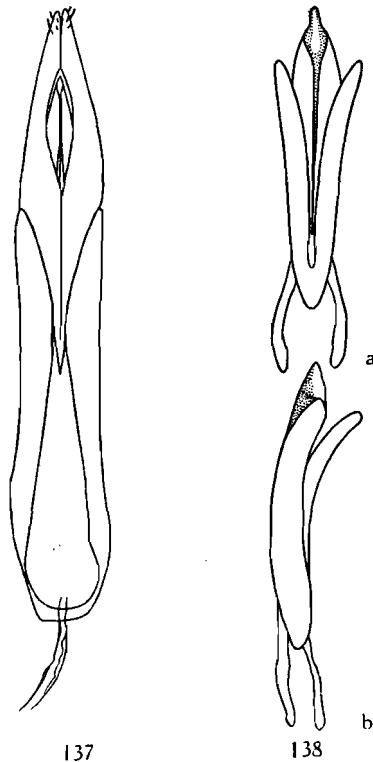


FIG. 137. — *Ædeagus* of *Quadrideres witteanus* n. sp. (ventral surface).
 FIG. 138. — The extracted penis plus lacinia of the *ædeagus* of *Quadrideres witteanus* n. sp. (a : outer surface; b : diagonal view).

Ædeagus (figs. 137, 138). — Apicale broad and with continuously converging outer contours; median division strong and complete. Parameres straight, with obtuse, slightly gaping apices. Penis broad, triangularly pointed apically; the lacinia with broadly rounded apices. Basale about three to four times as long as apicale.

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

Distribution (map 4). — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park : Kaswabilenga, X.1947, G. F. DE WITTE (6 spec., types I.P.N.); Lupiala, X.1947, G. F. DE WITTE (3 spec., I.P.N.); Kateke River, XII.1947, G. F. DE WITTE (4 spec., I.P.N.); Kankunda, XI.1947, G. F. DE WITTE (4 spec., I.P.N.).

Dedication. — Named in honour of the discoverer, Mr G. F. DE WITTE, Chief of the « Mission d'exploration du Parc National de l'Upemba » of the « Institut des Parcs Nationaux du Congo Belge ».

- Elytra strongly depressed, with weakly sloping to almost flat sides; in exact dorsal view and examined at the point of the initiation of apical constriction (viz. behind middle) the eighth, ninth, the justa-pseudopleural tenth intervals plus the pseudopleural crest entirely exposed, and the justa-pseudopleural interval not or scarcely narrower than the ninth interval. Body strikingly slender, the pronotum almost square, about one-quarter broader than long.

Quadrideres elegans n. sp.

(Pl. X, fig. 4.)

Closely related to *Qu. witteanus*, but easily recognized from all *Quadrideres* by the very slender appearance and the depressed elytra. Body usually reddish brown, with the lateral portions often of a paler tint; upper surface almost sericeous to moderately shiny; of smaller size than in *witteanus*. Head above with slightly coarser but less dense, separated, round punctures. Epistome less distinctly separated from genæ. Middle section of mentum very strongly narrowed towards the distinctly lobiform apical portion. Apical segment of maxillary palpi in the ♂ distinctly more strongly securiform than in the ♀. Antennæ longer and more slender than in *witteanus*. Pronotum much more slender, with the subparallel portion of sides occupying almost three-quarters of pronotal length; punctures coarser than in *witteanus* and slightly tending to become confluent; anterior emargination deeper, with sharply produced anterior angles; submarginal depression stronger but only slightly broader than in *witteanus*. Prosternum transversely wrinkled. Elytra as broad as pronotum, very slender and subparallel. Primary rows sharply impressed, with less fine and more scattered punctures; there are about 40 to 45 punctures in the fourth row; ninth row less approximated to pseudopleural crest, gradually curved inwards on basal third, entirely separated from pseudopleural crest by a subcanaliculate justa-lateral tenth interval; the latter basally broader than the ninth interval. Secondary intervals as in *witteanus*, but distinctly convex on disc, very strongly convex and subcostate on lateral and apical portions. Underside of hind body as in *witteanus*. Legs slender and non-dimorphic; the anterior tarsi in the ♂ not broader than in the ♀, without distinct soleæ below; the anterior tibiæ simple, in the ♂ not excavate below. Ædeagus as in *witteanus*, but more slender, with elongate apicale.

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

Distribution (map 4). — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park: Mabwe, XII.1948, G. F. DE WITTE (1♂, holotype I.P.N.); Kaswabilenga, X.1947, G. F. DE WITTE (1♀, allotype I.P.N.); Kilwezi, IX.1948, G. F. DE WITTE (1♂, I.P.N.); gorges de la Pelenge, VI.1947, G. F. DE WITTE (1♀, I.P.N.). — [Katanga, Lubudi, X.1936, M. PRINZ (1♂, BCM).]

10. Body of large size, $9 \frac{1}{2}$ to $11 \frac{1}{2}$ mm long, $4 \frac{1}{4}$ to $5 \frac{1}{4}$ mm broad. Elytra distinctly broader basally than behind middle, with the third, fifth and seventh secondary intervals entirely and obtusely subcostate, being much more strongly raised than the completely flattened, alternating even intervals; the eighth interval strongly subcostate and much more strongly convex than the ninth interval. Pronotum with scattered, simple punctures, with very fine and not impressed median line and a few shallow, irregular impressions on disc. In the ♂ the underside of anterior tibiae with narrow and small distal cavity; the anterior tarsi not or inconspicuously dilated, but soleate below.

[**Quadrideres scutatus** (GERSTAECKER).]

(Pl. XI, fig. 1.)

*1871, *Anchophthalmus scutatus* GERSTAECKER, p. 60. — 1873, GERSTAECKER, p. 176.

— 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 418, n° 5618.

*1897, *Selinus costulifer* FAIRMAIRE, p. 122. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 417, n° 5602. — (=syn. nov.).

Original description. — « Oblongo-ovatus, niger, subnitidus, glaber, prothoracis subtiliter punctati margine laterali explanato, apicem versus angustato, elytris punctato-sulcatis, alternatim subcostatis. — Mehr denn doppelt so lang als breit, ziemlich parallel, tief und etwas glänzend schwarz, nakt. Fühler kurz, zurückgeschlagen nur auf $\frac{2}{3}$ der Prothoraxlänge reichend, das dritte Glied nicht ganz so lang wie die beiden folgenden zusammengenommen, die Glieder vom fünften an nicht länger als breit. Kopf ziemlich stark und dicht, aber nirgends runzlig punktiert. Prothorax kaum um ein Viertheil breiter als lang, erst in der vorderen Hälfte allmählich gegen die Spitze hin verschmälert, mit abgestumpften Vorder- und spitzwinkligen Hinterecken; der von der Scheibe deutlich und flach abgesetzte Seitenrand hinten sehr breit, nach vorne stark verschmälert, mit aufgebogenem Aussensaum, nicht dichter, aber beträchtlich stärker punktiert als die kissenartig gewölbte und mit feiner Mittellinie versehene Scheibe. Schildchen mit sehr feiner Punktierung. Flügeldecken um die Hälfte länger als zusammen breit, an den abgerundeten Schulterecken etwas breiter als in der Mitte, jenseits derselben nach

hinten eiförmig zugerundet, mehr seidenartig glänzend als der Prothorax, in den fein furchenartig vertieften Längsstreifen sperrig punktirt, die Zwischenräume mit feinen, zerstreuten Pünktchen besetzt, der dritte, fünfte und siebente stärker gewölbt und leicht rippenartig heraustretend, der fünfte und siebente vor der Spitze mit einander verbunden, letzterer sich auch mit dem dritten vereinigend. Unterseite des Körpers und Epipleuren sehr verloschen punktirt. Schienen einfach und gerade, Tarsen gleich den Tastern rotbraun. Long. 10, lat. $4 \frac{1}{2}$ mill. »

Synonymy. — GERSTAECKER's species is a true *Quadrideres*. The original description refers clearly to the fine punctation on pronotum and the anteriorly narrowing submarginal depression of pronotal sides, particulars which are not found in the *Anchophthalmus*. FAIRMAIRE's description of *Selinus costulifer* agrees almost literally with GERSTAECKER's description.

Remarks. — Body strongly depressed, broad, moderately shiny above, recalling the Stizopin *Blenosia semicostata* GEBIEN. Middle section of mentum elongate, strongly narrowing to the produced and lobiform apex, with median carina on basal half. The apical segment of maxillary palpi securiform, but non-dimorphic. Pronotum distinctly dilated from middle to base, with very strong submarginal depression; base rather shallowly bi-sinuate, with the lobes of posterior angles forming an almost right angle. Underside of prothorax smooth. Elytra strongly depressed, with broad, dorsally entirely exposed justa-pseudopleural tenth interval and pseudopleural crest, remarkable by the presence of complete, more or less strongly convex costæ on third, fifth, seventh and eighth intervals and posteriorly raised sutural interval; the alternating even intervals strongly depressed and broad; primary rows arranged in pairs, composed of rather scattered and strong, round punctures, with about 40 punctures in the fourth row. The marginal tenth interval broadly flattened basally and there broader than the ninth interval. Metasternum plane or sometimes with an obsolescent, elongate tubercle on centre. Abdomen with very fine, scattered punctures, concentrated on anal sternite. The legs practically non-dimorphic, the anterior tibiæ hardly more strongly dilated than the intermediate tibiæ, but in the ♂ with small distal cavity on underside.

This species is easily distinguished from all the other *Quadrideres* by the alternating and complete costæ on elytra.

Ædeagus. — Simple and small. Apicale with continuously converging sides, the parameres strongly divided and slightly gaping on distal half, with obtuse and almost straight apices; penis and lacinia exposed. Basale about three to four times as long as apicale.

Type locality. — «Jipe See» (North-eastern Tanganyika Territory). Types probably in Museum Berlin.

Distribution. — South-central and South-eastern British East Africa and north-easternmost part of Tanganyika Territory. — [Lake Jipe; Ikutha (type locality of *costulifer*); Machakos, near Nairobi, V.1942, Mus. STAFF (1 spec., C.M.); Kanziko, IX.1936, C. G. MACARTHUR (2 spec., C.M.); Samburu, coastal plain, VIII.1932, C. G. MACARTHUR (1 spec., C.M.); Rabai, coast, XI-XII.1933, VAN SOMEREN, A. F. J. GEDYE (2 spec., C.M.); Lamu, coast (1 spec., T.M.).

- Body of small size, $7 \frac{1}{2}$ to $9 \frac{1}{4}$ mm long, $3 \frac{1}{4}$ to 4 mm broad. Elytra about as broad basally as behind middle, with the third, fifth and seventh secondary intervals weakly or only basally more strongly convex than the alternating even intervals; the eighth interval not more strongly convex than the ninth interval. Pronotum with dense, somewhat umbonate, rather strong punctures, tending to become confluent, with impressed, fine median sulcus, ending at a transversely arcuate, shallow impression in front of base. In the ♂ the underside of anterior tibiae simple, without distal cavity; the anterior tarsi neither dilated nor soleate.

Quadrideres stigmaticollis n. sp.

(Pl. XI, fig. 2.)

On account of the strongly depressed elytra, the very broad justapseudopleural tenth interval on elytra and the non-dimorphic legs related only to *Qu. elegans*, but of broader and shorter shape of body, the pronotum broadest basally, about one-third broader than long, with the sides very slightly dilated from middle to base, differently sculptured, but with the same shallowly bi-sinuate base and almost rectangular lobes of posterior angles. The elytra much shorter, with bluntly rectangular angles which are slightly demarcated from sides by a very shallow, elongate post-humeral sinuosity. Primary rows with rather strong, moderately dense punctures, with about 35 to 40 punctures in the fourth row. Secondary intervals broad, the sutural, third, fifth and seventh intervals distinctly a little broader than the alternating even intervals, the third interval basally, the fifth and seventh intervals entirely slightly more strongly convex than the adjacent intervals, the lateral intervals not subcostate, as strongly convex as the seventh interval; the tenth justapseudopleural interval broad, strongly dilated basally, flattened, in exact dorsal aspect not narrower than the ninth interval and, together with pseudopleural crest, entirely exposed. Underside of body and legs as in *elegans*. Aedeagus as in *elegans*, slightly stouter; the lacinia almost as broad as penis and weakly curved inwards apically.

Distribution (map 4). — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park: Kenia River, collected in a mole-rat nest, III.1947, G. F. DE WITTE (2♂♂, 1♀, types I.P.N.).

11. Anal sternite of abdomen immarginate. In the ♂ the underside of anterior tibiæ at least with small cavity distally 12
 — Anal sternite of abdomen entirely marginate. In the ♂ the underside of anterior tibiæ simple, without distinctive characters.

[**Quadrideres simplicipes** (GEBIEN).]

*1910 a, *Selinus simplicipes* GEBIEN, 374. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5599.

Original description. — « Ein kleine, unansehnliche Art. Schwarz, schwach glänzend, Fühler und Tarsen bräunlich. Körper oval, oder lang oval, aber in der Mitte beim ♂ ziemlich parallelseitig. Kopf sehr dicht und fein runzlig punktiert, der Canthus so breit wie die Augen, nach vorn nicht erweitert, der Clypeus nicht wulstförmig abgesetzt, der vordere Ausschnitt ziemlich tief, dick, an den Fühlern ist das dritte Glied $1\frac{1}{3}$ mal so lang wie das vierte, Glied 7-10 quer, das letzte so lang wie breit. Halsschild $1\frac{1}{2}$ mal so breit wie lang, die hinteren $\frac{2}{3}$ sind vollkommen parallel, das vordere ziemlich stark nach vorn verengt, Vorderecken ca. 110° gross, scharfwinklig, die Hinterwinkel etwa 75° gross, sehr kurz verrundet, Basis sehr fein gerandet, jederseits mit kurzem, bogigem Ausschnitt, davor ein schwacher Eindruck; zuweilen ist die Mittellinie etwas angedeutet, neben dem kräftig gekielten Seitenrand läuft eine parallele, nicht sehr tiefe Furche; Oberfläche ziemlich dicht, fein punktiert, die Punkte wie die der Flügeldeckenzwischenräume mit äusserst feinen, staubartigen Härchen. Flügeldecken ziemlich flach, im ersten Drittel parallel, genau so breit wie der Halsschild an der Basis, der Seitenrandkiel der ganzen Länge nach zu sehen, an den ziemlich scharf rechtwinkligen, nicht nach aussen tretenden Schultern kaum breiter. Die Streifen tief, die Punkte deutlich, die Zwischenräume auf der Scheibe schwächer, an den Seiten und an der Spitze stärker gewölbt, meist stark rippenförmig, sie sind sehr fein und dicht punktiert. Prosternum wagerecht, hinten mit verrundeter, dicker, scharf gerandeter Spitze, der Absturz senkrecht, der Rand der Vorderbrust an den Seiten abgesetzt, verflacht, fein quergerunzelt. Abdomen glänzend, sehr fein punktiert, mit staubartigen Härchen, das Analsegment fein gerandet. Die Vorderschienen des ♂ gekrümmt, aber innen ohne Auszeichnung, die übrigen Schienen einfach. Die Erweiterung der Vordertarsen schwach. L. 7-8 $\frac{1}{2}$ mm. — Diese kleine, flache Art ist mit *S. elevatus* GERSTAECKER und *asperatus* FAIRMAIRE verwandt. Von letzterer Art unterscheidet sie sich

durch ganz andere Skulptur der Flügeldecken und einfache Vorder-schienen des ♂; dieses Merkmal trennt sie u.a. auch sofort von *S. elevatus*, der breiter und flacher ist. »

Remarks. — I saw of this species a single ♂ paratype, kindly forwarded to me by Mr H. KULZER of the Museum Frey at München. It is very well characterized by the complete margination of anal sternite, the distinctly curved but simple anterior tibiæ in the ♂, the plane metasternum and the strongly depressed elytra.

Type locality. — « Kilimandjaro : VIII-IX; Kibonoto, 1.300-1.900 m, III, leg. Y. SRÖSTEDT ».

12. Body of smaller size, $8 \frac{1}{4}$ to $10 \frac{1}{4}$ mm long, $3 \frac{1}{2}$ to $4 \frac{3}{4}$ mm broad. Sculpture on upper surface finer and more even; the punctures on pronotum uniform, finer and well separated; the punctation on secondary intervals of elytra considerably finer than that on pronotum; the punctures of primary rows finer, not impinging the margins of intervals, becoming obsolescent on apical declivity and there the rows sharply impressed and practically lineate. In the ♂ the anterior tarsi rather strongly dilated and about as broad as the preapical segment of antennæ, soleate below as are the intermediate tarsi; the anterior tibiæ strongly dilated and thickened, with a large and deep distal cavity on underside and the inner contours with a shallow, short but distinct preapical emargination; intermediate tibiæ thickened, curved, with slightly dilated apical fifth of inner contours.

[*Quadriдерes ruandanus* n. sp.]

(Pl. XI, fig. 3; Fig. 140.)

Readily distinguished from the preceding species by the conspicuous and dense punctation of secondary intervals on elytra, the densely punctured pseudopleura and the distinctly dimorphic anterior legs, exhibiting a preapical emargination of the inner contours of tibiæ in the ♂ (fig. 140).

Upper surface moderately shiny and fairly convex. Head above with coarse, dense, separated punctation. Middle section of mentum moderately narrowed to the non-lobiform and broadly rounded apical margin, excavate on each side of median convexity on basal half. Apical segment of maxillary palpi distinctly more securiform in the ♂ than in the ♀. Pronotum strongly transverse, about two-thirds broader than long, with subparallel sides posteriorly, uniformly covered with more or less dense, rather coarse, but well separated, round punctures. Submarginal depression separated from discal convexity, with a fine, smooth, justa-lateral canaliculation. Base moderately bi-sinuate, with weakly acute lobes of posterior angles; the latter considerably produced backwards beyond

level of middle section of base. Underside of prothorax with fine and scattered punctures, well perceptible on episternum. Elytra rather long, subparallel or inconspicuously narrowing from base towards middle, with bluntly rectangular humeral angles. Primary rows sharply impressed, almost lineate on apical declivity, densely punctured discally, with about 25 punctures on the discal portion of the fourth row, but punctures not discernible on the sloping posterior portion; ninth row curved inwards basally. Secondary intervals densely punctured, broad, slightly convex, becoming gradually more strongly convex towards sides and apex. Pseudo-pleural crest not distinctly visible behind middle (dorsal aspect), with very fine justa-pseudo-pleural canaliculation, becoming broadened basally. Metasternum plane. Abdomen with very fine, scattered punctures, concentrated and stronger on anal sternite.

Ædeagus. — Apicale with slightly sinuate sides, the parameres completely divided and obtusely rounded apically. Ventral groove with exposed penis. Basale about three times as long as apicale.

Distribution (map 4). — Ruanda-Urundi. — Ruanda: Kibungu, X-XII.1937, R. VERHULST (a large series, types, BCM.); Astrida, 1939, A. LESTRADE (1 spec., BCM.); Kaninya, 1947, DAMES DE MARIE (4 spec., BCM.); Gatsibu, 1800 m, terr. Biumba, II.1953, P. BASILEWSKY (2 spec., BCM.); Gabiro, terr. Biumba, 1300 m, II.1953, P. BASILEWSKY, R. VERHULST (8 spec., BCM.); Gitarama, terr. Nyanza, 1850 m, I. 1953, P. BASILEWSKY (3 spec., BCM.); Ndugu, terr. Nyanza, II.1953, P. BASILEWSKY (6 spec., BCM.).

- Body of larger size, 10 to 11 $\frac{3}{4}$ mm long, 4 $\frac{1}{2}$ to 5 $\frac{1}{2}$ mm broad. Sculpture on upper surface coarser and more uneven; the punctures on pronotum stronger, very dense, in part and especially on lateral portions distinctly confluent; the punctation on secondary intervals of elytra very strong, only slightly finer than those on pronotum; the punctures of primary rows coarse to transverse, more or less strongly impinging the margins of intervals, distinctly marked also on apical declivity. In the ♂ the anterior tarsi only slightly dilated, considerably narrower than the preapical segment of antennæ, soleate below; intermediate tarsi not soleate; the anterior tibiæ slender, not thickened, with only very small and shallow distal cavity on underside, with practically straight inner contours; the inner contours of intermediate tibiæ straight and simple.

[*Quadrideres robynsi* n. sp.]

(Pl. XI, fig. 4.)

Very closely related to *Qu. ruandanus*, but readily distinguished from all *Quadrideres* by the luxuriant sculpture on upper surface, in particular of elytra; remarkable also by the large size of body. Pronotum in shape very similar to *ruandanus*, but more strongly

transverse, covered with a very dense punctation which often forms confluent rugosities also on disc, recalling the dense sculpture of most of *Anchophthalmus*. Elytra broader, subparallel, more strongly depressed, with dorsally well exposed pseudopleural crest and rather broadly demarcated justa-pseudopleural canaliculation all round. The primary rows composed of more or less coarse, often transverse to almost subfoveate punctures, of which there are about 35 in the entire fourth row; the punctures more or less strongly impinging and constricting the secondary intervals, particularly on lateral and apical portions. Secondary intervals with very dense and strong punctation, almost flat discally, but strongly convex to subcostate on lateral portions and apical declivity, the lateral intervals scarcely broader than the adjacent primary rows. Punctation on underside of hind body denser and stronger than in *ruandanus*. In the ♂ the dimorphism of legs much less developed than in *ruandanus*. *Ædeagus* subidentical with *ruandanus*.

Distribution (map 4). — North-eastern Belgian Congo, Ruanda-Urundi, North-western Tanganyika Territory. — Kivu Province: Uvira, VII.1912, STAPPERS (8 spec., types BCM.); same locality, XI.1949, N. LELEUP (1 spec., BCM.); Baraka, VII.1918, R. MAYNÉ (1 spec., BCM.). — Oriental Province: Nioka, 1934, P. LEFÈVRE (1 spec., BCM.). — Ruanda-Urundi: Kitega, I.1935, P. LEFÈVRE (2 spec., BCM.); Mt. Mbude, south of I. Luhondo, 2000 m, I.1953, P. BASILEWSKY (1 spec., BCM.). — Tanganyika Territory: Mwangongo, XI.1943, MENEGHETTI (8 spec., C.M.).

Dedication. — Named in honour of Prof. Dr. W. ROBYNS, Vice President of the « Institut des Parcs Nationaux du Congo Belge ».

13. Metasternum with elongate or roundish tubercle on centre 14
 — Metasternum plane, inermous, sometimes with a small to minute round fovea on middle.

[*Quadriдерes interioris* (GEBIEN).]

(Pl. XII, figs. 2, 3, 4; Fig. 139.)

*1911, *Selinus interioris* GEBIEN, p. 62. — 1938-1942, GEBIEN, p. 417, n° 5596.

Original description. — « Klein, schwarz, schwach glänzend, ziemlich oval, doch die Seiten in der Mitte auf eine kurze Strecke parallel. Der Kopf ist dicht und deutlich, ebenso fein wie der Halsschild punktiert, ein mittlerer Längskiel fehlt; er ist bei den Augen am breitesten, der Canthus ist ebenso breit wie die Augen. Fühler kurz und dick, schwarz, drittes Glied nicht ganz $1 \frac{1}{2}$ mal so lang wie das vierte, das fünfte ist so lang wie breit, die folgenden allmählich immer mehr quer, das vorletzte doppelt so breit wie lang, das letzte so breit wie lang, die Fühler reichen etwas über die Mitte des Halsschildes hinaus. Der Unterkopf ist dicht und stark rauh punktiert, seitlich sogar deutlich quer gerunzelt. Halsschild

in der Form variabel, meist an der Basis $1 \frac{2}{3}$ - $1 \frac{3}{4}$ mal so breit wie in der Mittellinie lang, die Seiten in den hinteren zwei Dritteln vollkommen parallel, das erste Drittel stark nach vorn verengt, die Vorderwinkel sind deutlich und ziemlich scharf, ca. 110° gross, die Hinterecken ca. $70-75^\circ$ gross, der basale Ausschnitt nicht sehr tief

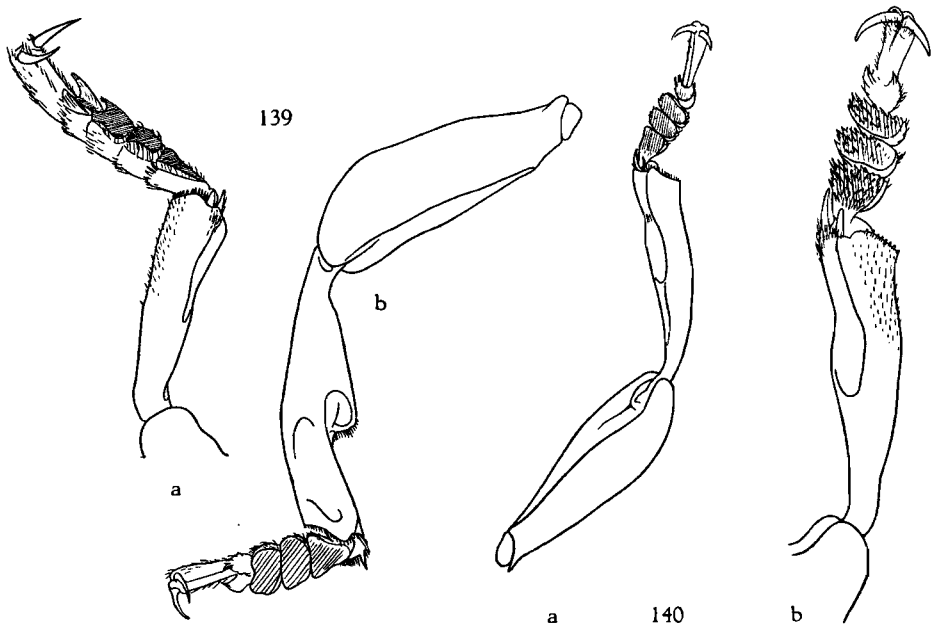


FIG. 139. — *Quadrideres interioris* (GEBIEN).

a : anterior leg of ♂; b : intermediate tibia with tarsus of ♂.

FIG. 140. — The anterior leg of a ♂ of *Quadrideres ruandanus* n. sp.

a : the entire leg; b : tibia with tarsus.

und nicht deutlich eingedrückt, die basale Randlinie ist fein aber vollständig. Neben dem Seitenrand verläuft ein deutlicher, aber nicht sehr tiefer Längseindruck. Die Oberfläche ist sehr deutlich und dicht punktiert, eine mittlere Längslinie fehlt oder ist kaum angedeutet; der umgeschlagene Rand ist glatt oder kaum quer gerunzelt. Die Flügeldecken sind von der Breite des Halsschildes, aber im hinteren Drittel um ein geringes breiter, sie sind sehr tief punktiert gestreift, die Punkte der Streifen sind verhältnismässig fein, etwa wie bei dem gemeinen *S. trivialis*, die der Zwischenräume aber sehr deutlich und so stark wie die des Halsschildes. Die Zwischenräume sind stark konvex, aber nicht gerippt, auch die seitlichen nicht, die Spitze ist in beiden Geschlechtern einfach. Das vortretende Pro-

sternum fällt gerundet senkrecht ab, seine Spitze ist vollständig gerandet. Die Unterseite ist glänzend, fein punktiert, das Analsternit ist ungerandet. Die Vorderschienen sind beim ♂ dicker und haben innen vor der Spitze einen sehr schwachen, nach oben nicht zahnartig begrenzten bogigen Ausschnitt, die Erweiterung der Vordertarsen ist nicht sehr deutlich. Die Mittel- und Hinterbeine und das Abdomen der ♂♂ sind ohne Auszeichnung. — Länge : 9-10 $\frac{1}{2}$ mm. — Die mir vorliegenden Tiere sind in Grösse und Form des Halsschildes etwas verschieden, doch glaube ich nicht, dass verschiedene Arten vorliegen. Die Art gehört mit *simplicipes* GEBIEN zu den kleinen, unansehnlichen und hat wie diese kaum ausgezeichnete Vorderschienen der ♂♂. Sie unterscheidet sich von ihr durch die bedeutendere Grösse, ungerandetes Analsegment, andere Körperform, feine Punkte der Streifen usw. »

Remarks. — This species is related to *Qu. ruandanus*, with which it agrees in the shape of body, the moderately shiny upper surface, the distinctly and densely punctured, similarly convex secondary intervals of elytra, and identical formation and sculpture of the underside of body. It is easily distinguishable by the strong dimorphism of legs. In the ♂ (fig. 139) the anterior tarsi are rather strongly dilated, only moderately narrower than the preapical segment of antennæ or the apex of anterior tibiæ, with the segments soleate on underside, as are the intermediate tarsi; the anterior tibiæ are more or less strongly thickened, with slightly to rather strongly curved outer contours, very strongly excavate below, with a strong to often semi-circular preapical emargination which is proximally demarcated by a sharp to dentiform angle; the intermediate tibiæ are thickened, sulcate below, slightly curved, sometimes more strongly dilated towards apex, with the inner contours exhibiting a weak, more or less conspicuous dilation at apical fifth; inner contours of posterior tibiæ straight or with the apical angle distinctly dilated and briefly emarginate between middle and apical dilation. *Qu. interioris* seems to be geographically variable in the more or less strong punctation of primary rows, size of body and development of the distinctive characters in the ♂.

Ædeagus. — Almost identical with *Qu. ruandanus*.

Dimensions. — Length 7 $\frac{1}{4}$ to 11 mm, width 3 to 4 $\frac{3}{4}$ mm.

Type locality. — « Sesse-Inseln » (Southern Uganda, Lake Victoria). Holotype, a ♀, probably in Museum Frey.

Distribution. — Southern Uganda, North-western Tanganyika Territory, North-eastern Belgian Congo. — Uganda: without specified locality, R. DUMMER (5 spec., S.A.M., the ♂♂ with very strongly developed distinctive

characters on legs). — Tanganyika Territory, Lake Victoria : Bukoba, XI.1943, MENEGHETTI, J. W. HUNT (10 spec., C.M.); Ukerewe Island, Father CONRAD (10 spec., C.M.). — Belgian Congo. Eastern Oriental Province : Kasenye, Lake Albert, V.1935, H. J. BRÉDO (2 spec., BCM.). — North-eastern Kivu Province : Beni-Lesse, VII.1911, MURTULA (1 spec., BCM.); Nyamarangwa Island, Albert National Park, 460 m, X.1935, H. DAMAS (1 spec., I.P.N.).

14. In the ♂ the anterior tarsi not or only inconspicuously dilated; the inner contours of intermediate tibiæ almost straight behind basal constriction, but with sharp and inwardly produced apical angle; posterior tibiæ without fringe of hairs, of rather equal width, with the inner apical angle slightly curved inwards and demarcated by a shallow, preapical emargination; posterior femora with almost straight and only very weakly arcuate lower edge of outer lateral surface.

[**Quadrideres lesnei** n. sp.]

(Pl. XII, fig. 1.)

1922, *Selinus femineus* LESNE, ♂, p. 702.

This is the species which LESNE erroneously took for the ♂ of his *femineus*. It occurs together with *femineus* and is closely related to the latter, agreeing in the subparallel shape of body, the very fine and inconspicuous punctation on secondary intervals of elytra and in the presence of a metasternal tubercle. It is, however, strongly differentiated by the strong dimorphism of legs, the less strongly shiny upper surface of body, the coarser and denser punctation on pronotum, broader and better demarcated submarginal depression on the latter, and by the much more developed elytral sculpture. The primary rows are composed of coarse to transverse punctures, of which about 30 are in the fourth row, becoming smaller but deeply impressed towards sides; the secondary intervals are much more strongly convex, with the third, fifth and seventh intervals usually more strongly convex than the alternating even intervals, and with the lateral intervals very strongly convex to subcostate, often all intervals subcostate and strongly constricted by the primary rows and then almost narrower than the primary rows. Prosternum with fine punctures, the pseudopleura with obsolescent punctation. In the ♂ the anterior tibiæ curved and broadened, very strongly excavate on underside, the inner contours with a strongly prominent and arcuate median dilation, thence rather strongly emarginate between dilation and apex; all the other distinctive characters as described above. *Ædeagus* very similar to *femineus*, but the apicale elongate, with slightly sinuate sides.

Dimensions. — Length 8 ½ to 11 mm, width 3 ¾ to 4 ¾ mm.

Distribution. — Central-southern British East Africa. — Ngang Forest, Nairobi, 1900 m (5 spec., types I.R.); Nairobi, III.1940, A. F. J. GEDYE (1 spec., C.M.), same locality, I.1923, G. BABAULT (2 spec., BCM.); Kibwezi, XI.1936, C. G. MACARTHUR (2 spec., C.M.); Emali Range, Sultan Hamud, 4.900 to 5.900 ft, VII.1940 (1 spec., C.M.).

- In the ♂ the anterior tarsi conspicuously dilated, but much narrower than preapical segment of antennæ or the apex of anterior tibiæ; the inner contours of intermediate tibiæ with simple and not inwardly bent apical angle, but behind the strongly curved basal constriction abruptly

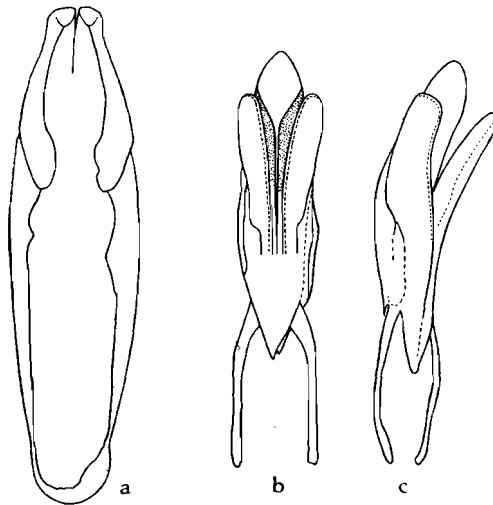


FIG. 141. — *Quadrideres volcanicus* n. sp.

a : the dissected and emptied aedeagal tegmen; b : the extracted penis plus lacinia of aedeagus, outer surface; c : ditto, in diagonal view.

and subangularly dilated about in front of middle, thence almost sub-parallel; inner contours of posterior tibiæ weakly dilated along middle section, very shallowly emarginate in front of the almost simple apical angle, but provided with a fringe of long and squarrose bristles on distal two-thirds; posterior femora with the lower edge of outer lateral surface bearing a fine fringe of very short, scattered bristles, rather strongly dilated and faintly angular behind middle.

[*Quadrideres volcanicus* n. sp.]

(Figs. 141, 142.)

Related to *Qu. lesnei* and agreeing with this species in the shape of body, the inconspicuously punctured secondary intervals on elytra, the structure of the anterior tibiæ in the ♂, but easily distinguishable

by the fine punctures of the primary rows of elytra, the broad and only laterally convex secondary intervals, the roundish and umbonate metasternal tubercle, and by the different distinctive characters of the legs in the ♂ (fig. 142). The occurrence of a fringe on posterior tibiæ in the ♂ is the only case within the genus. Ædeagus (fig. 141) as in *lesnei* and *femineus*, but with the apicale being intermediate in length.

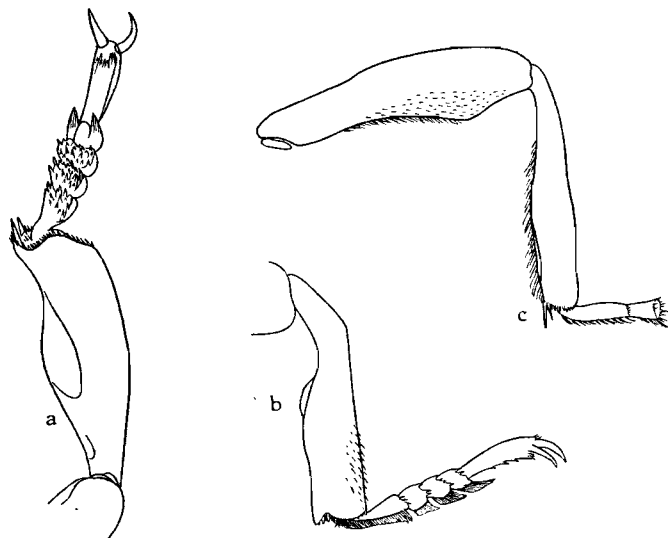


FIG. 142. — *Quadrideres volcanicus* n. sp.

a : anterior tibia with tarsus of ♂ ; b : intermediate tibia with tarsus of ♂ ;
c : posterior femur and tibia of ♂ .

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

Distribution. — Central-northern Tanganyika Territory. — Ngorongoro, IV.1941 (1♂, 2♀♀, types C.M.).

SPECIES INCERTÆ SEDIS.

Selinus parallelus ANCEY, 1879, p. 468. — « Ater, subnitidulus, subtus lævior. Caput punctulatum; prothorax apice attenuatus, postice fere parallelus, marginatus, et ante marginem convexior, in medio disco convexulus, angulis posticis præsertim, productis, nec acutis, basi bisinuatus, punctulatus. Elytræ subconvexæ, parallelæ, deinde rotundatæ et apice acuminatæ, tenuissime punctulatæ, sulcis punctigeris insculptis instructæ. Pars inferior

corporis tenuissima punctulata. — Cette espèce provient, comme la précédente (*Selinus obsoletus*), de l'Uzagara; elle se rapproche du *S. menoux* MULSANT et REY, très commun dans le Zanguebar, dont elle diffère par plusieurs caractères dont le plus saillant est sa forme allongée et parallèle. Le *Selinus obsoletus* est tout à fait à part par sa forme arrondie, son aspect mat, la sculpture fine de ses élytres, enfin par la forme de son prothorax arrondi latéralement et fortement bisinué à sa base. Long. 10; lat. 4 mm. »

This species is probably a *Quadrideres*, but I was unable to identify it. All the above described *Quadrideres* from the Tanganyika Territory come from more northern parts than is the locality of *parallelus*. The few specimens before me from Southern East African localities are all ♀♀ and belong to different, not yet described species which do not agree with ANCEY's description.

LESNE, 1922, p. 702, separates his mixed species *femineus* from *parallelus* as follows : — « *Femineus* diffère de *parallelus* par son corps notablement plus court, ses téguments dorsaux plus brillants, par la ponctuation moins dense du pronotum qui n'offre pas de renflement costiforme parallèle et adjacent au bord latéral, et dont le bord latéral est lui-même plus fortement réfléchi; par les points des stries élytrales moins serrés; enfin par la présence d'un tubercule médian sur le métasternum ». This differential diagnosis refers to a very peculiar character of *parallelus*, viz. the presence of a costiform, longitudinal convexity along the sides of pronotum. ANCEY does not mention this particular, but if LESNE should have had re-examined ANCEY's type, *parallelus* may represent a very well distinguished species. I do not know of any East African Platynotin, exhibiting such a convexity along sides of pronotum, and there are only two species which agree as to this formation, viz. *Selinus plicicollis* FAIRMAIRE from West Africa and *Oncotiphallops barbosai* n. sp. from Central Portuguese East Africa. Both these species, however, disagree completely with ANCEY's description.

MICROSELINUS n. gen.

Diagnosis. — Of small and oval shape, moderately shiny, bare above. Head with plane surface; epistomal emargination broad and very shallow. Eyes large, very slightly emarginate by genal canthus. Mentum apparently non-tripartite, but uniform, transverse, with broadly rounded, dilated and edged sides, narrowing and depressed apical margin and rather sharp median carina on basal two-thirds. Apical segment of maxillary palpi non-dimorphic, small, triangular, not broader than long. Antennæ stout, strongly dilated and compressed distally, with strongly transverse two preapical segments. Pronotum weakly transverse, of subconical shape, broadest basally, without submarginal depression, but with deep justalateral canaliculation, shallowly and weakly emarginated anteriorly, rather strongly bi-sinuate basally; punctation scattered and uniform. Underside of

prothorax with shallow and sparse punctures; the intercoxal apophysis not produced but bent towards foramen between coxal cavities. Elytra very slightly broader than pronotum, moderately and uniformly convex, subparallel basally and gradually attenuate posteriorly, with emarginate base, non-prominent, rectangular humeral angles and intra-humeral cavity of articulation surface. Primary rows sharply lineate, secondary intervals strongly convex laterally and apically. Justa-pseudopleural canaliculation very fine, together with pseudopleural crest just exposed dorsally behind middle. Pseudopleura abbreviated apically, almost occupying the entire ventrally reflected portion of elytra. Metasternum short, between meso and metacoxal cavities one third the length of the latter, with incomplete, laterally abbreviated pre-metacoxal sulcus; the lateral angles of the broad apical emargination minutely dentiform. Anal sternite with sharp margination on basal portion of sides, becoming finer and evanescent on middle of apex of sternite. In the ♂ the anterior tarsi distinctly dilated and soleate below; the anterior tibiæ excavate on underside and slightly differentiated. Aedeagus very slender, but of simple shape, similar to *Quadrideres*.

Dimensions. — 5 ½ to 6 mm long.

Relationship. — An isolated genus, very well characterized by the subconical and laterally canaliculate pronotum, the formation of metasternum and the large, only slightly emarginate eyes. On account of the abbreviated pseudopleura related to the selinoid *Platynotina* and best to be placed near to *Glyptopteryx*. Although of a quite different habitus, agreeing with this genus in the deep justa-lateral canaliculation of pronotum, the incomplete pre-metacoxal sulcus and the small size of body. Somewhat related also to *Selinus* by the sharply marginate anal sternite, the rather strongly dilated anterior tarsi in the ♂, as well as by the shape and sculpture of elytra.

Type species. — *Microselinus muelleri* n. sp.

Distribution. — Northern East African, endemic to Italian Somaliland.

[**Microselinus muelleri** n. sp.]

Black, the appendages, underside and anterior portion of head reddish brown. Upper surface rather weakly shiny, somewhat sericeous on account of the very finely micro-sculptured cuticle. Head with dense, coarse, well separated punctures. Clypeal and epistomal sutures coalescent, sharply and finely impressed. Supra-antennal surfaces scarcely impressed. Eyes large, strongly projecting beyond the short, subparallel outlines of genæ. Pronotum only a fifth broader than long, evenly covered with fine and sparse punctures which are considerably finer than those on head. Anterior margin bi-sinuate, carinate only on sides, the anterior angles only

very slightly produced beyond level of middle section. Sides gradually narrowed in an almost straight line from base to near to anterior angles, then rounded to the latter; lateral carina narrow, well raised, of about equal width, closely followed by a deep justa-lateral canaliculation. Base considerably broader than anterior margin, completely carinate, with arcuate middle section, rather strong and broad lateral emarginations and practically rectangular lobes of posterior angles; the latter scarcely projecting backwards beyond level of middle section. Elytra short, basally slightly broader than pronotal base. Primary rows without discernible punctation; the first and second rows abbreviated basally and there coalescent (as is the case in *Selinus elevatus*); secondary intervals with very scattered, fine punctures, distinctly convex on middle of disc, but becoming strongly convex to subcostate on sides, much broader than primary rows. Pseudopleura smooth, with only a few obsolescent punctures. Abdomen with very fine, sparse punctures, slightly more concentrated on anal sternite. In the ♂ the anterior tarsi dilated, but much narrower than preapical segment of antennæ or the apex of anterior tibiæ; the latter rather strongly dilated towards apex, with the inner contours shallowly emarginate on distal third; intermediate and posterior tibiæ slender, straight and subparallel; femora slender and simple.

Ædeagus. — Very slender and subparallel. The apicale elongate, with continuously converging sides. The parameres divided on apical third of apicale, with the apices obtuse and weakly bent. Ventral groove strongly constricted by inflexed alæ, very narrow, leaving exposed only the distal portion of penis. Basale only slightly broader than apicale, with subparallel sides, about three and a half times as long as apicale.

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

Distribution. — Italian Somaliland: Chisimaio, 1936, A. BIDOLI (1 ♂, holotype Museum Trieste); without specified locality, IX-XI.1935, C. LOMI (1 ♂ ♀, allotype Museum Trieste).

Dedication. — Named in honour of Prof. Dr. GIUSEPPE MÜLLER, former director of the Museo Civico di Storia Naturale at Trieste, and eminent Italian zoologist.

GLYPTOTERYX GEBIEN.

*1910 a, *Glyptopteryx* GEBIEN, p. 376. — 1919 b, GEBIEN, p. 335. — 1938-1942, GEBIEN, p. 484.

Diagnosis. — Closely allied to *Quadrideres*, of elongate and subparallel shape of body, but strikingly differing by the strongly raised, sharply carinate, odd secondary intervals on elytra, the sutural interval included, the different shape of pronotum, being broadest in front of middle,

with the sides distinctly narrowed in a straight line towards base, the only narrowly canaliculate submarginal depression of sides, the shallowly emarginate and bi-sinuate anterior margin, the incomplete basal carina which is interrupted on lateral emarginations, the subfoveate punctures on episternum of prosternum, the depressed and scarcely produced apex of prosternal apophysis, the rudimentary pre-metacoxal sulcus and the rather strong convexity of elytra. *Ædeagus* as in *Quadrideres*.

Dimensions. — 5 to 8 ½ mm long.

Relationship. — GEBIEN proposed for this genus a quite erroneous systematic position and placed it between the Asiatic genus *Eumylada* and the South African *Phylacastus*, having been unaware of the great similarity with the *Quadrideres* (olim *Selinus* and *Anchophthalmus* p. p.). *Phylacastus* belongs to the *Oncotini*, *Eumylada* to the *Opatrini*, while *Glyptoteryx* is a true *Platynotina*, agreeing with all the other *Platynotina* in the structure of *ædeagus* (short apicale, presence of lacinia), as well as in the stridulatory gula.

Glyptoteryx agrees with *Quadrideres*, to which it is well related, in the emarginated eyes, apically dilated antennæ, shape of mentum and maxillary palpi, the quasi-quadrangular pronotum, shape of subparallel elytra, generally similar sculpture of the latter, short metasternum, strongly abbreviated pseudopleura and the immarginate anal sternite of abdomen. *Glyptoteryx* is the only known genus of *Platynotina* exhibiting carinate costæ on elytra.

Type species. — *Selinus quadricollis* FAIRMAIRE, 1887 (= *Glyptoteryx forticostis* GEBIEN, 1910 a). Monotypical.

Distribution. — Northern and central Tanganyika Territory, south-eastern British East Africa.

[***Glyptoteryx quadricollis*** (FAIRMAIRE).]

(Pl. XIII, fig. 1; Fig. 143.)

*1887, *Selinus quadricollis* FAIRMAIRE, p. 284. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5601.

*1910 a, *Glyptoteryx forticostis* GEBIEN, p. 376, fig. 4. — 1910 b, GEBIEN, p. 335. — 1938-1942, GEBIEN, p. 484, n° 6530.

Original description. — « Oblongus, parallelus, niger, nitidus, parum convexus; capite dense punctato, antice picescente et transversim impresso; antennis brevibus, piceis, articulo 2° brevissimo, 3° sequente parum longiore, ceteris subæqualibus, ultimo transverso fere truncato; prothorace elytris haud angustiore, dense punctato, fere strigosulo, dorso medio obsolete lineato, antice et postice obsolete biimpresso, lateribus rectis sat fortiter reflexo-marginatis, margine postico utrinque emarginato, angulis

postice productis, angulis anticis sat obtusis; elytris parallelis, apice tantum angustatis, alternatim magis acute costatis, intervallis foveolatis; subtus sat fortiter dense punctatus, prosterni lateribus rugosis, pedibus piceis, tibiis rectis. Long. 8 mm. — Cet insecte présente un faciès assez différent des *Selinus*, à raison de sa petite taille, de son corps parallèle, de son corselet carré et de ses élytres à côtes saillantes; mais je ne vois pas de caractères suffisants pour le séparer des *Selinus*. Le 4^e article des antennes est un peu plus court. »

Synonymy. — FAIRMAIRE's description agrees in all respects with GEBIEN's *Glyptopteryx forticosis*. His discussion of the systematic position of this rather unique species is quite correct, whereas GEBIEN was greatly misled by basing himself on REITTER's division of the Palæarctic *Opatrini*. In the following I am giving GEBIEN's fine description of this species : —

« Körper ziemlich schmal, parallelseitig, stark gewölbt. Schwarz oder schwarzbraun, unbehaart und unbeschuppt, Oberseite wenig glänzend. Der Kopf gross; Augen eingeschnürt, aber nicht getheilt, der Vorderkopf stark entwickelt, der Canthus breiter als die Augen, Clypeus bogig, nicht sehr tief ausgeschnitten. Oberseite dicht und deutlich, auf der Stirn fast längsstrigos punktiert, der Clypeus feiner punktuert, er ist von der Furche an ebenso breit, wie der Kopf hinter ihm, am Innenrand der Augen eine breite, wenig auffallende Falte, auf der Stirn ein schmaler, glänzender Längskiel. Der Canthus breiter als die hinter ihm stark verengten Augen, nach den Seiten aber nicht winklig vorspringend, er ist dick und vorn breit verrundet. Die Fühler erreichen die Mitte des Halsschildes, das dritte Glied ist verlängert; die mittleren Glieder konisch, so breit wie lang, die letzten 3 oder 4 Glieder verbreitert, die beiden vorletzten doppelt so breit wie lang, Glied 3 $1\frac{1}{2}$ mal so lang wie 4. Mentum trapezisch mit fast geraden Seiten, die Vorderecken (= lateral wings) spitzig vorragend, die Mitte hoch bucklig gewölbt und vorn zweiteilig. Die Kehle vorne stumpf verrundet, äusserst fein quergerieft, so dass sie makroskopisch gesehen seidig glänzt. Der Halsschild $1\frac{1}{4}$ mal so breit wie lang; die letzten drei Viertel ganz parallel, das erste stark nach vorn verengt, aber nicht winklig an den Seiten abgesetzt; die Vorderwinkel niedergedrückt, scharf rechtwinklig, die Hinterwinkel nach hinten stark vorragend, die Basis in der Mitte gerade, jederseits neben dem Hinterwinkel in kurzem, wenig tiefem Bogen ausgeschnitten. Oberfläche ziemlich grob und dicht, auf der Scheibe etwas längsrissig punktiert, die Mittellinie der Länge nach eingedrückt, fast glatt, jederseits derselben ein langer Längseindruck, an dessen Hinterende, aber weiter nach aussen stehend an der Basis sich ein kurzer Eindruck befindet, als Fortsetzung des basalen Ausschnittes; neben dem Seitenrand ein dritter, oft wenig deutlicher Längseindruck. Die Flügeldecken mit aufgebogenen, sehr kurz verrundet rechtwinkligen Schultern, der Seitenrand von oben nur im ersten Sechstel sichtbar. Die Naht mit hoher Dorsalrippe, ausser dieser auf jeder Flügeldecke 4 hochgekielte Rippen, die sämtlich an der Basis beginnen und bis

zum Ende hoch und scharf sind, fast immer sind die erste und dritte Rippe an der Spitze vereinigt, ihnen schliesst sich meist die vierte Rippe an, die zweite ist eingeschlossen, die Zwischenräume mit Doppelreihen ziemlich grober nicht gedrängter Punkte, die den Rippen genähert sind und einen glatten, blanken Raum zwischen sich haben. Schultern stark entwickelt aber nicht nach aussen vorspringend. Körper ungeflügelt (entsprechend dem kurzen Metasternum), Naht verwachsen. Epipleuren vor dem Ende verkürzt, fast glatt. Prosternum hinten senkrecht abfallend das Ende verrundet, gesenkt; Propleuren mit groben, wenig dichten Punkten. Mesosternum

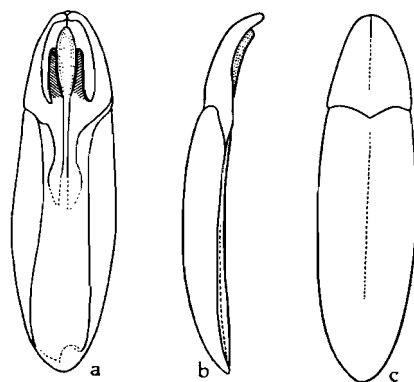


FIG. 143. — Aedeagus of *Glyptopteryx quadricollis* (FAIRMAIRE).

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

eingedrückt, Metasternum sehr kurz, erstes Abdominalsegment zwischen den Hüften schmal, aber am Ende gerade abgestutzt. Abdomen glänzend, in beiden Geschlechtern verschieden : beim ♂ sind die ersten Segmente flach grubig eingedrückt und ziemlich grob punktiert, an der Basis deutlich längsstrigos, beim ♀ sind die Segmente gewölbt, fein und ziemlich weitläufig punktiert. Schenkel ohne Auszeichnung, die Vorderschienen gegen das Ende verbreitert, ohne Zahn an der Aussenkante, das Ende ebenfalls nicht winklig nach aussen springend. Endsporne klein, gleichlang. Die Schienen aussen ungefurcht. Tarsen kurz, schmal, unten zweireihig kurz beborstet. L. 6-8 $\frac{1}{2}$ mm. »

Remarks. — *G. quadricollis* is unique among all *Platynotina* by the sharply carinate elytra. In its appearance, the apically coalescent elytral costæ included, it recalls superficially the *Litoborini* genus *Hanstræmium*. In the ♂ the apical segment of maxillary palpi is slightly more strongly securiform than in the ♀, but the legs are non-dimorphic; the shallowly and medially impressed proximal sternites of abdomen in the ♂ represent a frequently appearing particular in the *Platynotini*.

Ædeagus (fig. 143). — Apicale much narrower than basale, with continuously converging sides; parameres completely divided, almost straight, with obtuse apices; penis and lacinia exposed. Basale about four times as long as apicale.

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

Type locality. — « Uzagara » (Central Tanganyika Territory). Type (coll. FAIRMAIRE) probably in Museum Paris.

Distribution. — Central and Central-northern Tanganyika Territory. — Usagara; Meru plain (type locality of *forticostis*); Ngare na nyuki, I., Y. SJÖSTEDT (2 paratypes of *forticostis*, T.M.). — South-eastern British East Africa. — Olgasalic, V.1943, MENEGHETTI (1 spec., C.M.); Naivasha, III.1941 (18 spec., C.M.); Nairobi (6 spec., C.M.); Ngang Forest, 1900 m (2 spec., I.R.).

UPEMBARUS n. gen.

An entirely new phylogenetic line within the selinoid *Platynotina*.

Agreeing with *Monodius* in the large size of body, the abbreviated pseudopleura of elytra, the practically non-dimorphic maxillary palpi, the plane to obsolete impressed supra-antennal portions of head, the even sculpture and broad, non-costate secondary intervals on elytra, the short metasternum, the immarginate anal sternite, the strongly dilated anterior and intermediate tarsi in the ♂. However, this genus is extraordinarily characterized by the evenly convex pronotum which lacks any trace of a submarginal depression of sides; moreover sharply separated from *Monodius* by the posteriorly rounded and narrowed sides of pronotum, the coarse punctation on underside of prothorax, the punctured pseudopleura, the presence of a strong median tooth on underside of intermediate femora in the ♂, and in particular by the small size and simple shape of ædeagus. On account of the last mentioned character related to the two genera *Quadrideres* and *Ectateus*, both having abbreviated pseudopleura of elytra and an immarginate anal sternite of abdomen. From *Quadrideres* readily distinguished by the large size of body, the posteriorly rounded sides of pronotum, the absence of a submarginal depression of pronotal sides, the plane to obsolete impressed supra-antennal portion of head, the basally non-dilated justa-pseudopleural canaliculation of elytra, the coarse punctation of underside of prothorax, the slightly longer metasternum, and in the ♂ by the strongly dilated anterior tarsi and the dentate intermediate femora.

The only somewhat related genus is *Ectateus*, displaying in the species of the *modestus* group likewise posteriorly rounded and narrowed sides of pronotum, as well as dentate intermediate femora in the ♂ (except for *Ectateus ghesquierei*, in which case, however, the pronotum is deeply sulcate along midline). Even the subparallel parameres of ædeagus,

peculiar to all the *Ectateus*, occur in a similar way also among the *Upembarus*. But *Ectateus* is sharply separated from *Upembarus* by the deeply impressed supra-antennal and latero-epistomal portions of head, the slender and distally only moderately dilated antennæ, the broad and strong submarginal depression of pronotum, irregular impressions or median sulcus on pronotal disc, the practically smooth underside of prothorax, the lanceolate and more strongly produced intercoxal apophysis of prosternum (broadly rounded and less prominent in *Upembarus*), the broader and shorter elytra with basally broadened justa-pseudopleural canaliculation, and in the ♂ by the moderately dilated anterior tarsi.

Among the selinoid *Platynotina*, having abbreviate pseudopleura of elytra and an immarginate anal sternite, the only genus with absent submarginal depression of pronotum is *Glyptopteryx*. This genus, however, in which the submarginal depression of pronotal sides is substituted by a strong and smooth justa-lateral canaliculation, can not be brought into any relation to *Upembarus*. On the other hand there appears to exist a well traceable relationship between *Upembarus* and the *punctatostriatus* group of *Selinus*. In this group the ♂ has a similar tooth on the underside of intermediate femora, and *Selinus punctatostriatus* in particular agrees with the *Upembarus* even in the absence of a submarginal depression and posteriorly rounded and narrowing sides of pronotum. But all *Selinus*, the *punctatostriatus* group included, display a sharply and completely marginate anal sternite of abdomen.

Dimensions. — 9 ½ to 15 mm long.

Type species. — *Upembarus saegeri* n. sp.

Distribution (map 4). — South-eastern Belgian Congo, hitherto known exclusively from the Upemba National Park in the Central Elisabethville Province, with all species collected by the Mission G. F. DE WITTE.

KEY.

1. In the ♂ the posterior femora without brush and the posterior tibiæ without fringe of hairs. Lateral emarginations of pronotal base deep; sides of pronotum not sinuate in front of posterior angles. Humeral angles of elytra broadly rounded to obtuse 2
- In the ♂ the posterior femora with strong brush of dense and long yellowish hairs on proximal two-thirds of underside; the posterior femora with a fringe of fine hairs on about distal half. Lateral emarginations of pronotal base shallow; sides of pronotum distinctly sinuate in front of posterior angles. Humeral angles of elytra rectangular.

Upembarus saegeri n. sp.

(Pl. I, fig. 4; Figs. 144, 145, 146.)

Body large, moderately convex, the upper surface sericeous, but with distinct sheen on elytra. Head above with round and well separated punctures. Epistomal emargination deep; sides of epistome not separated from genæ; clypeal and epistomal sutures coalescent, arcuate and linearly impressed. Apical segment of maxillary palpi non-dimorphic, very slightly broader than long. Middle section of mentum carinate laterally, narrowed towards the produced and plane apical lobe which occupies about one third of length of mentum; median carina fine and sharp on basal two-thirds. Antennæ slender, long, moderately dilated and compressed distally, with broadly triangular two preapical segments which are only moderately broader than long. Pronotum broadest at about middle, strongly transverse, about twice as broad as long, sericeous, uniformly covered with rather dense, round, moderately strong, separated punctures, becoming slightly more concentrated towards sides. Anterior margin moderately emarginate, with produced anterior angles and medially interrupted marginal carina. Sides rather strongly rounded, narrowed towards, and distinctly sinuate in front of, posterior angles; lateral carina narrow, becoming evanescent on posterior angles, strongly narrowed and very fine towards anterior angles; submarginal depression practically absent, confined to a very shallow stretch along basal portion of sides. Base completely, finely carinate, with rather shallow, broad lateral emarginations and slightly arcuate middle section; the lobes of posterior angles almost rectangular. Underside of prothorax with round, rather scattered, coarse punctures, coarser on episternum; intercoxal apophysis produced, completely marginate, with broadly rounded apex. Elytra moderately convex, slightly broader than pronotum, more than one and a half times as long as broad, with slightly rounded sides and sharply rectangular humeral angles. Sides of base strongly sinuate, enclosing the intra-humeral cavity on articulation surface. Primary rows sharply impressed, composed of very dense, round, deep, but rather small punctures, well perceptible also on lateral and apical portions; in the fourth row with about 50 punctures; the ninth row closely following the pseudopleural crest. Secondary intervals broad, covered with very fine, scattered and rather inconspicuous punctures, flat discally, becoming uniformly and weakly convex on sloping lateral and apical portions; the second intervals of both elytra slightly bunched up apically and there obliquely coalescent. Pseudopleural crest with the submarginal canaliculation entirely exposed dorsally. Pseudopleura strongly and rather densely punctured, with the punctures becoming evanescent towards sides. Episterna of meso and

metasternum with dense, subfoveate and partially rugose punctation. Abdomen with deep, rather fine, moderately scattered punctures, more concentrated on anal sternite; sides of proximal sternites densely and longitudinally wrinkled. Legs robust and very strongly dimorphic. In the ♂ (fig. 146), the anterior and intermediate tarsi very strongly dilated and with poriferous soleæ underneath; the anterior tarsi almost as broad as the apex of anterior tibiæ, but about twice as broad as the preapical segment of antennæ; the intermediate tarsi more slender, but nevertheless about as broad as the apex of intermediate tibiæ and distinctly broader than the preapical segment of antennæ; the anterior tibiæ deeply, narrowly excavate on distal four-fifths of underside, with almost straight outer contours, but the inner contours with long and shallow emargination on about distal two-thirds; the inner contours of intermediate tibiæ obtusely dilated behind the rather strong basal constriction, thence almost subparallel, but with small, sharp spine at about halfway between middle and the simple apical angle; posterior tibiæ with rather broad, obtuse, shiny and longitudinal carina along midline of underside, with a fringe of short, yellowish and squarrose hairs on both sides of median carina on distal half, projecting beyond the weakly dilated distal half of inner contours; the latter with a minute, prominent preapical tubercle; the intermediate femora with a large, triangular, sharply pointed, perpendicularly prominent tooth, originating slightly distad from middle at the inner edge of under surface; the posterior femora with a similar but much smaller tooth at the initiation of distal third, with the lower edge of outer lateral surface shallowly emarginate, and bearing a dense brush of erect, yellowish hairs on underside.

Ædeagus (figs. 144, 145). — Simple and small. The apicale with strongly narrowed basal two-thirds of sides, but practically subparallel apical third; parameres completely divided, slightly gaping apically, with narrow, obliquely truncate apices which are strongly bent ventrad. Ventral groove large, leaving exposed penis and lacinia. Basale broader than apicale, gradually dilated towards base, about five to five and a half times as long as apicale.

Dimensions. — Length 12 to 15 mm, width 5 ½ to 7 mm.

Distribution. — South-eastern Belgian Congo. — Central Elisabeth ville Province, Upemba National Park: Kankunda, XI.1947 (334 spec., types I.P.N.); River Kateke, XI-XII.1947 (51 spec., I.P.N.); Kilwezi, VIII-IX.1948 (3 spec., I.P.N.); Piste Shinkulu, V.1949 (10 spec., I.P.N.); Piste Lupiala, X.1947 (6 spec., I.P.N.); Munoi, VI.1948 (59 spec., I.P.N.); Gorges de la Pelenge, VI.1947 (3 spec., I.P.N.); Mabwe, VIII.1947 (6 spec., I.P.N.); Kabwe sur Muye, V.1948 (23 spec., I.P.N.); Kaswabilenga, X.1947 (2 spec., I.P.N.); Loie River, IX.1948 (19 spec., I.P.N.); all collected by the Mission G. F. DE WITTE.

Dedication. — Named in honour of Mr. H. DE SAEGER, Secretary of the « Comité de Direction de l'Institut des Parcs Nationaux du Congo Belge ».

2. In the ♂ the inner contours of intermediate tibiae with a small spine at about halfway between middle and apical angle, the latter bare, with impressed and smooth apical portion of underside of tibia; the posterior femora simple, without any trace of a postmedian tooth ... **3**

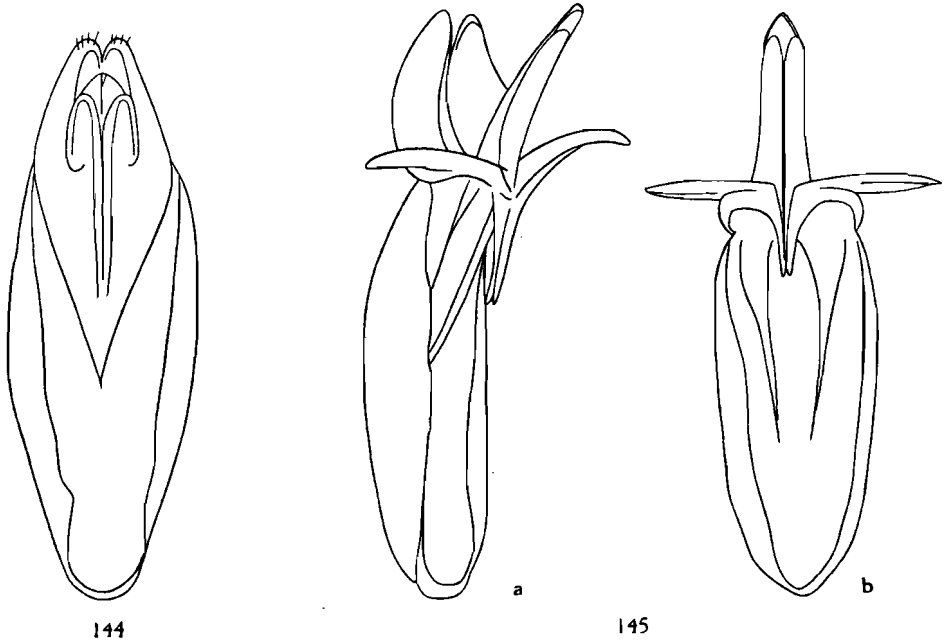


FIG. 144. — Ventral surface of aedeagus of *Upembarus saegeri* n. sp. — FIG. 145. — Aedeagus of *Upembarus saegeri* n. sp. (a: diagonal view, with lifted inner sclerites and inflexed alae of parameres, at which the lacinia are fastened; b: exact ventral view, the apical of aedeagal tegmen removed and the lacinia deflected).

- In the ♂ the inner contours of intermediate tibiae without preapical spine, but the inner angle bearing a distinctly prominent brush of aggregated, silky, yellowish hairs, running for a short distance proximad on apical portion of underside of tibia; the posterior femora with small to minute postmedian tooth on inner edge of underside.

***Upembarus wittei* n. sp.**

(Pl. I, fig. 5; Figs. 147, 148.)

Large, bare, moderately shiny above. Head above densely, somewhat rugosely punctured, with distinct epistomal impression. Mentum as in *U. saegeri*, but more coarsely punctured and the

median carina obsolescent. Maxillary palpi as in *saegeri*. Antennæ considerably shorter than in *saegeri*, more strongly dilated towards apex, with rather strongly transverse three preapical segments. Pronotum broadest at about middle, strongly transverse, about twice as broad as long, with the sides evenly rounded and narrowed towards base. Anterior margin moderately emarginate, with complete or medially briefly interrupted marginal carina. Sides with very narrow, anteriorly constricted, posteriorly evanescent lateral carina, practically without submarginal canaliculation or depression. Base with very narrowly carinate, almost straight middle section; without distinct lateral emarginations, as the lobes of posterior angles are abruptly and angularly demarcated from middle section of base; at the point of demarcation the marginal carina obsolescent to absent, very weakly developed and often indistinct on posterior angles; the lobes of posterior angles acute and strongly produced backwards. Disc with a slight longitudinal impression on each side laterally and a few very shallow, irregular impressions on middle. Integument evenly covered with moderately strong, round, separated punctures, becoming slightly coarser on sides; sometimes with a fine median line, becoming very slightly impressed anteriorly. Underside of prothorax with fine, very scattered punctures, concentrated on middle of prosternum; intercoxal apophysis as in *saegeri*. Elytra broader than in *saegeri*, strongly convex laterally, distinctly broader than pronotum, slightly rounded laterally, with obtusely rounded humeral angles. Base with truncate middle section, the lateral portions almost obliquely cut and without distinct intra-humeral cavity on articulation surface. Primary rows finer and less strongly impressed than in *saegeri*, in the fourth row with only about 40 punctures, the punctures well separated also apically and the rows there not lineate; ninth row closely following the pseudopleural crest. Secondary intervals very broad, with fine, scattered, well perceptible punctures, flat throughout and only inconspicuously convex laterally. The pseudopleural crest invisible behind middle (dorsal aspect). Underside of hind body, the pseudopleura and episterna included, with much finer and sparser punctation than in *saegeri*. Legs robust and less strongly dimorphic than in *saegeri*. In the ♂ (fig. 147) the anterior and intermediate tarsi soleate below, slightly to distinctly less strongly dilated than in *saegeri*; the anterior tibiæ excavate underneath, but the inner contours subspecifically variable, straight or briefly emarginate preapically; the inner contours of intermediate tibiæ with short, slightly prominent apical brush of yellowish hairs (the latter often of a black tint in greasy specimens), straight or very weakly emarginate distally; posterior tibiæ almost simple, without or with very narrow, obsolescent median carina underneath, with

the inner contours slightly curved inwards apically, without fringe of hairs; intermediate femora with sharply pointed, smaller, more spiniform, basally not triangularly dilated tooth on about middle of inner edge of underside; posterior femora with only very fine, minute to inconspicuous tooth behind middle.

Ædeagus. — Similar to *U. saegeri* but differing by the broader apicale, the sides of which are continuously narrowed towards apex in a straight to weakly rounded course; the apices of parameres obtusely narrowing, not obliquely cut and less strongly curved ventrad.

Distribution. — South-eastern Belgian Congo, endemic to the Upemba National Park of the Central Elisabethville Province, and there occurring in three well separable geographic subspecies.

Subspecies :

a) ssp. wittei: Posterior angles of pronotum strongly produced backwards and angularly demarcated from middle section of base. In the ♂ (fig. 147) the anterior tarsi distinctly less strongly dilated than in *U. saegeri* and narrower than the apex of anterior tibiae; the inner contours of anterior tibiae slightly curved in a continuous line without discernible distal emargination; the inner contours of intermediate tibiae practically straight from base to the apical brush of aggregated hairs. Size of body: 11 $\frac{1}{4}$ to 12 $\frac{1}{4}$ mm long, 5 $\frac{3}{4}$ to 6 mm broad.

Of this form altogether 8.267 specimens were examined from the following localities, all collected by the Mission G. F. DE WITTE: Mabwe, VIII.1947 (more than 7.000 specimens, types I.P.N.): River Kateke, XI-XII.1947; Kankunda, XI.1947; Piste Kaswabilenga-Mabwe, X. 1947; Munoi, VI.1948; Bowa River, III.1949; Kaswabilenga, IX.1947; Mts. Kabulumba, I.1949; Lukawe, X.1947; [Kimiala-Sampwe, Kundelungu, III.1949].

b) ssp. debilis: Agreeing with the typical *wittei* in the structure of pronotal base and in the simple formation of tibiae in the ♂, but in this sex the anterior and intermediate tarsi very strongly dilated, the posterior femora with inconspicuous, very small tooth, and the size of body small, 9 $\frac{1}{2}$ to 10 $\frac{1}{2}$ mm long. — Ganza, VI.1949, Mission G. F. DE WITTE (61 spec., types I.P.N.).

c) ssp. masculinus: Base of pronotum with the lobes of posterior angles not angularly demarcated from middle section of base. In the ♂ (fig. 148) the anterior tarsi practically as strongly dilated as in *saegeri* and only slightly narrower than apex of anterior tibiae; the inner contours of anterior tibiae with weakly arcuate median dilation and shallow preapical emargination; the inner contours of inter-

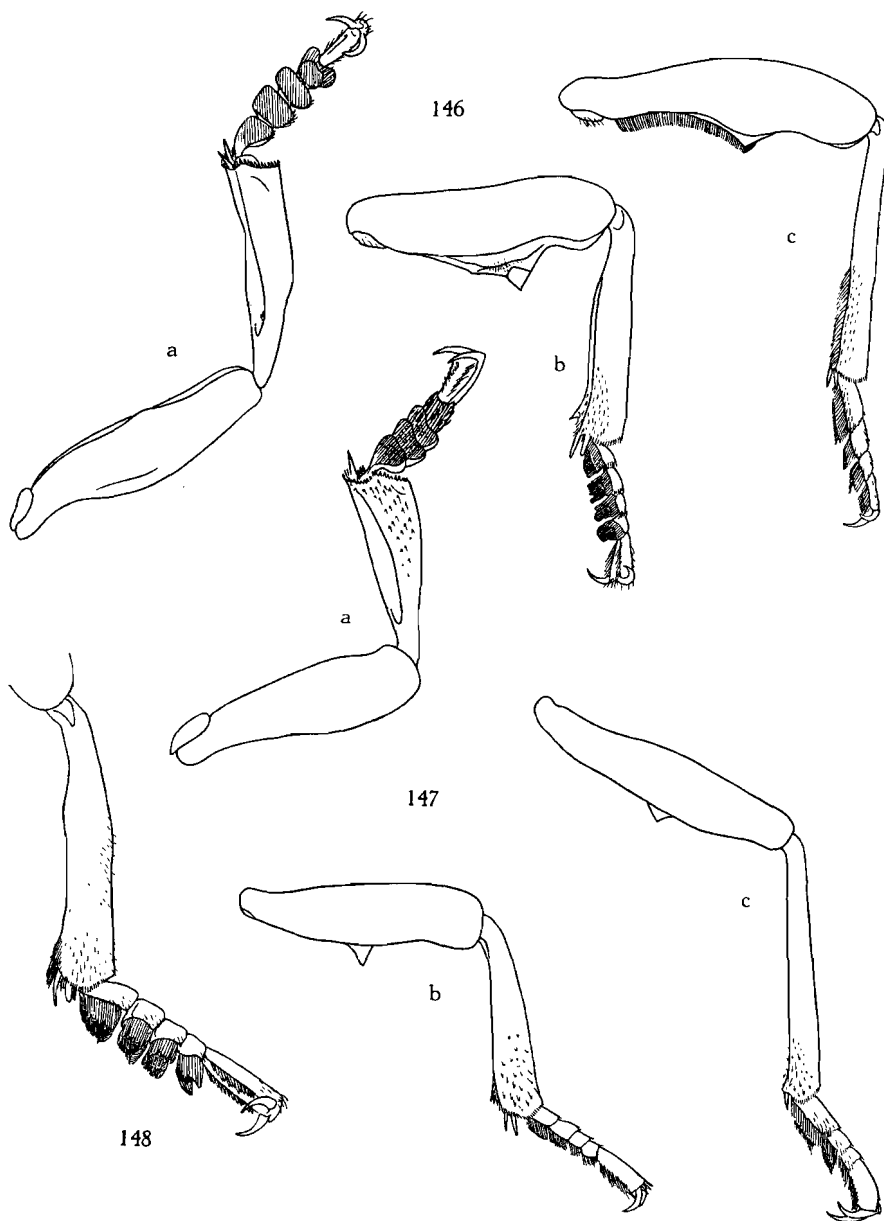


FIG. 146. — *Upembarus saegeri* n. sp. — FIG. 147. — *Upembarus wittei wittei* n. sp. (a : anterior leg of ♂; b : intermediate leg of ♂; c : posterior leg of ♂). — FIG. 148. — Intermediate tibia with tarsus of a ♂ of *Upembarus wittei masculinus* n. ssp.

mediate tibiæ with slight and short dilation behind basal constriction and shallow preapical emargination. On account of the structure of pronotal base similar to *U. saegeri*, but in all other particulars agreeing with the typical form of *wittei*. Size of body larger than in the typical *wittei*: 13 to 15 mm long. — Kanonga, II.1949, Mission G. F. DE WITTE (49 spec., types I.P.N.).

Dedication. — Named in honour of the discoverer of all *Upembarus* species, Mr G. F. DE WITTE, Chief of the « Mission d'exploration du Parc National de l'Upemba » of the « Institut des Parcs Nationaux du Congo Belge ».

3. In the ♂ the inner contours of intermediate tibiæ more or less strongly dilated postbasally, thence gradually dilated towards the preapical spine, between the latter and apical angle subparallel with the outer contours; the anterior tarsi strongly dilated, considerably broader than the preapical segment of antennæ.

***Upembarus upembaensis* n. sp.**

(Fig. 149.)

Very closely related to *U. wittei*, agreeing with the latter in the shape of body, sculpture, mentum, antennæ and formation of underside, but constantly differing by the slightly less strongly produced posterior angles of pronotum, and in the ♂ by the presence of a preapical spine, but absence of apical brush on intermediate tibiæ (fig. 149). In this sex the anterior tibiæ as in the typical form of *wittei*, the inner contours of intermediate tibiæ with very slight to weakly angular (ssp. *glabrior* nov.) postbasal dilation, the posterior tibiæ straight; the posterior femora simple, without any trace of postmedian tooth; the median tooth of intermediate femora as in *wittei*. *Ædeagus* as in *wittei*, but stouter. Occurring in two subspecies: — the typical *upembaensis* of larger size, with very weak and gradual postbasal dilation of intermediate tibiæ in the ♂, with uniformly sericeous and scarcely shiny upper surface of body; and the ssp. *glabrior* of smaller size, small but distinctly angular postbasal dilation of intermediate tibiæ in the ♂, with strongly shiny and polished upper surface of body.

Dimensions. — Length 11 to 14 $\frac{1}{4}$ mm, width 5 $\frac{1}{4}$ to 6 $\frac{1}{2}$ mm.

Distribution. — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park: Kilwezi, VIII-IX.1948 (134 spec., types of *upembaensis upembaensis*, I.P.N.); Kaziba, II.1948 (33 spec., types of *upembaensis glabrior*, I.P.N.); all captured by the Mission G. F. DE WITTE.

- In the ♂ the inner contours of intermediate tibiae very strongly, almost rectangularly dilated distad from basal constriction, thence strongly emarginate or sinuate between postbasal dilation and preapical tooth, from the latter to the apical angle obliquely narrowed in a straight line; the anterior tarsi more weakly dilated, scarcely broader than the preapical segment of antennæ.

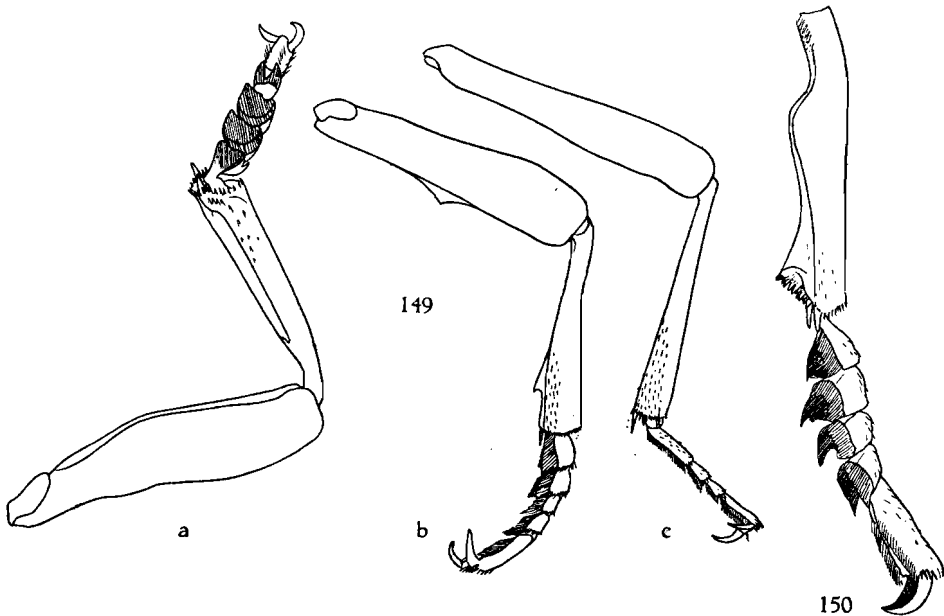


FIG. 149. — *Upembarus upembaensis* n. sp. (a: anterior leg of ♂; b: intermediate leg of ♂; c: posterior leg of ♂). — FIG. 150. — Intermediate tibia with tarsus of a ♂ of *Upembarus sympatrius* n. sp.

***Upembarus sympatrius* n. sp.**

(Pl. XIII, fig. 2; Fig. 150.)

Very closely related to, and occurring together with, *U. upembaensis upembaensis*, but with strongly shiny and smoothed upper surface as in *upembaensis glabrior*. On account of the smaller size of body, the shiny upper surface, shape and sculpture of body almost identical with *upembaensis glabrior*, but distinguished from both subspecies of *upembaensis* by the deeper lateral emarginations of pronotal base and the presence of a very narrow, but distinct, smoothed, submarginal canaliculation along basal half of pronotal

sides. In the ♂ the anterior tarsi less strongly dilated than in all the other *Upembarus*, the anterior tibiae with almost inconspicuous, very shallow emargination on distal two-thirds of inner contours, the intermediate tibiae (fig. 150) excavate and smooth below, with strongly dimorphic inner contours, the posterior tibiae almost straight; femora as in *upembaensis*. Aedeagus very similar to *upembaensis*.

Dimensions. — Length 11 ½ to 12 mm; width 5 ½ to 5 ¾ mm.

Distribution. — South-eastern Belgian Congo. — Central Elisabethville Province, Upemba National Park : Kilwezi, VIII-IX.1948, Mission G. F. DE WITTE (13 spec., types I.P.N.).

ECTATEUS n. gen.

Diagnosis. — Of rather broad and short shape, upper surface moderately to strongly shiny, bare. Eyes considerably constricted by genal canthus. Antennae slender, the two preapical segments compressed but only moderately dilated, triangular, not or only slightly broader than long. Supra-antennal surface together with lateral portion of epistome deeply impressed, with the lateral margin distinctly and broadly bunched up. Mentum with exposed distal half or third of lateral wings; the middle section narrowed to the truncate apical margin, with sharp median carina, and deeply excavate each side of the latter. Apical segment of maxillary palpi securiform, in the ♂ only slightly broader than in the ♀. Pronotum depressed, strongly transverse, with the sides posteriorly either slightly narrowed in a straight line towards base to practically subparallel (*crenatus*-group), or rather strongly rounded and narrowed towards base and often shallowly sinuate in front of posterior angles (*modestus*-group). Integument with shallow to coarse, but always well separated punctures on disc, smoothed to transversely rugose on submarginal depression. Submarginal depression broad, usually strong, of about equal width, sometimes with a weak longitudinal convexity along sides. Anterior margin deeply emarginate, with produced, sharply acute anterior angles, carinate only laterally. Base shallowly (*crenulatus*-group) to rather deeply (*modestus*-group) bi-sinuate. Disc often with irregular impressions, in one case also with median sulcus (*E. ghesquierei*). Underside of prothorax practically smooth; the intercoxal apophysis strongly produced, with more or less pointed apex, completely carinate and of somewhat lanceolate shape; the centre of prosternum in one case (*E. laevistriatus*) in the ♂ with deep, round cavity. Elytra rather strongly convex, broader than pronotum, with the bluntly rectangular humeral angles projecting outwards beyond contours of pronotal base; sides distinctly rounded. Primary rows lineate, finely punctured, but the punctures often strongly impinging transversely the secondary intervals; the latter flat to moderately convex, broad, usually with scarcely

discernible, extremely fine punctation, in one case (*E. lævistriatus*) covered densely with conspicuous punctures, often with transversely wrinkled to somewhat cicatricose cuticle. The pseudopleural crest often concealed behind middle (dorsal aspect), with basally broadened and flattened submarginal canaliculation. Pseudopleura abbreviated apically, without distinct punctation. Metasternum short, as in *Quadrideres* and *Monodius*. Abdomen with fine punctures. Anal sternite immarginate. In the ♂ the anterior tarsi rather strongly dilated, and as the intermediate tarsi, soleate below; the anterior tibiæ deeply excavate underneath, in various ways differentiated; the inner contours of intermediate tibiæ with preapical spine, exceptionally without a such, when the apical angle is produced into a strong apical tooth (*E. ghesquierei*); the intermediate femora usually with a strong proximal tooth on underside, absent only in *E. ghesquierei*; the posterior femora with a very fine to inconspicuous or altogether absent distal spine or tubercle on underside, and often with hairy brush.

Ædeagus. — Homogeneous, small, but the apicale with subparallel, spiniform parameres. Basale about four times as long as apicale.

Dimensions. — 8 $\frac{3}{4}$ to 15 mm long.

Relationship. — Related to *Monodius* on the one hand, to *Quadrideres* on the other, agreeing with both these genera in the abbreviated pseudopleura of elytra and the immarginate anal sternite of abdomen. Readily distinguished from *Monodius* by the small size and simple shape of ædeagus, the subparallel, spiniform parameres of ædeagus, the strongly impressed supra-antennal surfaces plus lateral portions of epistome, the basally broad elytra, in the *modestus*-group by the posteriorly rather strongly narrowing sides of pronotum, and in the ♂ by the dentate intermediate femora which only in a single case (*E. ghesquierei*) are inermous, when the pronotum exhibits a strong median sulcus. Recognizable from *Quadrideres* by the broad and larger body, the slender, distally only moderately dilated antennæ, the broad, subparallel and anteriorly not narrowed submarginal depression of pronotum, the sides of which are distinctly narrowed towards base in the *modestus*-group, and in the ♂ by the dentate intermediate femora, except for *E. ghesquierei*, when the submarginal depression of pronotum is densely rugose transversely and the inner apical angle of intermediate tibiæ in the ♂ digitiform and strongly produced beyond apical margin of tibia. The ædeagus, although of small size as in *Quadrideres*, differs constantly by the subparallel, spiniform parameres which are converging towards the apex in *Quadrideres*.

Type species. — *Anchophthalmus modestus* FAIRMAIRE, 1887.

Distribution. — West African, in the East not expanding beyond the Central Belgian Congo or the Ubangi-Shari region of French Equatorial Africa, in the South reaching the North-western Elisabethville Province but not entering into Angola

KEY.

1. Body of smaller size, 8 $\frac{3}{4}$ to 10 $\frac{1}{4}$ mm long. Base of pronotum shallowly bi-sinuate, with almost rectangular, weakly produced lobes of posterior angles; the sides of pronotum posteriorly practically subparallel or very weakly narrowing. In the ♂ the inner contours of anterior tibiæ with a strongly prominent, dentiform median lobe; the underside of intermediate femora and the inner contours of intermediate tibiæ either without or with median or preapical tooth, respectively. Prosternum simple, plane *crenatus* group. **2**
- Body of larger size, 12 to 15 mm long. Base of pronotum strongly bi-sinuate, with more or less strongly acute and produced lobes of posterior angles; the sides of pronotum distinctly rounded and narrowed towards base. In the ♂ the inner contours of anterior tibiæ either without prominent median dilation or with a such, when the centre of prosternum is provided with a very large, deep and round cavity; the underside of intermediate femora with a median tooth, the inner contours of intermediate tibiæ with a preapical tooth *modestus* group. **3**
2. Disc of pronotum with strong and rather broad median sulcus. In the ♂ the femora inermous and the inner contours of intermediate tibiæ with strongly produced, digitiform apical angle, but without preapical tooth.

[*Ectateus ghesquierei* n. sp.]⁽¹⁾.

(Pl. XIII, fig. 3; Figs. 151, 152.)

Body broadly oval to roundish, with strongly shiny and polished upper surface. Head above longitudinally rugose on middle of vertex, with the punctures becoming fine to evanescent towards sides and epistome. Anterior portion of genæ and lateral portion of epistome bunched up and separated from inner surface of head by a rather deep impression. Middle section of mentum with sharp median carina on basal two-thirds. Apical segment of maxillary palpi as broad as the third antennal segment is long in the ♂, a little narrower in the ♀. Antennæ dilated and compressed distally, with moderately transverse two preapical segments, and large, apically truncate apical segment. Pronotum depressed, broadest at about middle, not quite twice as broad as long, with very broad, strong submarginal depression, and faintly narrowed to practically subparallel sides posteriorly. Anterior margin deeply emarginate, with the marginal carina confined to sides. Lateral carina narrow, the

(1) Erroneously *ghesquierei* on Plate XIII, fig. 3.

submarginal depression occupying more than a sixth of pronotal width, with a longitudinal convexity anteriorly; disc with straight, deep, rather broad median sulcus, the background of which is smooth; each side of median sulcus with two roundish, rather strong impressions on about middle. Base shallowly bi-sinuate, with not or only slightly produced, sharply rectangular posterior angles. Disc covered with rather dense, shallow to obsolescent punctures, the submarginal depressions very densely covered with transverse, somewhat wavy wrinkles or rugosities. Underside of prothorax almost smooth; the intercoxal apophysis strongly produced horizontally, of lanceolate shape and sharply carinate. Elytra short, considerably broader than pronotum, convex laterally, with rounded sides and broadly rectangular shoulders. Base almost straight, without intra-humeral cavity laterally. Primary rows sharply impressed, composed of rather fine, dense and round punctures, with about 60 to 70 punctures in the fourth row; with the exception of the two inner rows all rows gradually curved inwards towards base; the ninth row becoming divergent with pseudopleural carina on basal third. Secondary intervals broad, with extremely fine, inconspicuous punctation, distinctly convex, becoming more strongly convex but not subcostate on sloping lateral and apical portions. Pseudopleural crest with broadly flattened submarginal canaliculation, becoming narrowed towards apex, exposed dorsally but just visible behind middle. Pseudopleura almost smooth. Abdomen densely and longitudinally wrinkled on proximal two sternites, with very fine, round punctures on median two sternites, slightly more densely punctured on anal sternite. Legs slender, with the preapical segment of tarsi strongly bi-lobate. In the ♂ (fig. 152) the anterior and intermediate tarsi with spongiose soleæ below; the anterior tarsi small, rather strongly dilated, almost as broad as the apex of anterior tibiæ, but considerably broader than the preapical segment of antennæ; the anterior tibiæ broadened and curved, very strongly excavate below, the inner contours with strong emargination on distal half, angularly delimited proximally, constricted and subparallel on apical third; the inner contours of intermediate tibiæ straight, but with produced, straight, digitiform apical angle; posterior tibiæ straight, with broadly flattened, distally pilose under surface, and very slightly dilated inner apical angle, there with minute preapical tubercle. Femora simple.

Ædeagus (fig. 151). — Elongate; the sides of apicale strongly narrowing on basal third, and produced into narrow, subparallel, spiniform parameres on about two distal thirds. Apices of parameres obtuse and briefly bent ventrad. Penis and lacinia exposed apically. Basale slender, about four times as long as apicale.

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

Remarks. — This new species is well characterized by the polished cuticle of upper surface, the median sulcus on pronotum and the ineramous femora in the σ .

Distribution (map 4). — Central-western and Central Belgian Congo. — Kasai Province: Kondue, E. LUJA, LEONARD (7 spec., types BCM.); Komi, Sankuru, V.1930, J. GHESQUIÈRE (1 spec., BCM.). — Léopoldville Province: Mayidi, 1942, P. VANEYEN (3 spec., BCM.); Matadi, II-III.1937, DARTEVELLE (1 spec., BCM.).

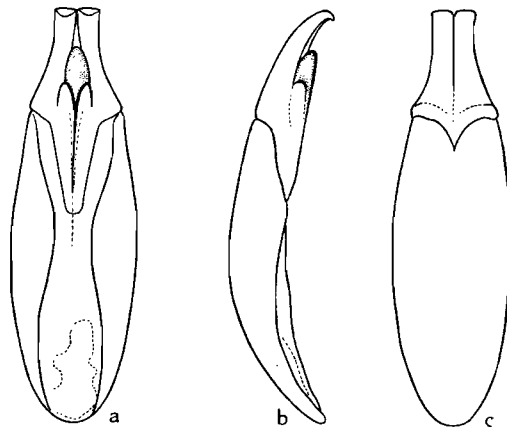


FIG. 151. — Aedeagus of *Ectateus ghesquierei* n. sp.

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

Dedication. — Named in honour of Mr. J. GHESQUIÈRE.

- Disc of pronotum without median sulcus. In the σ the intermediate femora with strong tooth on proximal third of underside, the inner contours of intermediate tibiae with strong preapical tooth.

***Ectateus latipennis* n. sp.**

(Pl. XIII, fig. 4; Fig. 153.)

Related to *E. ghesquierei* on account of the small size of body, the shallowly bi-sinuate base of pronotum, the similar shape and sculpture of pronotum and elytra, the lanceolate prosternal apophysis and the subparallel, spiniform parameres of aedeagus, but clearly differentiated as follows. Head above more coarsely to rugosely punctured. Pronotum slightly more strongly transverse, with the same

acute anterior angles and broad submarginal depression, but without median sulcus, with narrower lateral carina, rather coarse discal punctation, less distinct, transverse rugosities on submarginal depression and with only an obsolescent longitudinal convexity on anterior half of the latter; with strong, irregular impressions on both sides of midline. Elytra considerably broader, only one-third longer than broad, but of similar shape; the primary rows with coarser punctures

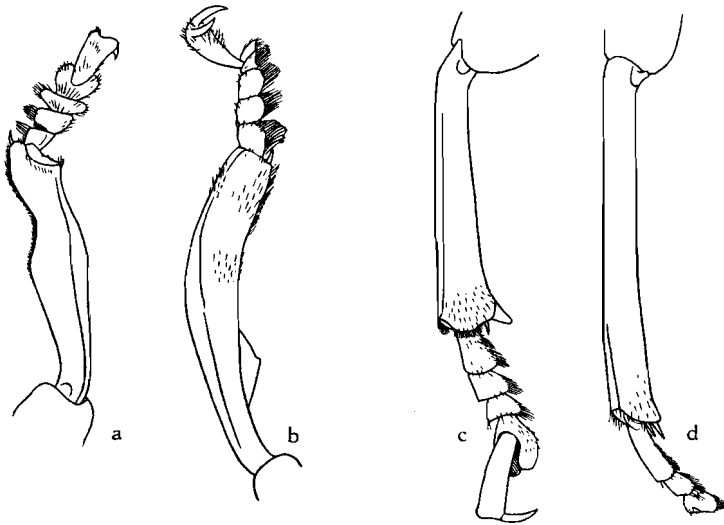


FIG. 152. — *Ectateus ghesquierei* n. sp.

a : front leg of ♂, inner lateral surface; b : front leg of ♂, outer lateral surface;
c : intermediate tibia with tarsus of ♂; d : posterior tibia of ♂.

which strongly impinge transversely the adjacent secondary intervals; secondary intervals slightly more convex than in *ghesquierei*, appearing as if smooth, but less shiny and less even on account of the crenulate margins. In the ♂ the intermediate femora with large, triangular tooth on proximal third of the inner edge of underside, the posterior femora with minute tooth or barely perceptible tubercle on postmedian dilation of lower edge of outer lateral surface, the underside with scattered, short, erect bristles; the anterior tibiae (fig. 153) very similar to *ghesquierei*, but the median dilation slightly stronger and more dentiform; the intermediate tibiae with a strong preapical tooth, between the latter and the simple, inner apical angle straight; the posterior tibiae as in *ghesquierei*; the anterior and intermediate tarsi dilated and soleate as in *ghesquierei*. The aedeagus very similar to *ghesquierei*, but stouter. *Selinus crenatus* FAIR-

MAIRE ⁽¹⁾, unknown to me, ought to be very similar to this species, but the size is larger (10 to 11 mm long), the posterior angles of pronotum are acute, and the base of pronotum is rather strongly bi-sinuate. The ♂ characters of *crenatus* are unknown.

Dimensions. — Length $8 \frac{3}{4}$ to $9 \frac{1}{4}$ mm, width 5 to $5 \frac{1}{4}$ mm.

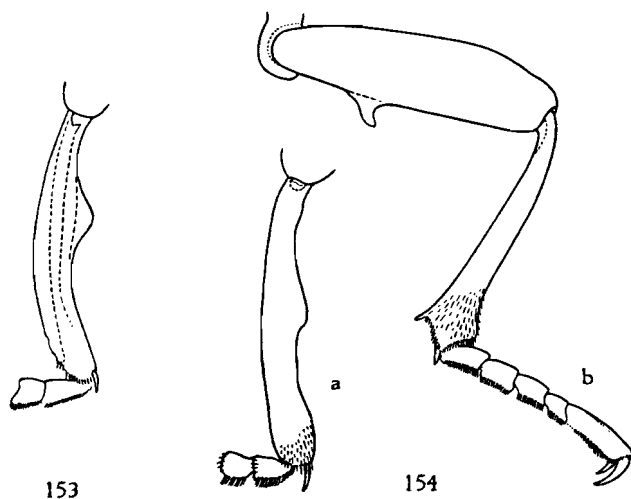


FIG. 153. — Anterior tibia of a ♂ of *Ectateus latipennis* n. sp. — FIG. 154. — *Ectateus lavistriatus* (FAIRMAIRE) (a : anterior tibia of ♂; b : intermediate leg of ♂).

Distribution. — Central Belgian Congo. — North-western Oriental Province: Barumbu, VIII.1923, J. GHESQUIÈRE (1♂, holotype BCM.); Ibembo, Itimbiri, IV.1890 (1♀, allotype, I.R.). — North-western Elisabethville Province: Mukunkoto, VI.1936 (1♂, I.R.).

(1) *Selinus crenatus* FAIRMAIRE, 1897, p. 121. — « Ovatus, brevis, sat convexus, niger, nitidus; capite subtiliter strigosulo-punctato, antice impresso, antennis prothoracis basin haud attingentibus, apice paulo latioribus; prothorace transverso, elytris angustiore, subtiliter punctato, lateribus deplanato et longitudinaliter impresso, disco utrinque pluri-impresso, antice angustiore et profunde emarginato, angulis acute productis, margine postico utrinque sat fortiter sinuato, angulis acutis; scutello brevissimo, obtuso; elytris brevibus, lateribus leviter rotundatis, postice angustatis, dorso fortiter striato-crenatis, intervallis convexus, lævibus; subtus punctatus, prosterno apice fere spatulato, pedibus dense asperulo-punctatis. Long. 10-11 mill. — Congo portugais. — Très voisin du *curtulus* FAIRMAIRE de l'Oubanghi, mais bien plus petit, avec le corselet plus largement déprimé sur les côtés qui sont un peu renflés longitudinalement avec le bord externe, celui-ci moins arrondi, le disque à plusieurs impressions, et les élytres bien plus fortement striés-crênelés avec les intervalles convexes. »

3. Pronotum with posteriorly sinuate sides; the lateral carina very fine, only slightly broader than the basal carina; disc with rather coarse, irregular and more or less scattered punctation. On elytra the punctures of primary rows stronger, distinctly to strongly impinging the secondary intervals; the latter appearing as if impunctate, but uneven on account of the crenulate margins and the more or less transversely wrinkled, cicatricose cuticle. Prosternum simple. In the ♂ the inner contours of intermediate tibiæ without prominent median dilation; the posterior femora with brush of yellowish hairs 4
- Pronotum with posteriorly rounded and narrowed sides; the lateral carina broad, about three times as thick as the fine basal carina; disc with uniform, dense, very fine punctures. On elytra the punctures of primary rows extremely fine, the rows lineate, with the straight margins sharply delimiting the sides of secondary intervals; the latter very densely covered with conspicuous punctures and with even cuticle. Prosternum strikingly dimorphic, in the ♂ with a large, deep, round cavity on centre. In the ♂ the inner contours of anterior tibiæ with a strongly prominent dilation in front of middle, thence emarginate; the posterior femora without brush.

[*Ectateus lævistriatus* (FAIRMAIRE).]

(Fig. 154.)

*1897, *Selinus lævistriatus* FAIRMAIRE, p. 122. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 416, n° 5581.

Original description. — «Forme du *curtulus*, le corselet présentant les mêmes impressions, mais les élytres sont moins courts, élargis plus au milieu et moins brusquement rétrécis en arrière, avec les stries lisses, les intervalles un peu plus convexes, assez finement et densément ponctués; le prosternum n'est pas bisillonné entre les hanches, la saillie intercoxale est plus nettement tronquée et très finement crénelée.»

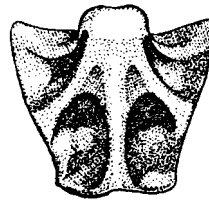
Remarks. — This species is well characterized by the densely and conspicuously punctured secondary intervals and sharply lineate, non-crenulate primary rows on elytra. The upper surface is distinctly shiny. Head as in *curtulus* and *modestus*. The pronotum with large, shallow submarginal depression, on the latter with a smoothed, weak longitudinal convexity; the irregular discal impressions faint; between the dense discal punctures with a very fine, smoothed median line. Elytra laterally convex, less short than in *modestus* and *curtulus*, with obtuse humeral angles and even sculpture; the fourth row with only partially discernible punctures; secondary intervals almost flat; the apex in front of pseudopleural margination with a transverse, smoothed callus, occupying the width of the two inner

intervals on each elytron. In the ♂ (fig. 154) the legs as in *modestus* and *curtulus*, except for the structure of anterior tibiæ, the bare posterior femora and the preapical tooth on intermediate tibiæ, being situated more closely to apical angle, of triangular and not spiniform shape. The unique structure of the prosternum in the ♂ is rather similar to that in the ♂♂ of the Tentyriini genus *Cyphostethe*; the cavity is very deep, exactly round, with annular carina around, and filled with a greasy substance.

Dimensions. — Length $12 \frac{3}{4}$ mm, width $6 \frac{1}{4}$ mm.



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FIG. 155. — Mentum of *Ectateus curtulus* (FAIRMAIRE).

FIG. 156. — Mentum of *Ectateus modestus* (FAIRMAIRE).

Type locality. — « Sierra-Leone ». Type (coll. THERY) probably in Museum Paris. I know of this species only a ♂ with the same locality (Sierra-Leone), belonging to the Naturhistoriska Riksmuseum, Stockholm. FAIRMAIRE's holotype apparently is a ♀ specimen.

4. In the ♂ the anterior tibiæ without fringe of hairs; the inner contours with a short preapical emargination, occupying the apical quarter of tibial length and angularly delimited proximally.

[*Ectateus curtulus* (FAIRMAIRE).]

(Fig. 155.)

*1893, *Selinus curtulus* FAIRMAIRE, p. 143. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 416, n° 5576.

*1904, *Selinus calcaripes* GEBIEN, p. 3. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 416, n° 5577 (=syn. nov.).

Original description. — « Ovatus, postice ampliatus, parum convexus, postice paulo magis, fusco-niger, sat nitidus, subtus cum pedibus nitidior; capite brevi, subtilissime punctato, clypeo sinuato,

antennis medium prothoracis paulo superantibus, apicem versus paulo crassioribus, articulo 3° sequenti parum longiore; prothorace brevi, longitudine duplo latiore, antice angustato, lateribus a basi rotundato, dorso subtilissime dense punctulato, impressiusculo, medio leviter bifoveolato, lateribus deplanato, margine postice medio recto, ante angulos obliquato, angulis sat acute retroversis; scutello truncato, fere lævi; elytris brevibus, postice dilatatis, apice obtuse rotundatis, dorso striolato-punctatis, striis vix impressis, sed sat fortiter punctatis, intervallis planis, dense sat subtiliter punctatis et obsolete transversim cicatricosis, subtus fere lævis, prosterno apice planato et obtuse producto, abdomine basi obsolete punctato. Long. 13 mm. — Ressemble assez à *S. platessa* FAIRMAIRE, mais plus élargi en arrière, à corselet plus arrondi sur les côtés et légèrement rétréci vers la base et à élytres moins fortement striés-punctués.»

Synonymy. — GEBIEN's *calcaripes* is a doubtless synonym of this species. His very elaborate description, although not referring to any allied species, reads as follows : —

«Ungeflügelt, schwarz, etwas glänzend. Kopf fein gerunzelt. Fühler die Basis des Halsschildes nicht erreichend, Glied 3 $\frac{1}{2}$ mal so lang wie 4, die folgenden an Grösse zunehmend, das letzte das grösste. Halsschild an der breitesten Stelle vor der Mitte zweimal so breit als in der Mitte lang, nach vorn stärker als nach hinten verengt, Vorderwinkel ca. 80° gross, die Randung vorn in der Mitte unterbrochen; Oberfläche sehr fein und deutlich punktiert, an den Seiten mit einer gebogenen, deutlichen Furche, ausserdem durch einige flache Eindrücke uneben. Schildchen sehr klein. Flügeldecken sehr stark gewölbt, mit feinen Punktstreifen; Zwischenräume auf der Scheibe schwach dachförmig gekielt, gegen die Spitze hin stark gewölbt, sie sind äusserst fein lederrunzlig; die Spitze in beiden Geschlechtern einfach, aber beim ♂ breiter als beim ♀ verrundet. Unterseite etwas glänzender als die Oberseite, Submentum dicht und deutlich punktiert, die Kehle ganz glatt wie bei *Selinus convexipennis*. Der Prosternalfortsatz ist am Ende winklig vorgezogen, auch an der Spitze gerandet; das Abdomen, namentlich das Analsegment, dicht und deutlich punktiert; Epipleuren und Propleuren ganz glatt. Schenkel und Schienen dicht punktiert mit feiner, goldgelber Pubescenz. ♂: Vorderschienen fast gerade, mit kleiner Schwiele vor dem Ende der Innenseite; Mittelschienen mit spitzem, senkrecht abstehenden Dorn von etwa der Länge einer Schienendicke; Hinterschienen mit stumpfer, zahnförmiger Erweiterung am Ende der Innenseite. Mittelschenkel mit gekrümmten, ziemlich kräftigen Zahn zwischen Mitte und Hüfte an der hinteren Innenseite, Hinterschenkel mit kleinem, spitzem Zahn in der Nähe der Mitte, aber mehr dem

Ende zu, ausserdem mit feinem Haarbesatz. Forceps ganz ausserordentlich klein, mit fein, aber tief der Länge nach geteilter Spitze. ♀ : Vorderschienen schwach gekrümmt; alle Beine einfach. Länge 12 mm, Breite 6 mm. »

Remarks. — Middle section of mentum (fig. 155) broad, rounded and narrowed towards the short, transverse, plane apical portion, with sharp median carina and deeply excavate each side of the latter. Elytra rather strongly convex, broader than pronotum, with bluntly rectangular humeral angles and slightly rounded sides. Primary rows with transverse, fine punctures, strongly impinging the secondary intervals, with the rows sharply impressed and lineate on sloping lateral and apical portions. Secondary intervals broad, with inconspicuous punctation, faintly convex discally but becoming distinctly to rather strongly convex laterally and apically, more or less distinctly covered with transverse, somewhat cicatricose wrinkles. In the ♂ the underside of anterior tibiæ deeply excavate, the inner contours appearing as if straight and simple, but under a certain angle of observation with densely pilose, preapical emargination which is angularly delimited proximally; the intermediate tibiæ with transversely projecting, long, sharply pointed preapical spine on inner contours, situated at about halfway between middle and apical angle; posterior tibiæ shallowly curved inwards on apical third, the inner contours very weakly dilated apically and there with a minutely prominent tubercle; the femora as in the description of *calcaripes*; the anterior tarsi moderately dilated, as the intermediate tarsi soleate below, much narrower than apex of anterior tibiæ but slightly broader than the slender preapical segment of antennæ.

Ædeagus. — Very similar to *E. modestus*.

Dimensions. — Length $11 \frac{3}{4}$ to 12 mm, width $5 \frac{3}{4}$ to $6 \frac{1}{4}$ mm.

Type locality. — «l'Oubanghi» (French Equatorial Africa, Ubangi-Shari). Type (leg. CRAMPEL) probably in Museum Paris.

Distribution. — Central and Eastern French Equatorial Africa, Cameroons, Central-northern Belgian Congo. — Cameroons : Moline near Victoria (type locality of *calcaripes*); Kamerunberg, Soppo, 730 m., 1912, V. ROTHKIRCH (1♀, T.M.). — Belgian Congo. North-western Oriental Province : Bambesa, X.1933, J. V. LEROY (2♂♂, 1♀, BCM.).

- In the ♂ the anterior tibiæ with a fringe of rather dense to scattered, squarrose pale bristles along median half, projecting beyond inner contours; the latter almost straight, inconspicuously emarginate on distal third.

[*Ectateus modestus* (FAIRMAIRE).]

(Pl. XIV, fig. 1; Figs. 156, 157.)

*1887, *Anchophthalmus modestus* FAIRMAIRE, p. 282. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5611.

Original description. — «Ovatus, nigro-fuscus, sat nitidus; capite subtilissime punctato, antice utrinque late impresso; prothorace transverso, longitudine dimidio latiore, basi elytris paulo angustiore, lateribus rotundatis, basi breviter et parum sinuatis, margine postico utrinque acutis, dorso dense punctato, medio impressusculo, ad

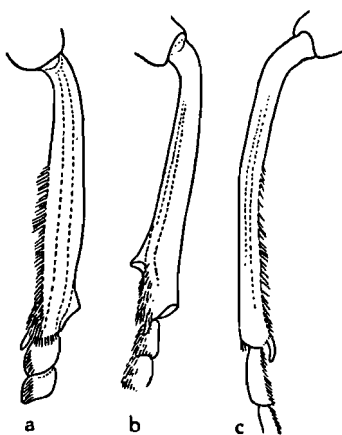


FIG. 157. — *Ectateus modestus* (FAIRMAIRE).

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

latera late depresso; scutello vix punctulato; elytris brevibus, convexis, lateribus rotundatis, apice obtuse acuminatis, dorso modice striatis, intervallis vix convexiusculis, dense transversim plicatulo-rugulosis; subtus punctatus. Long. 14 mm. — Sa forme courte, ses élytres convexes, à intervalles densément ridés, le rendent facile à reconnaître. »

Remarks. — FAIRMAIRE's description agrees almost literally with that of his *curtulus*, but, as he placed *modestus* to the *Anchophthalmus*, he did not refer to it, when describing his *Selinus curtulus* a few years later. In actual fact both species are very closely related and of subidentical shape and sculpture. In *modestus* the discal punctation of pronotum is coarser and more concentrated, the secondary intervals of elytra are more strongly uneven, rather densely and transversely rugose to wrinkled, and the legs are differently

shaped in the ♂. In this sex (fig. 157) the anterior and intermediate tarsi are soleate below as in *curtulus*, but the anterior tarsi are more elongate; the anterior tibiæ are deeply excavate below, the inner edge of excavation bears a fringe of short and squarrose bristles, projecting beyond median portion of inner contours; the latter are very weakly and elongately emarginate on distal third, without densely pilose and constricted preapical portion; the posterior tibiæ are more densely pilose on distal half of inner contours than in *curtulus*, but do not exhibit any apical dilation or tubercle; the intermediate femora are strongly dentate; the posterior femora are minutely dentate and furnished with a brush of dense yellowish hairs, as is the case in *curtulus*. Mentum fig. 156.

Ædeagus. — Apicale elongate, with strongly narrowed basal half of sides and subparallel, rather broad distal half of parameres. The latter completely and deeply divided, slightly gaping apically, with straight and broadly rounded apices. Penis and lacinia exposed, the former thin, the lacinia slightly broader and compressed. Basale about four times as long as apicale.

Dimensions. — Length 12 $\frac{1}{4}$ to 15 mm, width 6 to 7 $\frac{3}{4}$ mm.

Type locality. — «Landana» (Portuguese Cabinda). Type probably in Museum Paris.

Distribution (map 4). — (In both catalogues of GEBIEN, 1910 and 1938-1942, erroneously indicated as East African.) West African, from Gabon to the South-western Belgian Congo. — Portuguese Cabinda : Sassa-Zao, 1931, DARTEVELLE (2 spec., BCM.). — Gabon (1 spec., T.M.). — Belgian Congo. South-western Léopoldville Province, Bas-Congo District : Mayidi, 1942, P. VANEYEN (a long series, BCM.); Makaya Tete, XI.1915, R. MAYNÉ (2 spec., BCM.); Temvo, 1935, VANALSTEIN (3 spec., BCM.); Kuimba-Diambo, XI.1925, A. COLLART (1 spec., I.R.); Luali, IX.1937, DARTEVELLE (8 spec., BCM.); Moanda, VIII.1941, DARTEVELLE (1 spec., BCM.); Mayumbe, without specified locality, X.1939, J. J. DEHEYEN (4 spec., BCM.).

SELINUS sensu novo.

1852, *Selinus* MULSANT & REY, p. 322. — 1853, MULSANT & REY, p. 97. — 1859, LACORDAIRE, p. 241. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 416.

Similar to *Monodius* and *Anchophthalmops*, but the anal sternite entirely marginate, except for a doubtful species (*S. plicicollis*), the ♂ of which is unknown. Head as in *Monodius*, with scarcely impressed supra-antennal surfaces, distally strongly dilated antennæ, non dimorphic maxillary palpi and tri-partite mentum. The pronotum transverse, with the sides subparallel or slightly dilated posteriorly, in a single case (*S. punctatostriatus*) rounded and narrowed in front of posterior angles. Submarginal depression usually broad, rather well demarcated, but in the species of the *punctato-*

striatus group weak to absent. Base completely carinate and strongly bi-sinuate. Integument from almost smooth to rather densely but finely punctured. Underside of prothorax smooth or with scattered, rather strong punctures on episternum of prosternum; prosternal apophysis produced. Elytra slightly to distinctly broader than pronotum, shiny or sericeous, subparallel, with rectangular humeral angles. Primary rows from very fine and lineate to coarsely punctured; secondary intervals usually broad, from smooth to distinctly and densely punctured, flat to convex, the lateral intervals sometimes subcostate and then constricted by the coarse punctures of primary intervals. Pseudopleura as in *Monodius*, abbreviated apically. Metasternum very short. Anal sternite entirely marginate. In the ♂ the anterior tarsi strongly to very distinctly dilated, soleate below as are the intermediate tarsi; the tibiae always with distinctive characters; the intermediate femora in two species (*S. raposoi* and *basilewskyi*) with a median tooth. Ædeagus quite different from that of *Monodius* or *Anchophthalmops*, of simple shape and with continuously converging sides of parameres, but suddenly exhibiting a peculiar structure in *S. infernalis* and *leakeyi*.

Dimensions. — 8 $\frac{3}{4}$ to 17 mm long.

Relationship. — This genus is rather heterogeneous, but readily recognized from all the preceding selinoid genera by the entirely marginate anal sternite, a particular which is peculiar to all the trigonopoid genera with the exception of *Bantodemus*. In habitus similar to the two selinoid genera *Monodius* and *Anchophthalmops*, it is sharply separated from the former by the marginate anal sternite and the entirely different, usually simple structure of ædeagus, from *Anchophthalmops* by the non-dimorphic maxillary palpi, the simple and inermous proximal sternites of abdomen and the non-spiniform parameres of apicale of ædeagus. The nearest ally appears to be *Anchophthalmops* on account of the similarly marginate anal sternite of abdomen and the rather well agreeing distinctive characters of legs in the ♂.

Type species. — *Opatrum planum* FABRICIUS.

Distribution. — Trans-Tropical, but of a discontinuous distribution. The *planus* group in Northern West Africa, the *punctatostriatus* group in Southern West Africa and the western part of Central Africa, and the *menouxi* group strictly East African, extending from Italian Somaliland to Central Portuguese East Africa.

KEY.

1. Anal sternite of abdomen with complete marginal sulcus. Pronotum without longitudinal convexity along lateral carina 2
- Anal sternite of abdomen with the marginal sulcus interrupted on apex. Pronotum with a longitudinal convexity along lateral carina.

[*Selinus plicicollis* FAIRMAIRE.]

*1897, *Selinus plicicollis* FAIRMAIRE, p. 123. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 416, n° 5583.

Original description. — « Forme intermédiaire entre le *Selinus planus* et quelques *Anchophthalmus*, différent du premier par sa forme oblongue, sa taille, le corselet ne se rétrécissant qu'en avant, ayant sur les côtés un pli bien marqué, parallèle au bord externe comme chez les *A. clathratus* et *alternatus*, mais plus saillant; les élytres sont striées comme chez les *S. menouxi* et *trivialis*, les stries assez profondes, mais très finement ponctuées, plus fortement au bord externe, les intervalles convexes, paraissant lisses, mais couverts d'une ponctuation extrêmement fine, chaque point donnant naissance à un poil peu distinct. Le dessous et les pattes sont très brillants, parfois un peu rougeâtres; les tarses antérieurs sont dilatés. Long. 13-15 mm ».

Remarks. — I know of this species only a ♀ paratype (T. M.) which agrees in the sericeous upper surface of body with the *Selinus* of the *menouxi* group, but is very well characterized by the broad and posteriorly subparallel pronotum which is scarcely narrower than the subparallel elytra, the longitudinal convexity on submarginal depression of pronotum (in this regard agreeing with *Oncotiphallops*) and particularly by the fine marginal sulcus on anal sternite of abdomen, distinct only on basal half of sides of sternite.

Type locality. — « Togoland ». Type (leg. L. CONRADT, coll. OBERTHÜR) probably in Museum Paris.

2. Disc of pronotum without or with irregular impressions, but not with a transverse impression in front of middle section of base on basal quarter. Primary rows of elytra either sharply impressed and lineate or with dense, fine to moderately strong punctures **3**
- Disc of pronotum with a transverse, distinct impression in front of middle section of base on basal quarter. Primary rows of elytra never impressed or lineate, composed of rather widely spaced, free, very coarse to subfoveate punctures *platessa* group. **12**
3. Elytra distinctly shiny, the secondary intervals with more or less dense but conspicuous and well perceptible punctation; in a single case the cuticle sericeous, when the intermediate femora are dentate in the ♂ (*S. basilewskyi*). Pronotum always with fine and more or less scattered punctation **4**

- Elytra sericeous, the secondary intervals with extremely fine, hardly discernible punctation, appearing as if smooth; in a single case the punctures dense and more or less conspicuous, but then the pronotum with very dense, strong, laterally subconfluent punctation (*S. lundbladi*). In the ♂ the intermediate femora ineruous *menouxi* group. **8**
4. Underside of prothorax punctured; prosternal apophysis less produced, with broadly rounded to subtruncate apex of horizontal portion; mesosternum not entirely excavate longitudinally, but with bunched up apical portion. Antennæ stout, with strongly dilated two preapical segments. In the ♂ the intermediate femora often dentate, the inner contours of anterior tibiæ simple, the posterior femora without brush, but with a fine stripe of subtomentose hairs in *S. raposoi*, the posterior tibiæ without fringe of squarrose hairs, but often with a broad stripe of sessile, subtomentose yellowish pilosity on underside *punctatostriatatus* group. **5**
- Underside of prothorax smooth; prosternal apophysis strongly produced, somewhat lanceolate and attenuate apically; mesosternum entirely excavate longitudinally, with the apical margin distinctly impressed along midline. Antennæ slender, with moderately dilated distal segments and only the penultimate segment being distinctly transverse, but of triangular shape. In the ♂ the intermediate femora always ineruous, the inner contours of anterior tibiæ with prominent, subdentiform dilation in front of, or at, middle, the posterior femora with short brush on underside and the posterior tibiæ with fringe of dense hairs on underside, projecting beyond inner contours of tibia on apical half *planus* group. **7**
5. Sides of pronotum posteriorly subparallel or slightly dilated towards posterior angles; lateral portions either with fine, smoothed justa-lateral canaliculation or distinct submarginal depression. In the ♂ the intermediate femora with a sharp median tooth on inner edge of underside; the underside of anterior tibiæ with a small, rather inconspicuous, fine stripe of yellowish hairs on distal third; the underside of posterior tibiæ with a broad stripe of a yellowish, subtomentose pilosity on distal three-quarters **6**
- Sides of pronotum distinctly and briefly rounded and narrowed towards posterior angles posteriorly; discal convexity uniform, reaching the lateral carina, neither with justa-lateral canaliculation nor submarginal depression on lateral portions. In the ♂ the intermediate femora ineruous; the underside of anterior tibiæ with a broad stripe of a subtomentose, yellowish pilosity on median two-quarters, but the underside of posterior tibiæ shiny and smoothed along midline.

[*Selinus punctatostriatus* (GERSTAECKER).]

*1854, *Eurynotus punctatostriatus* GERSTAECKER, p. 533. — 1862, GERSTAECKER, p. 286. — 1870, GEMMINGER & DE HAROLD, p. 1914.

1910 b, *Selinus punctatostriatus* GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5585.

Original description. — « *Eurynotus niger*, subopacus, thorace antrorsum minus attenuato, disco subtilius punctulato, elytris punctato-striatis, interstitiis punctulatis. — Dem *Eurynotus muricatus* KIRBY [= *Eurynotus* (s.str.) *capensis* (FABRICIUS) of *Onco-tini*, cf. KOCH, 1953 a] in Grösse und Form nahe verwandt, doch durch die Textur der Flügeldecken leicht zu unterscheiden. Der Körper ist schwarz, matt glänzend. Der Kopf ist ziemlich dicht und deutlich punktiert, die Fühler gegen die Spitze fein greis behaart. Das Halsschild ist fast doppelt so breit als lang, von der Basis bis zur Mitte gleich breit, dann nach vorn schnell verengt, am Hinterrand tief zweibuchtig, wodurch die Hinterecken stark nach hinten vortreten; die Oberfläche leicht gewölbt, auf der Scheibe viel weitläufiger und feiner als an den Rändern punktiert. Das Schidchen ist deutlich punktiert. Die Flügeldecken sind bis zum letzten Drittheil gleich breit, nach hinten stumpf zugespitzt, mässig gewölbt, fein punktiert gestreift, die Punkte in den Streifen deutlich von einander getrennt, die Zwischenräume auf der Scheibe feiner und weitläufiger, nach den Seiten hin dichter und stärker punktiert. Die Unterseite ist runzlig punktiert und wie die Beine etwas glänzend. — Long. lin. 6 $\frac{1}{2}$ -7. »

Remarks. — Similar to *S. planus* but of much larger size. Head above with shallow impressions on supra-antennal surfaces. Middle section of mentum with carinate and strongly narrowed proximal two-thirds of sides and lobiform, plane apical third; median carina sharp. Apical segment non-dimorphic, in both sexes small and triangular, not broader than long. Pronotum broadest far behind middle, not quite twice as broad as long, with a transverse impression just in front of middle section of base. Anterior margin moderately emarginate, carinate only laterally. Lateral carina narrow, only slightly broader than the very fine basal carina. Lateral emarginations of base broadly rounded, with strongly produced posterior angles. Underside of prothorax with more or less dense to scattered, but rather strong punctures; apex of horizontal portion of prosternal apophysis broadly rounded and immarginate. Elytra rather strongly convex, with slightly obtuse humeral angles and sinuate lateral portions of base. Primary rows extremely finely lineate, with very fine, dense punctures which are only slightly stronger than those on sides of pronotum; with about 60 to 70 punctures in the fourth row; ninth row closely following

the pseudopleural crest. Secondary intervals very broad, plane throughout, covered with scattered, extremely fine but well perceptible, sharp punctures. Pseudopleural crest with extremely fine, posteriorly ill defined justa-lateral canaliculation, in dorsal aspect visible only basally and apically. Pseudopleura with sparse, extremely fine punctures, abbreviated posteriorly, impressed preapically, strongly narrowing on posterior two-thirds and there leaving exposed a portion of the ninth elytral interval. Episternum of metasternum with dense, rough, somewhat asperate punctation. Abdomen with rather dense, fine punctures, and longitudinal wrinkles on proximal three sternites; the punctures on the two apical sternites finer. The marginal sulcus on anal sternite strong and deep, considerably narrower than the demarcated apical margin. In the ♂ the anterior tarsi weakly dilated and soleate underneath, narrower than the apex of anterior tibiae and about the width of the preapical segment of antennae; underside of intermediate tarsi as in the ♀, not soleate, but with a row of long, dense bristles on both sides; inner contours of anterior tibiae with very shallow, inconspicuous preapical emargination; intermediate and posterior tibiae straight; the underside of anterior femora with a row of minute bristles along the strongly carinate inner edge.

Ædeagus. — Simple and rather small. The apicale with moderately and continuously converging sides. Parameres broad, deeply and completely divided, with straight and broadly rounded apices. Penis and lacinia exposed. Basale subparallel, slightly narrowing posteriorly, four to four and a half times as long as apicale.

Dimensions. — Length 14 to 17 mm, width $7\frac{3}{4}$ to 9 mm.

Type locality. — « Loanda ». Type probably in Museum Berlin.

Distribution. — Central-western Angola. — Luanda, VIII.1949, B. MALKIN (2♂♂, 2♀♀, M.C.A.); 30 km from Novo Redondo, on the way to Gabela, XI.1949, A. DE BARROS MACHADO (2♀♀, M.D.).

6. Body convex. Pronotum uniformly convex, without submarginal depression but with very narrow, smooth justa-lateral canaliculation. Underside of prothorax with coarse and rather dense punctation; the apex of horizontal portion of prosternal apophysis marginate. Elytra elongate, strongly convex laterally, the ninth secondary interval almost perpendicular and exactly lateral in position (caudal aspect); primary rows composed of rather strong punctures which are considerably coarser than the discal punctures of pronotum; secondary intervals with slightly denser punctation, distinctly shiny. Pseudopleural crest with posteriorly very narrow justa-lateral canaliculation; the latter together with a portion of the ninth interval plus the pseudopleural crest just

visible from above. Pseudopleura not occupying the entire ventrally reflected portion of elytra, but leaving exposed a portion of the ninth interval on posterior third. In the ♂ the underside of intermediate tarsi setiferous.

[*Selinus raposoi* n. sp.]

(Pl. XIV, fig. 2; Figs. 158, 159, 160.)

Closely related to *S. punctatostriatus* but very well characterized by the presence of a median tooth on intermediate femora in the ♂. Agreeing with *punctatostriatus* in the shape and sculpture of body,

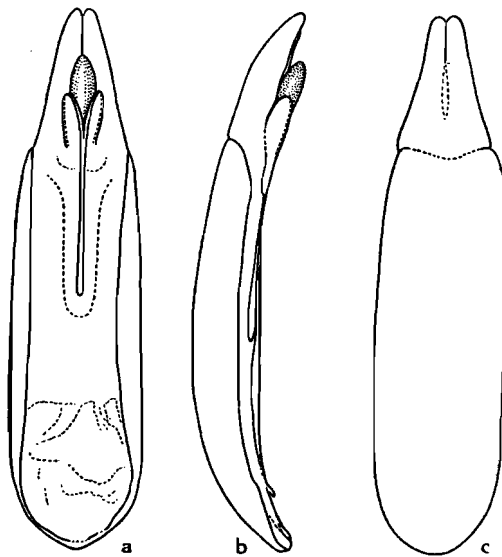


FIG. 158. — Aedeagus of *Selinus raposoi* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

but of smaller size, the punctures on head coarser and partially confluent longitudinally, the pronotum with considerably coarser punctation (which is extremely fine on disc in *punctatostriatus*), stronger lateral carina, posteriorly subparallel sides, distinct justalateral canaliculation and more briefly rounded and deeper lateral emarginations of base. The punctation on underside of prothorax denser and coarser. The elytra of similar shape, slightly broader than the pronotum (as is the case also in *punctatostriatus*), less strongly convex, with stronger sculpture. The primary rows less distinctly lineate, with coarser punctures; the secondary intervals with more conspicuous and concentrated punctation, becoming distinctly convex towards sides and apex. The justalateral canali-

culation slightly broader and well developed also posteriorly. Metasternum shorter, sculptured as in *punctostriatus*. The abdomen only sparsely punctured discally, but with coarse punctures on sides of proximal two sternites. Anal sternite as in *punctostriatus*. In the ♂ (fig. 160) the anterior tarsi rather strongly dilated, about as broad as apex of anterior tibiæ and broader than the preapical

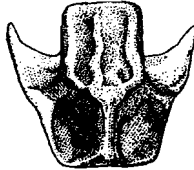


FIG. 159. — Mentum of *Selinus raposoi* n. sp.

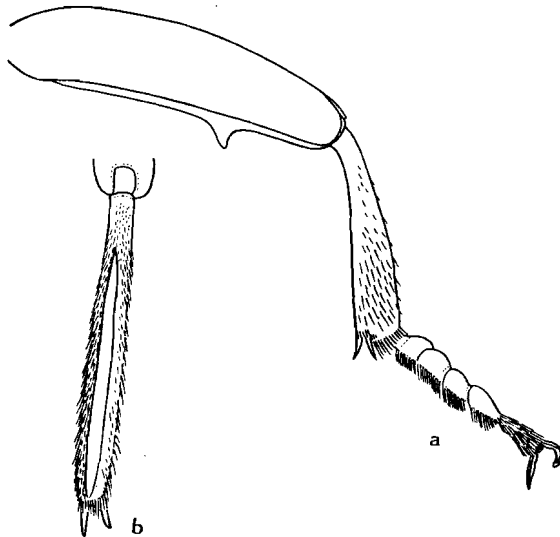


FIG. 160. — *Selinus raposoi* n. sp.

a : intermediate leg of ♂; b : underside of posterior tibia of ♂, exhibiting a broad stripe of subtomentose pilosity.

segment of antennæ; the inner contours of anterior tibiæ simple, but slightly curved; the underside of anterior femora without row of minute bristles, that of intermediate femora with strong tooth slightly distad from middle and that of posterior femora with a fine stripe of depressed yellowish bristles on proximal half. Mentum fig. 159.

Ædeagus (fig. 158). — Very similar to *punctostriatus* but the apicale more slender, with slightly sinuate sides. Penis strongly dilated basally, lacinia with sharply pointed apices.

Dimensions. — Length 11 to 13 mm; width $5\frac{1}{2}$ to $6\frac{1}{2}$ mm.

Distribution (map 6). — South-western Angola and the northernmost part of Ovamboland. — Forte Roçadas, Cunene District, X.1949, A. DE BARROS MACHADO (35 spec., types M.D.); Ovamboland, 1890-1891, A. ERIKSSON (6 spec., S.A.M.).

Dedication. — Named in honour of my friend Mr. AMANDIO DE MIRANDA RAPOSO, Administrador of the Cunene District.

- Body depressed. Pronotum with distinct submarginal depression on sides, but with only obsolescent justa-lateral canaliculation. Underside of prothorax with scattered and shallow punctures; the apex of horizontal portion of prosternal apophysis immarginate. Elytra short, very slightly sloping laterally, the ninth secondary interval oblique and dorsal in position (caudal aspect); primary rows with extremely fine, slightly elongate punctures which are as fine as the discal punctures of pronotum; secondary intervals with scattered, very fine punctures, with the cuticle becoming sericeous towards sides. Pseudopleural crest with equally broad and conspicuous justa-lateral canaliculation; the latter, the pseudopleural crest plus the ninth interval entirely exposed dorsally. Pseudopleura entirely occupying the ventrally reflected portion of elytra. In the ♂ the underside of intermediate tarsi soleate as are the anterior tarsi.

[***Selinus basilewskyi* n. sp.**]

Closely related to *S. raposoi* and agreeing with the latter also in the distinctive characters of the ♂, except for the distinctly dilated and soleate intermediate and more strongly dilated anterior tarsi. Readily recognized by the finer sculpture of body, extremely fine and sparse on underside of hind body, and the depressed, less shiny upper surface. The aedeagus very similar to both the preceding species, but the apicale with the sides continuously narrowing in a straight line and the division of parameres not reaching the base of apicale dorsally.

Dimensions. — Length 11 to $13\frac{3}{4}$ mm, width $5\frac{3}{4}$ to $7\frac{1}{4}$ mm.

Distribution (map 4). — South-eastern Belgian Congo. — Elisabethville Province: Luashi, XI.1938, F. FREYNE (13 spec., types BCM.); Source Lubilash, XI.1937, F. FREYNE (2 spec., BCM.); Malonga, IX.1937, F. FREYNE (3 spec., BCM.); Kafakumba, XI.1937 (1 spec., I.R.); Lupweshi, XI.1937 (1 spec., I.R.); Diolo, IX-X.1933, H. DE SAEGER (4 spec., BCM.); Kinda, ex coll. STAUBINGER (11 spec., BCM.). — Kivu Province: Kalehe, X.1937 (1 spec., I.R.).

Dedication. — Named in honour of my friend Mr. P. BASILEWSKY, chief of the Entomological Section of the Musée royal du Congo Belge, Tervueren.

7. Pronotum with posteriorly slightly dilated sides. In the ♂ the dilation of inner contours of anterior tibiæ strong, subdentiform, situated close to basal constriction; the anterior femora strongly clavate and dilated at middle, with dense brush on proximal half of underside; the intermediate tibiæ dilated and curved, the inner apical angle densely pilose but simple.

[**Selinus planus** (FABRICIUS).]

(Pl. XIV, fig. 3; Figs. 161, 162, 163.)

*1792, *Opatrum planum* FABRICIUS, p. 118. — 1793, HERBST, p. 215. — 1801, FABRICIUS, p. 90. — 1853 a, *Selinus planus* MULSANT & REY, p. 324. — 1853 b, MULSANT & REY, pp. 97, 99, pl. 2, figs. 11-13. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1906, GEBIEN, p. 211. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 416, n° 5584.

Description (ex MULSANT et REY). — « Corps ovalaire; longitudinalement en arc un peu déprimé dans son milieu; faiblement convexe; d'un noir mat. Tête densément et finement ponctuée. Épistome médiocrement échancré en arc. Antennes noires, avec les derniers articles moins obscurs par l'effet de leur pubescence. Prothorax élargi d'avant en arrière, plus sensiblement et en ligne un peu courbe jusqu'au tiers, puis plus faiblement et en ligne presque droite ou formant une sinuosité à peine sensible; muni latéralement d'un rebord un peu épais, sensiblement plus saillant ou relevé à partir de la moitié; à sinuosités basilaires assez profondes en forme d'angle très ouvert; rayé au devant de la base d'une ligne constituant un rebord étroit, plus marqué au devant des sinuosités, et interrompu sur son quart médiaire; une fois environ plus large à la base que long dans son milieu; faiblement convexe, un peu déprimé près des côtés dans sa seconde moitié; densément et finement ponctué. Écusson trois fois aussi large qu'il est long dans son milieu; arqué en arrière à son bord postérieur; ponctué. Élytres un peu plus larges au devant que le prothorax à ses angles postérieurs; à peine élargies jusqu'à la moitié ou aux quatre septièmes; faiblement ou assez faiblement convexes; à stries étroites, très apparentes et rendues plus prononcées par la convexité médiocre des intervalles; marquées dans le fond de points à peine apparents : la première postérieurement liée à la neuvième, la deuxième à la septième, la troisième à la sixième; les quatrième et cinquième plus courtes et encloses par leurs voisines. Intervalles assez faiblement convexes; moins densément et moins finement ponctués que le prothorax; le septième plus étroit au devant que le sixième. Bord supérieur du repli en forme de rebord un peu tranchant et relevé, ordinairement plus saillant au devant. Dessous du corps superficiellement ridé près des hanches de devant; ponctué sur le ventre. Postépisternums inégaux; plus larges au devant, moins de trois fois aussi longs que larges. Proster-

num rebordé; peu convexe. Pieds assez grêles. Cuisses postérieures droites. ♂ : Jambes de devant arquées, relevées en forme de petite dent vers l'échancrure qui termine leur arête externe; échancrées en dessous depuis le tiers de la base, en forme d'arc terminé à l'extrémité. Jambes intermédiaires simples et faiblement arquées; les postérieures presque droites. Quatre premiers articles des tarses

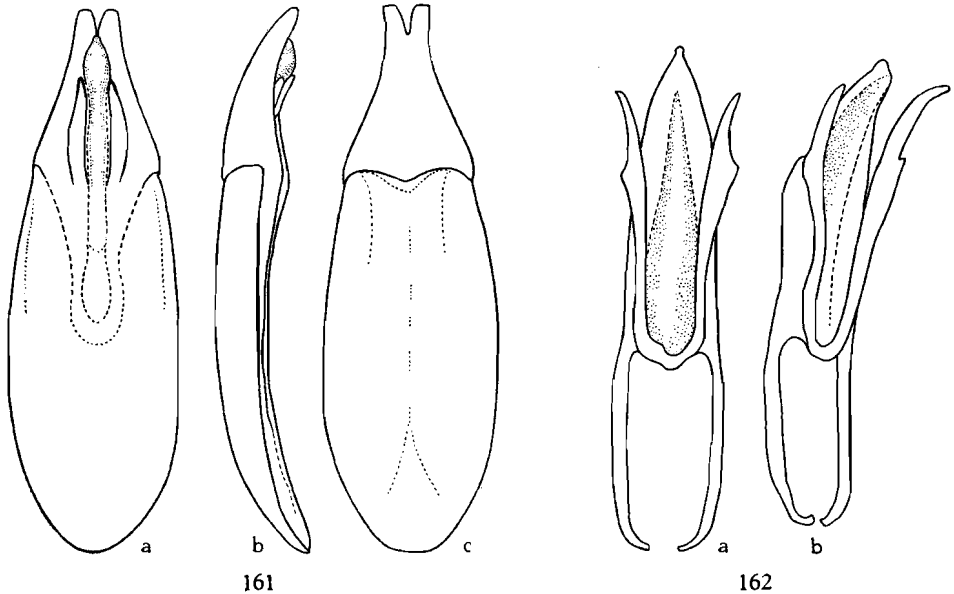


FIG. 161. — *Ædeagus* of *Selinus planus* (FABRICIUS) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 162. — The extracted penis plus lacinia of the *ædeagus* of *Selinus planus* (FABRICIUS) (a : outer surface; b : diagonal view).

antérieurs dilatés, surtout les deuxième et troisième. ♀ : Jambes antérieures et intermédiaires plus faiblement arquées, simples. Tarses antérieurs peu ou pas dilatés. Long. 11,2 à 12,3 mm, larg. 7,8 à 9 mm. »

Remarks. — Very similar to the species of the *punctostriatus* group. The antennæ much longer and slender. The apical segment of maxillary palpi larger and distinctly securiform, broader than long and in the ♂ slightly broader than in the ♀.

The middle section of mentum with carinate and narrowing sides, but the apical portion not distinctly lobiform, smoothed, and the median carina substituted by a broad and obtuse median convexity. The pronotum with more strongly produced and sharp anterior

angles, with shallow submarginal depression but without distinct justa-lateral canaliculation. Prosternum with fine and somewhat asperate punctation, the episternum almost smooth. Elytra as in *punctatostriatus*, slightly less convex laterally, with sharply lineate

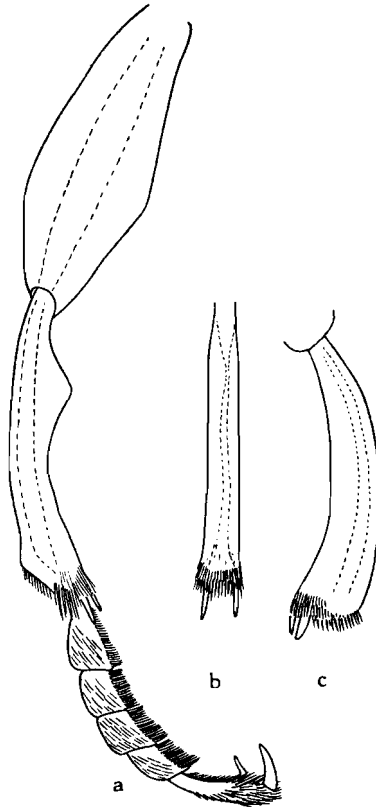


FIG. 163. — *Selinus planus* (FABRICIUS).

a : anterior leg of ♂; b : underside of anterior tibia of ♂;
c : intermediate tibia of ♂.

and finely punctured primary rows; the justa-lateral canaliculation well developed and entirely exposed dorsally. Abdomen with rather dense, fine punctation and irregular longitudinal wrinkles. Anal sternite with fine marginal sulcus. In the ♂ (fig. 163) the anterior and intermediate tarsi very strongly dilated and soleate, the anterior tarsi about the width of apex of anterior tibiae and almost twice as broad as the slender preapical segment of antennae; the posterior tibiae very slightly curved, the underside densely covered

with squarrose, yellowish hairs on distal three-quarters, projecting beyond inner contours of tibia; the underside of posterior femora with fine brush of yellowish hairs on proximal two-thirds.

Ædeagus (figs. 161, 162). — Rather large, with broadened basale. The apicale with the sides strongly narrowed in a straight line on proximal three-quarters, thence with subparallel and briefly demarcated apical quarter. Parameres divided only apically, with slightly curved, rather broad and almost truncate apices. Apical portion of penis and lacinia exposed. Basale about six to seven times broader than the apex of apicale and three and a half times as long as apicale.

Dimensions. — Length 11 to 13 mm, width $5 \frac{3}{4}$ to $6 \frac{3}{4}$ mm.

Type locality. — « Sibirien ». GEBIEN, 1911, examined FABRICIUS' holotype (a small ♀) in the Museum Copenhagen and found it identical with MULSANT & REY's species.

Distribution. — North-western Tropical Africa. — French Guinea (teste MULSANT & REY; furthermore several specimens with the label « Guinea. BOHEMAN » and « Guinea. WESTERMAN » in M.St.). — Sierra Leone (teste MULSANT & REY). A large series of about 30 specimens with the label « Chama, Westafrika, H. BRAUNS » in T.M.

- Sides of pronotum almost subparallel on posterior half. In the ♂ the dilation of inner contours of anterior tibiæ weak, arcuate, non-dentiform and situated just in front of middle of tibia; the anterior femora not clavate, simple, with practically subparallel contours of outer lateral surface, bare; the intermediate tibiæ moderately dilated, with straight inner contours but the inner apical angle produced into a sharply pointed, short and inwardly bent spine.

[*Selinus striatus* (FABRICIUS).]

(Figs. 164 to 167.)

*1794, *Helops striatus* FABRICIUS, p. 440. — 1801, FABRICIUS, p. 161.

1906, *Selinus striatus* GEBIEN, p. 211. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5586.

Description (ex GEBIEN 1906). — « Ausserordentlich ähnlich *S. planus*. Das ♂ am Ende der Mittelschienen mit einem kräftigen rechtwinkligen Zahn, die Vorderschienen sind nahe der Basis schwach gerundet erweitert, die Hinterschienen sind deutlich gekrümmt. »

Remarks. — This species is very similar to *S. planus*, but the size of body is smaller, the shape slightly more slender, the pronotum more distinctly subparallel posteriorly and particularly the secondary

intervals of elytra exhibit an extremely dense and very conspicuous punctation. By the last particular readily distinguishable from all the other *Selinus*. In the ♂ (fig. 167) the structure of anterior and intermediate tarsi, as well as that of posterior legs, as in *planus*.

Ædeagus (figs. 164, 165, 166). — Strongly differentiated from *S. planus* by the slender and subparallel shape of basale. The apicale

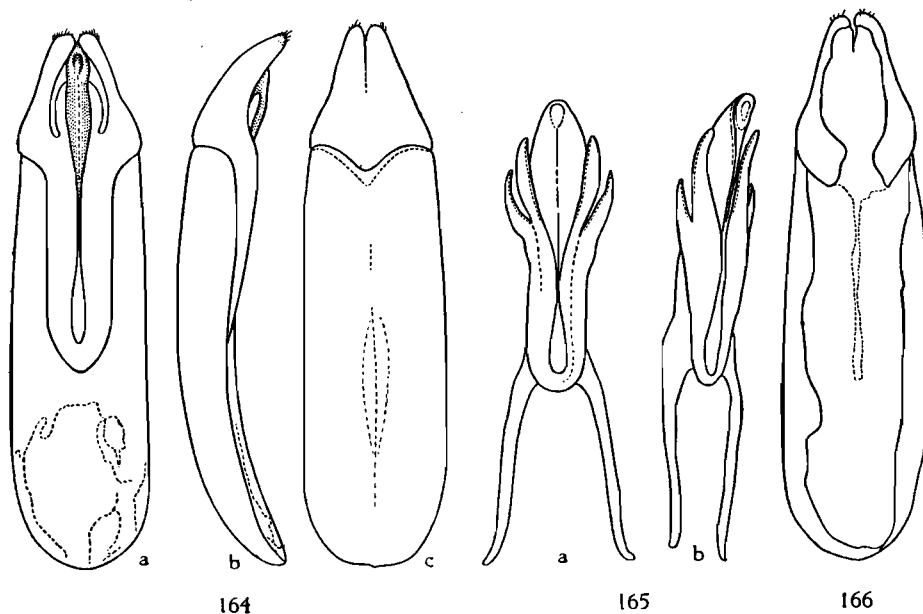


FIG. 164. — Ædeagus of *Selinus striatus* (FABRICIUS) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 165. — The extracted penis plus lacinia of the ædeagus of *Selinus striatus* (FABRICIUS) (a : outer surface; b : diagonal view). — FIG. 166. — The dissected and emptied aedeagal tegmen of *Selinus striatus* (FABRICIUS).

of similar shape, but more elongate and the median division of parameres produced backwards and reaching the middle of dorsal surface of apicale. Basale subparallel, not dilated, not quite three times as broad as apex of apicale, but more than four times as long as apicale.

Dimensions. — Length 11 to 11 ½ mm, width 5 ½ to 6 mm.

Type locality. — «Guinea». The ♂ holotype in Museum Copenhagen (teste GEBIEN, 1906).

Distribution. — North-western Tropical Africa. — French Guinea. — Ivory Coast: Oimbroko (2♂♂, T.M.). — Togo (1♂, T.M.).

8. Pronotum with extremely fine to moderately strong, more or less scattered punctures, with the intervals between punctures always much larger than the diameter of punctures. Punctures on head moderately dense, rarely slightly confluent; vertex without median carinula. Punctures on secondary intervals of elytra inconspicuous and sparse 9
- Punctuation on pronotum coarse and extremely dense, partially confluent longitudinally, with the intervals between punctures almost smaller than the diameter of punctures. Punctures on head coarse, extremely dense and longitudinally confluent; on vertex with longitudinal rugosities and short, badly defined median carinula. Punctures on secondary intervals of elytra conspicuous and dense.

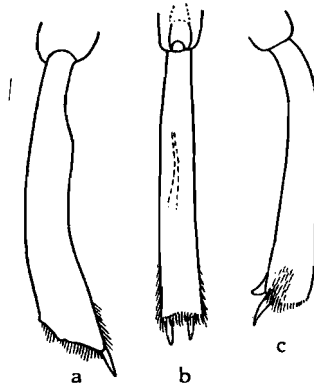


FIG. 167. — *Selinus striatus* (FABRICIUS).

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

[*Selinus lundbladi* n. sp.]

Upper surface uniformly sericeous. Epistome sharply separated from genae and somewhat lobiform. Supra-antennal surfaces convex, without impressions. Middle section of mentum with sharply carinate and narrowing sides on basal two-thirds, lobiform, plane and coarsely punctured on apical third, with broad, obtuse and non-carinate median convexity on proximal two-thirds. Apical segment of maxillary palpi slightly securiform, broader than long (♀). Antennæ stout, with strongly dilated and transverse two preapical segments. Pronotum broadest at middle or basally, about one and a half times as broad as long, depressed, with very shallow but rather broad submarginal depression of sides. Anterior margin deeply emarginate, with strongly produced and sharp anterior angles. Sides posteriorly subparallel or very slightly dilated towards base, some-

times shallowly sinuate; lateral carina narrow, narrowing towards anterior angles, without justa-lateral canaliculation. Base sharply carinate, with broadly rounded lateral emarginations and rather strongly produced, slightly acute lobes of posterior angles. Underside of prothorax practically smooth. Apex of horizontal portion of prosternal apophysis broadly rounded and sharply marginate. Elytra very slightly broader than pronotum, subparallel, rather elongate, with bluntly rectangular humeral angles. Primary rows with moderately strong, round punctures which are not much coarser than the discal punctures on pronotum, with about 30 punctures in the fourth row, becoming very fine on apical declivity; the lateral rows sharply lineate and impressed; the ninth row closely following the pseudopleural crest. Secondary intervals broad, slightly convex, becoming rather strongly convex on sloping lateral portions. Lateral convexity strong, but the equally and well demarcated justa-lateral canaliculation plus pseudopleural crest entirely visible from above. Pseudopleura practically occupying the entire ventrally reflected portion of elytra; sericeous, with a few indistinct punctures. Episternum of metasternum obsolete sculptured. Abdomen with dense, partially confluent punctation on proximal three sternites, more strongly and densely punctured on anal sternite. The latter with moderately strong, complete marginal sulcus. ♂ unknown.

Remarks. — This species is remarkable by the dense and coarse punctation of pronotum, by this particular alone readily distinguished from all the other *Selinus*. It seems to be related to *S. menouxi* and *S. leakeyi*, both with fine and sparse punctation on pronotum.

Dimensions. — Length 10 to 10 ½ mm, width 4 ½ to 4 ¾ mm.

Distribution. — South-eastern Tanganyika Territory. — Lukuledi (4 ♀, holotype M.St.).

Dedication. — Named in honour of Prof. O. LUNDBLAD, chief of the entomological department of the Naturhistoriska Riksmuseum, Stockholm.

9. In the ♂ the apex of the underside of intermediate tibiæ bare, but either with a minute tubercle in front of apex, or subfoveate and with the apex of inner edge slightly produced backwards beyond apical margin of tibia. Size of body larger, 9 ½ to 16 mm long. Primary rows of elytra sharply lineate, with very fine punctures 10
- In the ♂ the apex of the underside of intermediate tibiæ with a dense tuft of yellowish, adherent hairs, neither tuberculate nor with produced apex of inner edge. Size of body smaller, 8 ¾ to 10 ¼ mm long. Primary rows of elytra with strong to rather coarse, sometimes transverse punctures, less sharply lineate 11

10. Body broad. The sides of pronotum slightly dilated towards base; the latter only very slightly narrower than elytra. In the ♂ the inner contours of intermediate tibiæ straight, with minutely prominent tubercle just in front of apex; the underside with not foveate, but plane surface in front of apical margin.

[*Selinus infernalis* (GERSTAECKER).]

(Pl. XIV, fig. 4; Figs. 168, 169.)

*1854, *Eurynotus infernalis* GERSTAECKER, p. 533. — 1862, GERSTAECKER, p. 287. — 1870, GEMMINGER & DE HAROLD, p. 1914. 1910 b, *Selinus infernalis* GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 417, n° 5603.

Original description. — «*Eurynotus depressus*, niger, opacus, capite thoraceque crebre punctatis, elytris punctato-sulcatis, interstitiis convexis, subtiliter punctulatis. — Der Körper ist flachgedrückt, matt schwarz. Der Kopf ist dicht, an den Seiten sogar runzlig punktirt, die Querlinie, wodurch das Kopfschild abgesetzt wird, sehr undeutlich. Die Palpen und Fühler sind fein greis behaart, die der letzteren mit stark erweiterten Endgliedern. Halsschild um die Hälfte breiter als lang, nach vorn mässig verengt, mit stark hervortretenden Vorder- und Hinterecken, sehr flachgedrückt, nach den Seiten dichter und stärker, auf der Scheibe feiner und etwas weitläufiger punktirt. Schildchen einzeln punktirt. Flügeldecken an der Basis merklich breiter als das Halsschild, bis zur Mitte ihrer Länge gleich breit, dann allmählig verengt und an der Spitze gemeinsam abgerundet; sehr flach gewölbt, deutlich gefurcht, in den Furchen mit ziemlich tiefen, querstehenden, deutlich von einander getrennten Punkten besetzt; Zwischenräume stark gewölbt, fein punktuliert. Unterseite seicht punktirt, matt glänzend, Beine fein greis behaart. — Long. lin. 6.»

Remarks. — Very similar to *S. menouxi*, but of broader and larger shape of body, the pronotum broader, more strongly transverse, less distinctly subparallel posteriorly, but with the sides slightly dilated towards base; the latter less deeply bi-sinuate; the primary rows on elytra with fine to moderately strong punctures, with about 50 punctures in the fourth row; the secondary intervals rather strongly convex laterally. In the ♂ the anterior and intermediate tarsi soleate below, the former strongly dilated, but narrower than the apex of anterior tibiæ and about as broad as the preapical segment of antennæ; the anterior tibiæ thickened, curved, with a deep, oval, densely pilose median cavity on underside, the inner contours with a strong distal emargination which is sharply and angularly demarcated proximally at about middle of tibia; the intermediate and posterior tibiæ straight, but the underside of the former as described above;

the underside of anterior and posterior femora with extremely fine, somewhat pulverulent, yellowish pilosity on proximal half. The distinctive characters on anterior tibiæ more or less strongly developed and variable. Mentum fig. 169.

Ædeagus (fig. 168). — Peculiar and readily distinguished from the ædeagus of all the other Platynotini. The apicale basally distinctly projecting beyond lateral contours of basale, with sinuate

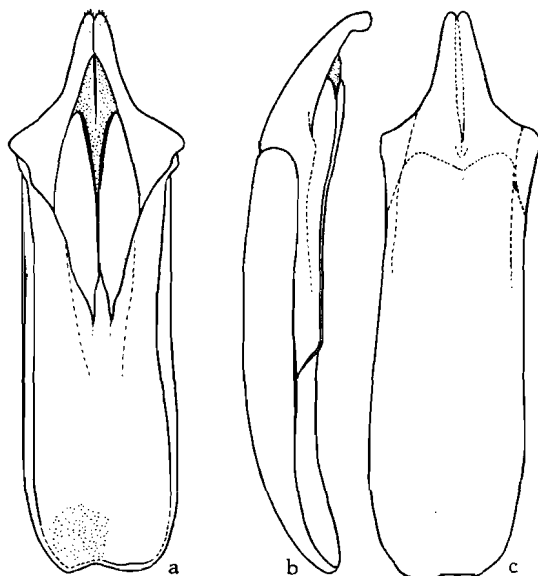


FIG. 168. — Ædeagus of *Selinus infernalis* (GERSTAECKER).

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

sides of the broad and transverse basal half; the latter strikingly demarcated from the narrow apical half by forming a slightly prominent, obtuse angle on each side. Parameres completely and deeply divided, weakly narrowing in a straight line on the narrow apical half, with the apices obtuse and shallowly curved ventrad; their inflexed alæ strongly dilated at middle and there forming the above described prominent angle of outlines of apicale. Penis and lacinia completely, but narrowly exposed. Basale subparallel, scarcely broader than the apicale between the prominent median angles of sides, about four times as long as apicale.

Dimensions. — Length 12 to 16 mm; width 6 to 7 $\frac{3}{4}$ mm.

Type locality. — «Tette» (Central-western Portuguese East Africa). Type probably in Museum Berlin.

Distribution. — From Central Portuguese Africa to the northern parts of the Tanganyika Territory. — Portuguese East Africa: Tette (teste GERSTAECKER); Beira, 1904, P. A. SHEPPARD (6 spec., S.A.M.); Dondo Forest, VIII.1953, BADHAM (1 spec., T.M.); Ngade, I.1904, P. KRANTZ (6 spec., T.M.); Pungwe Bay, XII.1903, P. KRANTZ (1 spec., T.M.). — Tanganyika Territory: Lukuledi (1 spec., BCM.); Lindi (4 spec., BCM.); Dondo Mountains (4 spec., T.M.); Micindani, F. SCHNEIDER (1 spec., T.M.); Mwika, VIII.1907 (1 spec., T.M.); Samburu, VIII.1932, C. G. MACARTHUR (1 spec., C.M.); Lake Yipe, VI.1913, BAYER (1 spec., BCM.); Usambará (5 spec., BCM.).

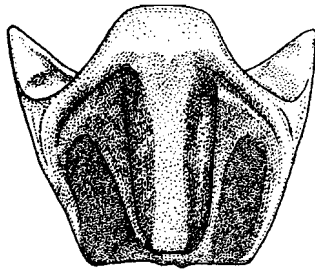


FIG. 169. — Mentum of *Selinus infernalis* (GERSTAECKER).

- Body slender. The sides of pronotum subparallel posteriorly; base considerably narrower than elytra. In the ♂ the inner contours of intermediate tibiæ distinctly curved inwards distally, with minutely produced apical angle, but without preapical tubercle; the underside subfoveate in front of apical margin.

[***Selinus menouxi*** MULSANT & REY.]

(Pl. XV, fig. 1; Figs. 170 to 172.)

*1853 a, *Selinus menouxi* MULSANT & REY, p. 322. — 1853 b, MULSANT & REY, p. 97. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5592.

*1871, *Opatrinus trivialis* GERSTAECKER, p. 60. — 1873, GERSTAECKER, p. 177. 1887, *Selinus trivialis* FAIRMAIRE, p. 284. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5591. — (=syn. nov.).

Original description. — «Corps oblong; presque parallèle depuis les deux-cinquièmes du prothorax jusqu'aux trois-cinquièmes des élytres; presque plan en dessus depuis la moitié du prothorax jusqu'à celle des élytres; très-faiblement convexe; d'un noir mat et un peu soyeux. Tête peu convexe; finement et assez densément ponctuée. Epistome échancré assez fortement. Prothorax élargi en ligne peu courbe jusqu'aux deux-cinquièmes ou un peu plus, presque

parallèle ensuite ou plutôt faiblement élargi en formant une longue et très légère sinuosité entre le milieu et les angles postérieurs; muni latéralement d'un rebord graduellement moins étroit ou plus épais à partir des deux-cinquièmes, convexe, saillant; à sinuosités basilaires en arc presque régulier; rayé au-devant de la base d'une ligne constituant un rebord peu étroit, uniforme, non interrompu; d'un tiers environ plus large à la base que long sur son milieu; très-faiblement convexe, finement et assez densément ponctué; marqué d'une dépression longitudinale ou d'un sillon très-léger naissant près des angles de devant et prolongé jusque près des angles postérieurs, plus éloigné, vers la moitié de la longueur du bord externe, vers lequel il se recourbe postérieurement; noté au-devant de chaque sinuosité basilaire, d'une dépression avancée presque jusqu'à la moitié. Écusson très petit; en triangle une fois plus large qu'il est long dans son milieu; lisse ou presque lisse. Elytres un peu plus larges en devant que le prothorax à ses angles postérieurs; presque parallèles ou à peine élargies jusqu'aux trois-cinquièmes; faiblement convexes; à stries très-prononcées, rendues plus profondes par la convexité des intervalles; marquées de points ou plutôt de courtes raies transverses, qui ne crénelent pas ou peu visiblement les intervalles lorsqu'ils sont vus en dessus (environ cinquante de ces points sur la quatrième strie): les première et deuxième stries presque terminales et postérieurement unies: les troisième et sixième liées, en enclosant les quatrième et cinquième qui sont plus courtes et pareillement unies. Intervalles assez faiblement convexes; lisses ou indistinctement pointillés: les premier et troisième un peu plus larges et un peu plus convexes postérieurement: le septième élargi et peu saillant en devant, sensiblement plus large que le sixième à sa partie antérieure. Dessous du corps peu luisant; lisse sur les côtés de l'antépectus; ventre à peine pointillé. Postépisternums presque parallèles; trois fois au moins aussi longs que larges. Prosternum rebordé; convexe. Pieds grêles. Cuisses postérieures droites. ♂: Jambes de devant arquées, graduellement et médiocrement élargies, échancrées en dessous après le milieu de la longueur. Jambes intermédiaires et postérieures à peu près droites, simples. Quatre articles des tarsi antérieurs dilatés: les deuxième et troisième un peu plus sensiblement que le quatrième et surtout que le premier. — Long. 12 mm, larg. 4,5 mm.

Synonymy. — GERSTAECKER's description of his *Opatrinus trivialis* agrees completely with MULSANT & REY's species. There is no doubt as to the synonymy of both species.

Remarks. — In the ♂ the legs very similar to *S. infernalis*; the anterior tarsi more strongly dilated and distinctly broader than the preapical segment of antennæ; the distal emargination of inner

contours of anterior tibiae shorter and slightly moved more proximad; the intermediate tibiae sharply differentiated and as described above; the inner contours of posterior tibiae more or less distinctly and elongately emarginate on distal three-fifths and there more conspicuously hairy than in *infernalis*; the underside of all femora bare. Mentum fig. 172.

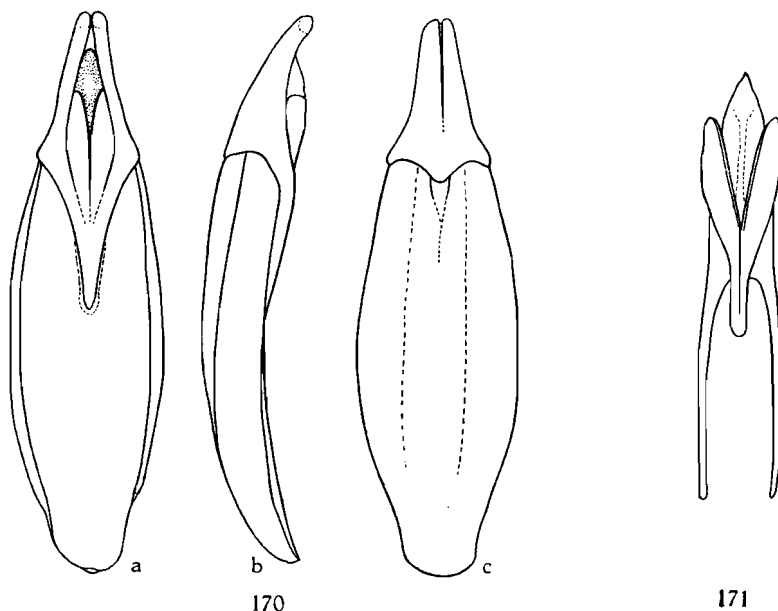


FIG. 170. — Aedeagus of *Selinus menouxi* Mulsant & Rey (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 171. — The extracted penis plus lacinia of the aedeagus of *Selinus menouxi* Mulsant & Rey, outer surface.

Aedeagus (figs. 170, 171). — Strongly differing from *S. infernalis*, of rather simple shape. The apicale very slender and elongate, with the sides weakly narrowed in a straight line on proximal two-thirds, thence practically subparallel; the parameres completely and deeply divided, with almost straight and obtuse apices. Ventral groove leaving narrowly exposed the penis and lacinia; the latter simple as in *infernalis*. Basale broader than apicale and about three and a half to four times as long as the latter.

Dimensions. — Length $9 \frac{1}{2}$ to $12 \frac{3}{4}$ mm, width $4 \frac{1}{4}$ to 6 mm.

Type locality. — «L'Afrique?». Type probably in Museum Lyon.

Distribution. — North- and Central-western Tanganyika Territory and South-eastern British East Africa. — Tanganyika Territory: Nguela, Usambara (a large series, I.R.); Eastern Usambara Mountains, STUHLMANN (4 spec., C.M.); Moshi, BELLI (1 spec., Senckenberg Museum); Bagamojo (3 spec., T.M.); Dar-es-Salaam (5 spec., S.A.M., Senckenberg Museum). — British East Africa: Malindi, V.1940, G. W. JEFFERY (2 spec., C.M.); Arabuko Forest, V.1940, T. H. E. JACKSON (2 spec., C.M.); Rabai, I.1928, A. F. J. GEDYE (1 spec., C.M.); Mombasa (type locality of *trivialis* GERSTAECKER). — Zanzibar (3 spec., BCM., S.A.M.).

GEBIEN, 1938-1942, cites Madagascar as patria of *S. menouxi*.

11. In the ♂ the inner contours of anterior tibiæ with small, ciliate median emargination, the proximal delimitation of which is weak and obtusely arcuate; the anterior tarsi moderately dilated, narrower than the pre-

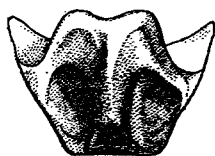


FIG. 172. — Mentum of *Selinus menouxi* MULSANT & REY.

apical segment of antennæ or the apex of anterior tibiæ; intermediate tibiæ curved, with slight and obtuse inner apical dilation; posterior femora without brush on underside. Ædeagus simple, subparallel, with triangular, continuously converging outlines of apicale, and simple penis and lacinia.

[***Selinus elevatus*** (GERSTAECKER).]

(Pl. XV, fig. 2.)

*1871, *Opatrinus elevatus* GERSTAECKER, p. 60. — 1873, GERSTAECKER, p. 178. — 1910 b, *Selinus elevatus* GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 417, n° 5593.

Original description. — « Oblongo-ovatus, ater, parum nitidus, prothorace convexiusculo, subsulcato, elytris late et profunde punctato-sulcatis, interstitiis convexis, disperse punctulatis. ♂: Tibiis anticis arcuatis, intus emarginatis ibique flavo-fimbriatis. — Kleiner als *Opatrinus trivialis*, übrigens von ähnlichem Umriss, bei gleich tief schwarzer Färbung, mit einigem, wenn auch schwachen, seidenartigem Glanz. Fühler von gleichen Längsverhältnissen der einzelnen Glieder. Kopf grober und besonders auf dem Clypeus auch gedrängter punktirt, die Stirn mit schwachem Längskiel, der Vorderrand des Clypeus mehr stumpfwinklig ausgeschnitten als bogig ausgerandet. Prothorax wenigstens beim ♂ erst von der Mitte anfangend und nach vorn schwächer verengt, im Bereich der Scheibe

etwas gewölbter, der Länge nach seicht gefurcht, die Punktierung relativ, wenn auch nicht absolut stärker, der Seitenrand feiner, weniger verdickt. Schildchen punktirt. Flügeldecken merklich kürzer, nach hinten jedoch kaum stumpfer zugerundet, die Punkte in den Furchen mindestens doppelt so breit als bei *Opatrinus trivialis* und letztere daher nur wenig schmaler als die Zwischenräume erscheinend; diese fein und zerstreut punktirt, gegen die Naht hin nur leicht, nach aussen jedoch allmählich stärker gewölbt und hier fast rippenartig erscheinend. In gleicher Weise wie der dritte mit dem siebenten, verbindet sich innerhalb derselben der vierte mit dem sechsten Zwischenraume, so dass der am meisten abgekürzte fünfte also doppelt eingeschachtelt erscheint. Prosternalfortsatz eiförmig abgerundet, fein gerandet, auf der Fläche punktirt; Mesosternum im Bereich der vorderen Hälfte fein gekielt, hinterwärts tief gefurcht. Hinterleib glänzend, fein und zerstreut punktirt, auf den drei vorderen Segmenten überall deutlich längsrissig. Beim ♂ sind die Vordertarsen nur leicht erweitert, die gekrümmten Vorderschienen innerhalb längs der grösseren Spitzenhälfte bogig ausgerandet und in dem oberen Theil dieser Ausrandung mit gelber Haarbewimperung versehen; ihre Rückseite ist grob schartig punktirt. Long. 8 ½ - 10 mm. »

Remarks. — *S. elevatus* is the smallest of *Selinus* species. It is related to *S. menouxi*, but of smaller, shorter and broader shape of body, the pronotum is more strongly transverse, similar to *S. infernalis*, rather densely and finely punctured, exhibiting a rather narrow submarginal depression, an obsolescent, very narrow, but not smoothed justa-lateral canaliculation, and often a fine, slightly impressed median line. The punctures of primary rows of elytra are variable but much stronger than in *menouxi* and *infernalis*, often rather coarse and transverse, in this case the rows almost broader than the secondary intervals; the latter are strongly convex to subcostate: the first and second primary rows are usually abbreviated basally and there coalescent.

Ædeagus. — Subparallel and elongate. The parameres continuously converging towards apex, with broad inflexed alae ventrally and very slightly bent, obtuse apices. Penis and lacinia simple, narrowly exposed. The basale not broader than the base of apicale, about four and a half times as long as apicale.

Dimensions. — Length 8 to 9 mm, width 3 ¾ to 4 ¼ mm.

Type locality. — «Kisuani und Endara» (North-eastern Tanganyika Territory). Type probably in Museum Berlin.

Distribution. — North-eastern Tanganyika Territory. — Kisuani. Endara (teste GERSTAECKER); Lake Yipe, VI.1913, BAYER (1♂ ♀, BCM.).

- In the ♂ the inner contours of anterior tibiæ with a strongly projecting, sharply pointed tooth slightly proximad from middle, delimiting the median cavity on underside of tibia; the anterior tarsi strongly dilated, broader than the preapical segment of antennæ and about as broad as the apex of anterior tibiæ; intermediate tibiæ very shallowly curved to practically straight, with continuous inner contours from base to apex; posterior femora with fine brush of short yellowish hairs on proximal half of underside. Ædeagus specialized, with peculiar shape of apicale, penis and lacinia, as described below.

[*Selinus leakeyi* n. sp.]

(Pl. XV, fig. 3; Figs. 173 to 175.)

Related to *S. elevatus* and agreeing with the latter in the presence of an apical brush of hairs on the underside of intermediate tibiæ in the ♂. Apart from the peculiar structure of ædeagus differing from this species as follows. Size of body larger and somewhat intermediate between *S. menouxi* and *elevatus*. Head with finer punctures above. The antennæ considerably more elongate, with slender proximal segments and less strongly dilated distal segments. The apical segment of maxillary palpi more strongly securiform. The middle section of mentum broader, only very slightly narrowed towards the non-lobiform apical margin. Pronotum slightly broader, but of same shape, with the same dense, fine punctation and narrow submarginal depression, but without indicated median line and the lateral angles less strongly produced. Elytra as in *elevatus*, but the punctures of primary rows less coarse, never transverse, therefore the secondary intervals never narrower than the primary rows; the first and second rows usually not coalescent anteriorly. Secondary intervals broader, constantly much broader than primary rows, becoming strongly convex towards sides and apex, but never subcostate. The justa-pseudopleural canaliculation of sides narrower than in *elevatus*. The punctation of underside of hind body finer. In the ♂ (fig. 175) the anterior and intermediate tarsi strongly dilated and soleate below; the anterior tibiæ with deep, densely pilose, median cavity on underside, and the inner contours curved and narrowed, but practically subparallel on distal half behind premedian tooth; the inner contours of posterior tibiæ inconspicuously and elongately emarginate on distal three-fifths and there covered with a dense, very short, yellowish pilosity.

Ædeagus (figs. 173, 174). — The basal half of apicale broad and with almost subparallel outlines of sides, thence suddenly nar-

rowed to the subparallel apical half. The parameres deeply and completely divided, with more or less prolonged, obtuse to almost pointed, straight to slightly bent apices. Penis large, subparallel, with upper sulcus and spoon-shaped, broadly rounded apical orifice. Lacinia very peculiar by having the apical third angularly demarcated from basal thirds and transformed into a strongly and inward-

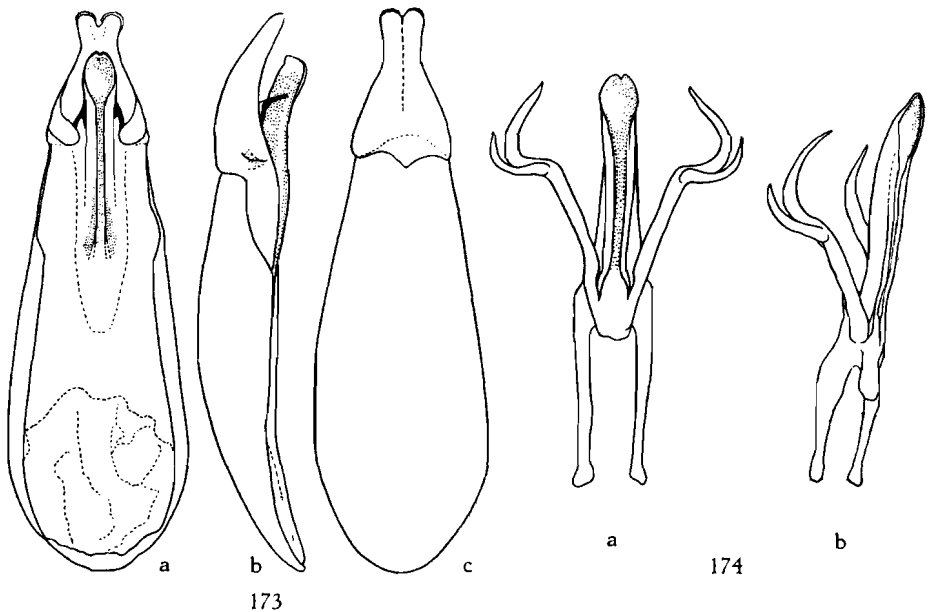


FIG. 173. — *Ædeagus* of *Selinus leakeyi* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 174. — The extracted penis plus lacinia of the *ædeagus* of *Selinus leakeyi* n. sp. (a: outer surface; b: diagonal view).

ly curved, sharply pointed spine. Basale broad and subparallel on proximal two-thirds, with angularly demarcated and converging sides of distal third, on proximal portion about three times as broad as base of apicale, about three times as long as apicale.

Remarks. — This new species is easily recognized from all the other *Selinus* by the sharp premedian tooth on anterior tibiæ in the ♂.

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

Distribution. — South-eastern British East Africa: Merifano, IX.1932, C. G. MACARTHUR (7 spec., types C.M.); Tsavo River, V.1913, BAYER (14 spec., BCM.); Samburu, VIII.1932, C. G. MACARTHUR (1 spec., C.M.); Malindi, VIII.1928, C. G. MACARTHUR (1 spec., C.M.); Kilifi, VII.1939, D. G. MACINNES (1 spec., C.M.); Lower Tana and Sabaki Rivers, V.1932, TURNER & MACARTHUR (1 spec., C.M.); Sekoke, VII.1932, A. TURNER (1 spec., C.M.).

Dedication. — Named in honour of Dr. L. S. B. LEAKEY, Director of the Coryndon Museum at Nairobi.

12. Punctures of primary rows of elytra coarse, scattered but not subfoveate; the lateral intervals about as broad as primary rows or slightly broader. Pronotum almost smooth, with inconspicuous punctation. Upper surface of body moderately shiny.

[*Selinus platessa* FAIRMAIRE.]

1887, *Selinus platessa* FAIRMAIRE, p. 286. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5589.

Original description. — « Late ovatus, parum convexus, niger nitidus; capite sat parvo, indistincto punctulato, clypeo antice

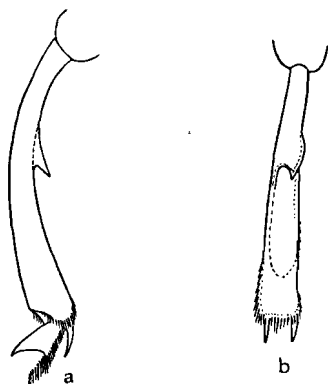


FIG. 175. — *Selinus leakeyi* n. sp.

a : anterior tibia of ♂ ; b : underside of anterior tibia of ♂ .

sat fortiter emarginato; antennis basin prothoracis haud attingentibus, sat gracilibus, articulis 3-5 elongatis, 3° longiore, 6°-7° que paulo brevioribus, penultimis transversis, latioribus, ultimo subrotundato, apice compresso; prothorace elytris vix sensim angustiore, lato, longitudine duplo latiore, lateribus antice tantum arcuatim convergentibus, margine postico utrinque late leviter sinuato, angulis posticis latis, triangularibus, paulo retroversis, dorso lævi, ante basin transversim sulcato, sulco utrinque abbreviato et striola brevi longitudinali limitato, lateribus utrinque ante marginem sulcatulo; scutello minutissimo, vix distincto; elytris breviter ovatis, basi late truncatis, apice obtuse angustatis, dorso grosse substriato-punctatis, intervallis lævibus, convexiusculis, extus et apice magis convexis, epipleuris latissimis, lævibus; subtus lævis, prosterno inter coxas planato, subtiliter marginato, apice angulatim producto, mesosterno fortiter sulcato, pedibus sat gracilibus. — Long. 12 mm. »

Remarks. — This species is well differentiated from all the preceding species of genus by the broad, *Zophosis*-like shape of body, the very broad and subparallel pseudopleura of elytra, the smooth upper surface of body, the coarse and sparse punctures of primary rows of elytra and the transverse impression in front of middle section of base. The anal sternite is entirely marginate as in all *Selinus*. I know only of two badly preserved paratypes (S.A.M.), presumably ♀♀.

Type locality. — « Makdischu » (Southern part of Italian Somaliland). Type probably in Museum Paris.

- Punctures of primary rows of elytra subfoveate and rather dense; the lateral intervals considerably narrower than primary rows and impinged by punctures of the latter. Pronotum with rather dense, conspicuous punctation. Upper surface of body polished and strongly shiny.

[***Selinus foveipennis*** FAIRMAIRE.]

*1887, *Selinus foveipennis* FAIRMAIRE, p. 286. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 417, n° 5604.

Original description. — « *S. platessa* valde affinis, sed major, ovato-oblongus, nitidior, capite evidentius punctulato, antennis minus gracilibus, articulis 5 ultimis latioribus, transversis, ultimo oblique truncato; prothorace longiore, lateribus antice minus arcuatis et minus convergentibus, basi et lateribus similiter sulcato, angulis posticis similiter retroversis; scutello paulo evidentiore; elytris longioribus, apice magis attenuatis et acuminatis, foveis lineatim seriatis impressis, intervallis angustis, convexiusculis, subtiliter dense punctatis; subtus subtiliter coriaceus, prosterno inter coxas convexiusculo, marginato, apice angulato. ♂ tarsis anticis dilatatis. — Long. 13 à 15 mm. »

Remarks. — This species, allied to *S. platessa*, is strikingly characterized by the polished upper surface, the subfoveate, very coarse punctures of primary rows of elytra and the apically acuminate shape of the latter. There are only 18 punctures in the fourth row, separated from each other by very narrow, transverse intervening spaces (in *platessa* with 23 to 25 punctures). The pseudopleura are strongly narrowing towards apex and do not occupy the entire ventrally reflected portion of elytra. The anal sternite of abdomen is entirely marginate as in the other *Selinus*. In the ♂ the anterior tarsi are rather strongly dilated and soleate below; the anterior tibiae are slightly curved distally, but not excavate on underside; the intermediate tarsi are weakly dilated and soleate below;

the femora are slender, without brushes on underside, simple as are also the straight intermediate and posterior tibiae.

Only a paratype of this species is known to me (S.A.M.).

Type locality. — « Makdischu » (Southern Italian Somaliland). Type probably in Museum Paris.

PHYMATOPLATA n. gen.

Closely related to *Selinus* and agreeing with this genus in the entirely marginate anal sternite of abdomen, the abbreviated pseudopleura of elytra, the short metasternum, the constricted eyes, the submarginal depression on pronotum, the non-dimorphic maxillary palpi, the dilated anterior tarsi in the ♂, as well as in the subparallel posterior portion of pronotum and subparallel elytra. Differing by the strongly depressed body, the laterally not convex but only sloping elytra, a median sulcus on pronotum, the densely and coarsely punctured pseudopleura, and particularly by the presence of tubercles on secondary intervals of elytra, a feature which is quite unknown in the *Platynotina* but characteristic for the *Oncotini*. Monotypical.

[*Phymatoplata asperula* (FAIRMAIRE).]

(Pl. XV, fig. 4.)

*1897, *Selinus asperulus* FAIRMAIRE, p. 121. — 1910 b, GEBIEN, p. 277. — 1938-1942, GEBIEN, p. 417, n° 5595.

Original description. — « Ressemble beaucoup au *Selinus costulifer*, mais un peu plus petit et plus étroit, avec le corselet marqué d'un léger sillon longitudinal, les élytres moins courts, à stries presque lisses, les intervalles assez convexes, couverts de fines aspérités assez écartées et d'une ponctuation serrée, un peu ruguleuse; les pattes et les antennes sont aussi d'un rougeâtre obscur, les dernières plus claires et surtout bien plus grêles; les fémurs sont foncés; les côtés du prosternum sont plus lisses. Long. 9,5 mm. »

Remarks. — Head above densely and coarsely punctured, slightly rugose on vertex and there with a very short and fine median carinula. Mentum tri-partite, the middle section narrowing towards the truncate and non-lobiform apical margin, with obtuse median convexity. Apical segment of maxillary palpi securiform, only a little broader than long. Antennæ moderately accrescent towards apex; the preapical segment moderately transverse, but triangular. Pronotum transverse, depressed, with moderately broad, subparallel submarginal depression, shallowly bi-sinuate base and almost rectangular lobes of posterior angles. Disc, besides the median sulcus, with a few irregular, but very shallow impressions. Integument

very densely covered with strong, partially confluent punctures. Underside of prothorax with a few fine punctures on episternum; the prosternal apophysis produced, with broadly rounded and marginate apex. Elytra subparallel, basally inconspicuously broader than pronotal base, strongly flattened, acuminate apically. The primary rows sharply impressed, narrowly lineate, with fine and only partially distinct, but not too dense punctures; secondary intervals much broader than primary rows, practically flat on middle of disc, but very strongly convex to subcostate on lateral and apical portions, very densely covered with a strong punctation plus a longitudinal row of small tubercles evanescent on middle of disc, but reaching the base on lateral portions and very well developed on posterior half. The lateral portions only slightly sloping towards the rather broad justa-pseudopleural canaliculation of sides; the ninth primary row closely attached to the latter. Pseudopleura occupying the entire ventrally reflected portion of elytra, very densely and coarsely punctured. Abdomen with dense and fine, setiferous punctation, concentrated on anal sternite; the latter with fine and complete marginal sulcus. In the ♂ the anterior and intermediate tarsi soleate below, the former moderately dilated, narrower than the apex of anterior tibiae but almost as broad as the preapical segment of antennae; the anterior tibiae concave and smooth on distal two-thirds, slightly curved, but with simple inner contours; all the other parts of legs simple.

Ædeagus. — Simple. The apicale with converging and distally slightly sinuate contours; parameres completely divided, with slightly curved and obtuse apices. Penis and lacinia narrowly exposed. The basale subparallel, scarcely broader than the base of apicale and about five to six times as long as apicale.

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

Type locality. — « Ousambara » (North-eastern Tanganyika Territory). Type probably in Museum Paris.

Distribution. — North-eastern Tanganyika Territory, Usambara District. — Bumbuli near Mombo, 1,250 m, IV.1933, KOHL & LARSEN (1 ♂ ♀, Senckenberg Museum); Neu-Bethel, IV.1903 (1 ♀, T.M.); Amani. XI.1903, EICHELBAUM (1 ♂, T.M.).

ANGOLOSITUS KOCH.

1955 a, *Angolositus* KOCH, p. 448.

Diagnosis. — Upper surface moderately shiny, convex. Head above densely punctured, with the clypeal and epistomal sutures coalescent, fine and sharply impressed. Eyes completely divided by the subparallel and strongly elongate genal canthus; dorsal section large and roundish. Mentum

tri-partite, with strongly narrowing, laterally and medially carinate middle section. Maxillary palpi non-dimorphic. Antennæ with strongly dilated distal segments. Pronotum transverse, very densely and rather strongly punctured, convex, with only weakly to obsoletely indicated, narrow, sub-marginal depression. Sides posteriorly slightly dilated, sometimes practically subparallel for a short distance in front of posterior angles, with the very fine lateral carina being not broader than the basal margination. Base completely marginate, broadly and strongly bi-sinuate, but with the lobes of posterior angles almost rectangular and not distinctly projecting backwards beyond level of middle section of base. Lateral portions of prosternum rather densely rugose, the episternum dull and with fine, sparse, somewhat asperate punctures. Prosternal apophysis produced. Elytra a little broader than pronotum, rather short, subparallel, convex, with almost rectangular, non-prominent humeral angles. Primary rows not lineate, composed of rather fine punctures, with about 45 punctures in the fourth row. Secondary intervals with very dense and strong punctation, appearing distinctly uneven, due to very flat and irregular callosities of cuticle; very broad, rather flat, but convex apically and often also laterally. Pseudopleura often densely and strongly punctured, leaving exposed a narrow portion of the ninth interval posteriorly, not abbreviated, but with apically sharply carinate epipleura. Metasternum very short. Anal sternite with strong, broad and entire marginal sulcus. Legs non-dimorphic.

Ædeagus. — Simple and small. Apicale very short, triangular, with strongly and continuously converging sides; penis and lacinia exposed, the former broad.

Dimensions. — 8 to 10 mm long.

Relationship. — A quite isolated genus which does not reveal signs of any direct relationship to the other *Platynotini*. On account of the entirely marginate anal sternite it may be compared with *Selinus*, but is very sharply separated from this genus by the divided eyes, the very dense punctation and uneven cuticle of elytra, the well developed and carinate apical portion of epipleura, the not abbreviate pseudopleura and the non-dimorphic legs. Representing among all *Platynotini* the only phylum with divided eyes. Because of this particular, in correlation with the densely punctured and shiny elytra, recalling certain palæarctic *Litoborini* or *Dendarini*.

Type species. — *Angolositus sadabandeirus* KOCH, 1955.

Distribution. — Central and Western Angola, from the Huila District northwards to the Malange District.

KEY.

- Pseudopleura of elytra densely and strongly punctured. Prosternal apophysis less strongly produced, with broad and rounded apex. Body slender, the elytra more elongate, more strongly convex laterally, therefore the pseudopleural crest dorsally concealed behind middle; secondary intervals with very dense and strong punctation, but only weakly uneven cuticle.

Angolositus sadabandeirus KOCH.

(Fig. 176.)

*1955 a, *Angolositus sadabandeirus* KOCH, p. 449, figs. 10, 30.

Original description. — « Bare; shiny; black, tarsi and antennæ, sometimes also femora and tibiæ of a dark reddish brown, the sides of pronotum and epistome often of a transparent brownish tint. Head with extremely dense, in part rugosely confluent punctures. Antennæ with elongate proximal and transversely dilated distal segments; third segment slightly more than twice as long as broad; fourth segment much shorter than third segment, about one and a half times as long as broad; penultimate segment strongly transverse, two-thirds broader than long; apical segment roundish, considerably longer than penultimate segment, but slightly narrower. Pronotum broadest basally, there about two-thirds broader than long, with extremely fine, but deep punctures, becoming more concentrated and slightly rugose towards sides, especially on the shallow submarginal depression. Anterior margin deeply emarginated, with the marginal carina briefly interrupted at middle and strongly produced, with rectangularly rounded anterior angles. Sides strongly rounded and narrowed towards middle, then gradually and almost straightly dilated towards posterior angles; with very fine margination. Base bi-sinuate, sharply carinate, with sharp rectangular posterior angles. Episternum of prosternum sericeous, dull, covered with a rather dense, obsolescent granular sculpture. Elytra scarcely to very slightly broader than pronotum. Primary rows complete, with fine, but sharp and dense punctures. Secondary rows covered uniformly with dense, rather strong and quite obvious punctures; flat, becoming weakly convex towards sides, but strongly convex to subcarinate on apical declivity. »

Ædeagus. — Parameres converging towards apex, completely and deeply divided, with weakly gaping, slightly curved and obtuse apices; penis very large, about three times as broad as one of the styli of lacinia, with only very weakly narrowing, straight sides and

broadly rounded apical orifice; lacinia abbreviated, only half the length of penis, strongly compressed, with pointed apices. Basale subparallel, not broader than the base of apicale, about four to four and a half times as long as apicale.

Dimensions. — Length $8\frac{1}{2}$ to $9\frac{3}{4}$ mm, width $4\frac{3}{4}$ to 5 mm.

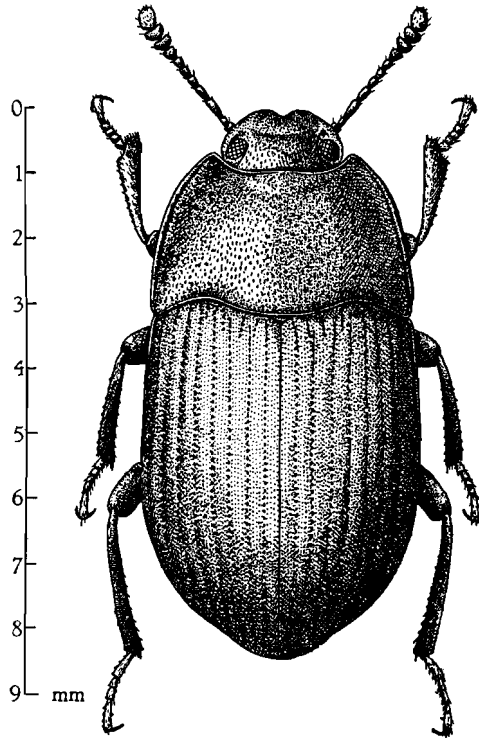


FIG. 176. — *Angolositus sadabandeirus* KOCH.

Type locality. — South-western Angola. — Huila Province and District : Sá da Bandeira (types in T.M.).

- Pseudopleura of elytra practically smooth, with only very shallow, obsolescent and sparse punctures. Prosternal apophysis very strongly produced, with attenuate, somewhat lanceolate apex. Body broad, the elytra short, distinctly depressed, with weakly convex lateral portions and dorsally entirely exposed pseudopleural crest; secondary intervals with less dense, somewhat smoothed punctures, but rather well developed, tuberculiform callosities of cuticle.

Angolositus rufimanus (HAROLD).

*1879, *Opatrinus rufimanus* HAROLD, p. 116.

1910 b, *Selinus rufimanus* GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 417, n° 5588.

Original description. — « Ovalis, subnitidus, oculis bipartitis, capite thoraceque densissime punctulatis, elytris sat convexis, leviter punctato-striatis, interstitiis dense punctulatis et obsolete transversim impressis. — Von eiförmiger, ziemlich gewölbter Gestalt, mässig glänzend, schwarz. Der Kopf fein und dicht, fast runzlig punktiert, die Wangen gerundet und etwas wulstig verdickt, sie durchsetzen mit ihrer hinteren Spitze die Augen ganz und teilen daher dieselben in eine obere und in eine untere Hälfte. Thorax sehr fein und äusserst dicht gleichmässig punktiert, die Basis jederseits zwischen Mitte und Hinterecken ziemlich stark bogig ausgebuchtet, diese daher einen scharfen, auf die Schultern übergreifenden Winkel bildend. Schildchen quer, sehr kurz. Die Flügeldecken mit feinen, wenig tiefen Punktreihen, die Zwischenräume fein und dicht punktiert, durch schwache Quereindrücke etwas uneben; die breiten Epipteren flach, ebenfalls fein punktiert. Die Unterseite schwarz, Beine und Fühler heller oder dunkler rötlichbraun, die Tarsen rostroth. Die Fühler gegen das Ende ziemlich stark verdickt, Glied 3 etwas kürzer als 4 und 5 zusammen, die letzten 4 Glieder merklich verbreitert, Glied 11 gerundet. Long. 10-11 mm. — Durch die sehr deutlich halbirten Augen würde diese Art eigentlich der Gruppe der Pedininen angehören, sie stimmt aber in dem dreilappigen Kinn, dem beilförmigen Endglied der Maxillartaster, der jederseits ausgebuchteten Thoraxbasis und den verbreiterten Endgliedern der Fühler so völlig mit *Opatrinus*, besonders mit *elevatus* GERSTAECKER und *planus* FABRICIUS überein, dass über ihre Zubehör zu dieser Gattung kein Zweifel sein kann. Die an der Basis eingeschnürte mittlere Vorragung des Kinns und die in beiden Geschlechtern einfachen Vorderfüsse gestatten eine sichere Scheidung der Opatrinen von den habituell mitunter äusserst ähnlichen Eurynoten. »

Remarks. — I did not know this species at the time of my description of *Angolositus sadabandeirus*. According to a specimen from Bimbe, it appears to be closely allied to my species but specifically different.

Type locality. — « Pungo Andongo » (North-western Angola). Type probably in Museum München.

Distribution. — North-western and Central Angola: Malange Province and District (Pungo Andongo); Benguela Province and Huambo District (Bimbe, 1 spec., T.M.).

B. — LITOBORINI

Litoborinæ ANTOINE, 1941, p. 19.

Litoborini ESPAÑOL, 1945, pp. 219, 225, 226. — KOCH, 1948, p. 403. — KOCH, 1953 *a*, pp. 270, 272.

Pandarites + Eurynotaires, p.p., MULSANT & REY, 1853 *b*.

Platynotides + Pédinides, p.p., LACORDAIRE, 1859.

Phylacina, p.p., REITTER, 1904, p. 107.

Pedinini + *Opatrini*, p.p., GEBIEN, 1938-1942.

Definition. — Body apterous, exceptionally alate (*Silvestriellum*, fig. 220). Epistome more or less strongly emarginate. Eyes constricted by genal canthus to completely divided into a dorsal and a ventral section. Gula non-stridulatory. Mentum uni-partite, in the genera from South of the Sahara with deeply emarginate apical margin, rounded sides and sometimes more or less distinctly marked median carinula basally (fig. 177). Maxillary palpi with sometimes extremely enlarged basal segment; the apical segment non-dimorphic, from triangular to moderately securiform (figs. 187, 188, 220, 223). Antennæ with eleven, exceptionally ten (*Zoutpansbergia*, fig. 233) segments. Pronotum transverse to square, very variable in shape and lateral structures, exceptionally with median carinæ on disc (*Tragardhus* s.str., fig. 229). Prosternal apophysis narrow, produced or with depressed apex. Elytra with nine or ten primary rows, of which one or two are situated on the ventrally reflected portion (figs. 178, 179); secondary intervals often, in the genera from South of the Sahara usually, with carinate costæ which sometimes are resolved into tubercles. Pseudopleura occurring in three formations; either complete, then narrow on posterior two-thirds and abruptly dilated and bent dorsad basally, reaching from base to the extreme apex of elytra and there being separated from the epipleural carina; or abbreviate apically, then shaped as in the preceding case, but not reaching the extreme apex of elytra, which is delimited by the epipleural carina alone; or absent on anterior half to two-thirds, but broad and well marked on apical third, there with the pseudopleural crest being well separated from the epipleural carina also on extreme apex (as is the case with the first mentioned formation). Pseudopleural crest not exposed dorsally. Metasternum usually short and much shorter than basal sternite of abdomen, exceptionally about as long as the latter (*Silvestriellum*). Intercoxal process of basal sternite broad, slightly rounded to truncate. Anal sternite either marginate or entirely immarginate, rarely with obsolescent margination (in a few palæarctic species). Legs slender; the tibiæ narrow, only weakly dilated towards apex in all the genera from South of the Sahara, sometimes very strongly dilated and with apical, often also median tooth, in the palæarctic genera; the upper surface of intermediate and posterior tibiæ sometimes sulcate. Tarsi with distinct

5-5-4 scheme, in the ♂ the anterior tarsi often dilated. In this sex sometimes also the tibiae and femora with moderately developed distinctive characters. (As in all the *Opatrinæ* the mesocoxal cavities with trochantin and the two preapical segments of abdomen with inter-segmental membrane). Ædeagal tegmen uni-partite, without separation between the apical and basal portions; inner sclerites composed of the penis plus a pair of lacinia. Length of body varying from 3 to about 15 mm.

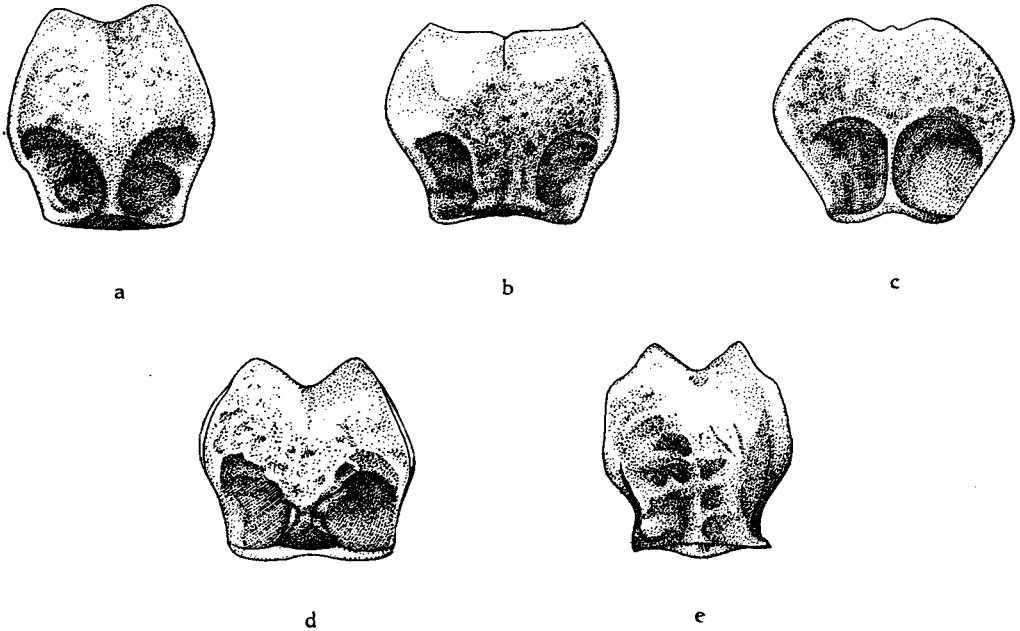


FIG. 177. — The mentum in a few *Zadenina* of *Litoborini*.

a : *Zadenos* (*Euzadenos*) *costifer* n. sp.; b : *Zadenos* (s. str.) *longipalpus* (WIEDEMANN);
 c : *Zadenos* (*Serridenos*) *solenopistoma* n. sp.; d : *Minorus rugicollis* (MULSANT & REY);
 e : *Hanstræmium adelostomoide* KOCH.

Relationship. — Within the *Opatrinæ* a quite isolated tribus which shows somewhat related only to the *Loensini* and *Leichenini* because of the uni-partite ædeagal tegmen. In habitus extremely variable, sometimes closely resembling other tribes of *Opatrinæ* and in one case (*Hanstræmium*, fig. 224) imitating to a striking extent the *Adelostomina* of *Eurychorini* (which belong to the subfamily of *Tentyriinæ*). Very peculiar and unique characters can be observed in the *Litoborini* from South of the Sahara, as there are the only ten-segmented antennæ in *Zoutpansbergia*, the alveolate gland on the dilated apical portion of pseudopleura in *Tragardhus* s. str., the development of wings in *Silvestriellum*, the long metasternum but

wingless body of the scaly *Gridelliopus*, and in particular the presence of supra-orbital carinæ, the *Adelostoma*-like apical segment of antennæ and the extremely enlarged basal segment of maxillary palpi in *Hanstræmium* (fig. 223).

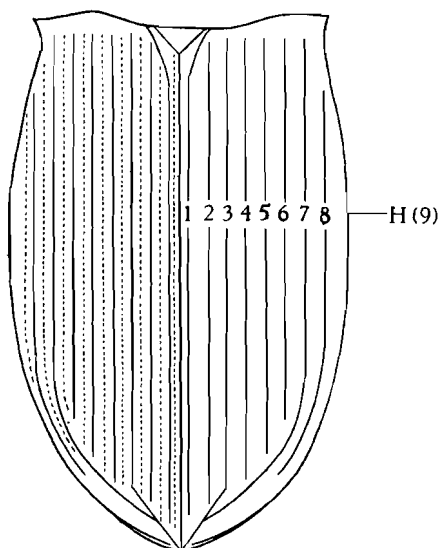


FIG. 178. — Scheme of the arrangement of sculpture on dorsal surface of elytra in the *Zadenina* of *Litoborini*.

Dotted lines : primary rows of punctures; continuous lines : the costate secondary intervals 1 to 9; 9 = H (humeral costa).

Distribution. — Originally believed to be endemic to the western and central parts of Northern Africa, the *Litoborini* have a disjunct Pan African distribution with evolution centres in the north-western part of Northern Africa and in the south-western part of Southern Africa, but occurring with isolated genera also in between these two centres in Tropical Africa (map 2). These isolated tropical genera are : *Hæmodus* and *Zoutpansbergia* from Southern Rhodesia and Northern Transvaal (map 5), *Hanstræmium* from the north-western part of Damaraland, Angola and the Southern Belgian Congo (map 5), while *Silvestriellum* and *Gridelliopus* are East African.

DIVISION OF LITOBORINI.

ESPAÑOL, 1945, p. 226, has subdivided the palæarctic *Litoborini* into the two subtribes of *Litoborina* (ædeagus, figs. 180, 181) and *Melambiina* (ædeagi, figs. 182-186).

The *Litoborini* from South of the Sahara are extremely heterogeneous in their morphology and structure of ædeagus, particularly so with regard to the isolated tropical genera. Their intra-tribal division is of an extreme

sharpness and based on much more spectacular particulars than those used by ESPAÑOL for the two palæarctic subtribes. However, how greatly developed their differentiation also may be, they agree all in the immarginate anal sternite of abdomen (with the only exception of the alate *Silvestriellum*), by this particular being readily distinguished from all the palæarctic genera. In recognizing the super-ordinate importance of this character I am preferring to consider all the *Litoborini* from South of the Sahara an inseparable subtribe.

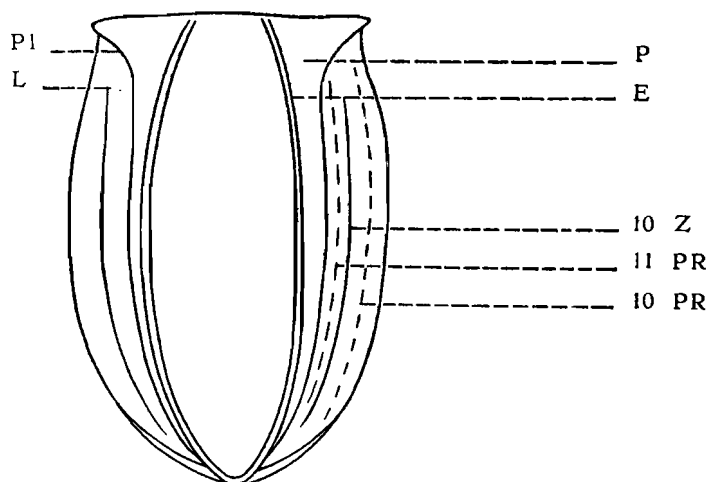


FIG. 179. — The ventrally reflected portion of elytra in *Zadenos*. E: epipleura; L: lateral interval; P: pseudopleura; P1: pseudo-pleural crest; 10 PR: tenth primary row; 11 PR: eleventh primary row; 10 Z: costa on tenth secondary interval.

1. Anal sternite of abdomen marginate (with a few exceptions, see key below). Eyes always divided by genal canthus into a dorsal and a ventral section. Apex of apical portion of ædeagal tegmen truncate, without parameral division (figs. 180, 181), or attenuate and with the parameres divided at least apically (figs. 182-186), when the anterior tibiæ are strongly dilated towards apex. Body apterous.
Palæarctic *Litoborini* 2
- Anal sternite of abdomen immarginate, with a single exception (*Silvestriellum*) but in this case the body alate. Eyes rarely divided by genal canthus. Apex of apical portion of ædeagal tegmen always attenuate (fig. 201); the parameres deeply divided, more or less gaping apically, sometimes spiniform and widely separated (fig. 225). Anterior tibiæ never strongly dilated.

ZADENINA.

Southern African and Tropical *Litoborini*.

2. Apex of ædeagal tegmen truncate; without parameral division (figs. 180, 181). Anterior tibiæ slender, very weakly dilated towards apex.

LITOBORINA.

- Apex of ædeagal tegmen attenuate; with parameral division at least apically (figs. 182-186). Anterior tibiæ strongly dilated towards apex.

MELAMBIINA.

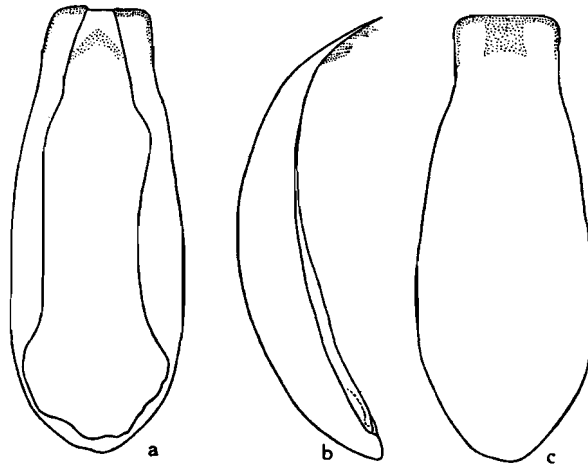


FIG. 180. — The dissected and emptied ædeagal tegmen of *Litoborus* spec. from « Algeria ».

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

KEY TO ALL GENERA,
BUT SPECIES ONLY FROM SOUTH OF THE SAHARA.

1. Anal sternite of abdomen immarginate, except for *Silvestriellum*, when the body is alate and the elytra densely covered with erect bristles. Eyes more or less strongly emarginated by genal canthus, sometimes completely divided, but in these cases the ventrally reflected portion of elytra with two primary rows of primary punctures.

(Tropical and Southern African genera and species.)

Zadenina 2

- Anal sternite of abdomen marginate. The only exceptions with immarginate or incompletely marginate anal sternite are the ♀ of *Melasmana*

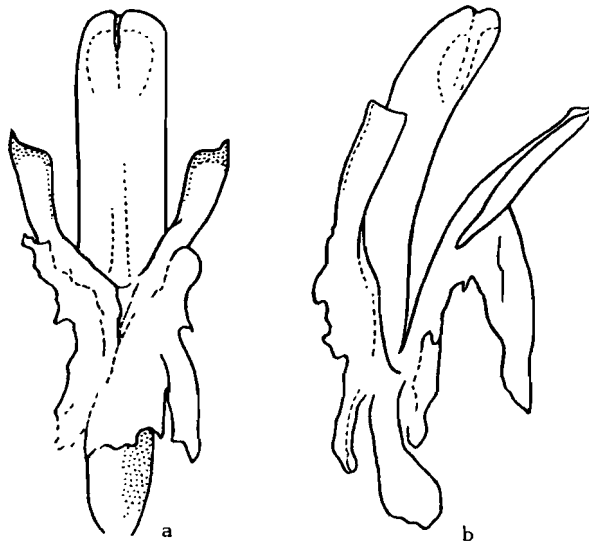


FIG. 181. — The extracted penis with lacinia of *Litoborus* spec.
from « Algeria ».

a : outer surface; b : diagonal view.

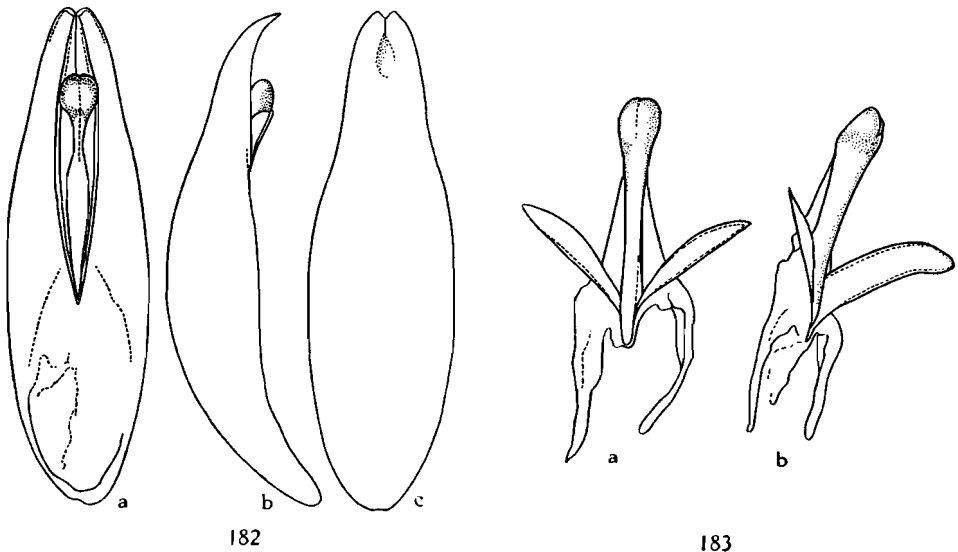


FIG. 182. — Aedeagus of *Hoplarion* (s. str.) *attritum* BEDEL (a : ventral surface; b : lateral aspect, with the ventral surface at right; c : dorsal aspect). — FIG. 183. — The extracted penis plus lacinia of *Hoplarion* (s. str.) *attritum* BEDEL.

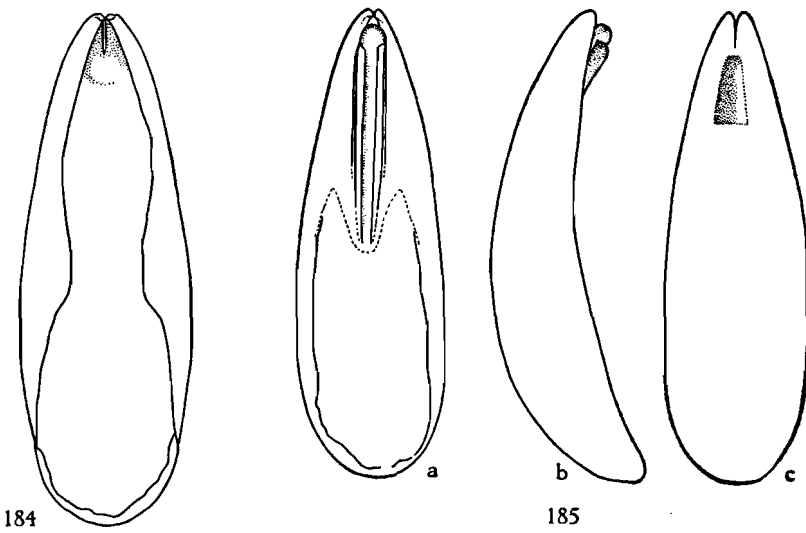


FIG. 184. — The dissected and emptied aedeagal tegmen of *Hoplarion* (s. str.) *attritum* BEDEL. — FIG. 185. — Aedeagus of *Hoplarion* (*Saharoplarion*) *compactum* (FAIRMAIRE) (a : ventral surface; b : lateral aspect, with the ventral surface at right; c : dorsal surface).

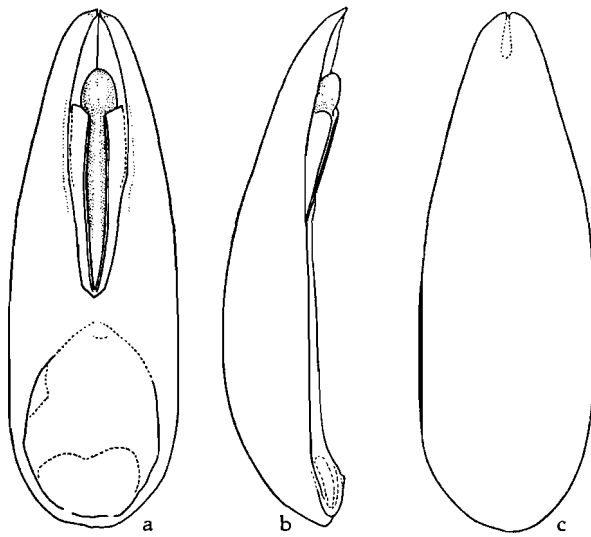


FIG. 186. — Aedeagus of *Hoplariobius* (*Glyptariobius*) *excavatus* KOCH. a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface.

(*Heliomelasma*) *appenhageni* KOCH, *Allophylax* (s. str.) *picipes* OLIVIER with subspecies, and *Allophylax* (*Litoboromimus*) *parallelus* SCHUSTER. In these species, however, the eyes are completely divided by the genal canthus, whereas the ventrally reflected portion of elytra exhibits at the best a single primary row of punctures. Body apterous, the upper surface of elytra practically bare, without erect bristles, sometimes the sides ciliate.

[Palearctic genera and subgenera (cf. KOCH, 1948, p. 405)] 71

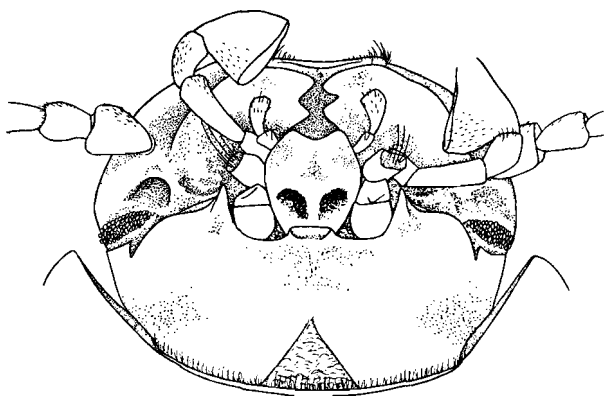


FIG. 187. — Under surface of head of *Zadenos* (*Serridenos*) *solenopistoma* n. sp.

(SUBSAHARAN *LITOBORINI*.)

2. Pseudopleural carina of elytra complete or abbreviated apically, but always clearly developed from base to the apical portion 3
- Pseudopleural carina of elytra developed only apically around distal sternites of abdomen, but absent from base to apical portion 59
3. Upper surface of body bare or with inconspicuous, microscopically short bristles; in a few cases the adherent bristles well perceptible, but very fine [*Zadenos* (*Euzadenos*) *incostatus*, *Minorus pilosicollis*, *Lasioderus sulcipennis*, etc.] 4
- Upper surface of body either with erect bristles, at least on costal elements of elytral sculpture, or entirely covered with dense, elongate and semi-sessile scales 56
4. Elytra with ten primary rows, of which two are situated on the ventrally reflected portion; the latter considerably broader than pseudo-pleura 5

- Elytra with only nine primary rows; the ventrally reflected portion narrow, not or scarcely broader than pseudopleura, with only a single primary row 51
- 5. Anterior tarsi distinctly dilated in the ♂, except for the subgenus *Serridenos*, when the mandibular ridge of postgenal margin is produced into a dentiform lobe. Ventrally reflected portion of elytra plane, with the exception of two species with fine costula between the ninth and tenth primary rows, but then either the upper surface of intermediate and posterior tibiæ sulcate [*Zadenos* (s. str.) *longipalpus*], or the sides of pronotum sinuate in front of posterior angles [*Zadenos* (*Euzadenos*) *lightfooti* and *gnophotoides*], or the outer contours of elytra appearing

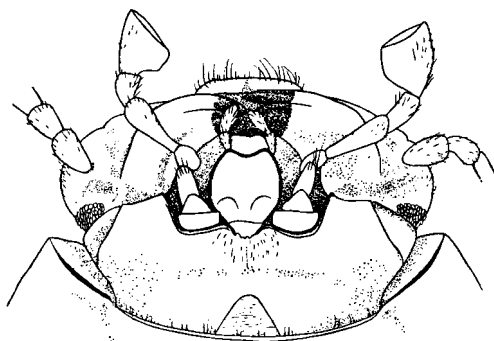


FIG. 188. — Under surface of head of *Minorus sculpticeps* n. sp.

as if denticulate [*Zadenos* (*Serridenos*) *XX-costatus*]. Pseudopleura abbreviated apically. Genal canthus strongly constricting eyes but not dividing the latter. Pronotum of variable shape, but the sides subparallel posteriorly or dilated towards base only, when the pronotum is more or less distinctly shiny.

ZADENOS LAPORTE DE CASTELNAU 6

(Fig. 187.)

*1840, *Zadenos* LAPORTE DE CASTELNAU, p. 210. — 1854 *a*, MULSANT & REY, p. 177. — 1854 *b*, MULSANT & REY, p. 33. — 1953 *a*, KOCH, pp. 270, 272.

Head (fig. 187) with large and prominent genæ. Eyes not divided but strongly constricted by genal canthus. Mentum sometimes with short median carinula basally. Apical segment of maxillary palpi about as broad as long; basal segment short. Postgenæ simple; the mandibular ridge of postgenal margin sometimes more or less strongly produced, from angular to dentiform. Antennæ with eleven segments. Pronotum transverse, with well separated to very densely

rugose sculpture; sides of variable shape, posteriorly subparallel, slightly dilated, rounded and narrowed to sinuate in front of posterior angles; submarginal depression from absent to very strong and broad. Prosternal apophysis horizontally produced, but often with the apex of produced portion depressed. Elytra more or less closely attached to pronotum, but often also widely separated from the latter, not to considerably broader than pronotum, with obtuse to dentiform prominent humeral angle, bare or with very fine and adherent bristles. With ten primary rows, of which two are situated on the ventrally reflected portion of elytra; secondary intervals punctured to subgranulate, in various ways costate at least on sides, but sometimes with the costæ resolved into separated and elongate tubercles, sometimes the costæ strongly serrate or denticulate, in a single case without any costæ [*Zadenos* (*Euzadenos*) *incostatus*]. Pseudopleura abbreviated apically, the apex of elytra therefore formed by the sharp and thin epipleural carina alone; considerably narrower than the ventrally reflected portion of elytra. Metasternum short. Anal sternite immarginate. Upper surface of intermediate and posterior tibiæ sometimes sulcate; in the ♂ the anterior tarsi usually distinctly dilated, except for the subgenus *Serridenos*; sometimes the tibiæ and femora with distinctive characters. Ædeagus with converging and well divided parameres; the inner sclerites simple, with the exception of the subgenus *Serridenos*, in which the penis is inserted on a peculiar and roundish sclerite.

Dimensions. — 4 ½ to 13 ½ mm long.

Type species. — *Opatrum longipalpe* WIEDEMANN, 1823.

Composition. — Of the few previously described species only the following belong to *Zadenos*: *Opatrum longipalpe* WIEDEMANN and *acutum* WIEDEMANN, *Pedinus ruficornis* GERMAR, *Eurynotus* (*Solenopistoma*) *acutus* MULSANT & REY, *Eurynotus* (*Zadenos*) *bohemani* MULSANT & REY, *capriciosus* MULSANT & REY and *delalandei* MULSANT & REY (of which *Eurynotus tenuecostatus* FAIRMAIRE is a synonym), as well as *Oncotus bistratus* FAIRMAIRE.

The *Zadenos* can be sharply divided into the three subgenera *Zadenos* s. str., *Euzadenos* and *Serridenos*.

Distribution (map 5). — Southern African, in moderate distance from the coast, extending from the southern part of the South-western Cape Province, the Cape Peninsula included, to the southern part of Portuguese East Africa and the Northern Transvaal, in the East, however, spreading far more (Zoutpansberg) than in the West.

- Anterior tarsi non-dimorphic, not dilated in the ♂. Ventrally reflected portion of elytra with fine costa on tenth secondary interval, with the

exception of the following four species, in which this costa is absent, but in these cases either the pseudopleura complete and extending to extreme apex of elytra (*Minorus XVIII-seriatus*), or the sides of pronotum subparallel or dilated posteriorly, but the integument of pronotum dull (*Minorus thornei*, *pilicollis* and *barnardi*). Sides of pronotum never sinuate in front of posterior angles. Upper surface of posterior and intermediate tibiæ not sulcate. Genal canthus often completely dividing the eyes.

MINORUS MULSANT & REY 38

(Fig. 188.)

*1854 a, *Minorus* MULSANT & REY, p. 185. — 1854 b, MULSANT & REY, p. 41. — 1953 a, KOCH, pp. 271, 272.

This genus is very closely related to *Zadenos* and, although exhibiting a quite different habitus in the species of the typical group (*rugicollis* group), there exist several intermediate species with regard to the otherwise very conspicuous characters of the complete pseudopleura of elytra, the completely divided eyes and the often very peculiar sculpture of upper surface. Nevertheless I have preferred to maintain this genus, basing it, with the intermediate species included, on the non-dimorphic anterior tarsi in the ♂ and the dull upper surface of body.

In *Minorus* all secondary intervals on elytra are finely carinate, with the crest of costæ sometimes serrate-denticulate. With the exception of the complete pseudopleura of elytra and the completely divided eyes in some of the species, in the remainder of characters agreeing with *Zadenos*. Underside of head fig. 188.

Dimensions. — 5 ¼ to 10 ¼ mm long.

Type species. — *Eurynotus (Minorus) rugicollis* MULSANT & REY, 1854.

Composition. — Of the many species of this genus only the type species was known previously.

Distribution (map 5). — Southern African, confined to the Western and Central-southern Cape Province, in the South-west overlapping the range of *Zadenos*. Extending from the Orange River southwards to the South-western and South-central Cape Province as far eastwards as the Steytlerville and Aberdeen Districts.

6. Upper surface of intermediate and posterior tibiæ evenly convex or flattened, but not sulcate.

- ZADENOS** subg. **EUZADENOS** nov. 7
- Type species : *Eurynotus (Zadenos) delalandei* MULSANT & REY.
- Upper surface of intermediate and posterior tibiæ sulcate 36
7. Disc of pronotum with separated, round to slightly confluent punctation, with the intervals between punctures plane and not rugosely raised ... 8
- Disc of pronotum with extremely dense, rugosely confluent to subgranular or substriolated sculpture; the intervals between punctures forming raised rugosities 20
8. Body of larger size, 7 to 10 ½ mm long 9
- Body of smaller size, 4 ½ to 6 ¼ mm long 16
9. Sides of pronotum subparallel or distinctly dilated on posterior third. 10
- Sides of pronotum from slightly to strongly rounded and narrowed on posterior third, sometimes sinuate in front of posterior angles 12
10. Apical declivity of elytra with the third interval sharply costate, angularly bent towards the costate suture in front of apex and coalescent with sutural costa apically. Pronotum with dense punctation, becoming slightly confluent on lateral portions 11
- Apical declivity of elytra with the sutural costa evanescent and the costa of third interval straight and abruptly ending at short distance from apex. Pronotum with rather scattered punctation, well separated and round also on lateral portions.

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

(Pl. XXV, fig. 1.)

Very closely related to *Z. delalandei* and agreeing with the latter in the elytral sculpture. Differing by the smoothed and strongly shiny cuticle, the smaller and more slender body, the reddish brown legs, slightly more elongate antennæ, less convex eyes, finer and round punctures on head, and in the ♂ by the straight inner contours of anterior and intermediate tibiæ, as well as by the reduced pilosity on underside of tibiæ and posterior femora. The ædeagus is very similar, but smaller, with the parameres shorter, less strongly divided apically and not demarcated from the basal portion of ædeagus; the outlines of the latter (in dorsal view) are continuous with those of parameres and gradually narrowed towards apex.

Dimensions. — Length 7 ¼ - 7 ½ mm; width 3 ½ mm.

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

11. Body more slender, 3 to 5 mm broad. Pronotum without or with narrow submarginal depression on sides; base only a little narrower than elytral base. Base of elytra with the costa on seventh interval transversely prolonged, curved towards humeral angle and united with the latter, but the costa on eighth interval abbreviate, not reaching the base.

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

(Pl. XXV, fig. 2.)

*1854 a, *Eurynotus (Zadenos) delalandii* MULSANT & REY, p. 182. — 1854 b, MULSANT & REY, p. 38.

1870, *Eurynotus delalandi* GEMMINGER & DE HAROLD, p. 1914.

1910 b, *Eurynotus delalandei* GEBIEN, p. 276. — 1938-1942, GEBIEN, p. 414, n° 5544.

1897, *Eurynotus tenuecostatus* FAIRMAIRE, p. 117 (= syn. nov.).

Original description. — «Long. 8,7 to 9 mm, larg. 4,2 to 4,5 mm — Corps ovale oblong; faiblement convexe; noir ou d'un noir brun mat ou peu luisant. Tête ponctuée, plus grossièrement sur le front; déprimée ou largement sillonnée sur la suture frontale. Antennes noires ou brunes à la base, graduellement d'un rouge ou brunâtre à l'extrémité, quelquefois d'un brun rouge passant graduellement au rouge brun à l'extrémité; prolongées environ jusqu'aux quatre-cinquièmes des côtés du prothorax; grossissant sensiblement à partir du septième article: le troisième de moitié ou des deux-tiers plus long que le cinquième: les sixième à huitième obconiques: les neuvième et dixième plus larges que longs: le onzième presque orbiculaire, au moins aussi large et de moitié plus long que le précédent. Prothorax élargi d'avant en arrière, en ligne à peu près droite postérieurement; muni latéralement d'un rebord peu épais, égal, médiocrement saillant; assez faiblement bisinué à la base, avec le tiers médiaire de celle-ci en ligne droite, et les angles sensiblement plus prolongés en arrière; muni d'un rebord basilaire non interrompu; assez faiblement convexe; légèrement inégal; offrant souvent sur son tiers postérieur les traces plus ou moins marquées d'un sillon longitudinal médiaire, marqué de points assez fins et rapprochés non réticuleux; offrant vers les angles postérieurs sa plus grande largeur; sans gouttière près de ses bords. Ecusson petit; presque en demi-cercle. Elytres aussi larges ou à peine plus larges en devant que le prothorax à ses angles postérieurs; munies d'une petite dent à l'angle huméral; un peu obliquement coupées sur les deux-cinquièmes externes de leur base; faiblement élargies jusqu'aux deux-cinquièmes, en ogive obtuse à l'extrémité; faiblement ou assez faiblement convexes: à dix sillons (huit seulement visibles en dessus): les deux ou trois premiers ordinairement affaiblis en devant et parfois presque réduits à des stries: ces sillons marqués dans leur milieu d'une rangée longitudinale de points

petits et souvent peu distincts, pointillés sur les côtés. Intervalles en forme de toit : les deux premiers plus ou moins affaiblis en devant : les autres en arête lisse et assez vive sur leur tranche : le huitième dirigé vers l'angle postérieur du prothorax : le septième, aboutissant par conséquent en devant à un point de la base situé en dedans de l'angle précité, lié à l'angle huméral par une ligne élevée transverse plus ou moins marquée : le septième intervalle lié postérieurement au troisième, et prolongé avec lui jusqu'à l'angle sutural, enclosant ainsi les quatrième à sixième : le cinquième, plus long que ses deux voisins : les neuvième et dixième intervalles, visibles seulement en dessous, plans, ponctués ainsi que le repli. Dessous du corps ponctué sur les côtés de l'antépectus. Ventre plus finement ou moins grossièrement ponctué. Prosternum rebordé, relevé à son extrémité. Tibias antérieurs presque cylindriques. ♂ Trois premiers articles des tarsi antérieurs garnis en dessous d'une brosse serrée ou de sortes de ventouses : les deuxième et troisième, dilatés. ♀ Tarsi non garnis de ventouses et peu ou point dilatés.»

Remarks. — Genæ subparallel, their outlines almost in line with those of eyes. Prosternal apophysis horizontally produced beyond coxal cavities. Humeral angle of elytra practically rectangular, but not or scarcely prominent; intervals densely punctured, with sharply raised costæ on outer dorsal intervals, becoming weaker and obtuse towards suture; sutural interval faintly convex discally, becoming costate on apical declivity. In the ♂ the second and third segments of anterior tarsi strongly transverse; the underside of anterior tibiæ excavate on middle, the inner contours of tibiæ therefore not straight, but very faintly dilated in front of middle and very shallowly emarginated between middle and apex; intermediate tibiæ with the inner contours strongly dilating on proximal two-thirds and subparallel on distal third, there with a subtomentose stripe of yellowish hairs on underside; posterior tibiæ straight, with a longitudinal stripe of yellowish, short, slightly squarrose hairs on underside; posterior femora with a brush of fine yellowish hairs on proximal two-thirds.

Ædeagus. — Basale demarcated from apicale by a transverse impression dorsally. Apicale gradually narrowed from base to about middle, thence almost subparallel, with the parameres long, completely and deeply divided on dorsal surface, gaping apically and exhibiting obtuse apices. Ventral surface with broad open groove, leaving exposed the pointed apex of penis and the apical portion of lacinia; the latter broadly rounded and bent outwards.

Dimensions. — Length $7 \frac{3}{4}$ to 9 mm, width 3 to 5 mm.

Synonymy. — The description of *Eurynotus tenuecostatus* FAIRMAIRE agrees completely with *detalandei* and can not be referred to any of the other related species.

Type locality. — «L'Afrique méridionale», type probably in Museum Paris.

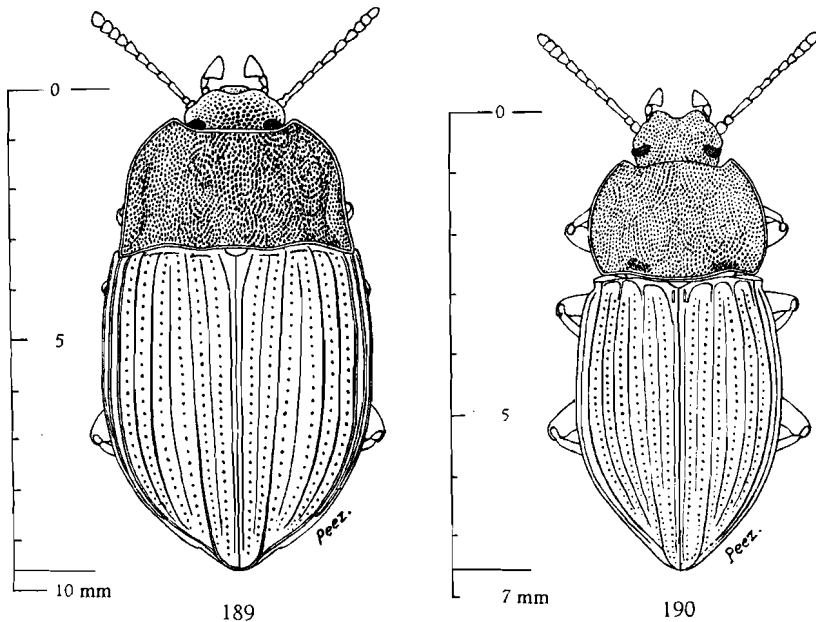


FIG. 189. — *Zadenos (Euzadenos) capriciosus* (MULSANT & REY).

FIG. 190. — *Zadenos (Euzadenos) rotundicollis rotundicollis* n. sp.

Distribution. — Central part of the Southern Cape Province. — Port Elizabeth (type locality of *tenuecostatus*) (T.M., S.A.M.); Uitenhage (S.A.M.); Somerset East (S.A.M.); Addo Bush (S.A.M.); Grahamstown (T.M., Rh.U., S.A.M.); Resolution near Fort Brown (T.M.); Van Stadens River (S.A.M.); Hogsback, Amatola Mts. (S.A.M.); Keurbooms River, Knysna District (S.A.M.); Mossel Bay (B.M., U.L.).

- Body broad, with the greatest width varying from $4 \frac{1}{4}$ to $5 \frac{1}{2}$ mm. Pronotum with broad, densely punctured, strong, submarginal depression of sides; base conspicuously narrower than elytral base. Base of elytra with the costa on seventh interval transversely united with the prolonged costa of eighth interval, but not continuing to, and not in contact with, the humeral angle.

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

(Pl. XXV, fig 3; Figs. 189, 191.)

*1854 a, *Eurynotus (Zadenos) capriciosus* MULSANT & REY, p. 184. — 1854 b, MULSANT & REY, p. 40.
1870, *Eurynotus capriciosus* GEMMINGER & DE HAROLD, p. 1914. — 1910 b, GEBIEN, p. 275.

Original description. — « Dans la collection du Muséum de Paris se trouvait, avec l'exemplaire que nous venons de décrire (*Z. delalandei*), un autre individu paraissant constituer une espèce particulière (*E. capriciosus*). Ce dernier s'éloigne du précédent, par son corps plus ovalaire, moins parallèle sur la moitié médiane de sa longueur; par ses élytres non munies d'une dent à l'angle huméral; par le septième intervalle non lié au dit angle, vers la base, par une petite ligne ou arête transverse; mais cet insecte trouvé également par M. DELALANDE, et probablement dans les mêmes lieux que l'*E. delalandei*, a d'ailleurs tant de ressemblance avec celui-ci, que les différences que nous venons de signaler ne sont peut-être qu'une variation de l'espèce. »

Remarks. — *Z. capriciosus* is not a variation of *delalandei* but a good species which differs constantly from *delalandei* by the larger and more oval body, much denser punctuation on pronotum, the slightly obtuse and not prominent humeral angles of elytra, as well as by the above mentioned characters. Both species agree well in the elytral sculpture, formation of legs in the ♂ and the structure of aedeagus. The latter is a little broader than in *delalandei*, with stouter parameres of aedeagus. Intermediate tibia of ♂ fig. 191. *Z. capriciosus* has been omitted by GEBIEN, 1938-1942.

Dimensions. — Length 8 $\frac{1}{4}$ to 10 $\frac{1}{2}$ mm, width 4 $\frac{1}{4}$ to 5 $\frac{1}{2}$ mm.

Type locality. — MULSANT & REY supposed correctly the same patria as that of their *E. delalandei* (« L'Afrique méridionale »). Type probably in Museum Paris.

Distribution. — Central part of the Southern Cape Province. — Algoa Bay (T.M.); Port Elizabeth (T.M., S.A.M.).

Habitat. — It is probable that the habitat of this species may be different from that of *delalandei*, although both species, together with *algoensis*, have been recorded from identical localities. However, all the specimens examined of *capriciosus* have been collected at « Algoa Bay » by H. BRAUNS (together with *algoensis*) and at « Port Elizabeth » by H. BRAUNS, C. G. C. DICKSON and A. MOORHOUSE, whereas *delalandei* has not been recorded from « Algoa Bay » and the many specimens from « Port Elizabeth » have been collected but by different collectors, viz. myself, P. BRINCK and R. F. LAWRENCE.

12. Sides of pronotum not sinuate in front of posterior angles. Intervals on elytra from more or less convex to sharply and continuously costate 13
- Sides of pronotum strongly sinuate in front of posterior angles. The six inner intervals on elytra with numerous elongate tubercles.

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

(Pl. XXV, fig. 4.)

Owing to the cordiform pronotum and tuberculate elytra resembling *Hadroderus tuberculiferus*.

Black, the appendages of a dark reddish brown tint. Head densely punctured, shiny, shaped as in *delalandei*, but less strongly enclosed in prothorax. Antennæ rather stout, strongly accrescent, with transverse two preapical segments, and the apical segment large, subtruncate apically, scarcely narrower than the preceding segment, but about one and a half times as long as the latter. Pronotum moderately shiny, broadest at about middle, transverse, two-thirds broader than long, moderately convex on disc, broadly depressed along sides, with rather coarse, dense, but round punctation, sparsely and briefly pilose, with rather strongly rounded, posteriorly sinuate sides and bi-sinuate, obsolete carinate base. Prosternal apophysis horizontal. Elytra sericeous, convex, considerably broader than pronotum, rounded and narrowed towards base, with the latter being much broader than pronotal base. Primary rows with fine, shallow and scattered punctures. Intervals without distinct punctation; the six inner intervals each with a longitudinal row of fine, elongate and shiny tubercles, becoming more numerous towards sides and on third interval apically; the three outer intervals sharply costate, but the crest of costæ somewhat crenulate, becoming evanescent at considerable distance from apex of elytra. Reflected lateral portion, plus pseudopleura, very opaque, impunctate, except for the two coarsely punctured primary rows. Abdomen with short, yellowish hairs, and dense, fine punctures, scattered on third and fourth sternites. Legs pilose, similar to *delalandei*. ♂ unknown.

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

Distribution. — Natal. — Umhlanga, IV.1941 (1♀, holotype M.S.Rh); Amauzimtoti, VII.1907 (1♀, paratype D.M.).

13. Sides of pronotum narrowed faintly and in an almost straight line towards base; pronotum moderately shiny, with narrow submarginal depression of sides and distinctly produced, sharp, practically rectangular posterior angles 14

- Sides of pronotum strongly rounded and narrowed towards base; pronotum very shiny, with broad, strong, subsulcate submarginal depression of sides and scarcely produced, obtuse posterior angles 15
14. Pronotum uniformly covered with fine, dense, but separated, round punctures, from which arise microscopically short, yellowish bristles.

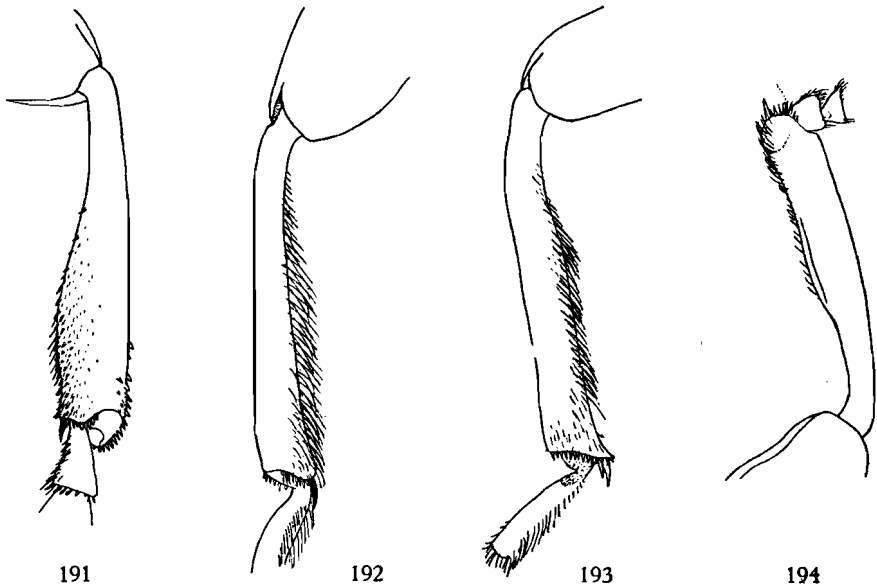


FIG. 191. — Intermediate tibia of a ♂ of *Zadenos (Euzadenos) capriciosus* (MULSANT & REY). — FIG. 192. — Posterior tibia of a ♂ of *Zadenos (Euzadenos) rotundicollis rotundicollis* n. sp. — FIG. 193. — Posterior tibia of a ♂ of *Zadenos (Euzadenos) monticola monticola* n. sp. — FIG. 194. — Anterior tibia of a ♂ of *Zadenos (Euzadenos) externus* n. sp.

Intervals and pseudopleura of elytra sericeous, without discernible punctation; only the four outer intervals sharply and continuously costate, the inner intervals carinate at most basally and apically.

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

Related to *delalandei*, but more slender and with almost dull upper surface. Head above coarsely and densely punctured; lateral portions of epistome strongly and angularly produced; clypeal sutures deeply impressed laterally. Pronotum broadest at about middle, a little less than one and a half times as broad as long; punctation slightly finer than on head, but less dense and uniform, bearing microscopically short, yellowish bristles; submarginal depression of

sides broadened towards base; the latter carinate and rather well bi-sinuate. Episternum of prosternum with coarse, sparse punctures, and a broad, smooth submarginal area along sides; intercoxal apophysis briefly produced, with short, tuberculiform apex. Elytra moderately broader than pronotum, with faintly rounded sides and minutely demarcated humeral angle. Primary rows with fine, but deep punctures. Intervals with extremely fine, scarcely discernible punctation; the costæ of seventh and ninth intervals transversely united basally; on apical declivity all intervals costate, except for the two inner ones, with the third costa indistinctly approximated to suture apically. Abdomen with fine, moderately dense punctation, more concentrated on anal sternite. Legs reddish brown, shaped as in *delalandei*. ♂ unknown.

Remarks. — *Z. zuluanus* shows also related to *natalensis* on account of the well separated, setiferous punctation on pronotum, and the sericeous elytra, the intervals of which are not distinctly punctured, but exhibit a few minute granules on posterior portion of inner intervals. Apart from the characters mentioned in the key, *zuluanus* is readily recognized from *natalensis* by the smaller, much more slender shape of body, the quite different elytral sculpture and the almost inconspicuous pilosity on pronotum and abdomen.

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

Distribution. — Zululand. — Junction Mfolozi and Onkudu Rivers, VII.1905, I. TRÄGÅRDH (1♀, holotype M.St.).

- Pronotum bare, with very dense punctation, tending to become confluent on disc, rugose on sloping lateral portions inwards from submarginal depression. Intervals and pseudopleura of elytra moderately shiny, with fine, dense, but deep punctures; all intervals sharply and continuously costate, except for the sutural interval

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

(Pl. XXVI, fig. 1.)

Closely related to *Z. zuluanus*, but the pronotum narrower and with very narrow submarginal depression of sides, the elytra with coarsely punctured primary rows, the third costæ of both elytra sharply raised and together coalescent with sutural costa apically, and the costa of seventh interval coalescent with the third costa in front of apex of elytra. In the ♂ the second and third segments of anterior tarsi transverse; the anterior tibiæ excavate and pilose on underside, with the inner contours slightly dilated on distal half; the intermediate and posterior tibiæ straight, pilose on underside, but without tomentose stripes; the femora simple, without brush-like pilosity on underside.

Ædeagus. — Similar to *delalandei*, but differing by the broad, apically subtruncate penis and the parameres which are scarcely bent, short, strongly gaping apically, but distinctly divided only on apical third of length of ædeagus.

Dimensions. — Length 7.7 $\frac{1}{2}$ mm, width 3 $\frac{1}{4}$ -3 $\frac{3}{4}$ mm.

Distribution. — Natal. — Pietermaritzburg, XI.1940, R. F. LAWRENCE (4 ♂♂, 2 ♀♀, types S.A.M.).

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

15. The punctures of primary rows of elytra coarse, considerably coarser than discal punctures on pronotum. In the ♂ the inner contours of posterior tibiæ straight and provided with a fringe of dense, yellowish, squarrose hairs.

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

(Pl. XXVI, fig. 2; Fig. 190.)

Black to reddish brown, the appendages from reddish brown to almost black. Head above with dense, coarse and partially confluent punctures; genæ subparallel; eyes convex, slightly projecting beyond contours of genæ. Antennæ long, accrescent, with elongate segments proximally; the preapical segments only slightly broader than long. Pronotum broadest slightly behind middle, about one and a half to one and two thirds times as broad as long, bare, strongly shiny, with strongly rounded and narrowed sides, moderately convex disc, and thick lateral carina. Punctuation fine, well separated on disc, there finer than punctures on head, becoming stronger, denser and sometimes slightly and longitudinally confluent towards sides, round and rather scattered on the broad submarginal depression. Base faintly bi-sinuate, with obtuse posterior angles. Prosternal apophysis depressed and subdenticulate. Elytra only slightly broader than pronotum, with weakly rounded sides, shiny, depressed. Intervals finely punctured, with at least the four outer intervals sharply costate; sutural interval not costate; on apical declivity both the third costæ rather obtuse, coalescent together with sutural interval apically and in contact with the seventh costa. Base appearing as if carinate, with the humeral angle forming a more or less distinct, prominent, minute tooth. Abdomen with fine, uniformly scattered punctures, becoming very dense and finer only on posterior portion of anal sternite. Legs as in the other *Zadenos*; in the ♂ the anterior tarsi dilated, with transverse second and third segments; all tibiæ straight, the underside of anterior tibiæ with a shallow median impression, bearing a few fine yellowish hairs, and the underside of posterior tibiæ (fig. 192) with hairy fringe; underside of posterior femora with fine brush of yellowish hairs.

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 eum 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 $\frac{1}{4}$ mm, width 2 $\frac{3}{4}$ 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, sublinate, 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 tibiae excavate underneath, with the inner contours rather strongly dilated in front of middle and then very faintly emarginated; the intermediate tibiae distinctly curved on proximal half, with the inner contours rather strongly dilated on distal half; the posterior tibiae 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.

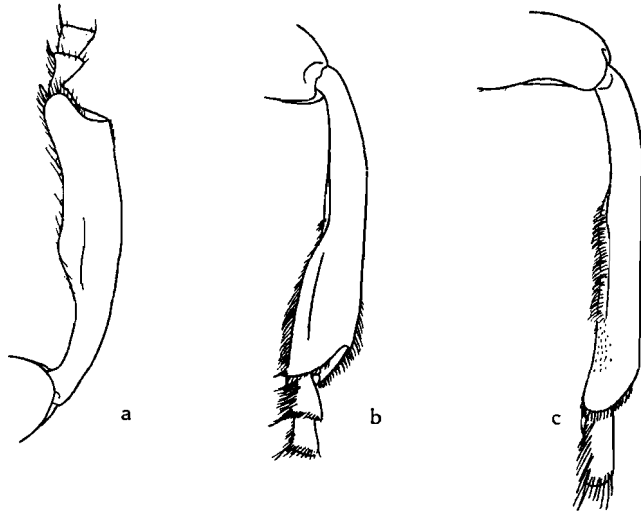


FIG. 195. — *Zadenos (Euzadenos) omeri* n. sp.

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 canalization. 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. Prosternum 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 tibiæ rugosely sculptured, but not opaque, that of anterior tibiæ uniformly convex and not edged. In the ♂ the anterior tarsi dilated, with transverse second and third segments; the underside of all tibiæ and femora with a fringe of squarrose hairs; the anterior tibiæ 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 costæ 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. Genæ parallel; eyes very slightly projecting outwards. Antennæ 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 under-side 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; punctuation 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 punctuation 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 pseudopleura densely punctured. Punctuation 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 $6 \frac{1}{4}$ to 7 mm, width 3 to $3 \frac{1}{2}$ 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 obsolete 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

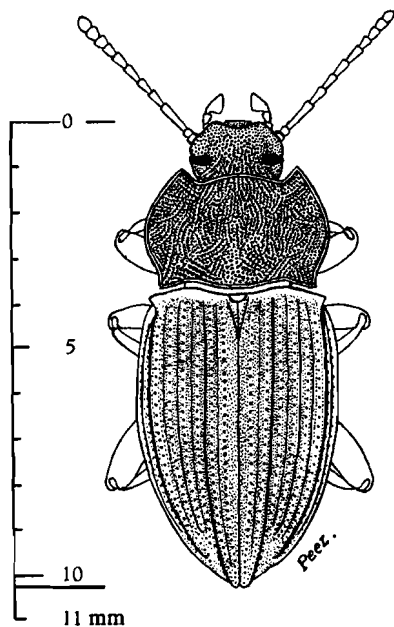


FIG. 196. — *Zadenos (Euzadenos) bohemani* (MULSANT & REY).

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 médiaire, 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 médiaire 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 étroite et non sinuée près de l'extrémité, dans leur seconde moitié; faiblement convexes; subconvexement déclives longitudinalement à partir de la moitié de leur longueur; offrant en dessus huit sillons et neuf arêtes (y comprises les juxta-suturale 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 antennæ, 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

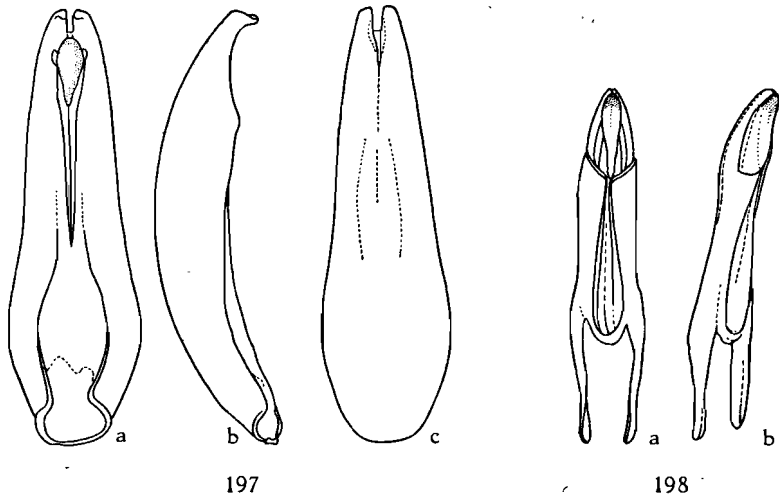


FIG. 197. — Aedeagus of *Zadenos (Euzadenos) acutus* (WIEDEMANN) (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 198. — The extracted penis plus lacinia of the aedeagus of *Zadenos (Euzadenos) acutus* (WIEDEMANN) (a: outer surface; b: diagonal view).

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.

Aedeagus (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 médiaux 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 suturales et marginales) de cinq lames ou arêtes comprimées, très étroites et unies sur leur tranche: la première ou suturale, commençant à diverger en avant 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

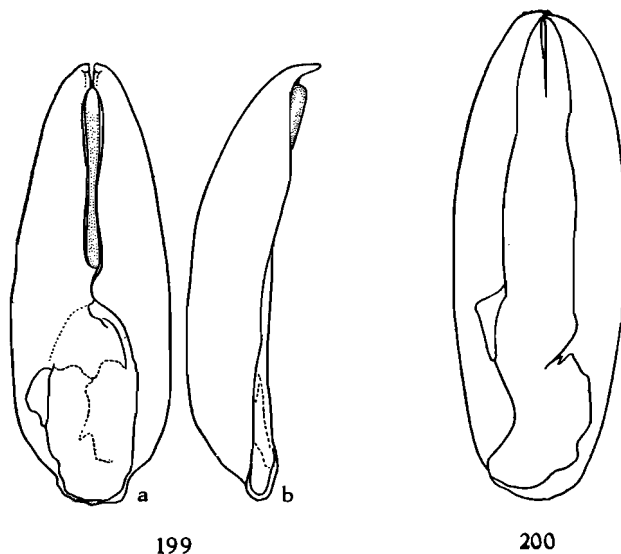


FIG. 199. — *Ædeagus* of *Zadenos* (*Euzadenos*) *mulsanti* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right). — FIG. 200. — The dissected and emptied *ædeagal tegmen* of *Zadenos* (s. str.) *longipalpus* (WIEDEMANN).

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.

Ædeagus (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 elevate, 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.

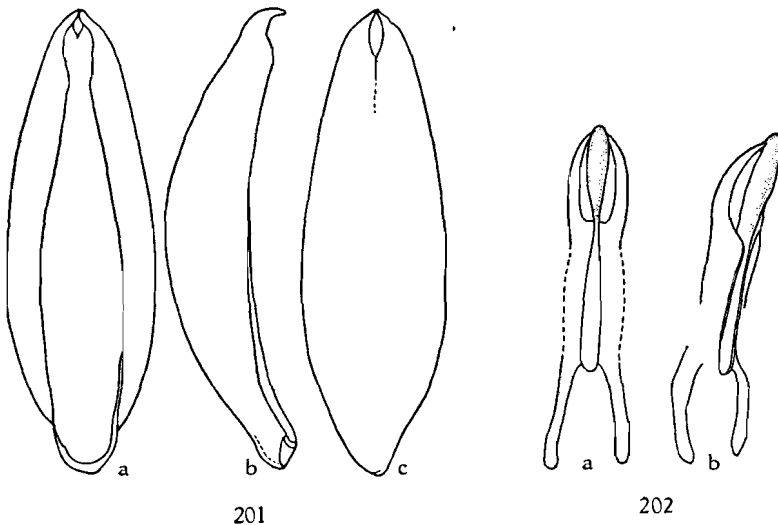


FIG. 201. — The dissected and emptied aedeagal tegmen of *Zadenos (Euzadenos) costifer* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 202. — The extracted penis plus lacinia of *Zadenos (Euzadenos) costifer* n. sp (a : outer surface; b : 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, subtomentose 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 grobwarbig. 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 warbig, 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 (φ) broader than pronotum, with almost subparallel (σ) to slightly rounded (φ) sides. Humeral angle minutely demarcated. Apical construction of costæ

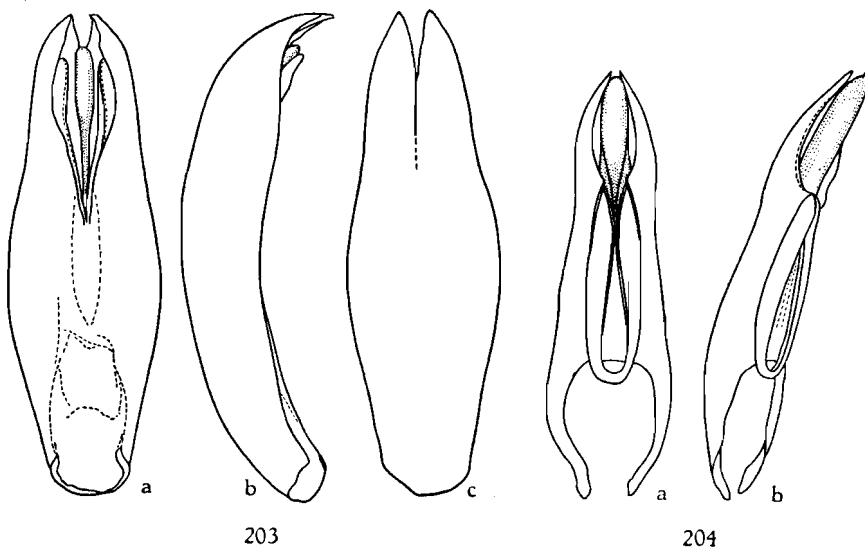


FIG. 203. — *Ædeagus* of *Zadenos* (s. str.) *longipalpus* (WIEDEMANN) (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 204. — The extracted penis plus lacinia of *Zadenos* (s. str.) *longipalpus* (WIEDEMANN) (a: outer surface; b: diagonal view).

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

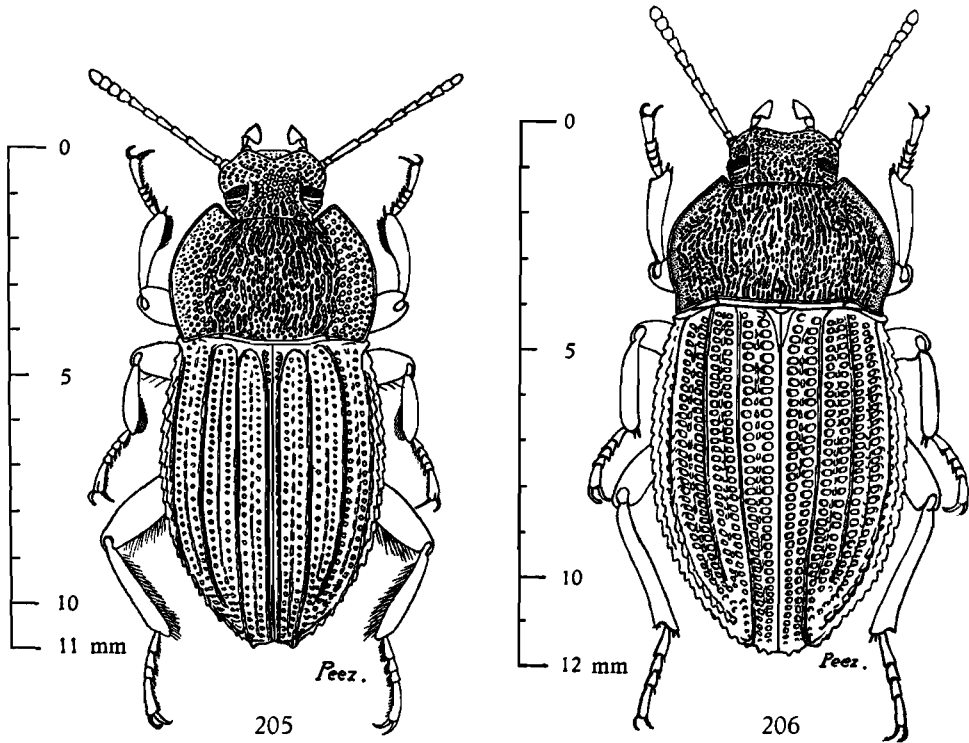


FIG. 205. — *Zadenos (Serridenos) solenopistoma* n. sp. (Litoborini).

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-

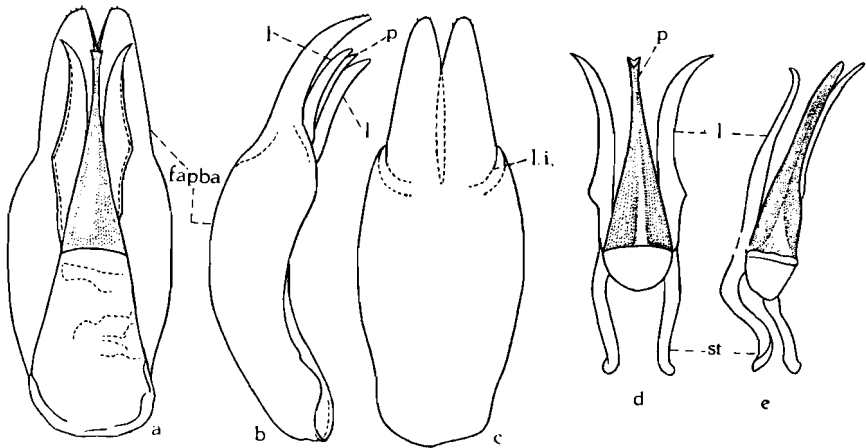


FIG. 207. — Aedeagus of *Zadenos (Serridenos) solenopistoma* n. sp.
(fapba : the fused apicale and basale of aedeagal tegmen; l : lacinia; l.i. : lateral impression; p : penis; st : struts of inner sclerites).

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.

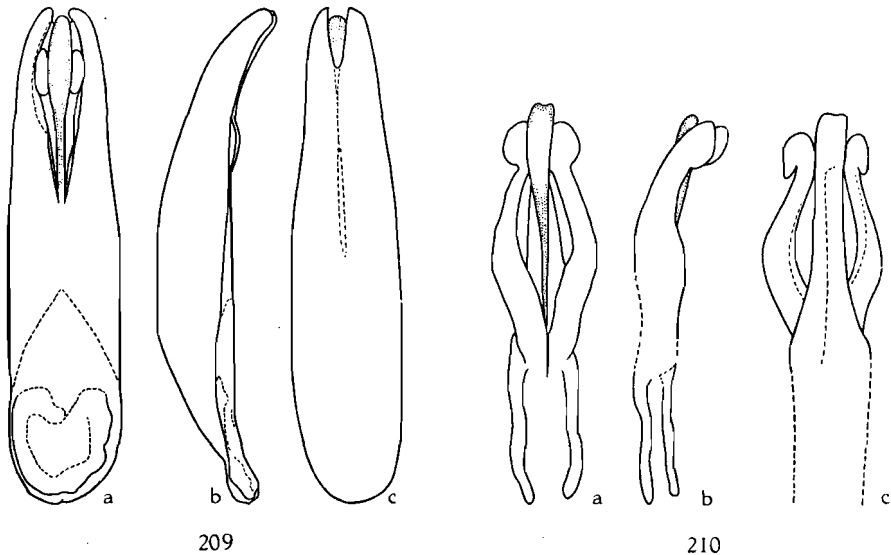


FIG. 209. — *Ædeagus* of *Minorus sculpticeps* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 210. — The extracted penis plus lacinia of the *ædeagus* of *Minorus sculpticeps* n. sp. (a: outer surface; b: lateral view; c: inner surface).

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. Epistome 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

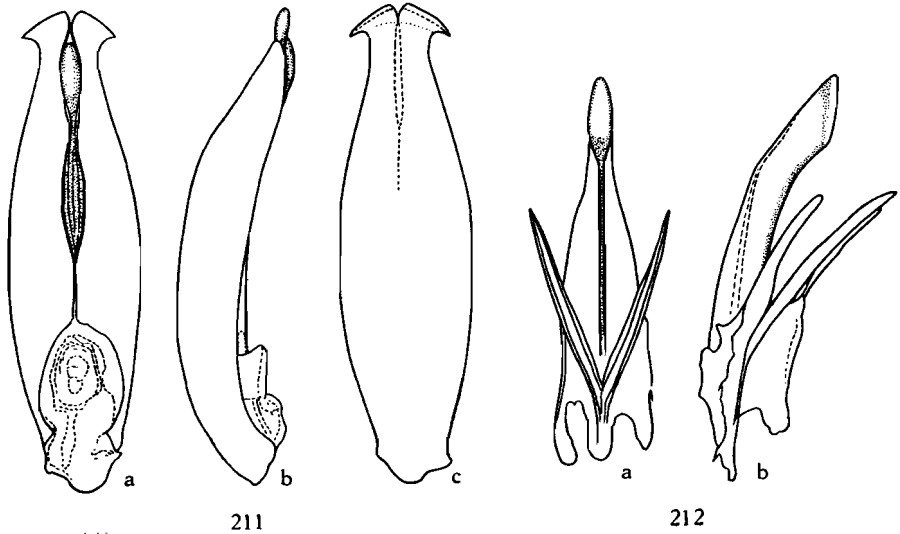


FIG. 211. — Aedeagus of *Minorus curtus* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 212. — The extracted penis plus lacinia of the aedeagus of *Minorus curtus* n. sp. (a: outer surface; b: diagonal view).

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 ½ to 8 mm, width 3 to 3 ½ 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 pedunculate, 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.

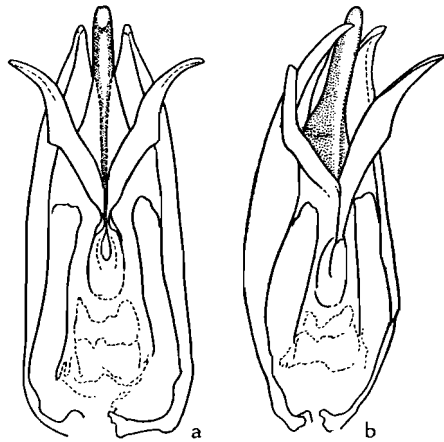


FIG. 213. — Dissected aedeagus of *Minorus jouberti* n. sp.
a : ventral surface; b : diagonal view.

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.

Ædeagus (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, VII.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 obsolete 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 médiales, 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 tibiae 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.

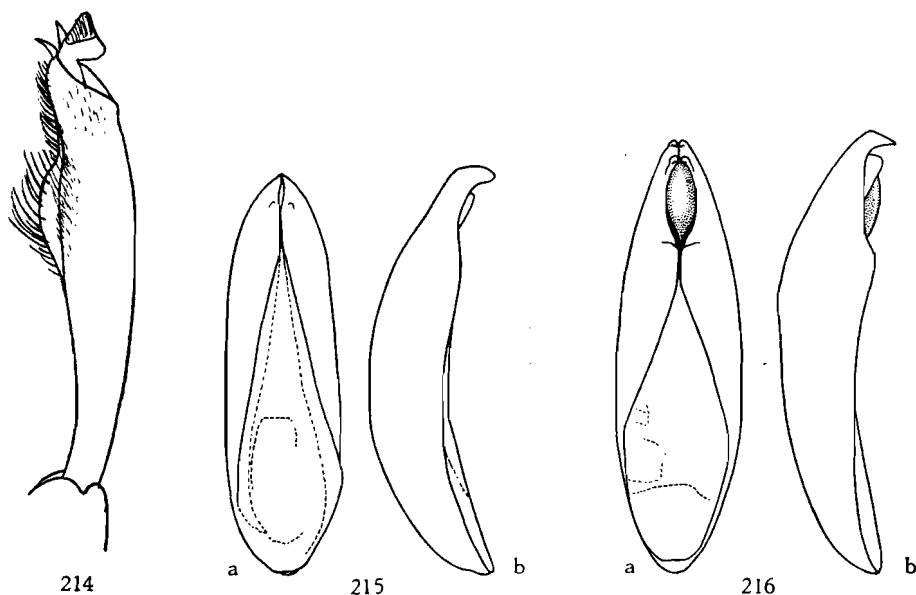


FIG. 214. — Anterior tibia of a ♂ of *Lasioderus vanhillei* n. sp.

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

FIG. 216. — Aedeagus of *Lasioderus 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 punctation. (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 obsolete 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 porrect, 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, nondimorphic. 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.

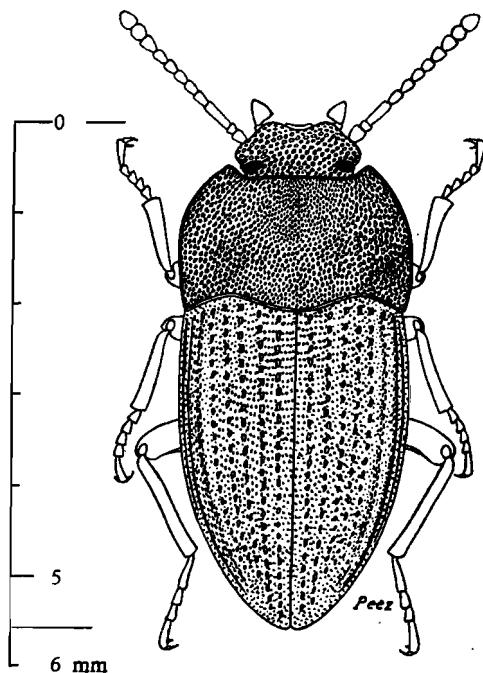


FIG. 217. — *Gridelliopus subsquamosus* n. sp.

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;

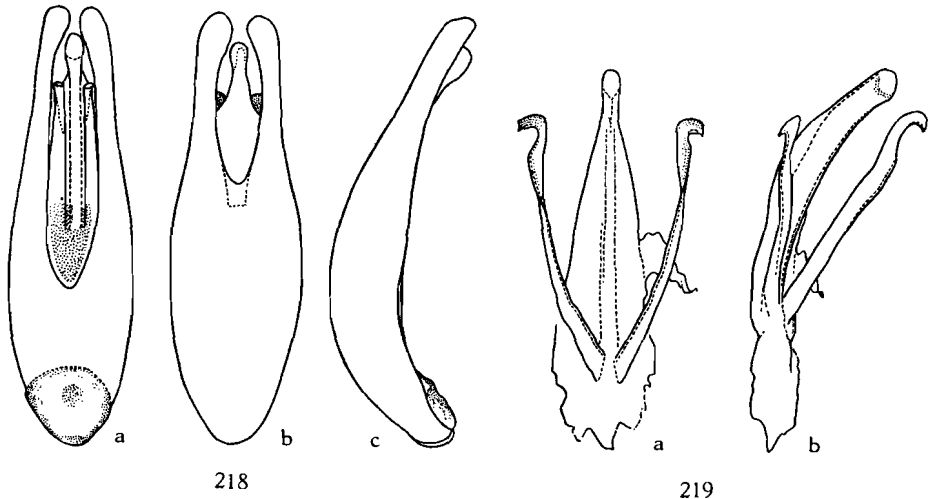


FIG. 218. — Aedeagus of *Gridelliopus subsquamosus* n. sp. (a : ventral surface; b : dorsal surface; c : lateral view, with the ventral surface at right). — FIG. 219. — The extracted sclerotized portion of penis plus lacinia of the aedeagus of *Gridelliopus subsquamosus* n. sp. (a : outer surface; b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

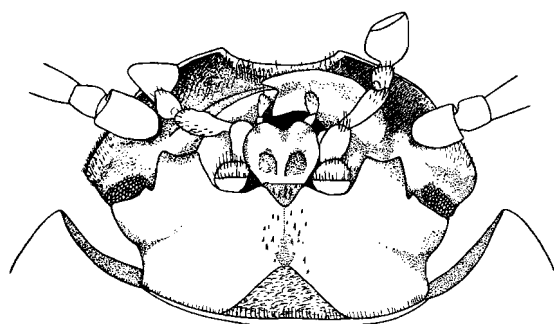


FIG. 220. — Under surface of head of *Silvestriellum scleronoides* n. sp.

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 of anterior tarsi; tarsi slender, with elongate unguis, but that of posterior tarsi about the length of basal segment or a trifle shorter. In the ♂ the underside of tibiae sulcate, often densely denticulate and sometimes briefly curved inwards apically.

Remarks. — *Silvestriellum* disagrees with all the other *Litoborini*, 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.

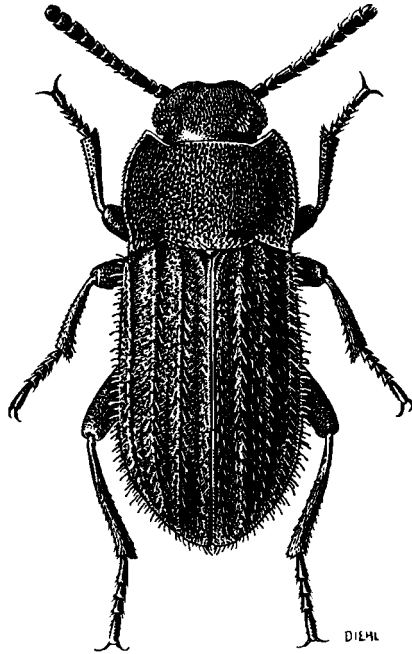


FIG. 221. — *Silvestriellum scleronoide* n. sp.

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 spiniform,

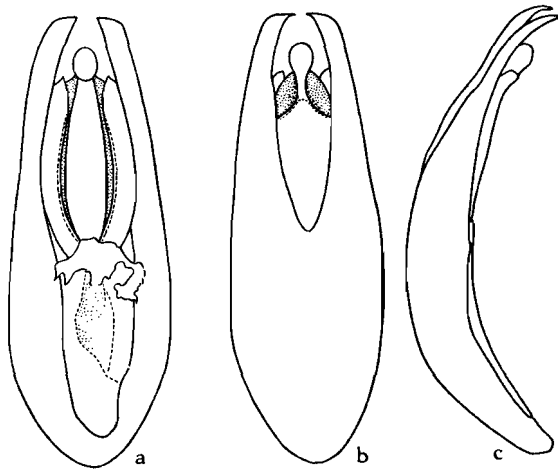


FIG. 222. — *Ædeagus* of *Silvestriellum alatum* n. sp.

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., I.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 tibiæ briefly curved inwards apically, the underside of all tibiæ sharply sulcate, that of anterior and intermediate tibiæ with conspicuous denticulation on both sides of sulcus.

[*Silvestriellum scleronoide* n. sp.]

(Fig. 221.)

Very closely related to *S. alatum* and agreeing with the latter in all the remaining characters, the ædeagus 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); Mwangongo, 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 antennæ with eleven segments, the pronotum loosely attached to elytra and the elytral costæ 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 antennæ either with only ten segments or with eleven segments, but then the sides of pronotum with large prebasilar incision and the elytral costæ 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. Antennæ *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 tibiae 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.

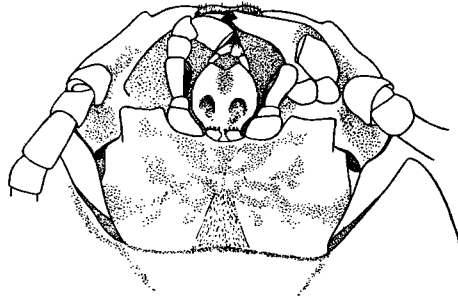


FIG. 223. — Under surface of head of *Hanstræmium lævifrons* KOCH.

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.

[**Hanstræmium adelostomoide** KOCH.]

(Figs. 224, 225, 226.)

*1953 e, *Hanstræmium 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

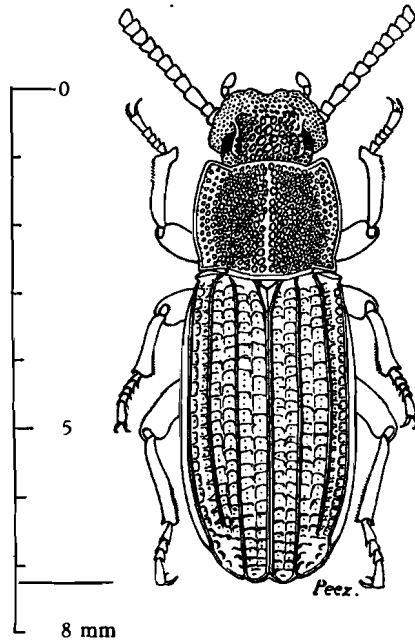


FIG. 224. — *Hanstroemium adelostomoide* KOCH.

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-

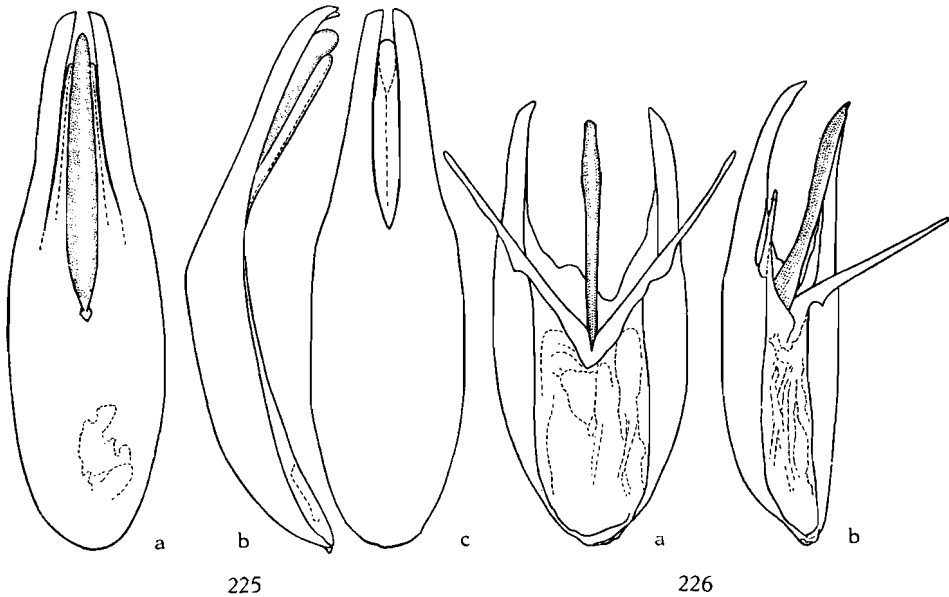


FIG. 225. — Aedeagus of *Hanstræmium adelostomoide* KOCH (a: ventral surface; b: lateral aspect, with the ventral surface at right; c: dorsal surface). — FIG. 226. — The dissected aedeagal tegmen with the penis and lacinia in *Hanstræmium adelostomoide* KOCH (a: ventral view; b: diagonal view).

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 obsolescent. 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, *Hanstræmium 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.

[*Hanstræmium lævifrons* KOCH.]

*1953 f, *Hanstræmium 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.

Hanstræmium 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.

[Hanstræmium 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-

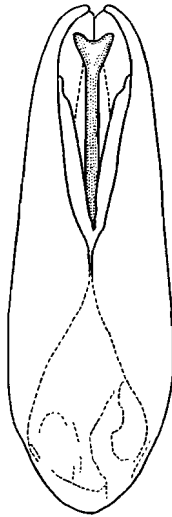


FIG. 228. — Ventral surface of the aedeagus of *Tragardhus* (*Mitragardhus*) *nodosus* n. sp.

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. TRÄGÅRDH (4♂♂, 1♀, types M.St.).

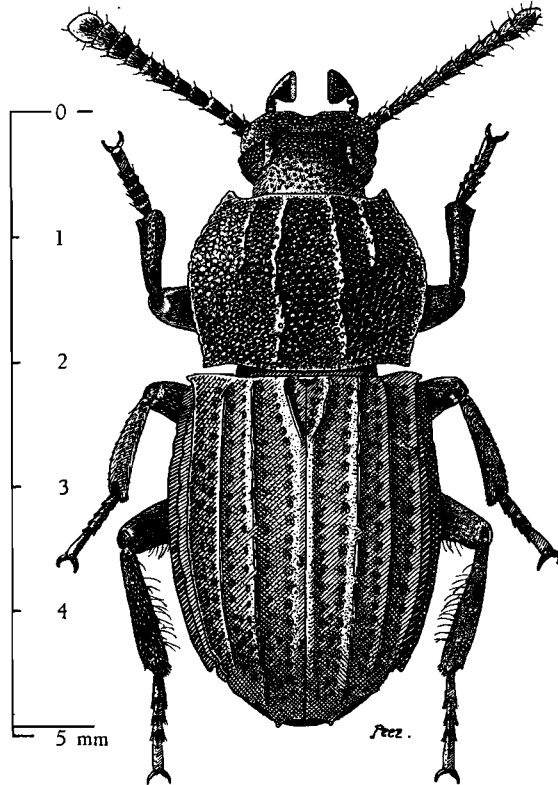


FIG. 229. — *Tragardhus* (s. str.) *glandipleurum* n. sp.
(The left antenna in lateral view, the right antenna from above.)

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

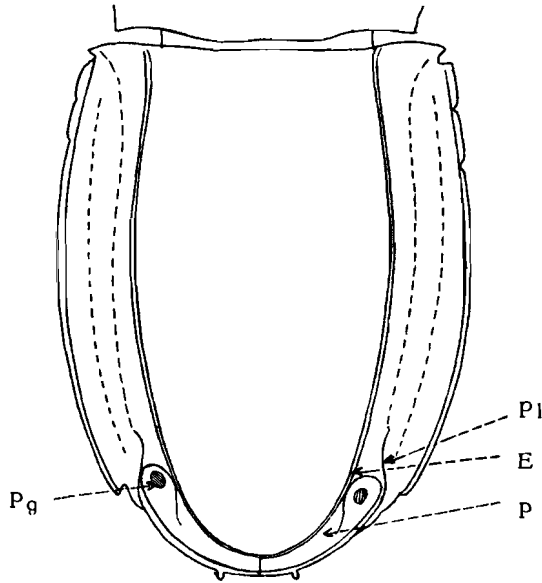


FIG. 230. — Scheme of the ventrally reflected portion of elytra in *Tragardhus* s. str.
E : epipleura; P : pseudopleura; Pg : pseudopleural gland; P1 : pseudopleural crest.

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. TRÄGÅRDH (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 subdentate. 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.

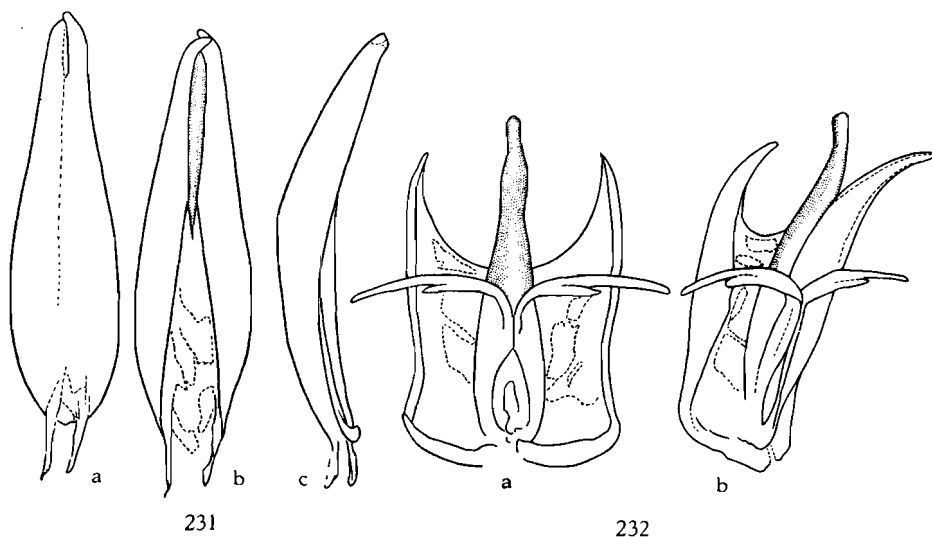


FIG. 231. — *Ædeagus* of *Tragardhus* (s. str.) *glandipleurum* n. sp. (a: dorsal surface; b: ventral surface; c: lateral aspect, with the ventral surface at right). — FIG. 232. — The dissected *ædeagal tegmen* with the penis and lacinia in *Tragardhus* (s. str.) *glandipleurum* n. sp. (a: ventral view; 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 obsolete 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 underside 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* FÄHRÆUS. In actual fact *Hæmodus* is clearly defined as a *Litoborini* 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.

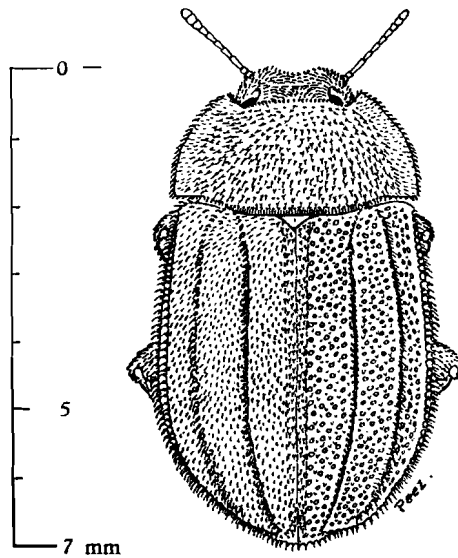


FIG. 233. — *Zoutpansbergia serricostata* n. sp.
Right half : elytral sculpture, dorsal surface of antenna; left half : elytral vestiture, compressed lateral surface of antenna.

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.

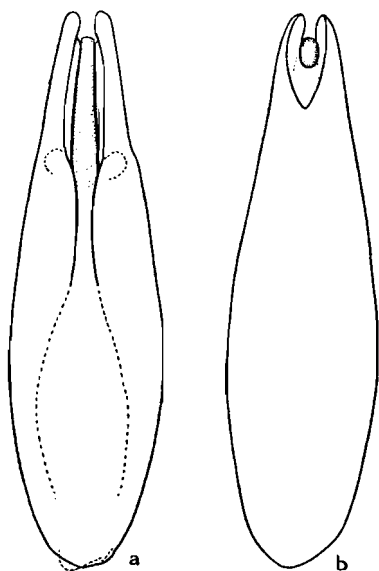


FIG. 234. — *Ædeagus* of
Zoutpansbergia serricostata n. sp.
a : ventral surface;
b : dorsal surface.

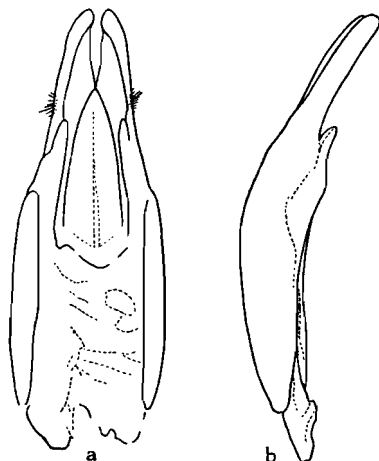


FIG. 235. — *Ædeagus* of
Hæmodus carinatipennis (PÉRINGUEY).
a : ventral surface; b : lateral view
with the ventral surface at right.

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 [*Melasmata (Heliomelasma) appenhageni* 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, КОСН, p. 407.

Monotypical. — *Melasmana* (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 tibiae 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 tibiae 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 spinulae 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* (WALTJ) [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 postgenae 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 ½ 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 *meli-tensis* 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.

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, *sequis* 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 (Hoplarion) 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*.

HOPLARION MULSANT & REY **90**

- 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).

ATLASION 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.

ATLASION subg. **ATLASION** sensu stricto.

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

The type species and *A. escalerae* 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 tibiae 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. Pseudo-pleura 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 tibiæ with pointed middle tooth; the apical tooth is situated at the extreme apex of tibiæ; the outer contours of intermediate and posterior tibiæ 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 tibiæ with denticulate median dilation; the apical tooth situated in front of the extreme apex of tibia; the outer contours of intermediate and posterior tibiæ 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 *subsINUATUS* 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 Tunisia.

- 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 Tunisia, 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-iculation 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 homomerous, 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

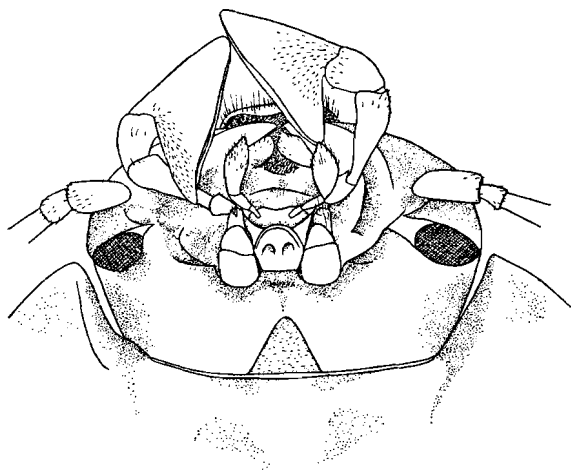


FIG. 236. — Under surface of head of a ♂ of *Loensus wittei* n. sp.

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,

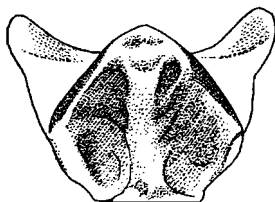


FIG. 237. — Mentum of *Loensus gebieni* n. sp.

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 2).

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

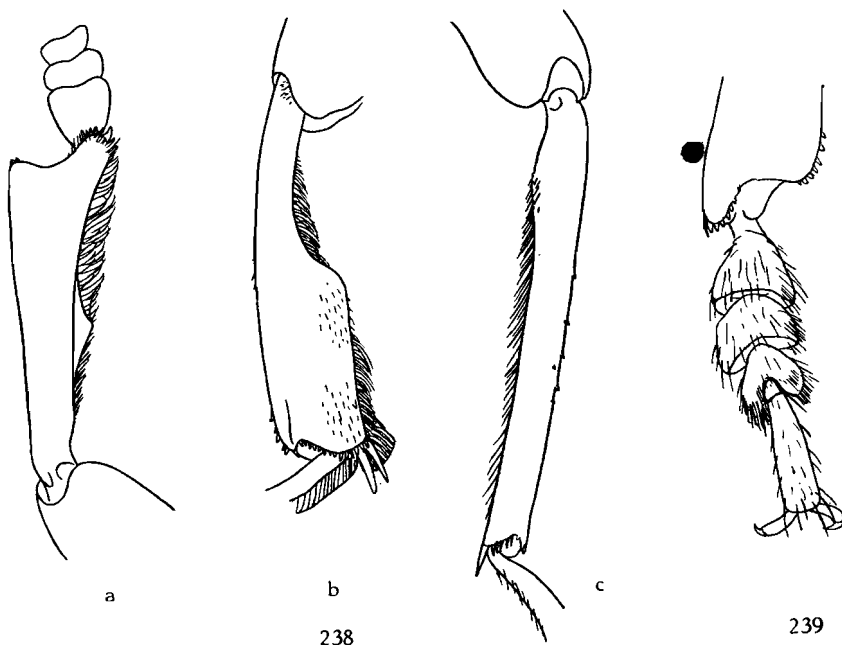


FIG. 238. — *Loensus smitheri* n. sp. (a : anterior tibia of ♂; b : intermediate tibia of ♂; c : posterior tibia of ♂. — FIG. 239. — Anterior tarsus of a ♂ of *Loensus smitheri* n. sp.

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 spongiöse 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.

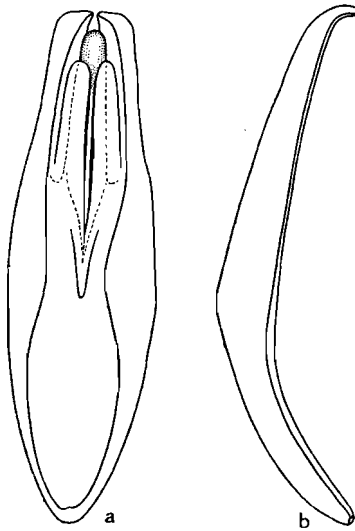


FIG. 240. — *Ædeagus* of *Loensus colpotoides* n. sp. (from Mutha).
a: ventral surface; b: lateral view, with the ventral surface at right.

[*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.).

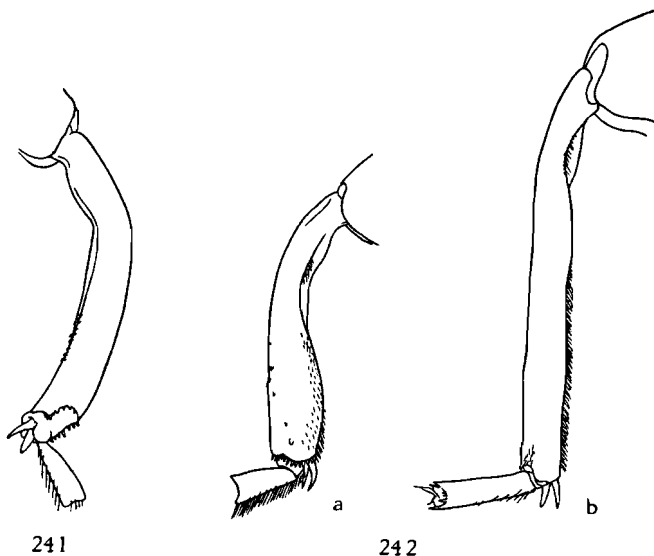
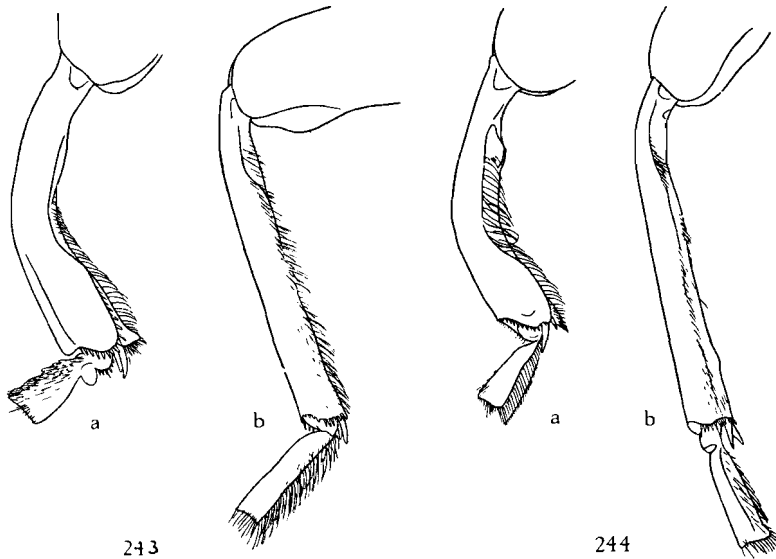


FIG. 241. — *Loensus colpotoides* n. sp., intermediate tibia of a ♂ from Mutha. — FIG. 242. — *Loensus colpotoides* n. sp., legs of a ♂ from « German East Africa » (a : intermediate tibia; b : posterior tibia).

- 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.



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.

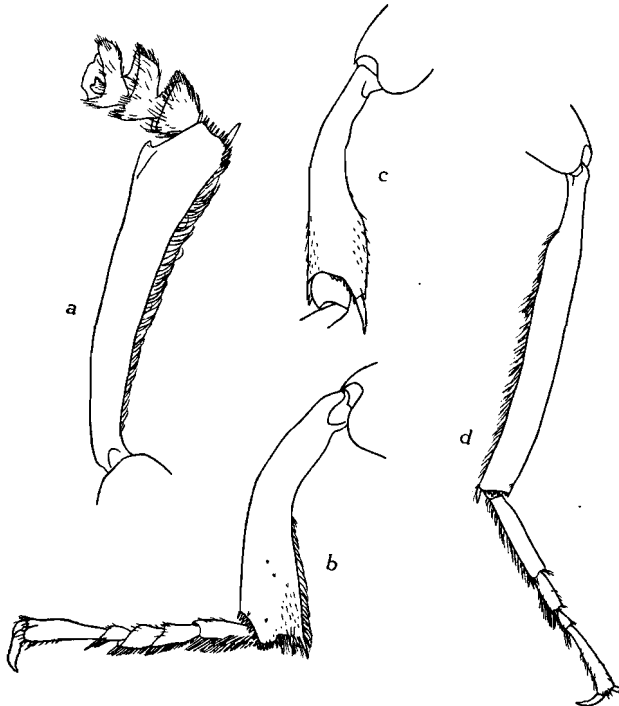
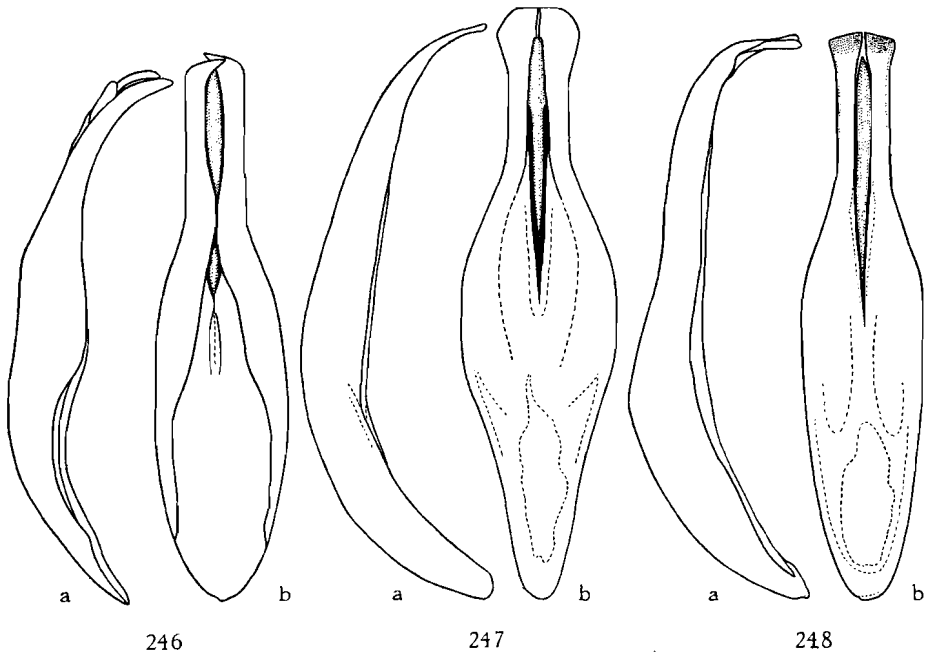


FIG. 245. — *Loensus pedinopsis* n. sp., legs of a ♂ from Ruanda-Urundi.
a: anterior tibia with tarsus; b: intermediate tibia with tarsus in dorso-lateral view; c: intermediate tibia, inner lateral view; d: posterior tibia with tarsus.

[*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 subparallel 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.

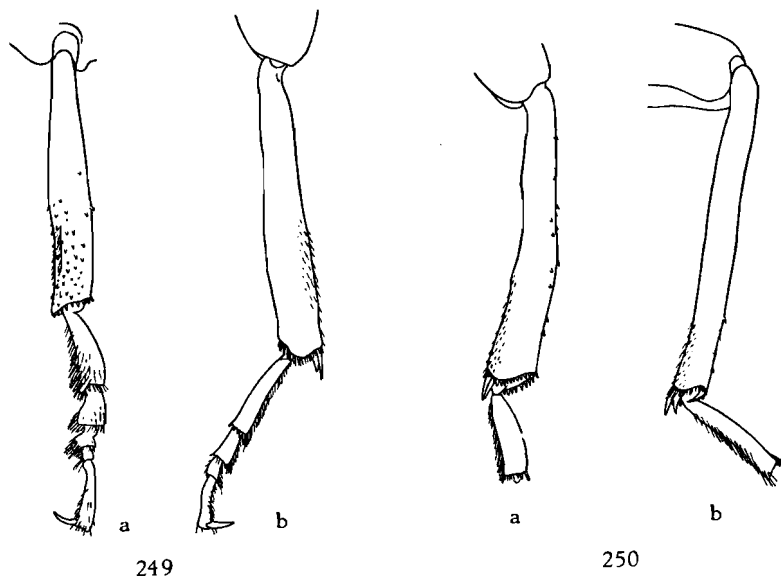


FIG. 249. — *Loensus wittei* n. sp. (a : intermediate tibia with tarsus of ♂; b : posterior tibia with tarsus of ♂). — FIG. 250. — *Loensus gebieni* n. sp. (a : intermediate tibia of ♂; b : posterior tibia of ♂).

***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.

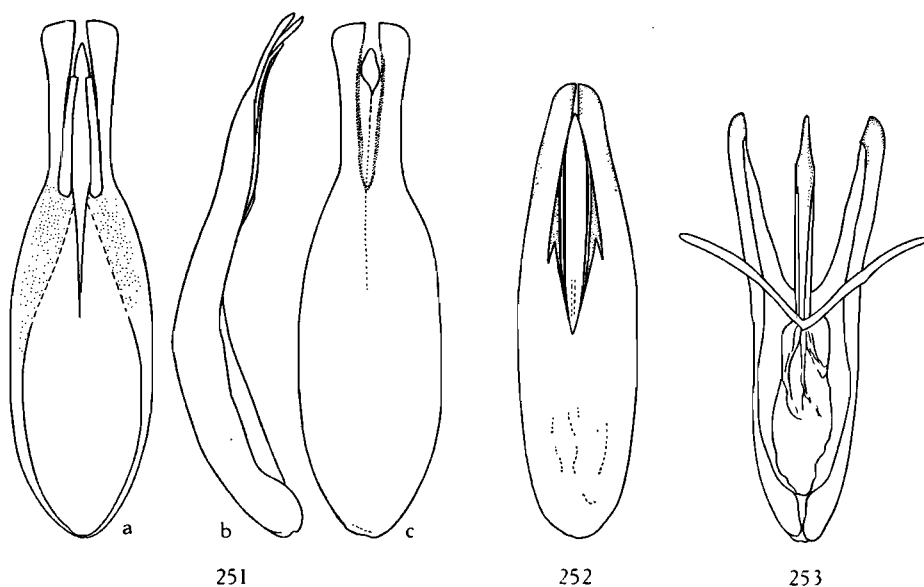


FIG. 251. — Ædeagus of *Loensus wittei* n. sp. (a: ventral surface; b: lateral view, with the ventral surface at right; c: dorsal surface). — FIG. 252. — Ædeagus of *Loensus gebieni* n. sp., ventral surface. — FIG. 253. — Dissected Ædeagus of *Loensus gebieni* n. sp., ventral surface with the penis and 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 ¼ to 4 ½ 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, 3º 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 biserialim 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 col-laris*, 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 échancré 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 échancré 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 médiaires 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 médiaire 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, ruguleux 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 tibiæ 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. Antennae 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

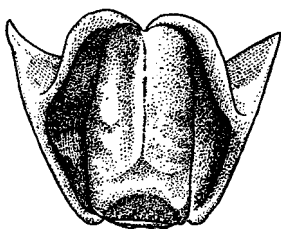


FIG. 254. — Mentum of *Selinopodus giganteus* n. sp.

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, absolutely 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-

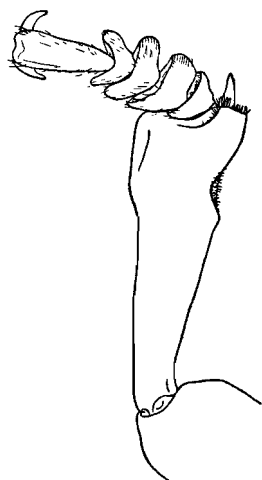


FIG. 255. — Anterior tibia with tarsus of ♂ of *Selinopodus giganteus* n. sp.

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 ½ mm, width 9 to 11 ½ 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. TRÄGÅRDH (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-*

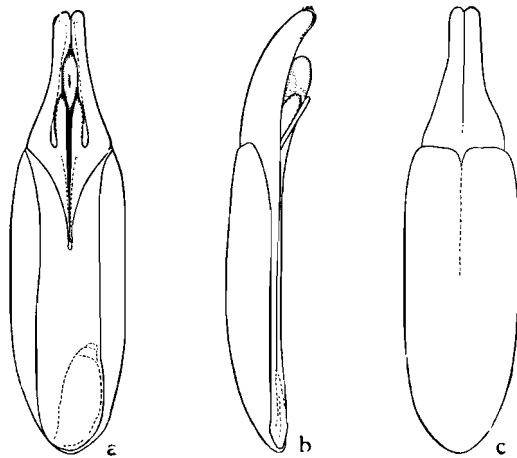


FIG. 256. — Aedeagus of *Selinopodus giganteus* n. sp.
a: ventral surface; b: lateral view, with the ventral surface at right;
c: dorsal surface.

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 tibiæ strongly sulcate and with sharply edged lateral margins. In the ♂ the inner contours of anterior tibiæ (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 ½ to 4 ¼ 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.).

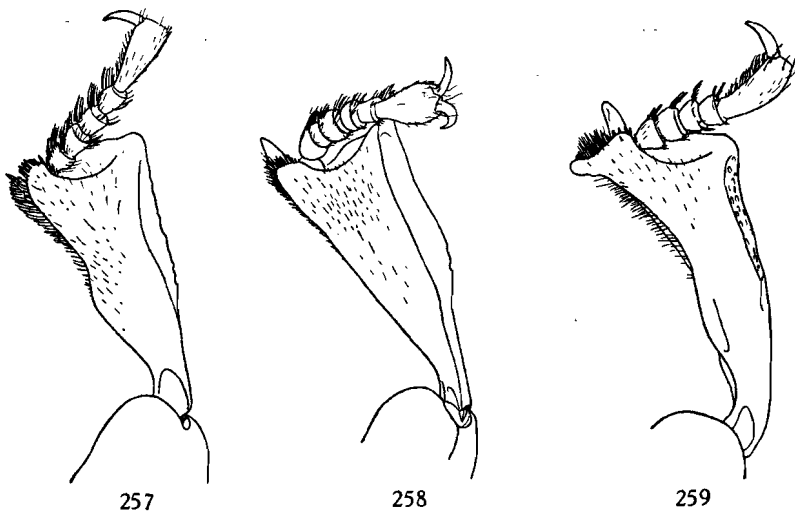
Relationship. — Only allied to *Sch. verreauxi* (MULSANT & REY) and agreeing with this species in the conspicuously punctured secondary intervals of elytra, the non-prominent humeral angle, and the inermous femora in the ♂. Readily distinguished from this species by the dark legs (which are testaceous 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 ½ mm in length and 3 ¼ to 3 ½ 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 ½ mm, width 3 ¼ mm.

Distribution. — Eastern part of the Central-southern Cape Province. — Uitenhage District: Dunbrody, J. O'NEILL (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 canaliculation. 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 punctuation; 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, KANNEMEYER (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 : — 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.); Oudtsboorn 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 tibiæ 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.

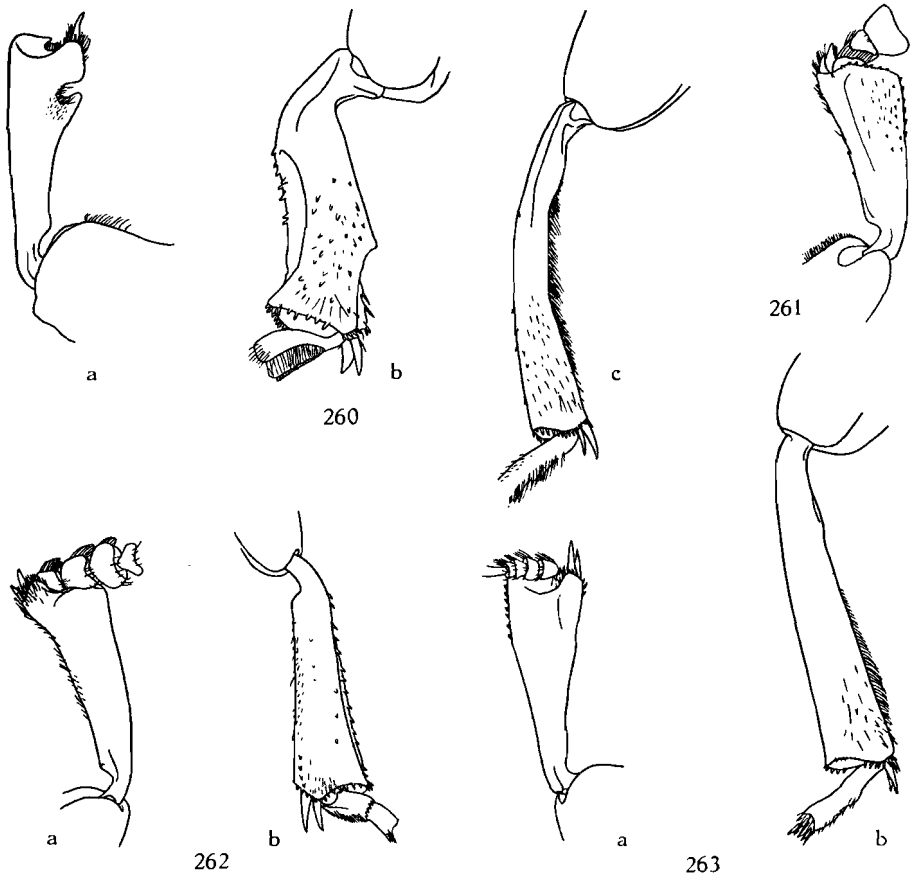


FIG. 260. — *Atrocates platyderus* (MULSANT & REY) (a: anterior tibia of ♂; b: intermediate tibia of ♂; c: posterior tibia of ♂). — FIG. 261. — *Atrocates latemarginatus* (MULSANT & REY), anterior tibia of ♂. — FIG. 262. — *Atrocates striatus* (QUENSEL) (a: anterior tibia of ♂; b: intermediate tibia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

The new species agrees very well with the *striatus* group, exhibiting in the ♂ the subtomentose stripe on underside of posterior tibiæ, as well as the angular postbasal dilation of anterior tibiæ. It is readily distinguished from *A. platyderus* by the simple structure of intermediate tibiæ in the ♂ [in *platyderus* the inner (or lower) contours of the outer lateral surface of intermediate tibiæ 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 tibiæ; 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).

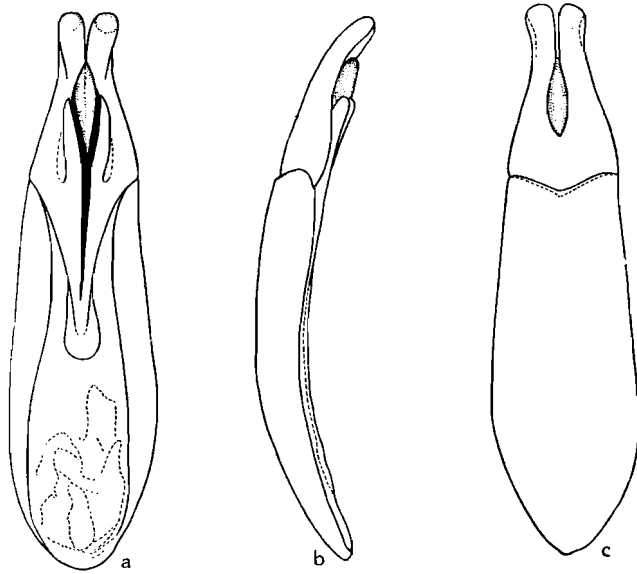


FIG. 264. — Edeagus of *Atrocates peringueyi* n. sp.

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 tibiae with sinuate outer contours, the upper surface of the former shallowly sulcate, that of posterior tibiae 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 antennae or a third the width of the apex of anterior tibiae; the intermediate tarsi not distinctly soleate below; the anterior tibiae simple, not excavate underneath, with straight inner contours; the intermediate tibiae with straight inner contours, but with scattered, slightly squarrose hairs on distal half of underside; the underside of the straight posterior tibiae 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.

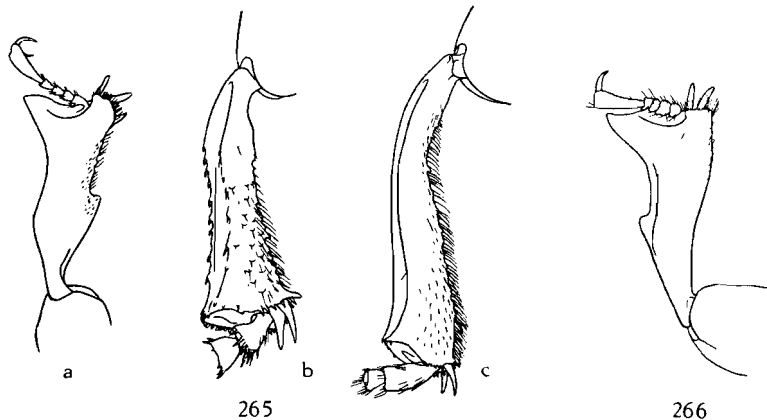


FIG. 265. — *Zophodes fitzsimonsi* n. sp. (a: anterior tibia with tarsus of ♂; b: intermediate tibia of ♂; c: posterior tibia of ♂). — FIG. 266. — *Zophodes tristis* FÄHRÆUS, anterior tibia with tarsus of ♂.

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

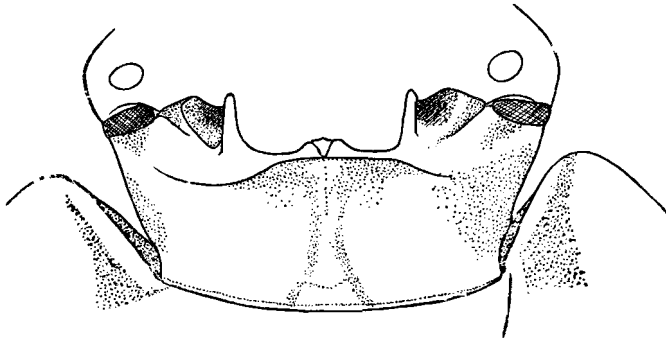


FIG. 267. — *Melanopterus podagricus* n. sp.

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.

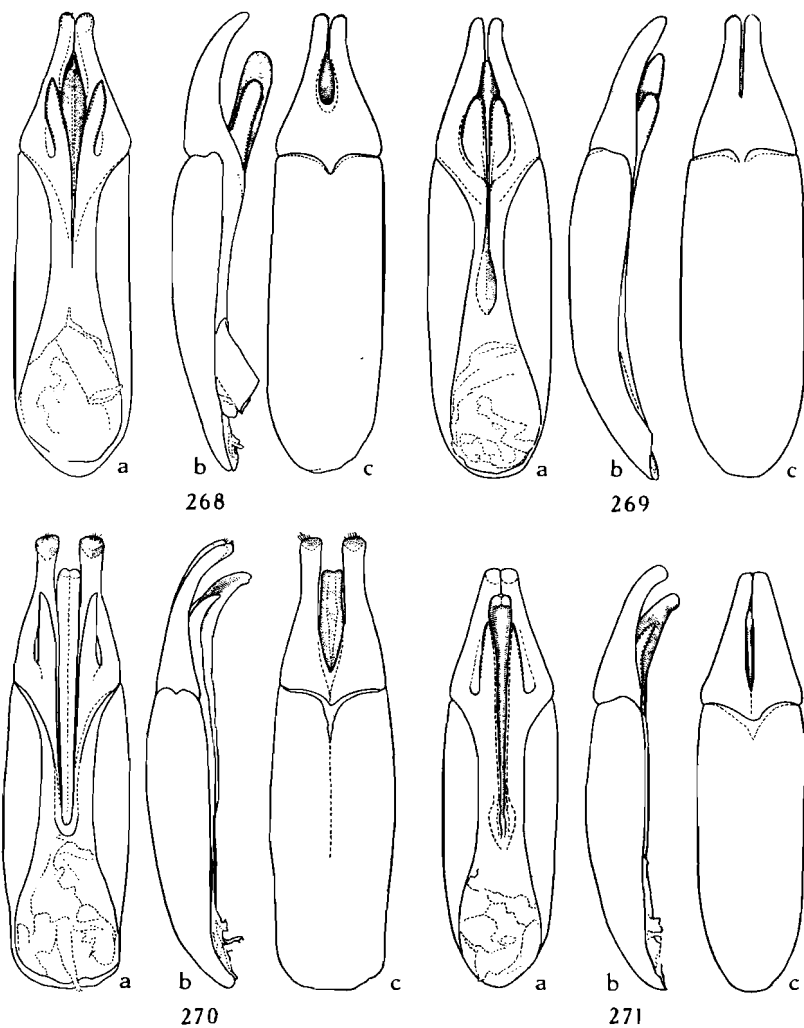
Ædeagus (fig. 269). — Apicale short and slender, with the sides continuously converging towards apex; the parameres deeply divided on distal two-thirds, with slightly gaping, obtuse, straight and minutely demarcated apices. Apical portion of penis and lacinia exposed. Basale about three times as long 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

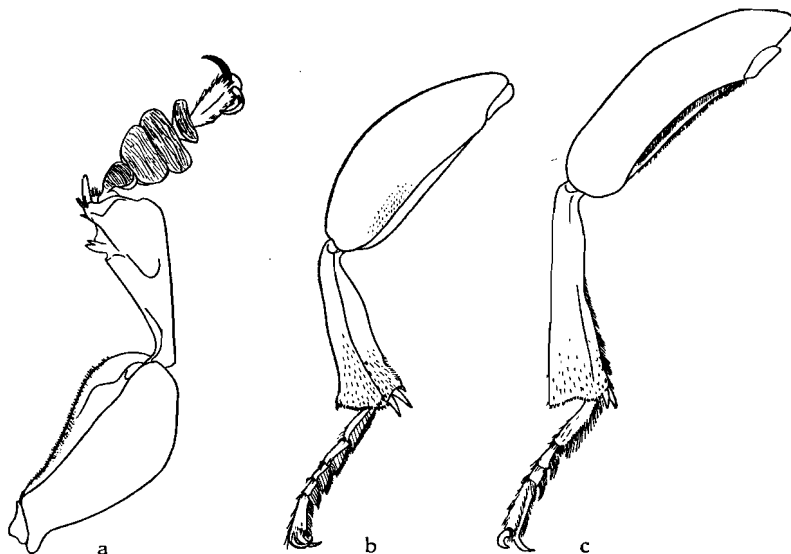


FIG. 272. — *Melanopterus marginicollis* Mulsant & Rey.
a : front leg of ♂; b : intermediate leg of ♂; c : hind leg of ♂.

(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. LIGHT-ROOF (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.

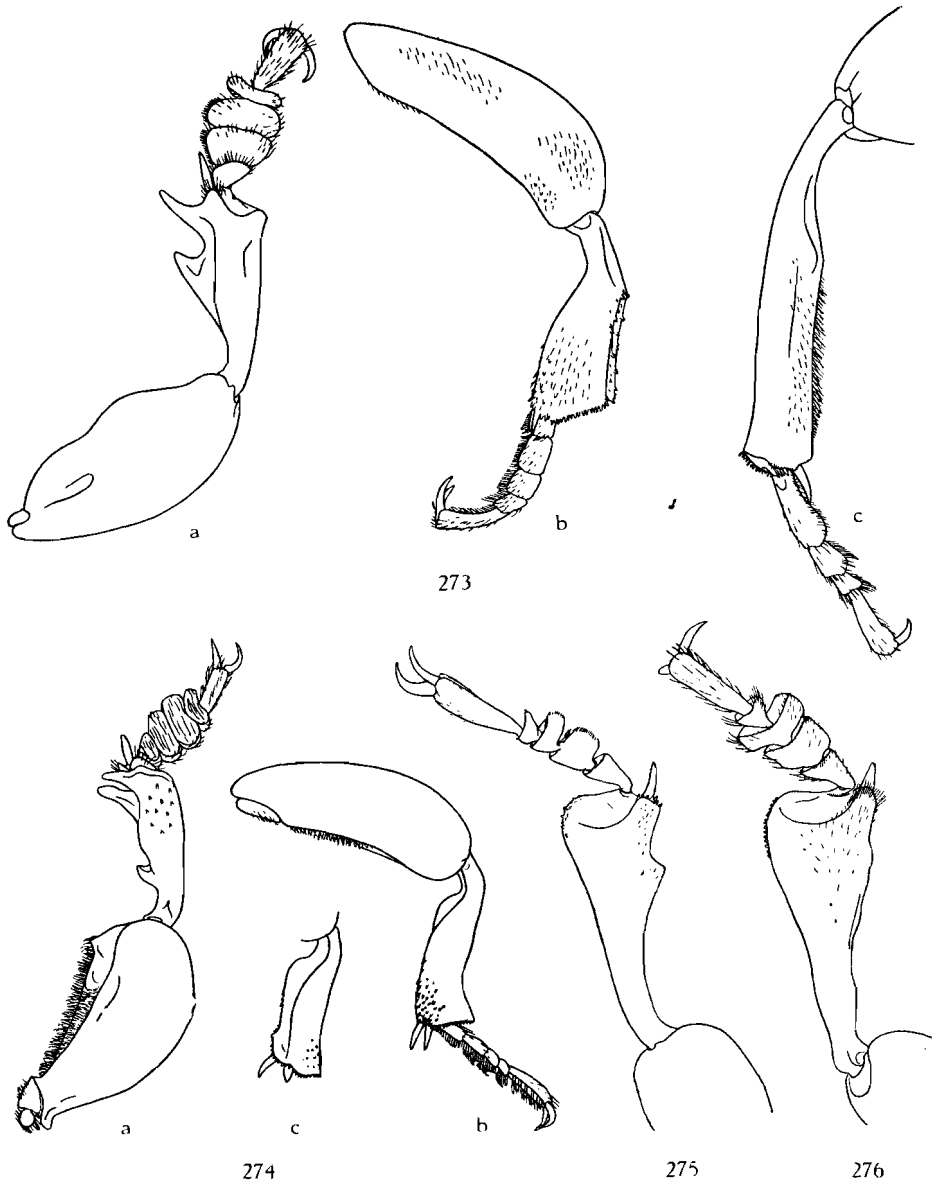


FIG. 273. — *Melanopterus spinipes* (MULSANT & REY) (a : front leg of δ ; b : intermediate leg of δ ; c : hind leg of δ). — FIG. 274. — *Melanopterus podagricus* n. sp. (a : front leg of δ ; b : intermediate leg of δ [inner lateral surface]; c : intermediate tibia of δ [diagonal view]). — FIG. 275. — *Melanopterus inga* n. sp., anterior tibia with tarsus of δ . — FIG. 276. — *Melanopterus varus* n. sp., anterior tibia with tarsus of δ .

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 $5\frac{1}{2}$ to $6\frac{1}{4}$ mm.

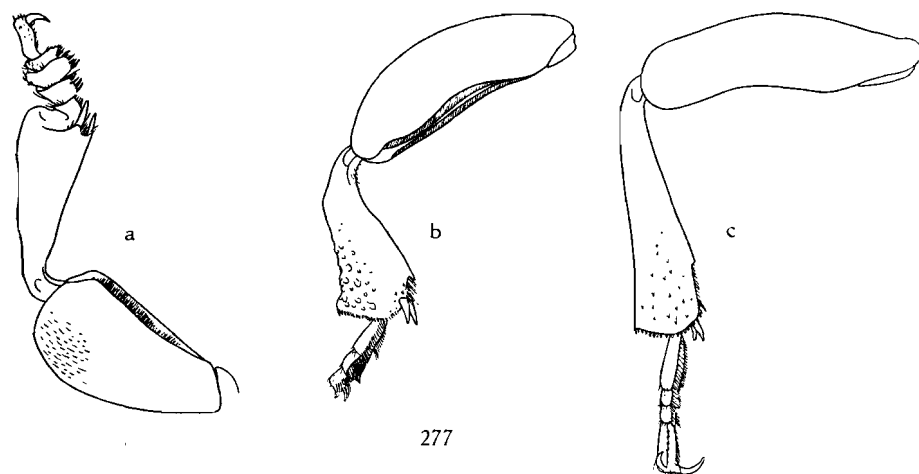
Distribution. — Eastern part of the Central-southern Cape Province. — Albany District: Farm Resolution near Fort Brown, VI.1928, A. WALTON (14 spec., types T.M.); Grahamstown, VII.1910, I. R. IVY (5 spec., T.M.), XII.1892 (2 spec., S.A.M.); Sheldon, VIII.1950, F. ZUMPT (2 spec., Museum Frey).

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*).

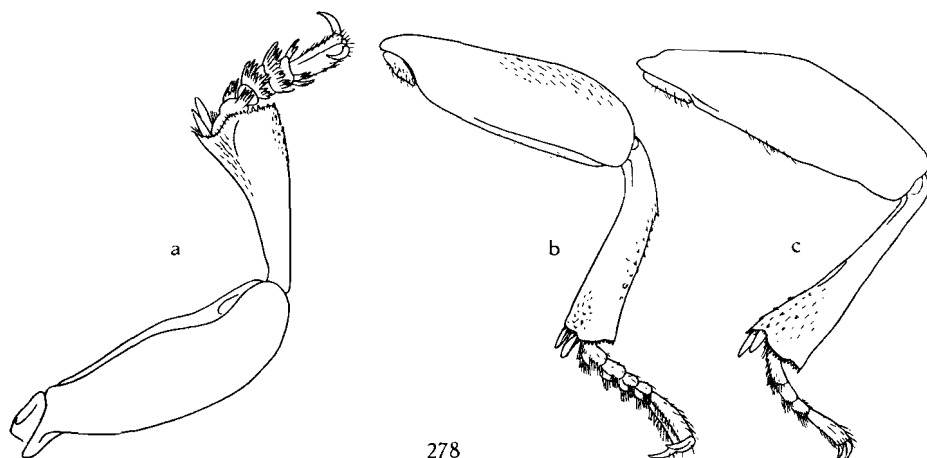
[*Melanopterus amicus* n. sp.]

(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.

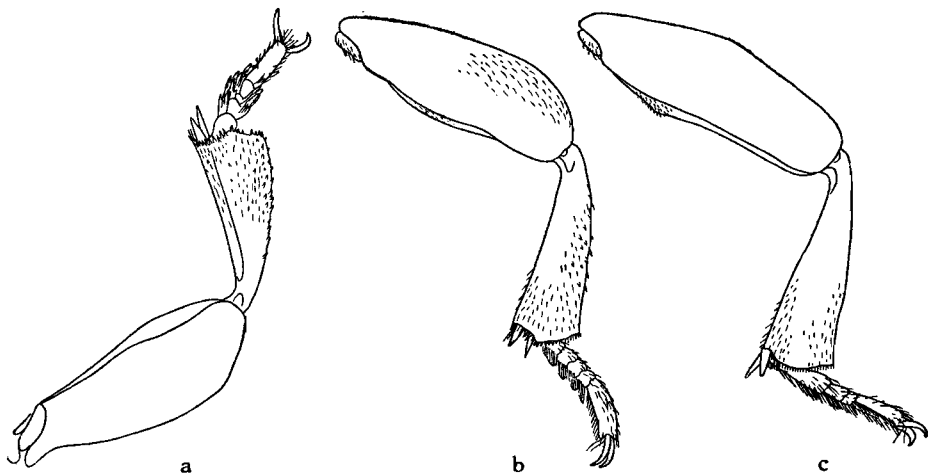
Dimensions. — Length 11 to 15 mm, width $5 \frac{3}{4}$ to $7 \frac{3}{4}$ mm.

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. GRENEH (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, obsolete 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

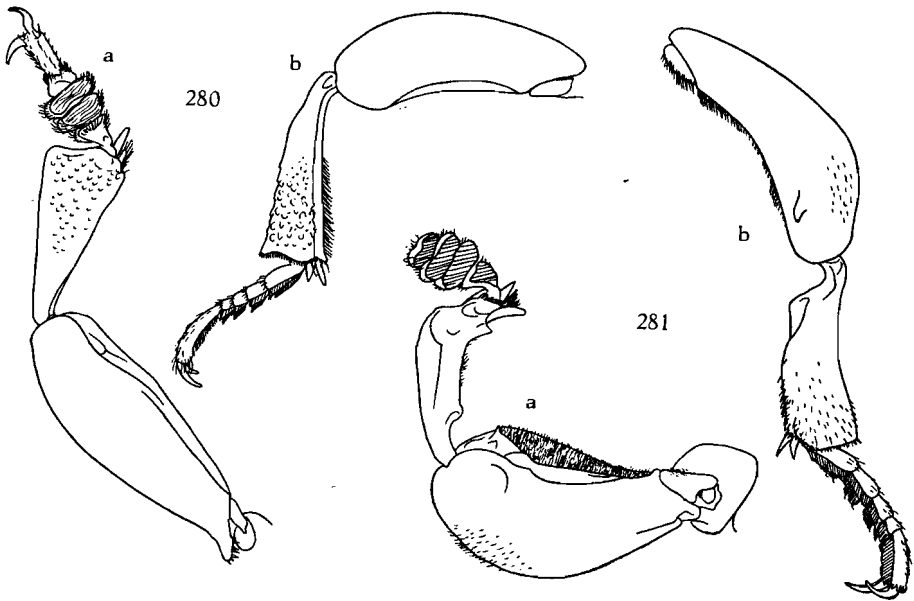


FIG. 280. — *Melanopterus amicus* n. sp. (a : anterior leg of ♂; b : intermediate leg of ♂). — FIG. 281. — *Melanopterus rugatipennis* n. sp. (a : front leg of ♂; b : intermediate leg of ♂).

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 tibiae sharply edged on distal half, that of intermediate tibiae broadly sulcate, the upper surface of posterior tibiae 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 tibiae; the anterior tibiae 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 tibiae 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 tibiae 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 tibiae 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*

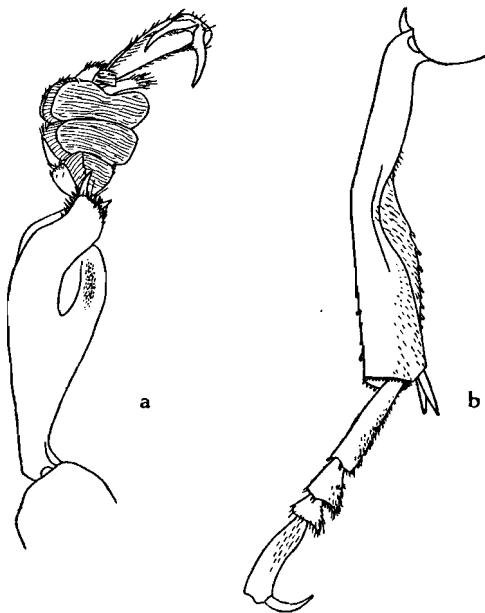


FIG. 282. — *Trigonopus flexipes* n. sp.

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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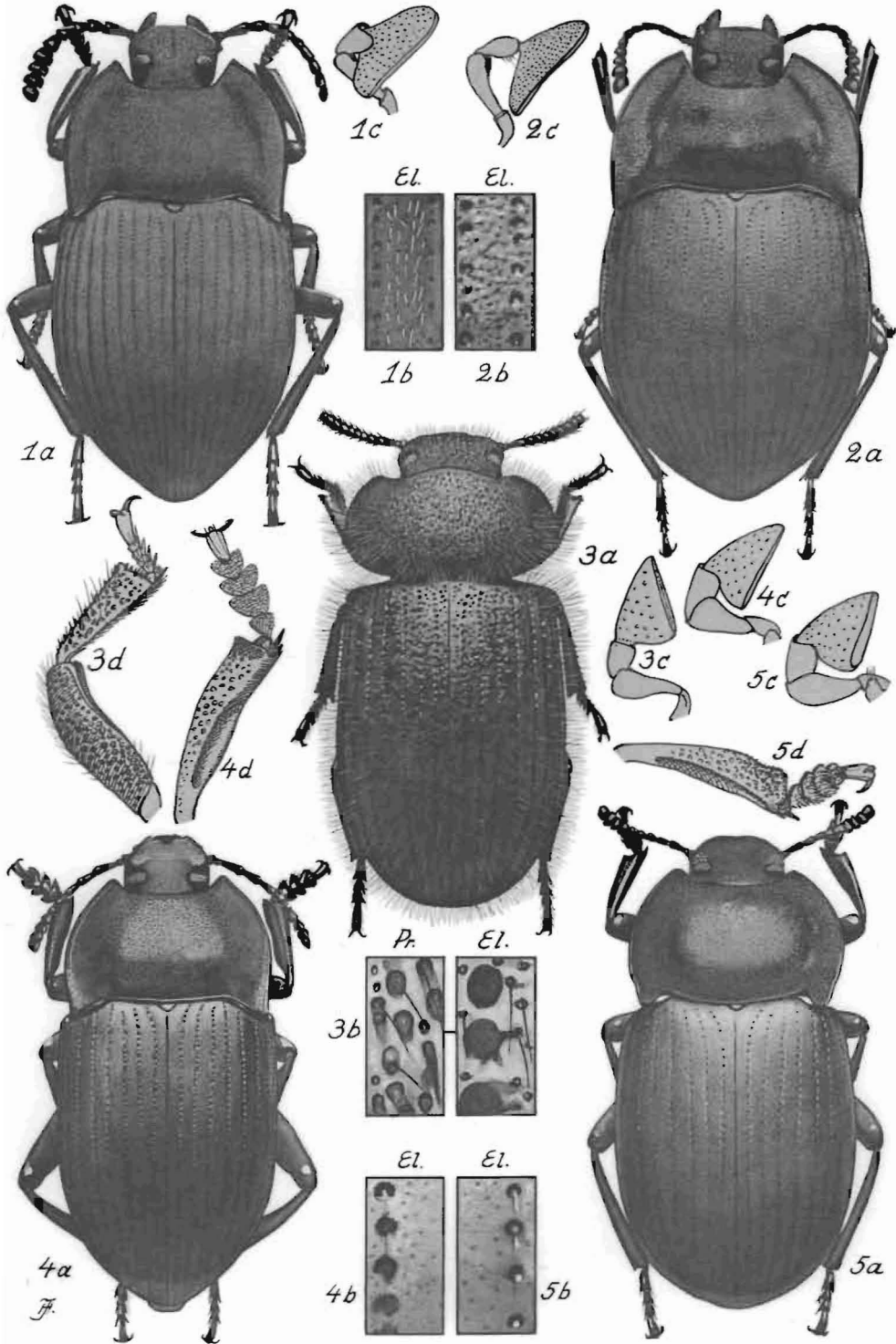
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PLATE I

EXPLANATION OF PLATE I.

- FIG. 1. — *Anchophthalmus pulvereus* n. sp.
a : dorsal view; b : elytral sculpture; c : maxillary palpi in the ♂.
- FIG. 2. — *Anchophthalmus straeleni* n. sp.
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- FIG. 3. — *Emmallus* spec. from Mabwe.
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- FIG. 4. — *Upembarus saegeri* n. sp.
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- FIG. 5 — *Upembarus wittei wittei* n. sp.
a : dorsal view; b : elytral sculpture; c : maxillary palpi in the ♂; d : anterior tibia with tarsus of ♂.

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The Tenebrionidæ of the Upemba Parc

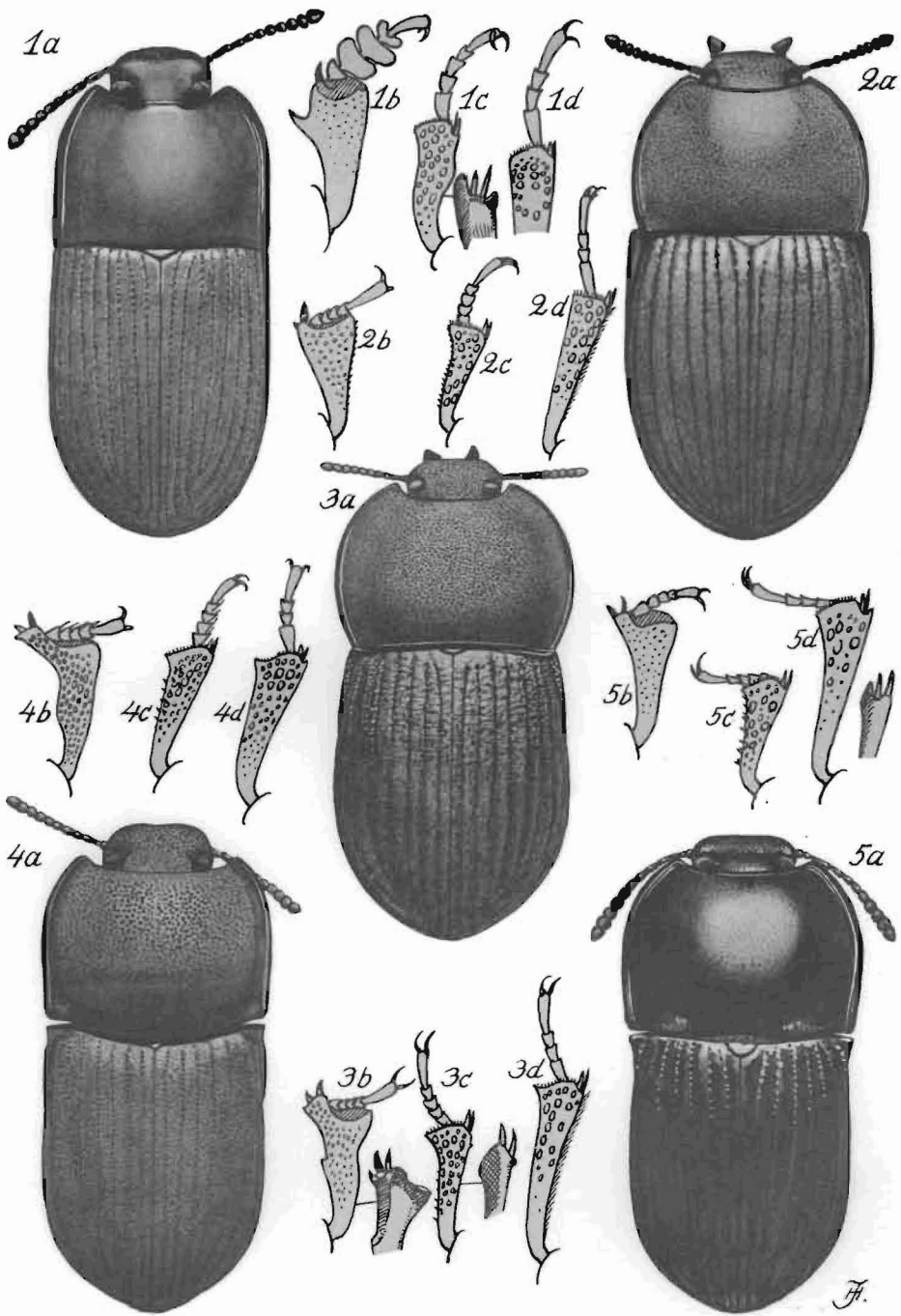
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

PLATE II

EXPLANATION OF PLATE II.

- FIG. 1. — *Bantodemus lugubris* (FÄHRAEUS).
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- FIG. 4. — *Schelodontes immundus* (MULSANT & REY).
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a : dorsal view; *b* : anterior tibia with tarsus of ♂; *c* : intermediate tibia with tarsus of ♂; *d* : posterior tibia with tarsus of ♂.

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II. — PLATYNOTINI, LITOBORINI and LOENSINI.

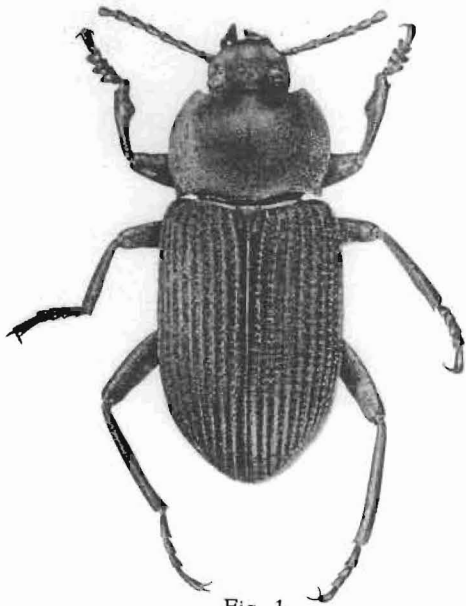


Fig. 1.
Opatrinus (Zidalus) corvinus
MULSANT & REY.

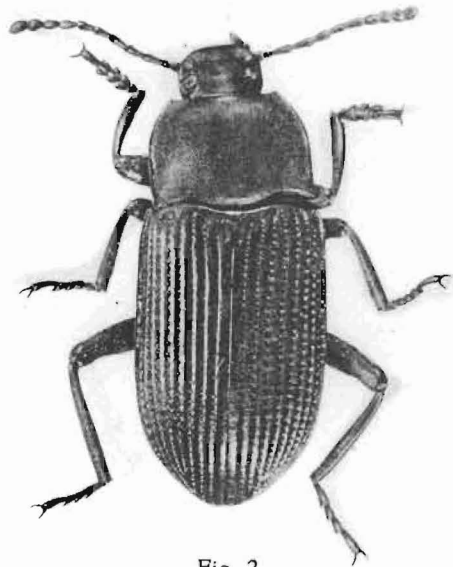


Fig. 2.
Opatrinus (Zidalus) niloticus
MULSANT & REY.

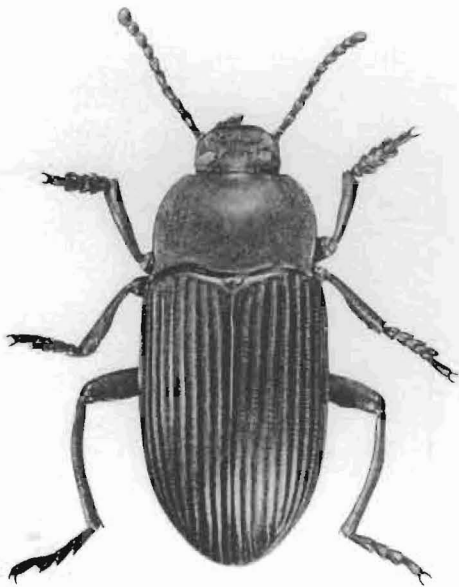


Fig. 3.
Opatrinus (Zidalus) latipes (SAHLBERG).

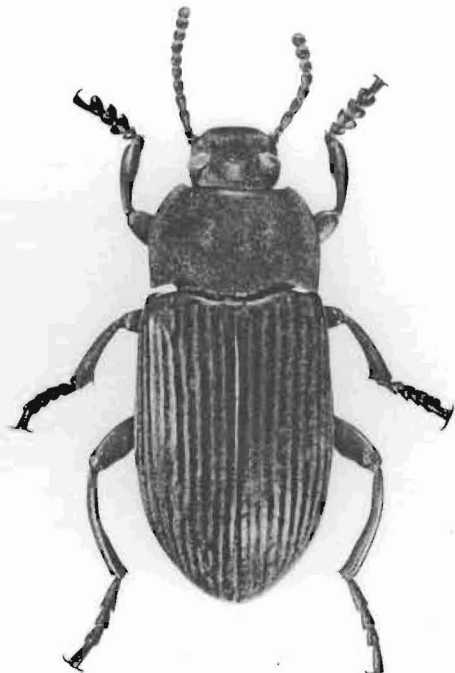


Fig. 4.
Opatrinus (Zodinus) costulatus (GUERIN).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

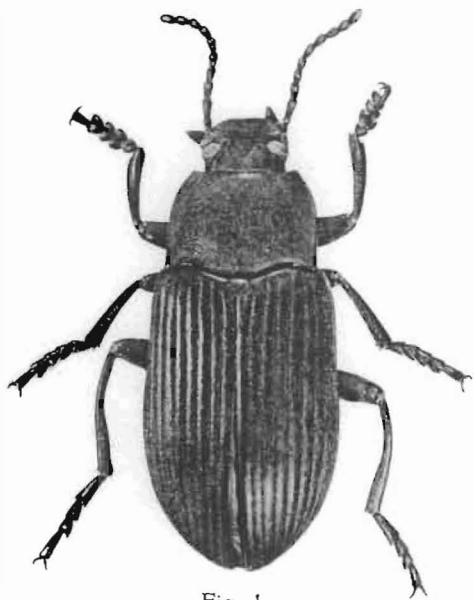


Fig. 1.
Opatrinus (Zodinus) setuliger CL. MUELLER.

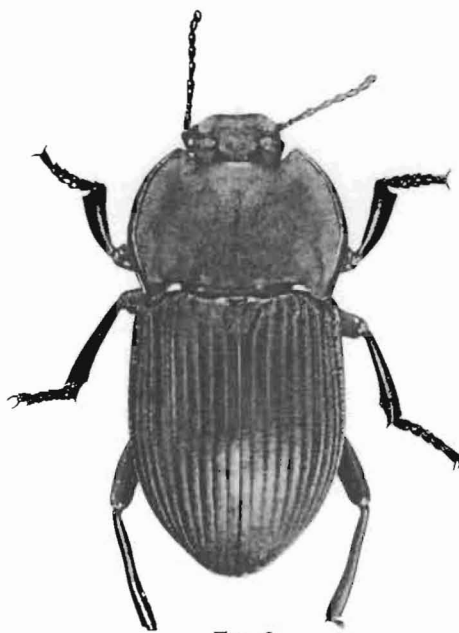


Fig. 2.
Anchophthalmus dentipes GERSTAECKER.

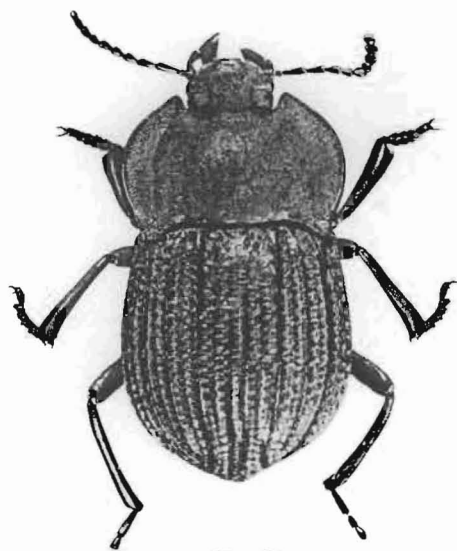


Fig. 3.
Anchophthalmus algoensis PERINGUEY.

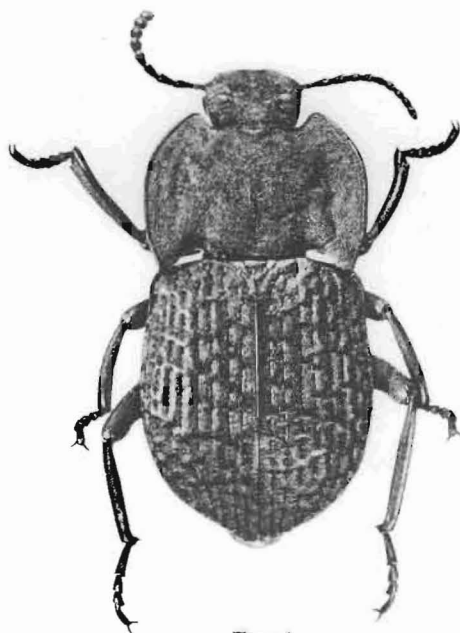


Fig. 4.
Anchophthalmus curvipes sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

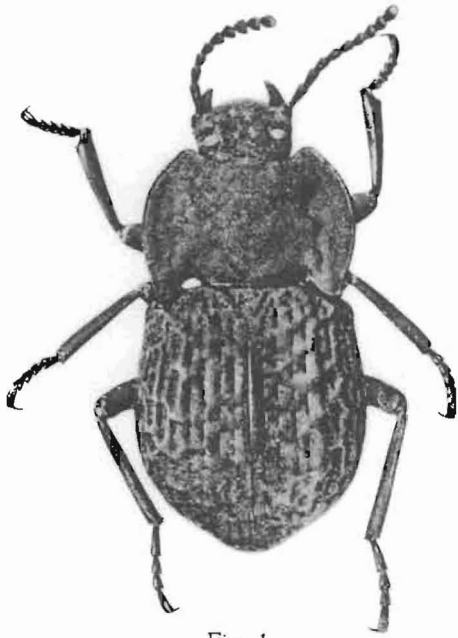


Fig. 1.
Anchophthalmus katangicus sp. nov.

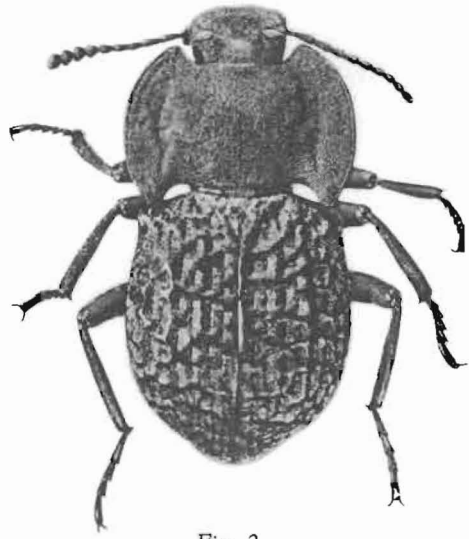


Fig. 2.
Anchophthalmus spinipes sp. nov.

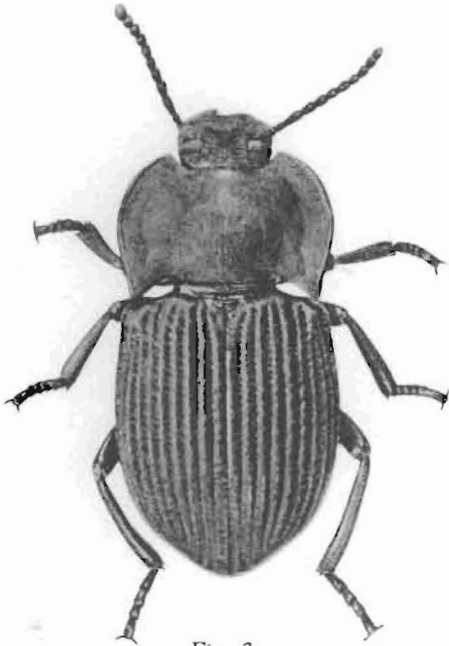


Fig. 3.
Anchophthalmus oncotipes sp. nov.

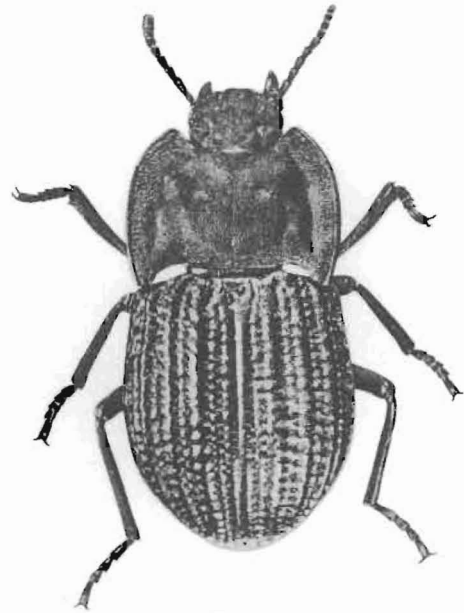


Fig. 4.
Anchophthalmus clathratus GERSTAECKER.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

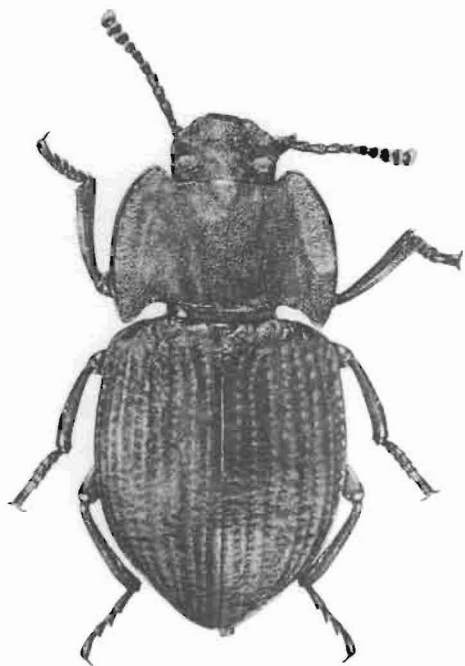


Fig. 1.
Anchophthalmus altioricola sp. nov.

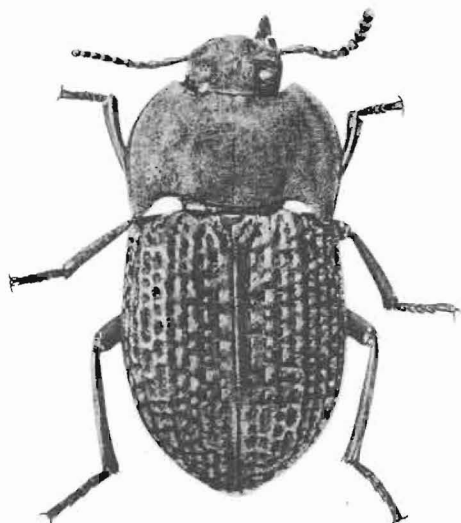


Fig. 2.
Anchophthalmus plicipennis PERINGUEY,
specimen from «Ukerewe Islands».

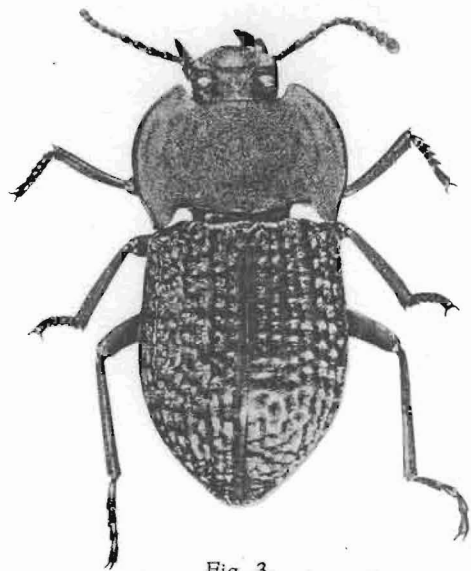


Fig. 3.
Anchophthalmus plicipennis PERINGUEY,
specimen from «Moliro».

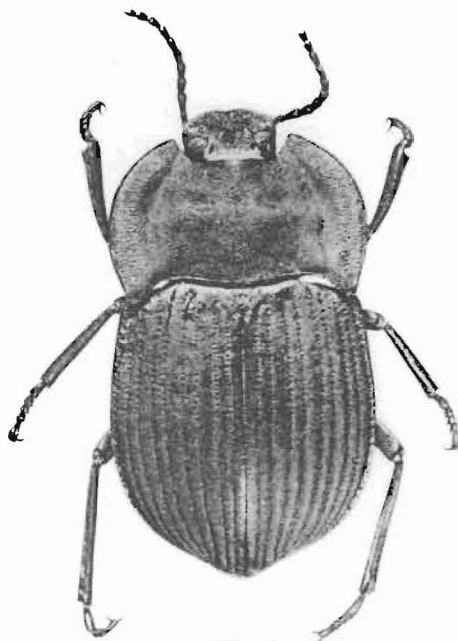


Fig. 4.
Anchophthalmus obsoletus (ANCEY),
specimen from «Munoi».

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

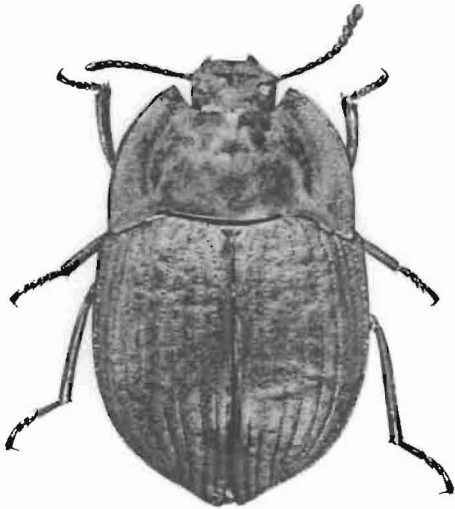


Fig. 1.
Anchophthalmus straeleni sp. nov.

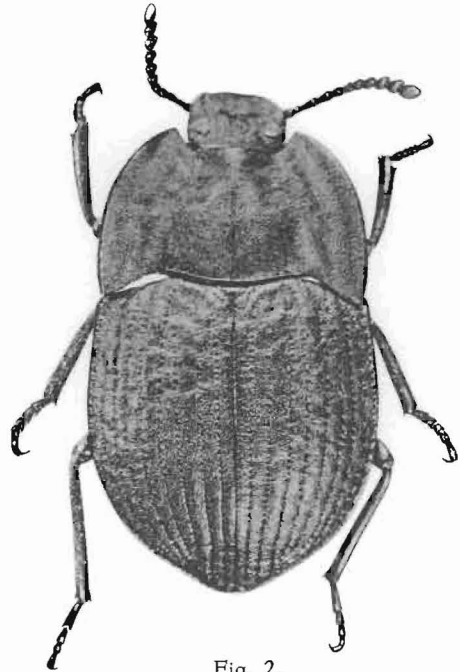


Fig. 2.
Anchophthalmus obsoletus (ANCEY).

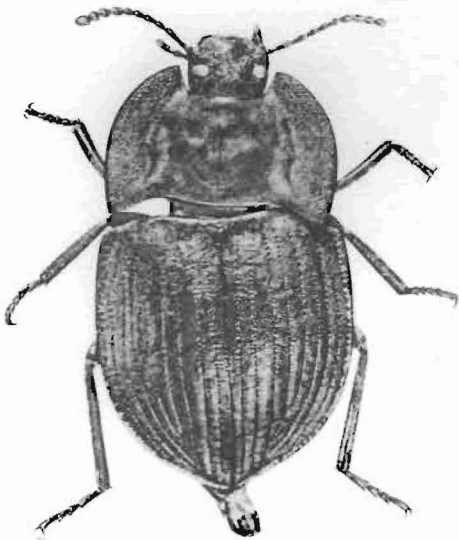


Fig. 3.
Anchophthalmus eurychoroides sp. nov.

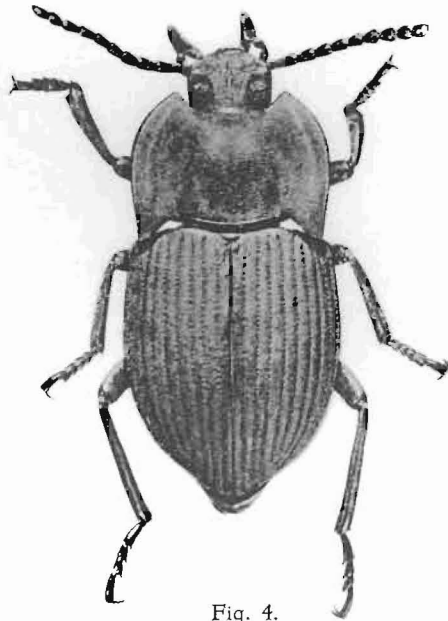


Fig. 4.
Anchophthalmus pulvereus sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

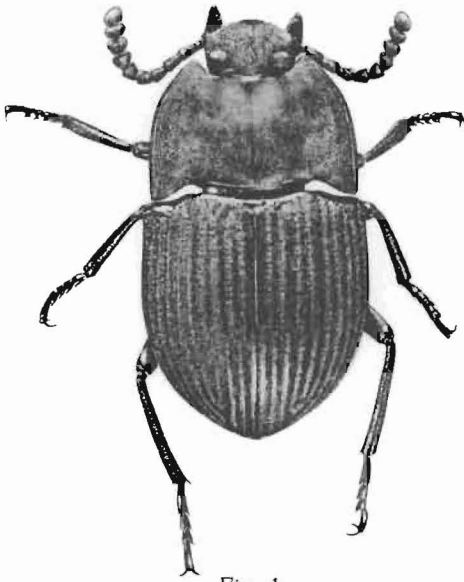


Fig. 1.
Anchophthalmus cariniceps sp. nov.

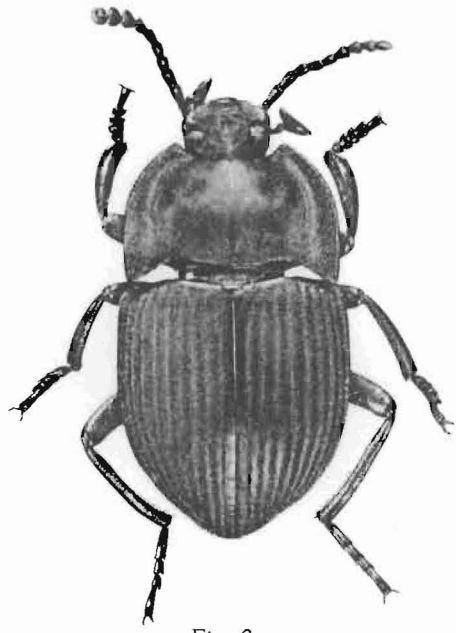


Fig. 2.
Anchophthalmus pedestris sp. nov.

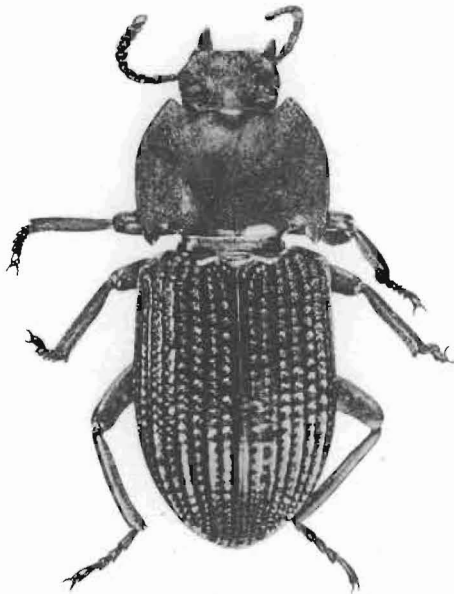


Fig. 3.
Cosmogaster impressicollis (FAIRMAIRE).

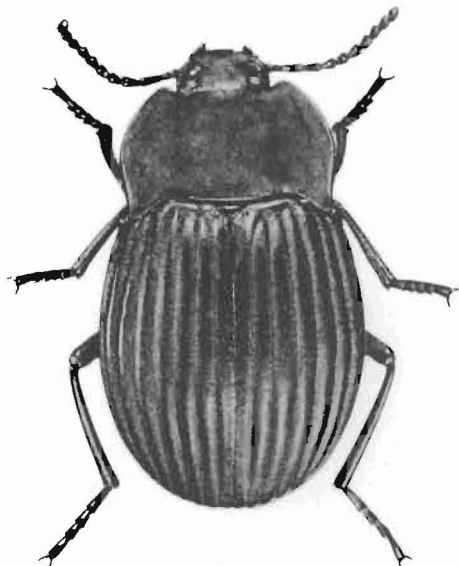


Fig. 4.
Phallocentrion edentatum (GEBIEN).

The Tenebrionidæ of the Upemba Parc

II. — PLATYNOTINI, LITOBORINI and LOENSINI.

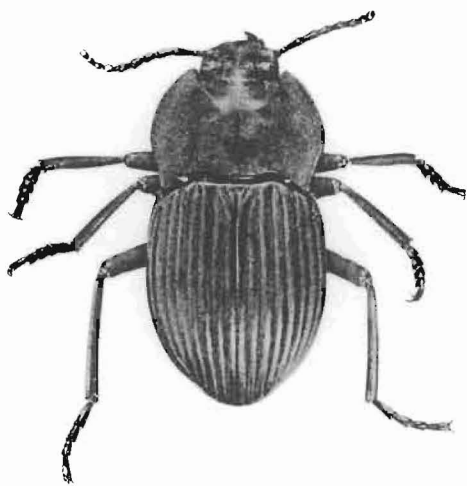


Fig. 1.
Phallocentron praelacinatum sp. nov.



Fig. 2.
Anchophthalmops maximus sp. nov.

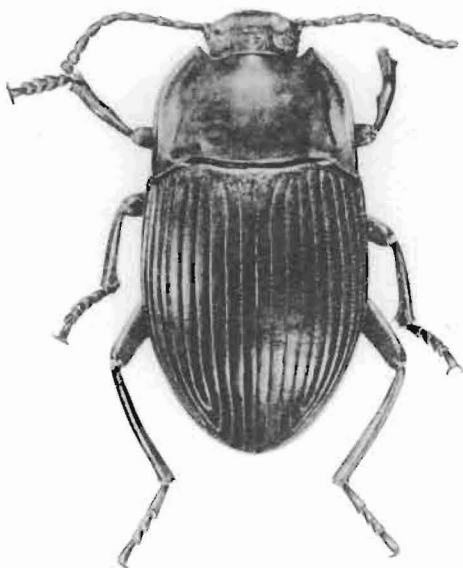


Fig. 3.
Monodius convexipennis (GEBIEN).

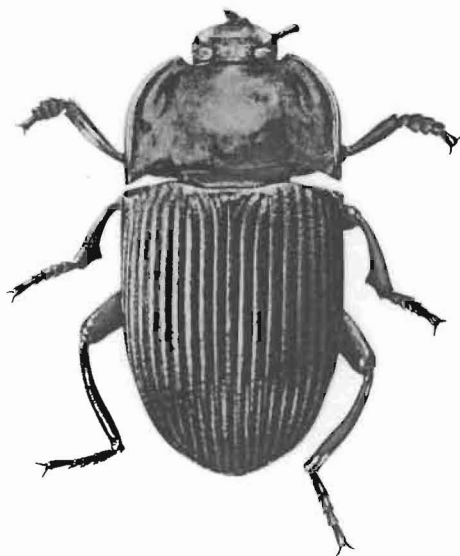


Fig. 4.
Monodius malaisei sp. nov.

The Tenebrionidæ of the Upemba Parc

II. — PLATYNOTINI, LITOBORINI and LOENSINI.

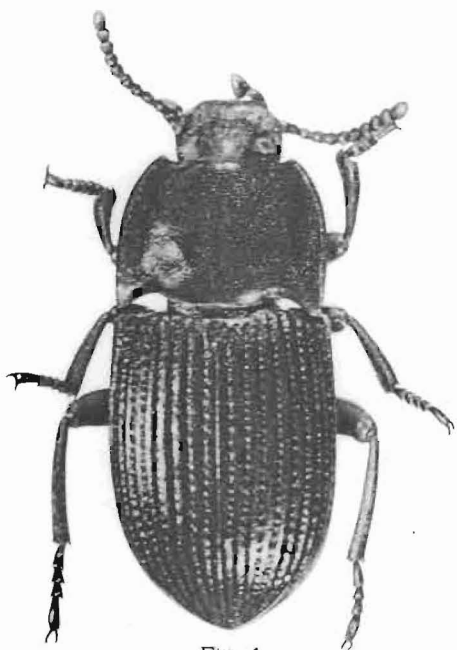


Fig. 1.
Quadrideres femineus (LESNE).

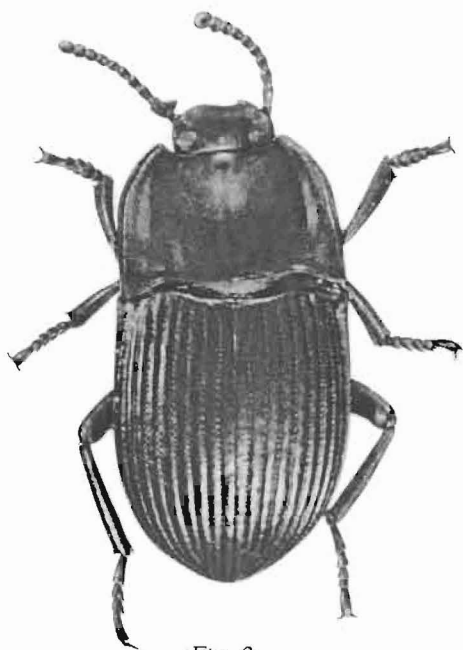


Fig. 2.
Quadrideres lineatus sp. nov.

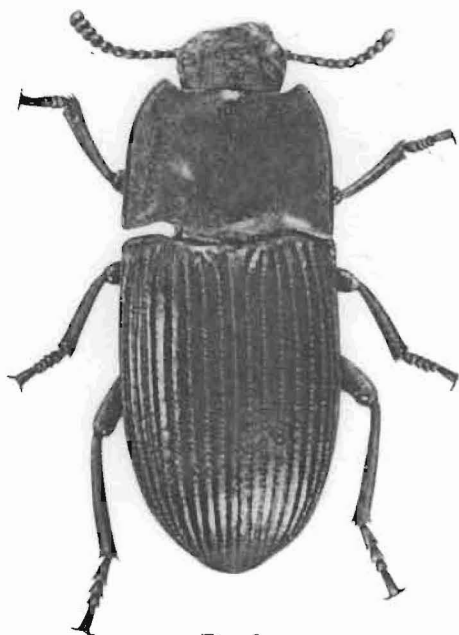


Fig. 3.
Quadrideres dewitteanus sp. nov.

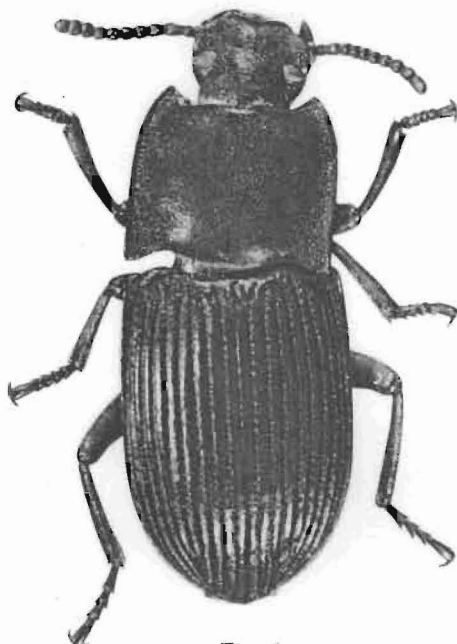


Fig. 4.
Quadrideres elegans sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

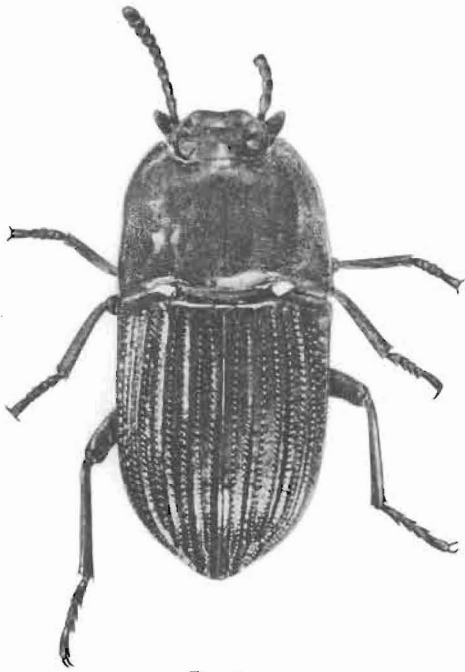


Fig. 1.
Quadrideres scutatus (GERSTAECKER).

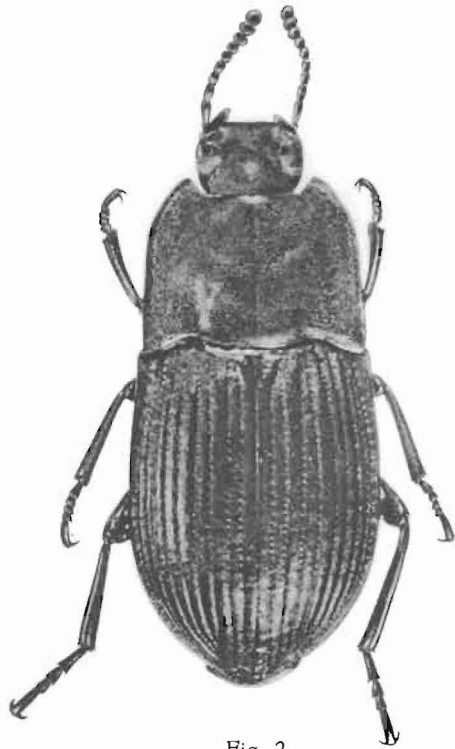


Fig. 2.
Quadrideres stigmaticollis sp. nov.

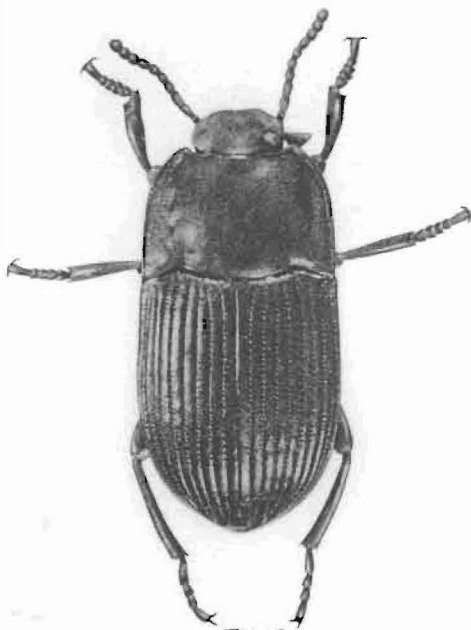


Fig. 3.
Quadrideres ruandanus sp. nov.

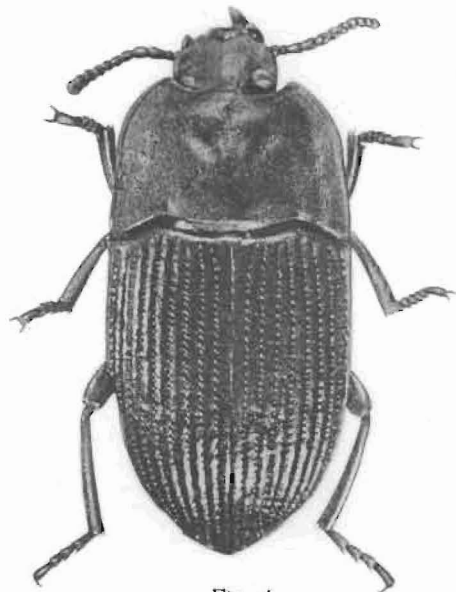


Fig. 4.
Quadrideres robynsi sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

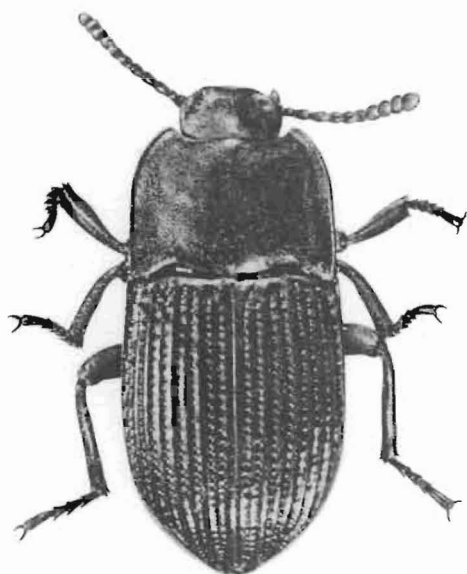


Fig. 1.
Quadrideres lesnei sp. nov.

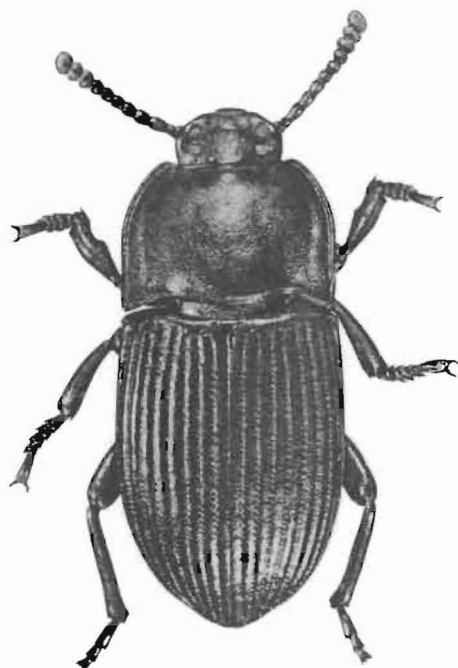


Fig. 2.
Quadrideres interioris (GEBIEN),
a ♂ specimen from «Uganda, leg. R. DUMMER».

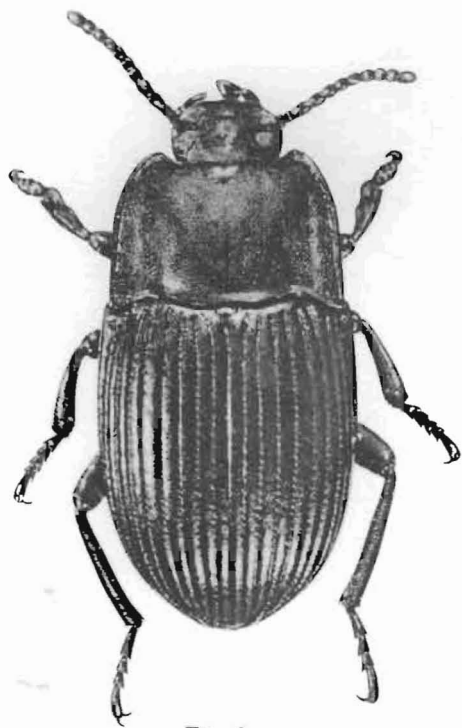


Fig. 3.
Quadrideres interioris (GEBIEN),
a ♂ specimen from «Kasenye».

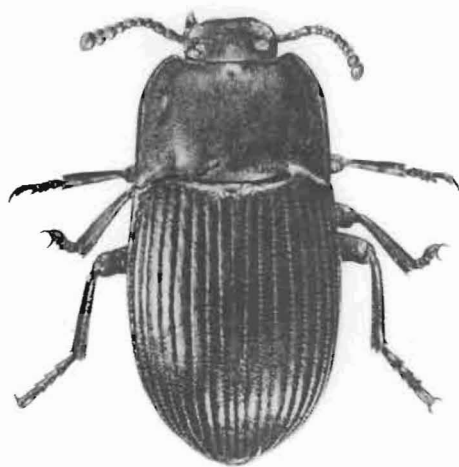


Fig. 4.
Quadrideres interioris (GEBIEN).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

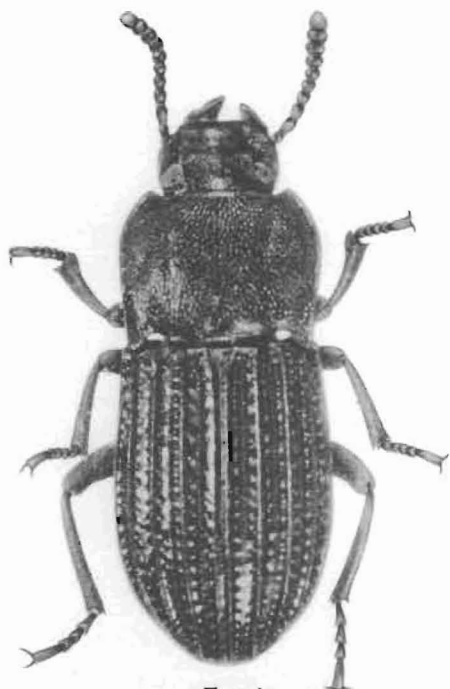


Fig. 1.
Glyptopteryx quadricollis (FAIRMAIRE).



Fig. 2.
Upembarus sympatrius sp. nov.



Fig. 3.
Ectateus ghesquierei sp. nov.

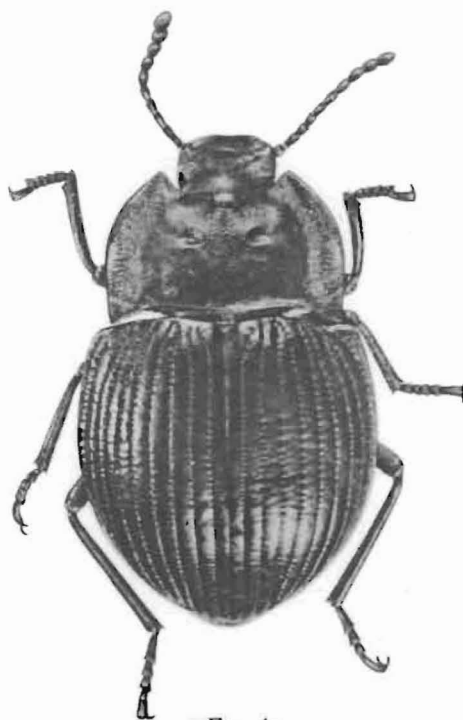


Fig. 4.
Ectateus latipennis sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

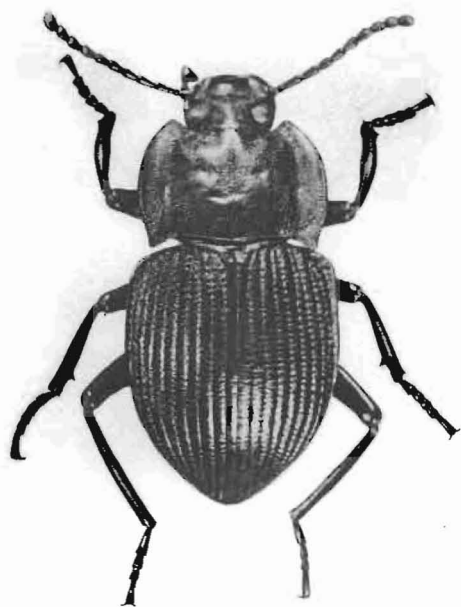


Fig. 1.
Ectateus modestus (FAIRMAIRE).

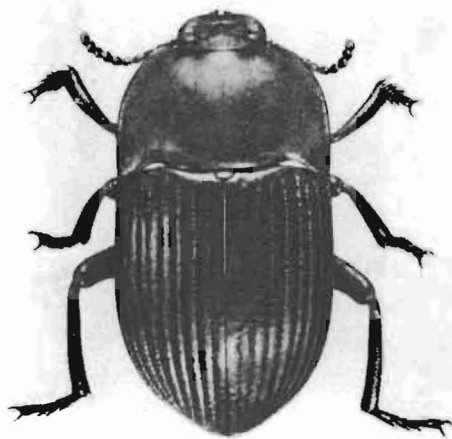


Fig. 2.
Selinus raposoi sp. nov.



Fig. 3.
Selinus planus (FABRICIUS).

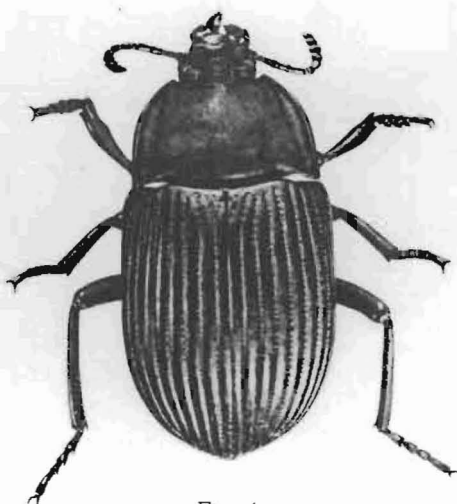


Fig. 4.
Selinus infernalis (GERSTAECKER).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

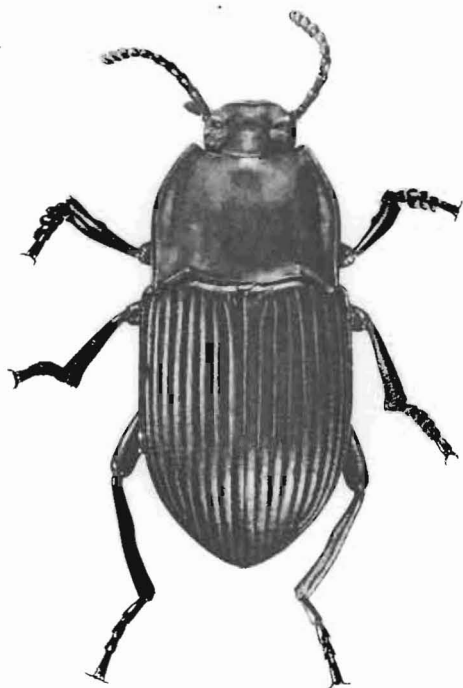


Fig. 1.
Selinus menouxi Mulsant & Rey.

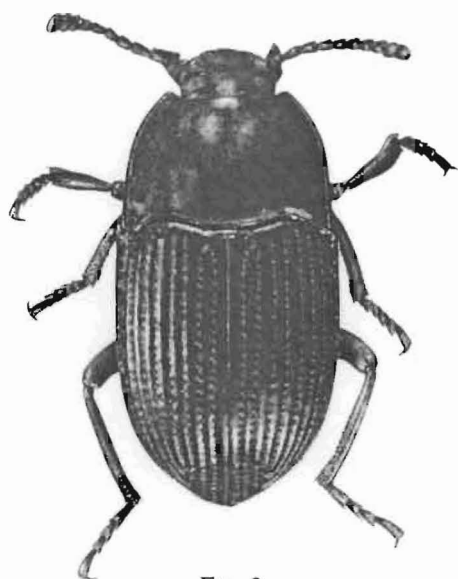


Fig. 2.
Selinus elevatus (Gerstaecker).

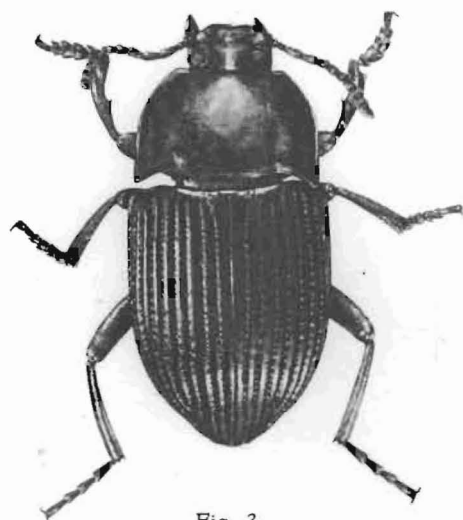


Fig. 3.
Selinus leakeyi sp. nov.

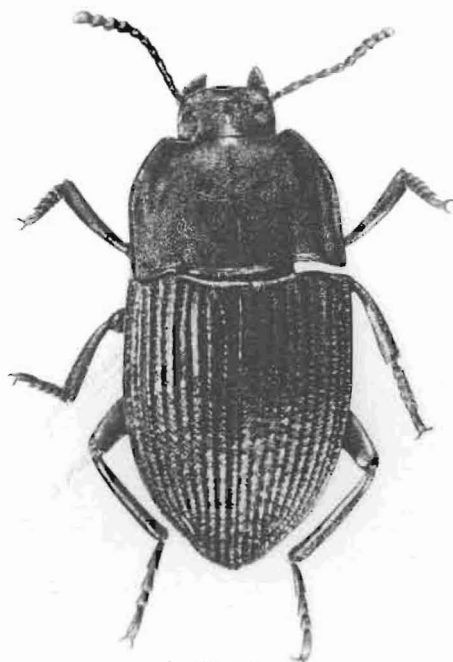


Fig. 4.
Phymatoplatia asperula (Fairmaire).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

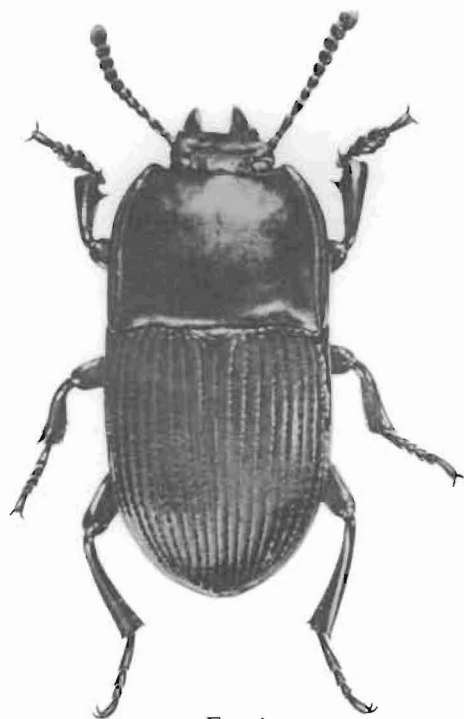


Fig. 1.
Bantodemus caffer (FAHRAEUS).



Fig. 2.
Bantodemus furcatus KOCH.

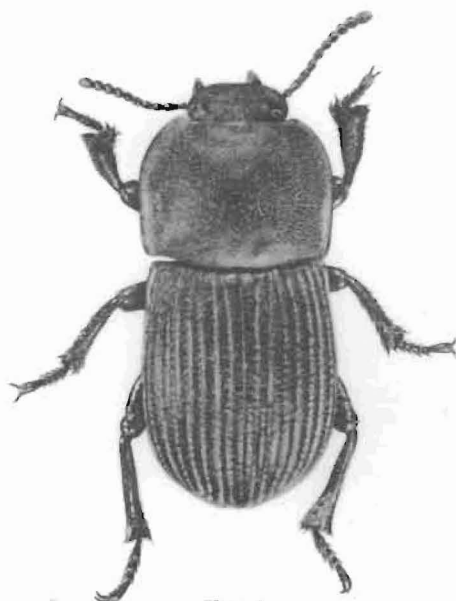


Fig. 3.
Schelodontes frater sp. nov.

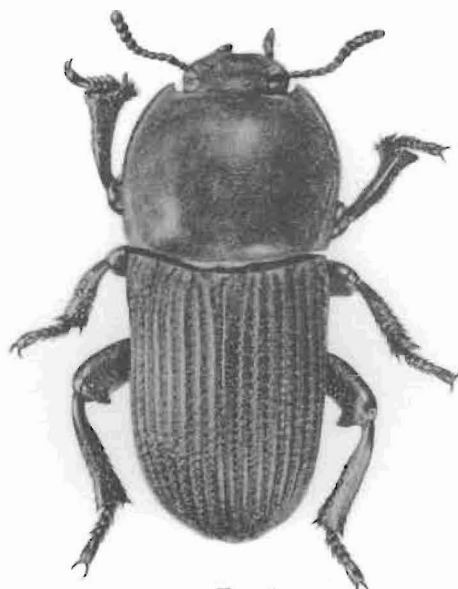


Fig. 4.
Schelodontes terrenus sp. nov.

The Tenebrionidæ of the Upemba Parc

II. — PLATYNOTINI, LITOBORINI and LOENSINI.

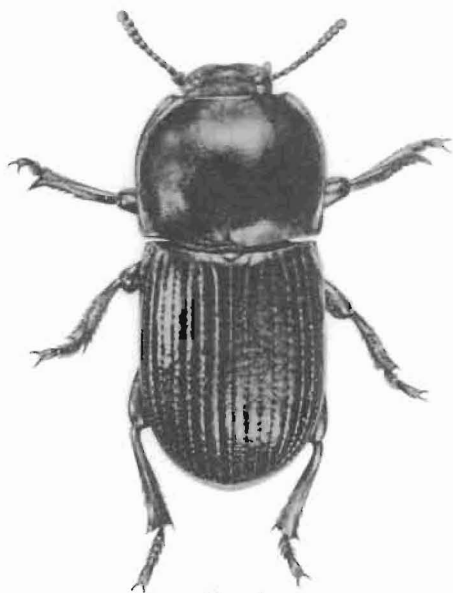


Fig. 1.
Schelodontes mulsanti sp. nov.

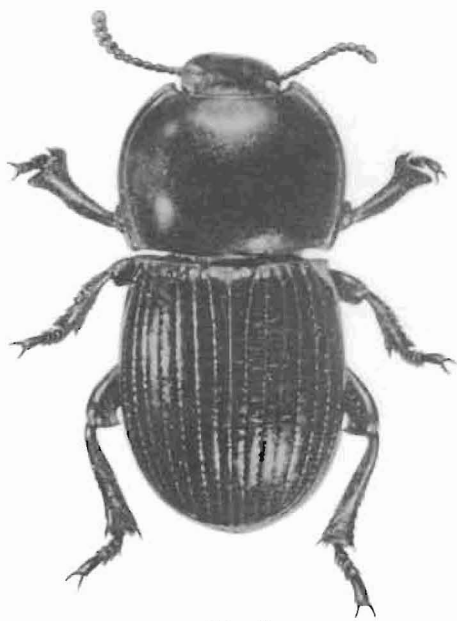


Fig. 2.
Schelodontes rotundicollis sp. nov.

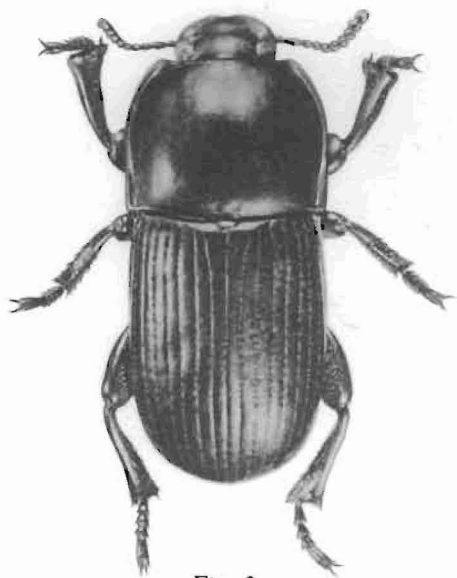


Fig. 3.
Schelodontes nigerrimus (MULSANT & REY).

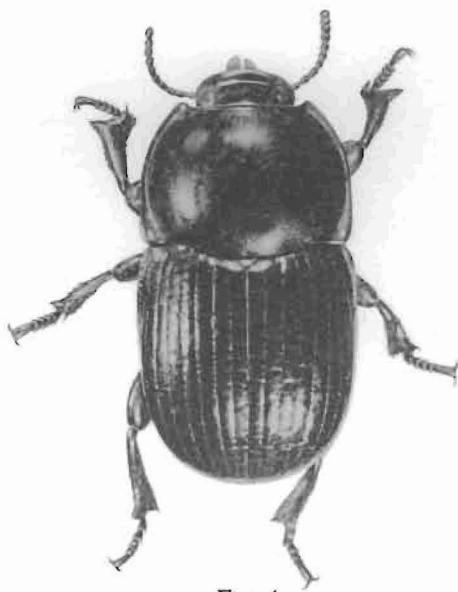


Fig. 4.
Schelodontes apicalis sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

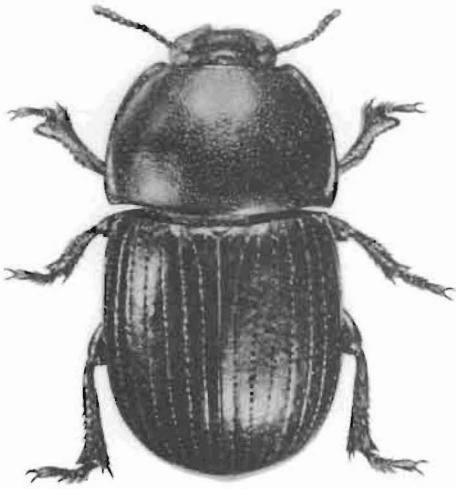


Fig. 1.
Schelodontes gemmeus sp. nov.

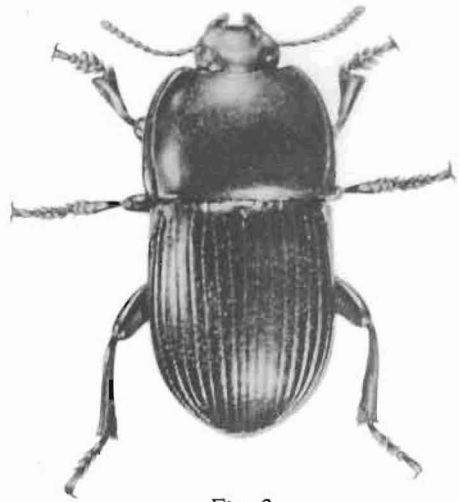


Fig. 2.
Atrocates latemarginatus (MULSANT & REY).

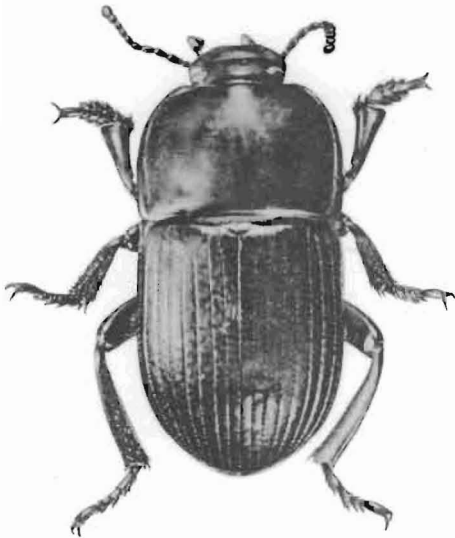


Fig. 3.
Atrocates striatus (QUENSEL).

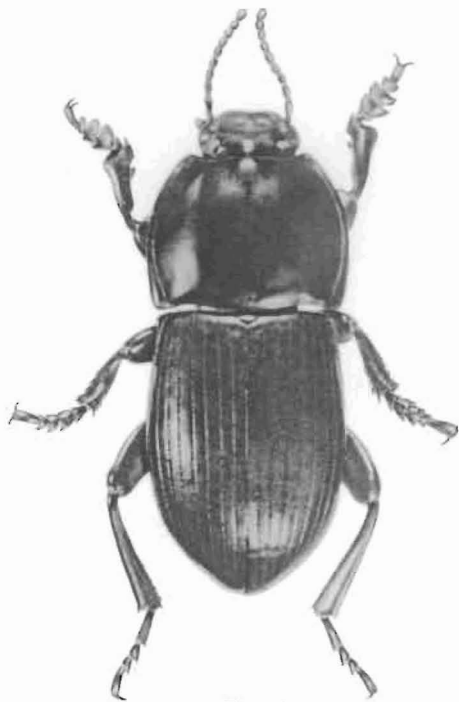


Fig. 4.
Atrocates bisinuatus sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI

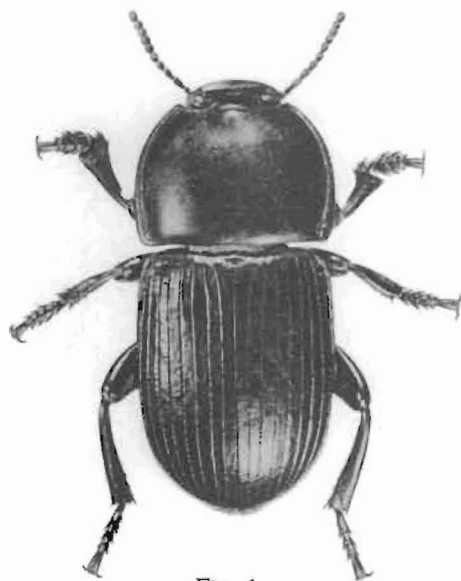


Fig. 1.
Atrocrates montis-cedri sp. nov.

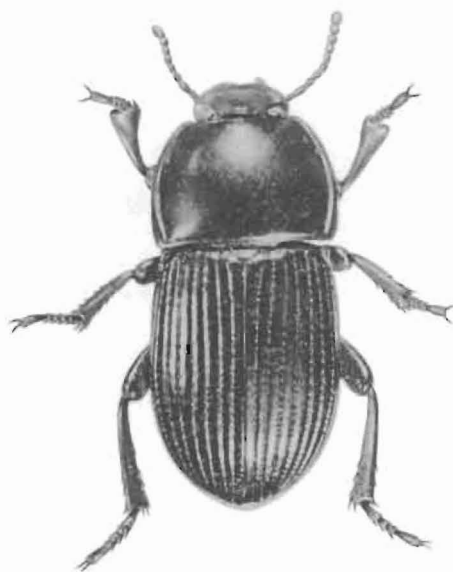


Fig. 2.
Atrocrates peringueyi sp. nov.

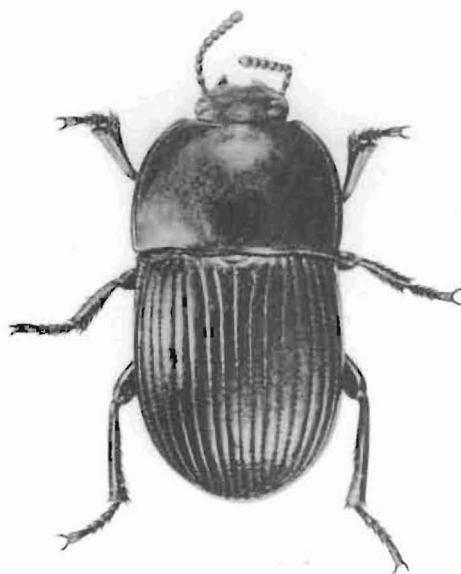


Fig. 3.
Eviropodus alternans (FAHRAEUS).

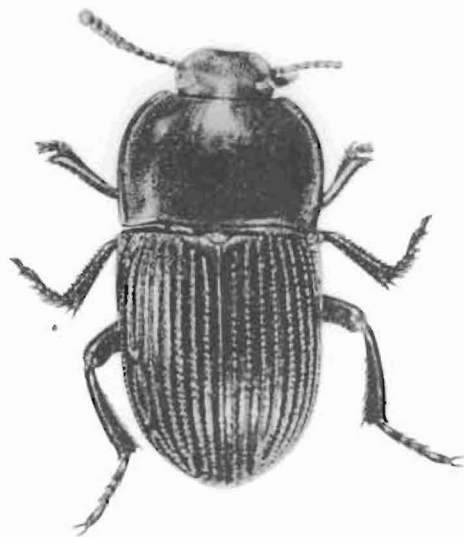


Fig. 4.
Eviropodus clanseyi sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

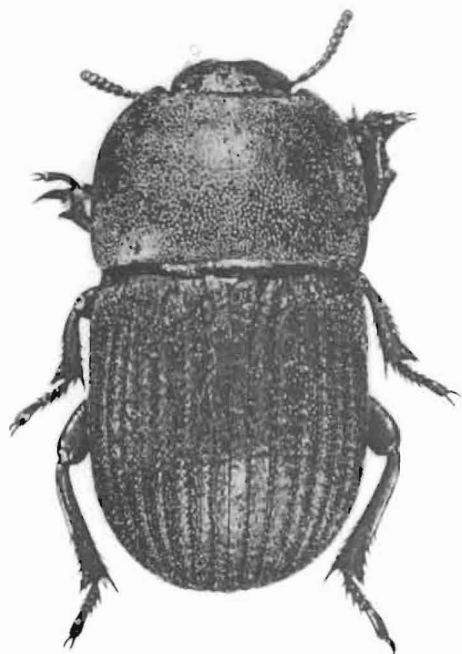


Fig. 1.
Zophodes tristis FAHRAEUS.

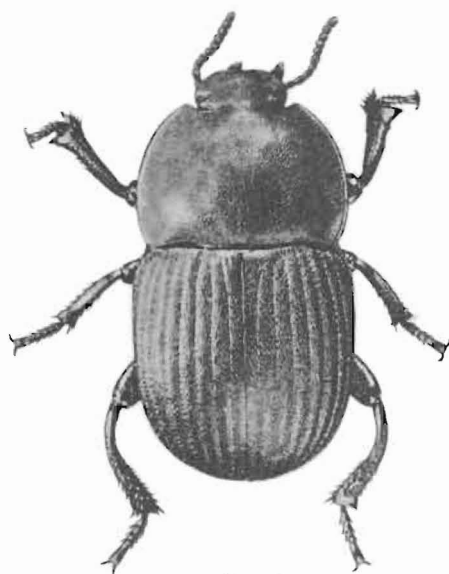


Fig. 2.
Zophodes fitzsimonsi sp. nov.

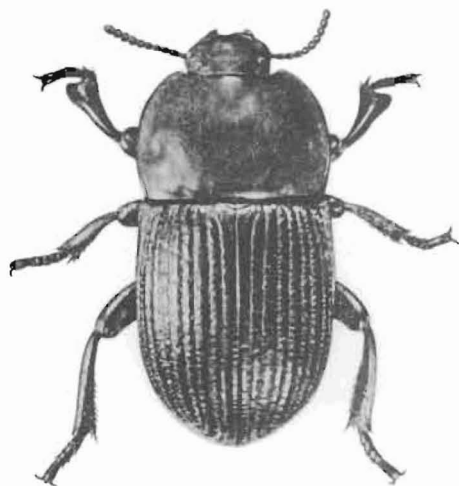


Fig. 3.
Amblychirus brevior (FAIRMAIRE).

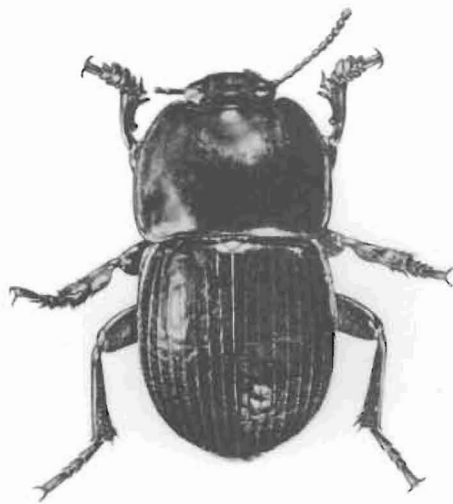


Fig. 4.
Melanopterus podagricus sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

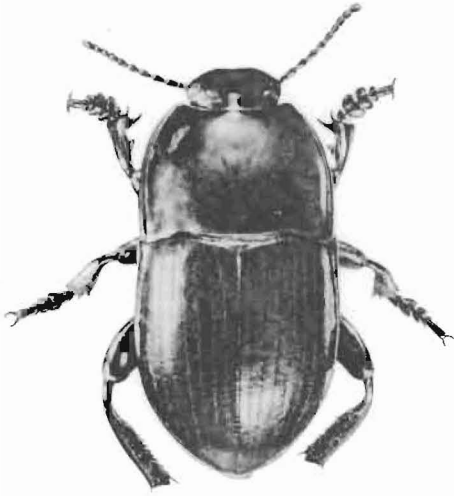


Fig. 1.
Melanopteris spinipes (MULSANT & REY).

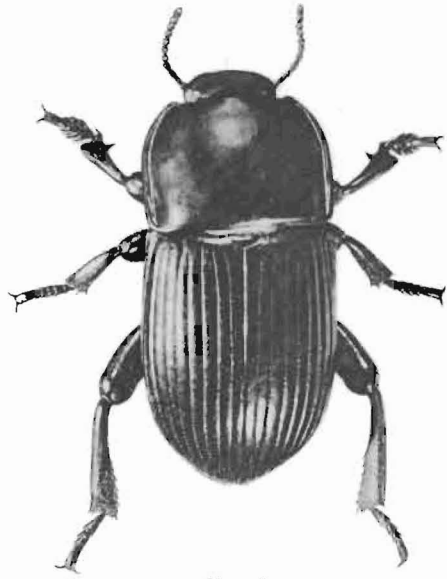


Fig. 2.
Melanopteris marginicollis MULSANT & REY.

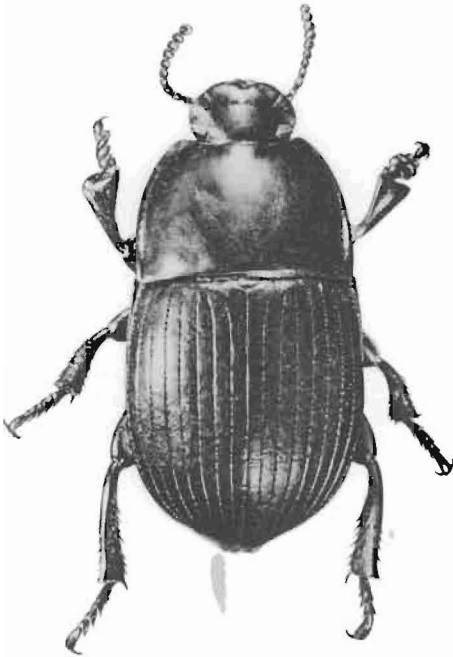


Fig. 3.
Melanopteris amaroides FAHRAEUS.

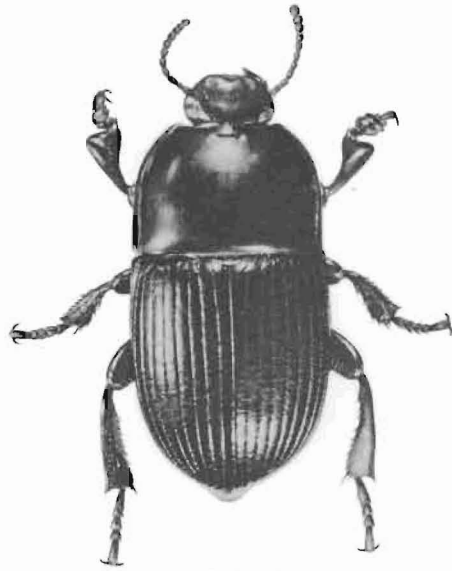


Fig. 4.
Melanopteris trivialis (FAHRAEUS).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

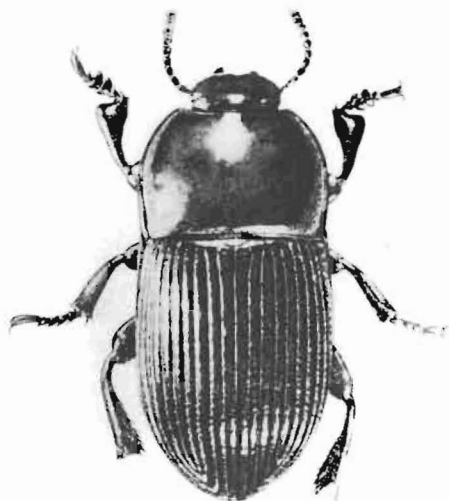


Fig. 1.
Melanopterus varus sp. nov.

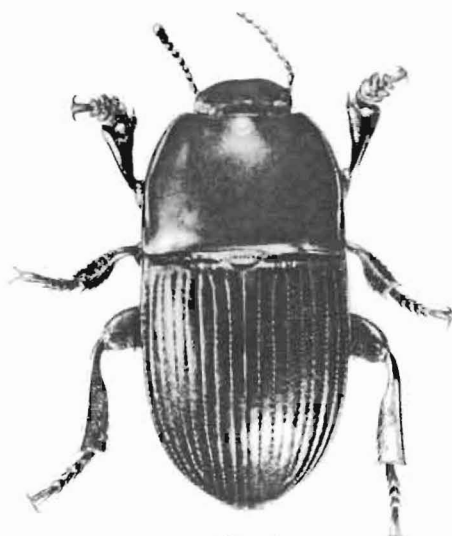


Fig. 2.
Melanopterus dilatipes sp. nov.



Fig. 3.
Melanopterus amicus sp. nov.

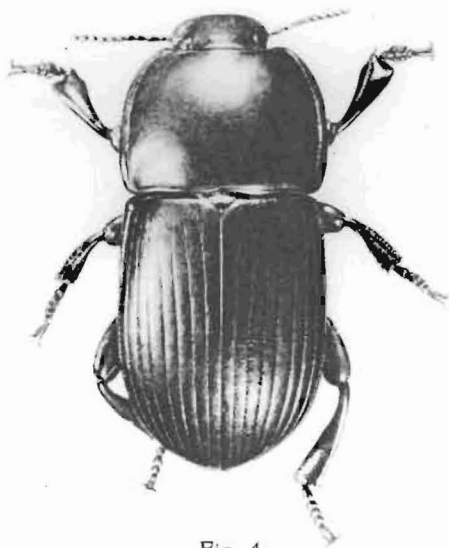


Fig. 4.
Melanopterus incisus sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

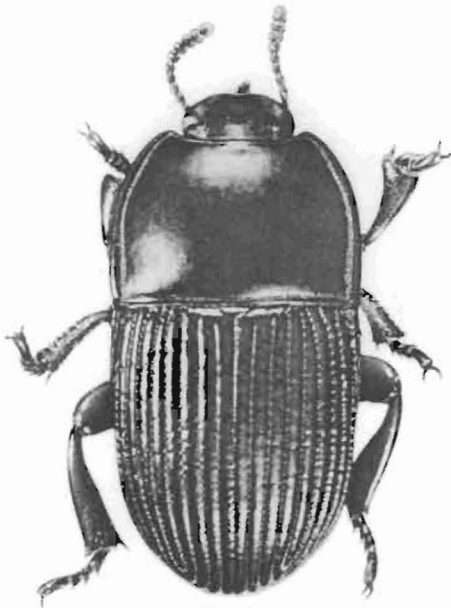


Fig. 1.
Melanopterus porcus (MULSANT & REY).

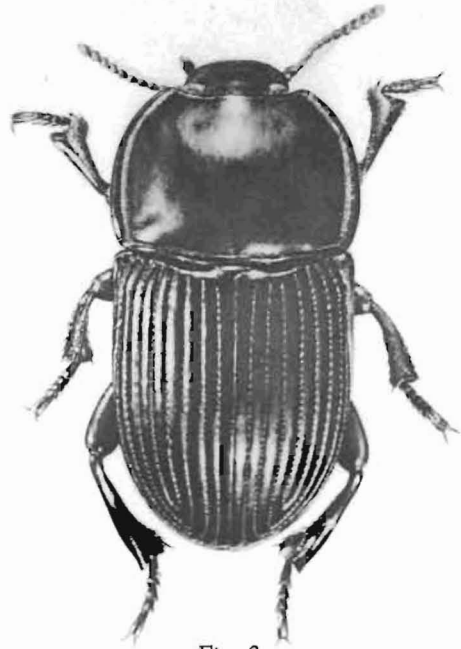


Fig. 2.
Melanopterus exaratus (MULSANT & REY).

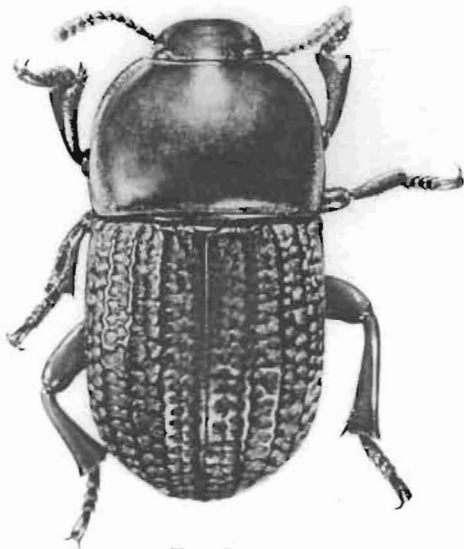


Fig. 3.
Melanopterus porcatus MULSANT & REY.

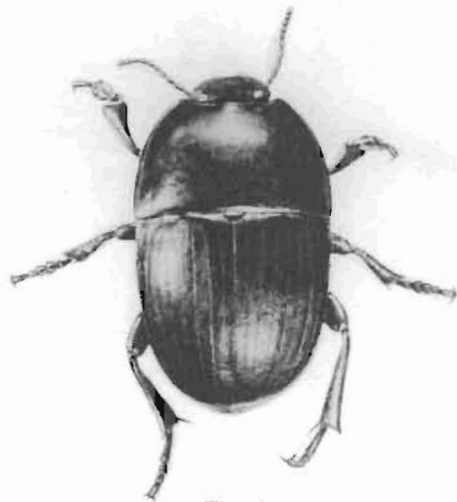


Fig. 4.
Crypticanus edwardsi (MULSANT & REY).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

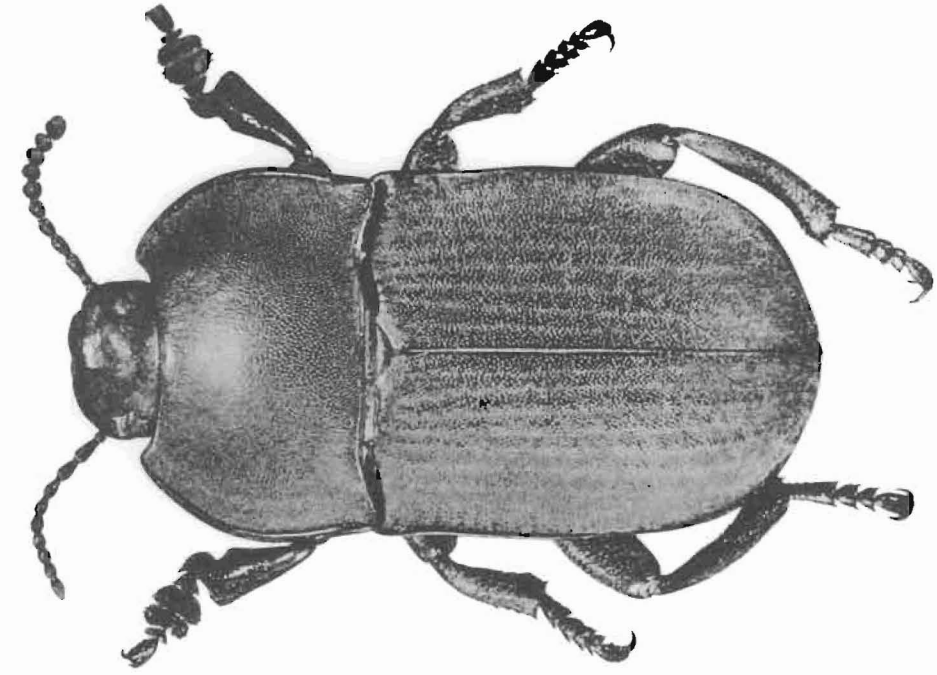


Fig. 2.
Trigonopus flexipes sp. nov.

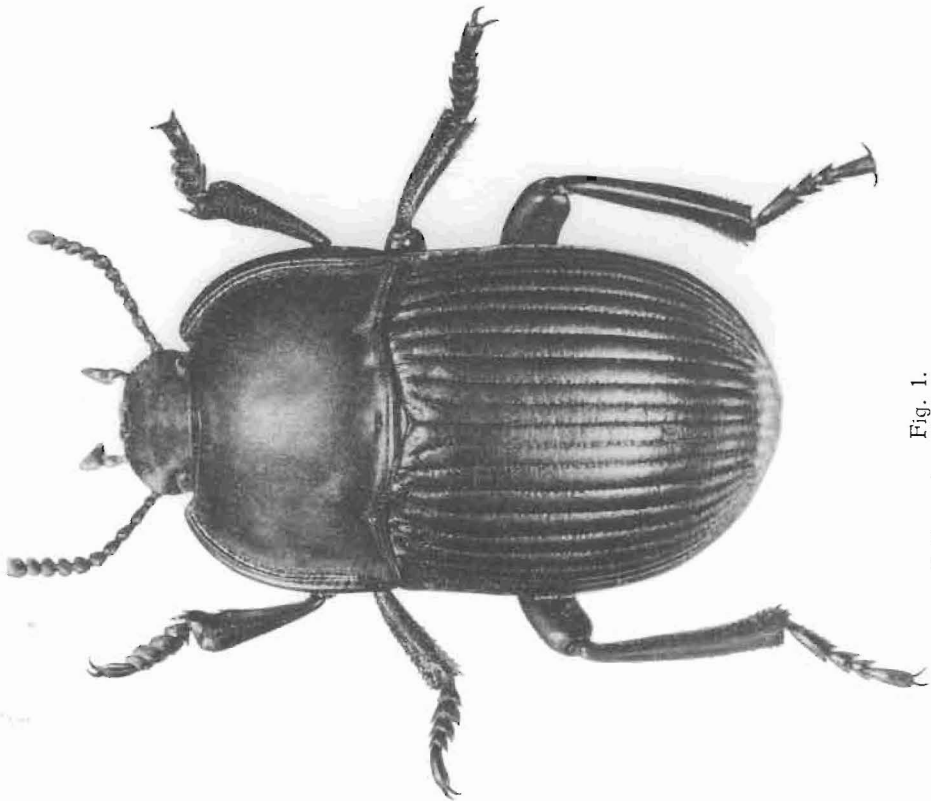


Fig. 1.
Selinopodus giganteus sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.



Fig. 1.
Zadenos (Euzadenos) algoensis sp. nov.

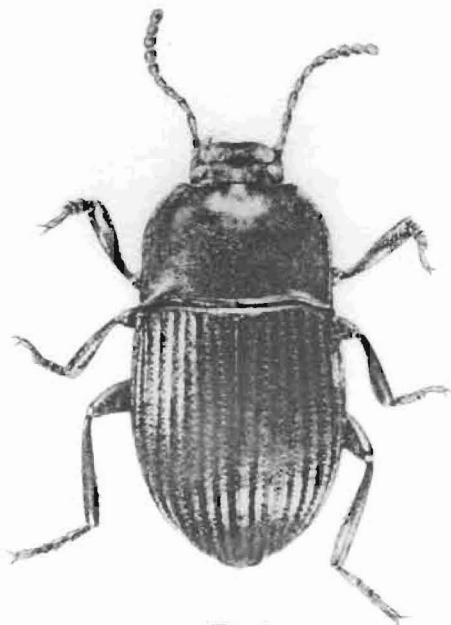


Fig. 2.
Zadenos (Euzadenos) delalandei
(MULSANT & REY).

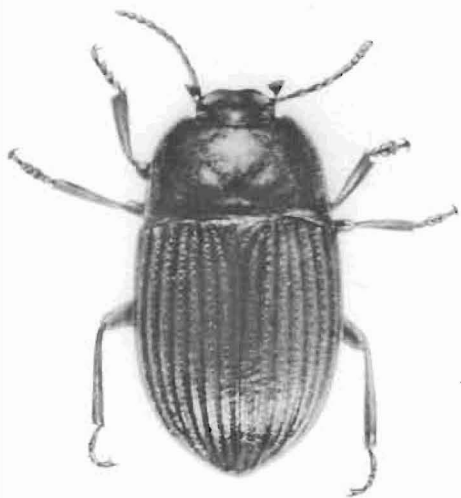


Fig. 3.
Zadenos (Euzadenos) capriciosus sp. nov.

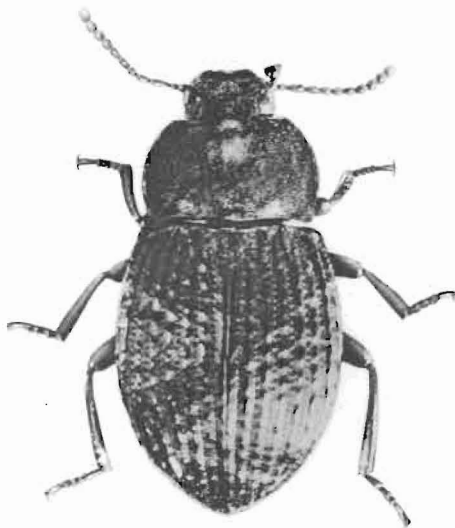


Fig. 4.
Zadenos (Euzadenos) natalensis sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.



Fig. 1.
Zadenos (Euzadenos) lawrencei sp. nov.



Fig. 2.
Zadenos (Euzadenos) rotundicollis sp. nov.

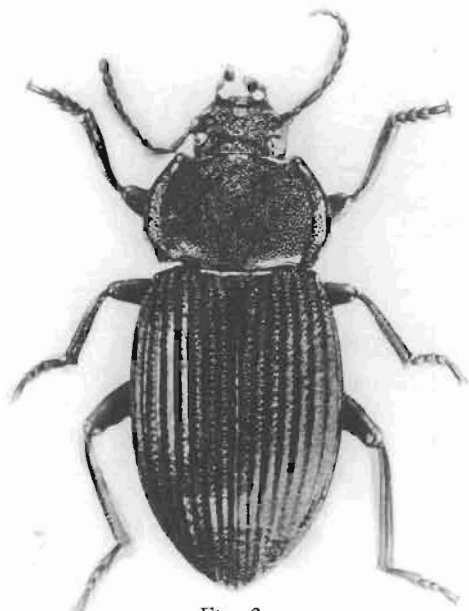


Fig. 3.
Zadenos (Euzadenos) monticola sp. nov.



Fig. 4.
Zadenos (Euzadenos) incostatus sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

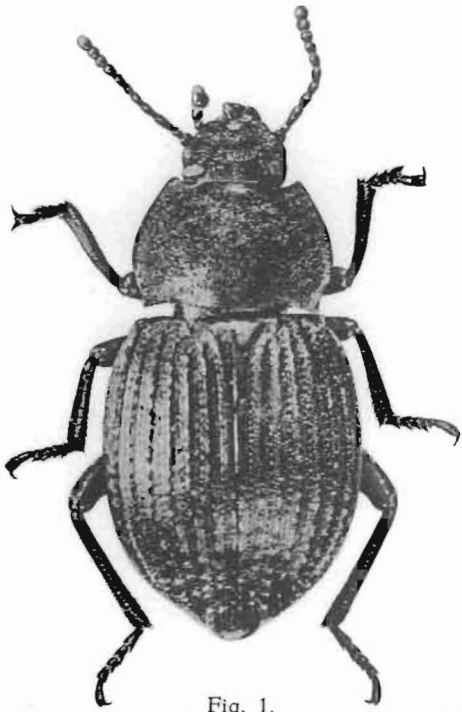


Fig. 1.
Zadenos (Euzadenos) tuberculatus sp. nov.

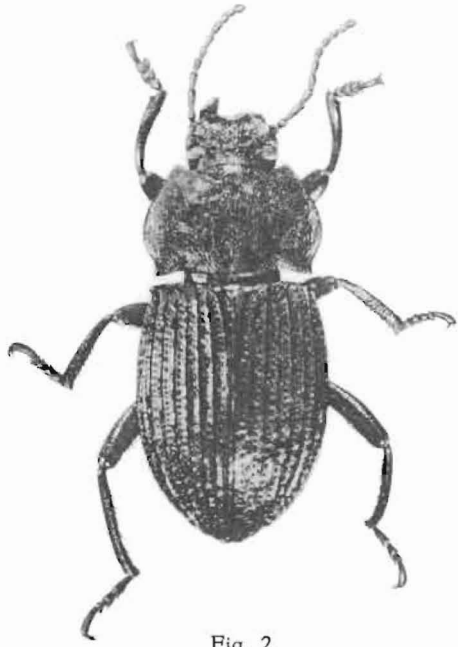


Fig. 2.
Zadenos (Euzadenos) georgensis sp. nov.



Fig. 3.
Zadenos (Euzadenos) visseri sp. nov.

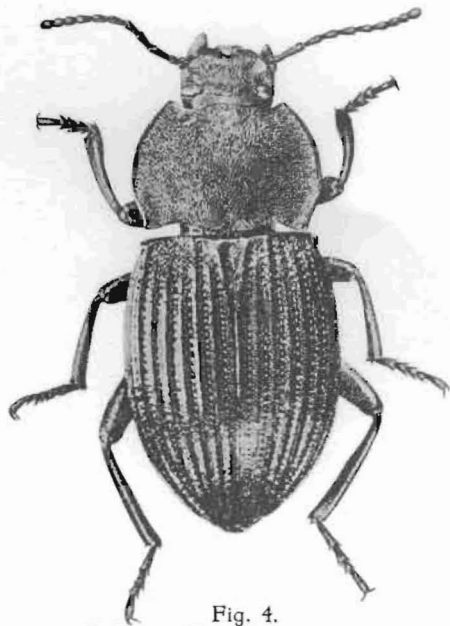


Fig. 4.
Zadenos (Euzadenos) bohemani
(MULSANT & REY).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

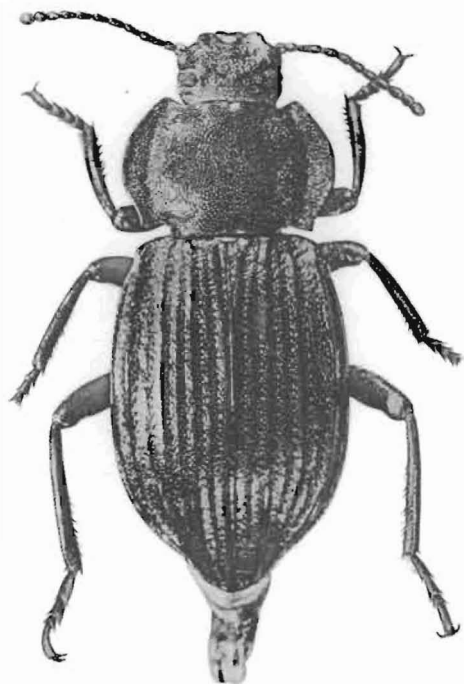


Fig. 1.
Zadenos (Euzadenos) sulcimargo sp. nov.

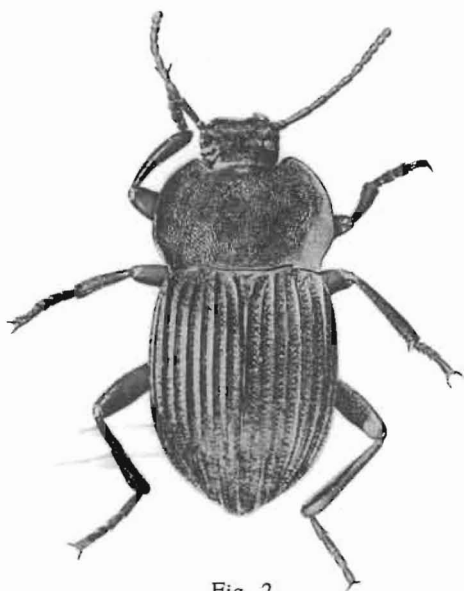


Fig. 2.
Zadenos (Euzadenos) ruficornis (GERMAR).

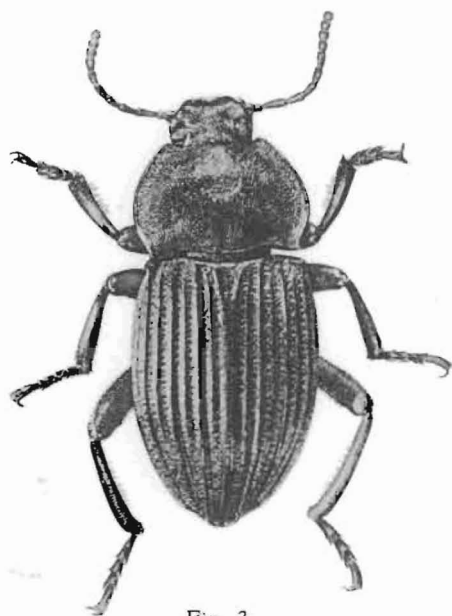


Fig. 3.
Zadenos (Euzadenos) caledonicus sp. nov.

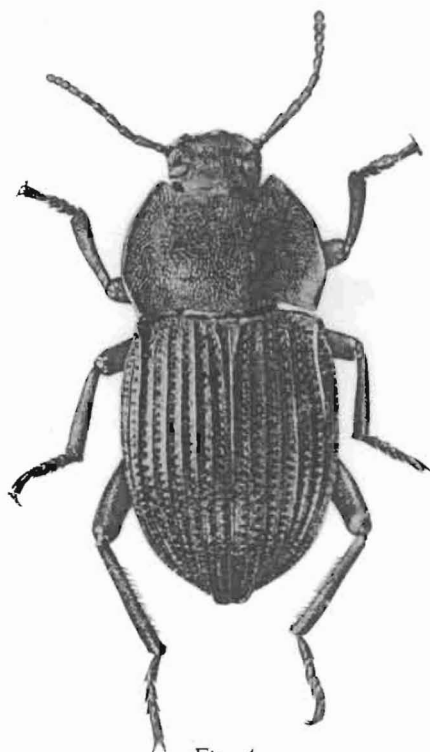


Fig. 4.
Zadenos (Euzadenos) babylomontis sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

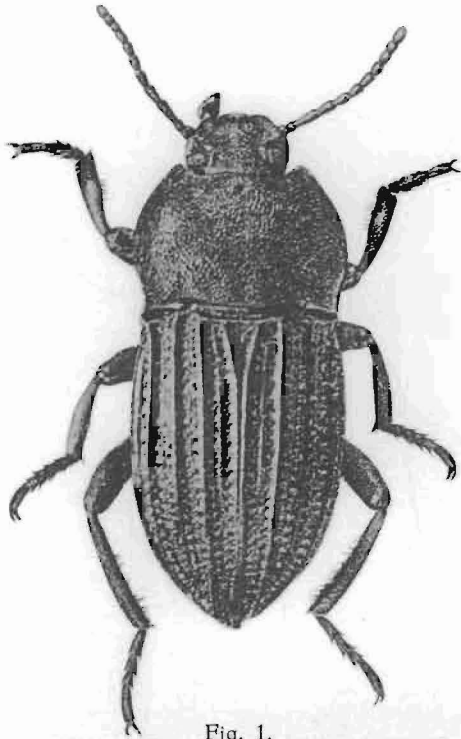


Fig. 1.
Zadenos (Euzadenos) mulsanti sp. nov.



Fig. 2.
Zadenos (Euzadenos) costifer sp. nov.

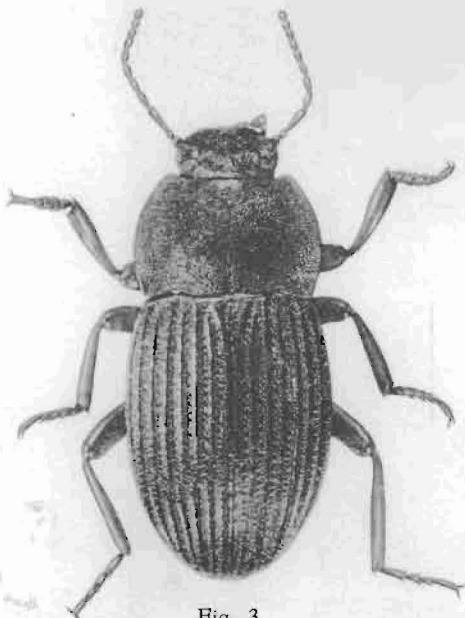


Fig. 3.
Zadenos (s. str.) longipalpus (WIEDEMANN).

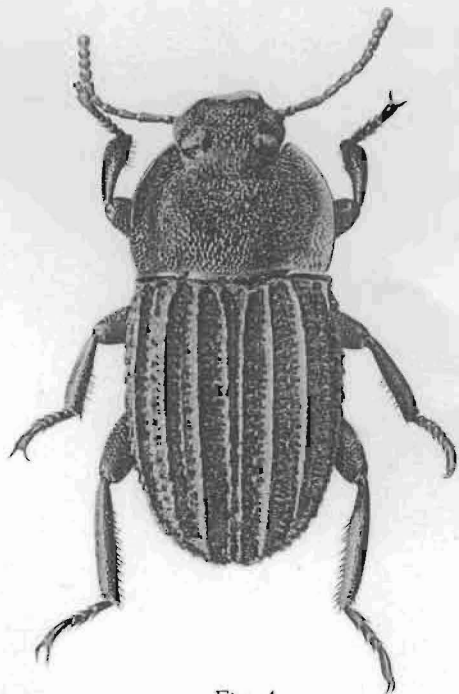


Fig. 4.
Zadenos (Serridenos) solenopistoma sp. nov.

The Tenebrionidæ of the Upemba Parc

II. — PLATYNOTINI, LITOBORINI and LOENSINI.



Fig. 1.
Minorus sculpticeps sp. nov.

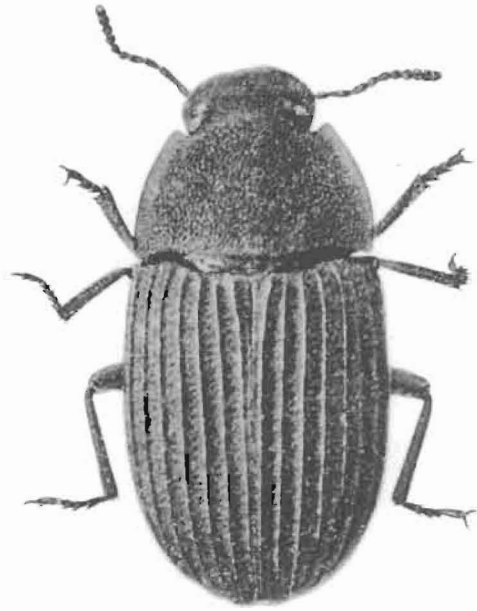


Fig. 2.
Minorus rugicollis (MULSANT & REY).

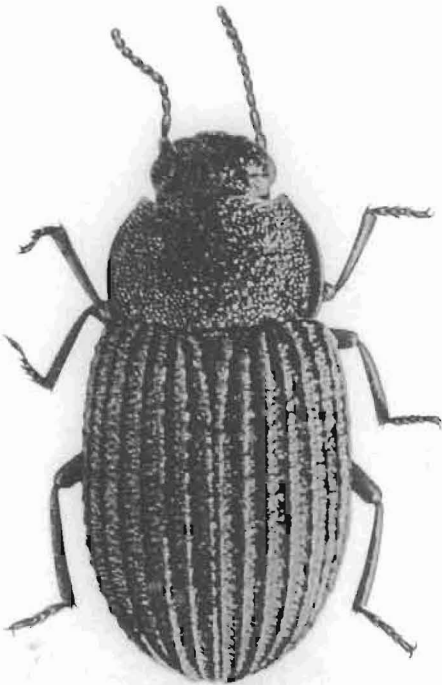


Fig. 3.
Minorus namaquanus sp. nov.



Fig. 4.
Hadroderus tuberculifer sp. nov.

The Tenebrionidæ of the Upemba Parc

II. — PLATYNOTINI, LITOBORINI and LOENSINI.

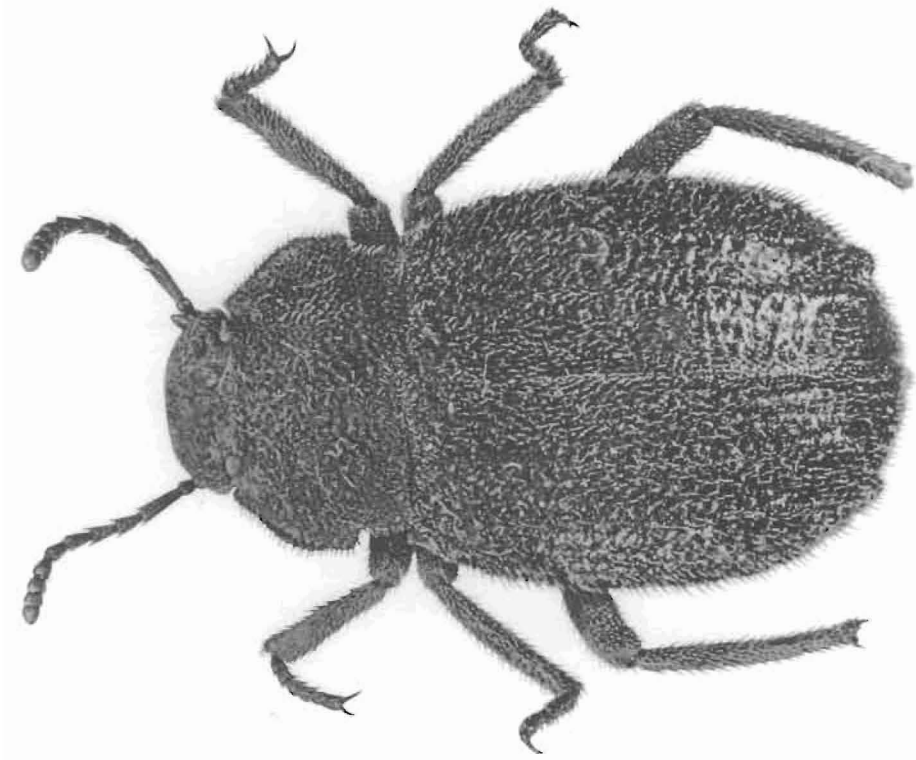


Fig. 2.
Haemodus carinatipennis (PERINGUEY).

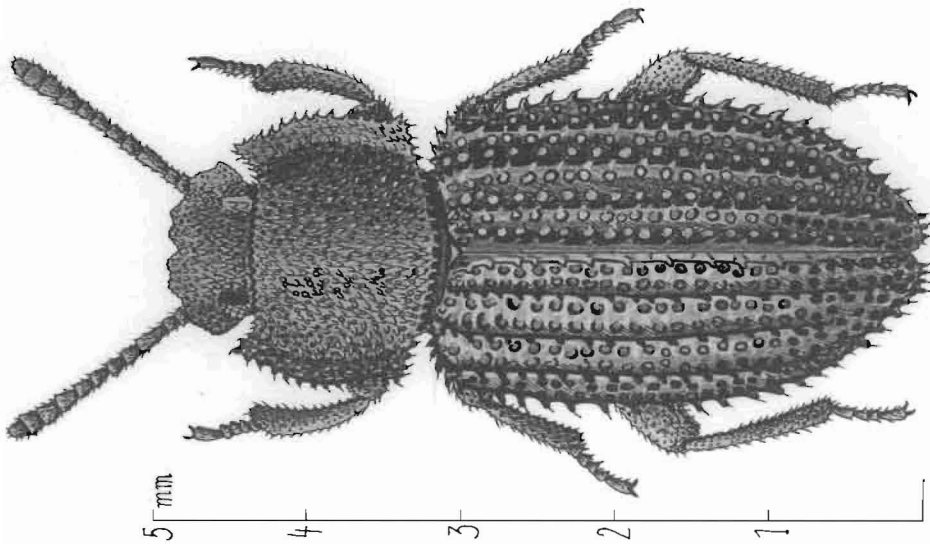


Fig. 1.
Hanstroemium spiniferum sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

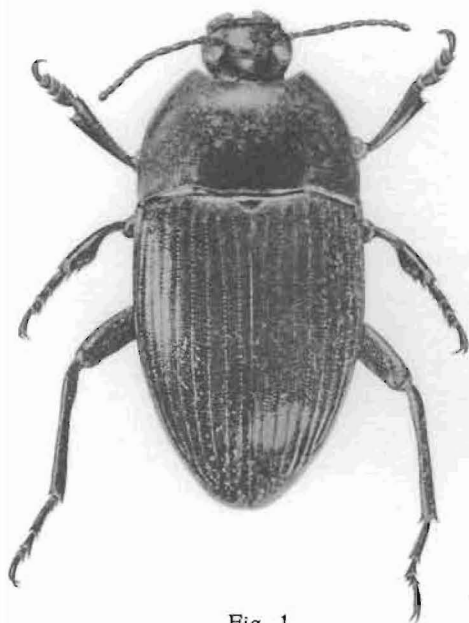


Fig. 1.
Loensus leleupi sp. nov.



Fig. 2.
Loensus pedinopsis sp. nov.
(♀ from Ruanda-Urundi).



Fig. 3.
Loensus wittei sp. nov.



Fig. 4.
Loensus gebieni sp. nov.

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.



Coll. Inst. Parcs Nat. Congo Belge

Photo G.-F. de Witte 1825

Fig. 1. — Katanga savanna. — Upemba National Parc.
Near the junction of Lusinga and Lufwa Rivers (alt. 1760 m).



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Photo G.-F. de Witte 1306

Fig. 2. — Oriental savanna. — Albert National Parc.
Lake Edward plain (alt. 1000 m).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.



Coll. Inst. Parcs. Nat. Congo Belge Photo G.-F. de Witte 3287

Fig. 1. - Equatorial forest. - Albert National Parc.
Tungudu (alt. 800 m).



Coll. Inst. Parcs Nat. Congo Belge

Photo G.-F. de Witte 2045

Fig. 2. — Dry Katanga forest. — Upemba National Parc.
Left bank of Fungwe River (alt. 695 m).

The Tenebrionidæ of the Upemba Parc
II. — PLATYNOTINI, LITOBORINI and LOENSINI.

Sorti de presse le 31 décembre 1956.

L'Institut des Parcs Nationaux du Congo Belge a commencé, en 1937, la publication des résultats scientifiques des missions envoyées aux Parcs Nationaux, en vue d'en faire l'exploration.

Les divers travaux paraissent sous forme de fascicules distincts. Ceux-ci comprennent, suivant l'importance du sujet, un ou plusieurs travaux d'une même mission. Chaque mission a sa numérotation propre.

Les fascicules peuvent s'acquérir séparément.

L'Institut des Parcs Nationaux du Congo Belge n'accepte aucun échange.

Het Instituut der Nationale Parken van Belgisch Congo heeft in 1937 de publicatie aangevangen van de wetenschappelijke uitslagen der zendingen welke naar de Nationale Parken afgevaardigd werden, ten einde ze te onderzoeken.

De verschillende werken verschijnen in vorm van afzonderlijke afleveringen welke, volgens de belangrijkheid van het onderwerp, één of meer werken van dezelfde zending bevatten. Iedere zending heeft haar eigen nummering.

De afleveringen kunnen afzonderlijk aangeschaft worden. Het Instituut der Nationale Parken van Belgisch Congo neemt geen ruilingen aan.

FASCICULES PARUS

VERSCHEENEN AFLEVERINGEN

HORS SÉRIE :

BUITEN REEKS :

Les Parcs Nationaux et la Protection de la Nature.

De Nationale Parken en de Natuurbescherming.

Discours prononcé par le Roi Albert à l'installation de la Commission du Parc National Albert.

Redevoering uitgesproken door Koning Albert op de vergadering tot aanstelling der Commissie van het Nationaal Albert Park.

Discours prononcé par le Duc de Brabant à l'African Society, à Londres, à l'occasion de la Conférence Internationale pour la Protection de la Faune et de la Flore africaines.

Redevoering door den Hertog van Brabant gehouden in de African Society, te Londen, bij de gelegenheid van de Internationale Conferentie voor de Bescherming van de Afrikaansche Fauna en Flora.

La Protection de la Nature. Sa nécessité et ses avantages, par V. VAN STRAELEN, 1937.

De Natuurbescherming. Haar noodzakelijkheid en haar voordeelen, door V. VAN STRAELEN, 1937.

Exploration du Parc National Albert. — Exploratie van het Nationaal Albert Park.

I. — Mission G. F. DE WITTE (1933-1935).

I — Zending G. F. DE WITTE (1933-1935).

Fasc.
Afl.

1.	G. F. DE WITTE (Bruxelles), <i>Introduction</i>	1937
2.	C. ATTEMS (Vienne), <i>Myriopodes</i>	1937
3.	W. MICHAELSEN (Hamburg), <i>Oligochäten</i>	1937
4.	J. H. SCHUURMANS-STEKHOVEN Jr (Utrecht), <i>Parasitic Nematoda</i>	1937
5.	L. BURGEON (Tervueren), <i>Carabidae</i>	} 1937
	M. BANNINGER (Giessen), <i>Carabidae (Scaritini)</i>	
6.	L. BURGEON (Tervueren), <i>Lucanidae</i>	1937
7.	L. BURGEON (Tervueren), <i>Scarabaeidae (S. Fam. Cetoniinae)</i>	1937
8.	R. KLEINE (Stettin), <i>Brenthidae und Lycidae</i>	1937
9.	H. SCHOUTEDEN (Tervueren), <i>Oiseaux</i>	1938
10.	S. FRECHKOP (Bruxelles), <i>Mammifères</i>	1938
11.	J. BEQUAERT (Cambridge, Mass.), <i>Vespides solitaires et sociaux</i>	1938
12.	A. JANSSENS (Bruxelles), <i>Onitini (Coleoptera Lamellicornia, Fam. Scarabaeidae)</i>	1938
13.	L. GSCHWENDNER (Linz), <i>Halipidae und Dytiscidae</i>	1938
14.	E. MEYRICK (Marlborough), <i>Pterophoridae (Tortricina and Tineina)</i>	1938
15.	C. MOREIRA (Rio de Janeiro), <i>Passalidae</i>	1938
16.	R. J. H. TEUNISSEN (Utrecht), <i>Tardigraden</i>	1938
17.	W. D. HINCKS (Leeds), <i>Dermaptera</i>	1938
18.	R. HANITSCH (Oxford), <i>Blattids</i>	1938
19.	G. OCHS (Frankfurt a. Main), <i>Gyrinidae</i>	1938
20.	H. DEBAUCHE (Louvain), <i>Geometridae</i>	1938
21.	A. JANSSENS (Bruxelles), <i>Scarabaeini (Coleoptera Lamellicornia, Fam. Scarabaeidae)</i>	1938
22.	J. H. SCHUURMANS-STEKHOVEN Jr et R. J. H. TEUNISSEN (Utrecht), <i>Nématodes libres terrestres</i>	1938
23.	L. BURGEON (Tervueren), <i>Curculionidae, S. Fam. Apioninae</i>	1938
24.	M. POLL (Tervueren), <i>Poissons</i>	1939
25.	A. JANSSENS (Bruxelles), <i>Oniticellini (Coleoptera Lamellicornia, Fam. Scarabaeidae)</i>	1939
26.	L. BURGEON (Tervueren), <i>Histeridae</i>	1939
27.	<i>Arthropoda : Hexapoda : 1. Orthoptera : Mantidae, par M. BEIER (Wien); 2. Gryllidae, par L. CHOPARD (Paris); 3. Coleoptera : Cicindelidae, par W. HORN (Berlin); 4. Rutilinae, par F. OHAUS (Mainz); 5. Heteroceridae, par R. MAMITZA (Wien); 6. Prioninae, par A. LAMEERE (Bruxelles); Arachnoidea : 7. Opiliones, par C. FR. ROEWER (Bremen)</i>	1939
28.	A. HUSTACHE (Lagny), <i>Curculionidae</i>	1939
29.	A. JANSSENS (Bruxelles), <i>Coprini (Coleoptera Lamellicornia, Fam. Scarabaeidae)</i>	1940
30.	L. BERGER (Bruxelles), <i>Lepidoptera-Rhopalocera</i>	1940
31.	V. LABOISSIÈRE (Paris), <i>Galerucinae (Coleoptera Phytophaga, Fam. Chrysomelidae)</i>	1940
32.	V. LALLEMAND (Bruxelles), <i>Homoptera (Cicadidae, Cercopidae, Fulgoridae, Dictyophoridae, Ricaniidae, Cixiidae, Derbidae, Flatidae)</i>	1941
33.	G. F. DE WITTE (Bruxelles), <i>Batraciens et Reptiles, avec Introduction de V. VAN STRAELEN.</i>	1941

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34.	L. MADER (Wien), <i>Coccinellidae</i> . — I. Teil	1941
	II. Teil	1950
35.	R. PAULIAN (Paris), <i>Aphodiinae</i> (<i>Coleoptera Lamellicornia</i> , Fam. <i>Scarabaeidae</i>)	1942
36.	A. VILLIERS (Paris), <i>Languriinae</i> et <i>Cladoxeninae</i> (<i>Coleoptera Clavicornia</i> , Fam. <i>Erotylidae</i>)	1942
37.	L. BURGEON (Tervueren), <i>Chrysomelidae</i> (S. Fam. <i>Eumolpinae</i>)	1942
38.	A. JANSSENS (Bruxelles), <i>Dynastinae</i> (<i>Coleoptera Lamellicornia</i> , Fam. <i>Scarabaeidae</i>).	1942
39.	V. LABOISSIÈRE (Paris), <i>Halticinae</i> (<i>Coleoptera Phytophaga</i> , Fam. <i>Chrysomelidae</i>)	1942
40.	F. BORCHMANN (Hamburg), <i>Lagriidae</i> und <i>Alleculidae</i>	1942
41.	H. DEBAUCHE (Louvain), <i>Lepidoptera Heterocera</i>	1942
42.	E. UHMANN (Stollberg), <i>Hispinae</i>	1942
43.	<i>Arthropoda</i> : <i>Arachnoidea</i> : 1. <i>Pentastomida</i> , par R. HEYMONS (Berlin); <i>Hexapoda</i> : 2. <i>Orthoptera</i> : <i>Phasmidae</i> , par K. GUENTHER (Dresden); 3. <i>Hemiptera</i> : <i>Membracidae</i> , by W. D. FUNKHOUSER (Lexington U.S.A.); 4. <i>Coleoptera</i> : <i>Silphidae</i> , par A. JANSSENS (Bruxelles); 5. <i>Dryopidae</i> , par J. DELÈVE (Bruxelles); 6. <i>Lymexylonidae</i> , par L. BURGEON (Tervueren); 7. <i>Bostrychidae</i> , par P. LESNE (Paris); 8. <i>Scarabaeidae</i> : <i>Geotrupinae</i> , par A. JANSSENS (Bruxelles); 9. <i>Cassidinae</i> , von A. SPAETH (Wien); 10. <i>Ipidae</i> , von H. EGGERS (Bad Nauheim); 11. <i>Platypodidae</i> , par K. E. SCHEDL (Hann. Münden); 12. <i>Hymenoptera</i> : <i>Sphegidae</i> , by G. ARNOLD (Bulawayo)	1943
44.	G. MARLIER (Bruxelles), <i>Trichoptera</i>	1943
45.	H. SCHOUTEDEN (Tervueren), <i>Reduviidae</i> , <i>Emesidae</i> , <i>Hemicocephalidae</i> (<i>Hemiptera Heteroptera</i>)	1944
46.	R. PAULIAN (Paris), <i>Hybosoridae</i> et <i>Trogidae</i> (<i>Coleoptera Lamellicornia</i>)	1944
47.	H. DE SAEGER (Bruxelles), <i>Microgasterinae</i> (<i>Hymenoptera Apocrita</i>)	1944
48.	G. SCHMITZ (Louvain), <i>Chalcididae</i> (<i>Hymenoptera Chalcidoidea</i>)	1946
49.	H. DEBAUCHE (Louvain), <i>Mymaridae</i> (<i>Hymenoptera Apocrita</i>)	1949
50.	H. DE SAEGER (Bruxelles), <i>Euphorinae</i> (<i>Hymenoptera Apocrita</i> , Fam. <i>Braconidae</i>)	1946
51.	A. COLLART (Bruxelles), <i>Helomyzinae</i> (<i>Diptera Brachycera</i> , Fam. <i>Helomyzidae</i>)	1946
52.	P. VANSCHUYTBROECK (Bruxelles), <i>Sphaerocerinae</i> (<i>Diptera Acalyptratae</i> , Fam. <i>Sphaeroceridae</i>)	1948
53.	H. DE SAEGER (Bruxelles), <i>Cardiochilinae</i> , <i>Sigalphinae</i> (<i>Hymenoptera Apocrita</i> , Fam. <i>Braconidae</i>)	1948
54.	A. THÉRY (Neully), <i>Buprestidae</i> (<i>Coleoptera Sternozia</i>)	1948
55.	M. GOETGHEBUER (Gand), <i>Ceratopogonidae</i> (<i>Diptera Nematocera</i>)	1948
56.	H. SCHOUTEDEN (Tervueren), <i>Coreidae</i> (<i>Hemiptera Heteroptera</i>)	1948
57.	H. F. STROHECKER (Miami), <i>Endomychidae</i> (<i>Coleoptera Clavicornia</i>)	1949
58.	R. POISSON (Rennes), <i>Hémiptères aquatiques</i>	1949
59.	M. CAMERON (London), <i>Staphylinidae</i> (<i>Coleoptera Polyphaga</i>)	1950
60.	J. PASTEELS (Bruxelles), <i>Tenthredinidae</i> (<i>Hymenoptera Tenthredinoidea</i>)	1949
61.	F. C. FRASER (Bornemouth), <i>Odonata</i>	1949
62.	D. ELMO HARDY (Honolulu, Hawaii), <i>Dorilaidae</i> (<i>Diptera</i>)	1950
63.	J. BALFOUR-BROWNE (London), <i>Palpicornia</i>	1950
64.	R. LAURENT, <i>Genres Afrixalus et Hyperolius</i> (<i>Amphibia Salientia</i>)	1950
65.	D. ELMO HARDY (Honolulu, Hawaii), <i>Bibionidae</i> (<i>Diptera Nematocera</i>)	1950
66.	J. VERBEKE (Gand), <i>Sciomyzidae</i> (<i>Diptera Cyclorrhapha</i>)	1950
67.	H. OLDROYD (London), <i>Genera Haematopota and Hippocentrum</i> (<i>Diptera</i> , Fam. <i>Tabanidae</i>)	1950
68.	A. REICHENSBERGER (Bonn) <i>Paussidae</i>	1950
69.	H. HAUPT (Halle), <i>Pompilidae</i> (<i>Hymenoptera Sphecoidea</i>)	1950
70.	<i>Hexapoda</i> : 1. <i>Orthoptera</i> : <i>Tridactylidae</i> , par L. CHOFARD (Paris); 2. <i>Hemiptera</i> : <i>Coccidae</i> , par P. VAYSSIÈRE (Paris); 3. <i>Coleoptera</i> : <i>Trogositidae</i> , par G. FAGEL (Bruxelles); <i>Erotylidae</i> von K. DELKESKAMP (Berlin); <i>Bostrychidae</i> , par J. VRYDAGH (Bruxelles); <i>Megalopodinae</i> , by G. E. BRYANT (London); <i>Anthribidae</i> , by K. JORDAN (Tring); 4. <i>Diptera</i> : <i>Therevidae</i> , par P. VANSCHUYTBROECK (Bruxelles); <i>Conopidae</i> , par P. VANSCHUYTBROECK (Bruxelles); 5. <i>Hymenoptera</i> : <i>Chrysididae</i> , von S. ZIMMERMANN (Wien)	1950
71.	K. ERMISCH (Radiumbad), <i>Mordellidae</i> (<i>Coleoptera Heteromera</i>)	1950
72.	J. VERBEKE (Gand), <i>Tæniapterinæ</i> (<i>Diptera Cyclorrhapha</i> , Fam. <i>Micropezidae</i>)	1951
73.	P. L. G. BENOIT (Tervueren), <i>Dryinidae</i> (<i>Hymenoptera Aculeata</i>); <i>Evantidae</i> (<i>Hymenoptera Terebrantia</i>)	1951
74.	P. VANSCHUYTBROECK (Bruxelles), <i>Dolichopodidae</i> (<i>Diptera Brachycera Orthorrhapha</i>).	1951
75.	N. BRUCE (Stockholm), <i>Cryptophagidae</i> (<i>Coleoptera Polyphaga</i>)	1951
76.	M. C. MEYER (Orono), <i>Hirudinea</i>	1951
77.	1. <i>Thysanoptera</i> , by H. PRIESNER (Cairo); 2. <i>Suctorina</i> (<i>Aphaniptera</i>), par J. COOREMAN (Bruxelles); 3. <i>Homoptera</i> , par V. LALLEMAND et H. SYNAVE (Bruxelles); 4. <i>Coleoptera</i> : <i>Sagridae</i> , par P. JOLIVET (Bruxelles); <i>Clytridae</i> , par P. JOLIVET (Bruxelles); 5. <i>Diptera</i> : <i>Asilidae</i> , by S. W. BROMLEY (Stamford, U.S.A.); <i>Simuliidae</i> , g. <i>Simulium</i> , by P. FREEMAN (London)	1951
78.	J. VERBEKE (Zürich), <i>Psilidae</i> (<i>Diptera Cyclorrhapha</i>)	1952

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79. 1. *Dermaptera*, by W. D. HINCKS (Manchester); 2. *Hemiptera : Cixiidæ*, par H. SYNAVE (Bruxelles); 3. *Reduviidæ*, par A. VILLIERS (Dakar); 4. *Coleoptera Laminæ*, par S. BREUNING (Paris); 5. *Chrysomelinæ*, von J. BECHYNE (München); 6. *Diptera : Celyphidæ*, par P. VANSCHUYTBROECK (Bruxelles); 7. *Hippoboscidæ* and *Nycteribiidæ*, by J. BEQUAERT (Cambridge, Mass.); 8. *Argidæ*, par J. PASTEELS (Bruxelles) ... 1953
80. L. MADER (Wien), *Coccinellidæ* (III^e Teil) ... 1954
81. L. P. MESNIL (Feldmeilen), Genres *Actia* et voisins (*Diptera Brachycera Calyptrata*). 1954
82. + A. THÉRY (Paris), Genre *Paracylindromorphus* (*Coleoptera Buprestidæ*) ... 1954
83. P. FREEMAN (London), *Chironomidæ* (*Diptera Nematocera*) ... 1955
84. W. EVANS (Sydney), *Cicadellidæ* (*Hemiptera-Homoptera*) ... 1955
85. J. COOREMAN (Bruxelles), *Acari* ... 1955
86. 1. *Hemiptera Heteroptera : Tingidæ*, by C. J. DRAKE (Ames, Iowa); 2. *Coleoptera Clavicornia : Colydiidæ*, by R. D. POPE (London); 3. *Diptera Nematocera : Anisopodidæ*, par R. TOLLET (Bruxelles); 4. *Hymenoptera Evanoidea : Gasteruptionidæ*, par J. J. PASTEELS (Bruxelles) ... 1956
87. F. ZUMPT (Johannesburg), *Diptera Cyclorrhapha* : part. I. *Calliphorini* and *Chrysomyini* ... 1956
88. P. L. G. BENOIT (Tervuren), *Bethylidæ* (*Hymenoptera Apocrita*) ... (Sous presse.) (Ter pers.)
89. H. HAUPT (Halle, Saale), *Pompitidae* II (*Hymenoptera Sphecoidea*) ... (Sous presse.) (Ter pers.)
90. 1. *Hemiptera Homoptera : Meenoplidae*, par H. SYNAVE (Bruxelles); 2. *Hemiptera Fulgoroidea : Issidae*, par H. SYNAVE (Bruxelles); 3. *Hemiptera Homoptera : Membracidae*, by A. L. CAPENER (Cleveland) ... (Sous presse.) (Ter pers.)
91. 1. *Coleoptera Polyphaga*, Fam. *Staphylinidae : Pygosteninae*, by D. H. KISTNER (Chicago); 2. *Coleoptera Heteromera*, Fam. *Meloidae*, von Z. KASZAB (Budapest); 3. *Diptera Nematocera*, Fam. *Culicidae*, par J. WOLFS (Bruxelles) ... (Sous presse.) (Ter pers.)

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2. W. ARNDT (Berlin), *Spongilliden* ... 1938
3. P. A. CHAPPUIS (Cluj, Roumanie), *Copépodes Harpacticoides* ... 1938
4. E. LÉLOUP (Bruxelles), *Moerisia Alberti* nov. sp. (*Hydropolype dulcicole*) ... 1938
5. P. DE BEAUCHAMP (Strasbourg), *Rotifères* ... 1939
6. M. POLL (Tervuren), avec la collaboration de H. DAMAS (Liège), *Poissons* ... 1939
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9. J. H. SCHUURMANS STEKHOVEN Jr (Utrecht), *Nématodes libres d'eau douce* ... 1944
10. J. H. SCHUURMANS STEKHOVEN Jr (Utrecht), *Nématodes parasites* ... 1944
11. G. MARLIER (Bruxelles), *Trichoptera* ... 1943
12. W. KLIE (Bad Pyrmont), *Ostracoda* ... 1944
13. G. MARLIER (Bruxelles), *Collemboles* ... 1944
14. J. COOREMAN (Bruxelles), *Acari* ... 1948
15. A. ARCANGELI (Torino), *Isopodi terrestri* ... 1950
16. F. GUIGNOT (Avignon), *Dytiscidae et Gyrinidae (Coleoptera Adephaga)* ... 1948
17. H. BERTRAND (Dinard), *Larves d'Hydrocanthares* ... 1948
18. O. LUNDBLAD (Stockholm), *Hydrachnellae* ... 1949
19. W. CONRAD (Bruxelles), P. FRÉMY (St.-Lô) et A. PASCHER (Prague), *Algues et Flagellates* ... 1949
20. M.-L. VERRIER (Paris), *Ephéméroptères* ... 1951
21. FR. KIEFER (Konstanz), *Copépodes* ... 1952

III. — Mission P. SCHUMACHER (1933-1936).

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2. P. SCHUMACHER (Antwerpen), *Anthropometrische Aufnahmen bei den Kivu-Pygmäen*. 1939

IV. — Mission J. LEBRUN (1937-1938).

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- 2-5. ... (En préparation.) (In voorbereiding.)
6. F. DEMARET et V. LEROY (Bruxelles), *Mousses* ... 1944
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8. P. VAN OYE (Gand), *Desmidiées* ... 1943
9. P. VAN OYE (Gand), *Rhizopodes* ... 1948
10. P. DUVIGNEAUD et J.-J. SYMOENS (Bruxelles), *Cyanophycées* ... 1948

V. — Mission S. FRECHKOP (1937-1938).

V. — Zending S. FRECHKOP (1937-1938).

1. S. FRECHKOP (Bruxelles), *Mammifères* ... 1943
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VI. — Missions J. VERHOOGEN (1938 et 1940).

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1. J. DE HEINZELIN DE BRAUCOURT (Bruxelles), *Le fossé tectonique sous le parallèle d'Ishango* 1955
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3. W. ADAM (Bruxelles), *Mollusques fossiles quaternaires de la région du lac Edouard*. (Sous presse.) (Ter pers.)
4. *Fossiles d'Ishango*: 1. *Mammifères*, par A. T. HOPWOOD (Londres) et X. MISONNE (Bruxelles); 2. *Restes d'Oiseaux*, par R. VERHEYEN (Bruxelles) (Sous presse.) (Ter pers.)

VIII. — Mission d'études vulcanologiques.

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2. R. JEANNEL (Paris), *Pselaphidae (Coleoptera Polyphaga)* 1956
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5. 1. *Eccrinida*, par J.-F. MANIER (Paris) et J. THEODORIDES (Paris); 2. *Nyctotherus* (parasite de Myriapodes), par O. TUZET (Montpellier), J.-F. MANIER (Paris) et P. JOLIVET (Bruxelles); 3. *Nyctotherus* (parasite de Ténébrionides), par O. TUZET (Montpellier) et J. THEODORIDES (Paris); 4. *Trichomycetes*, par O. TUZET (Montpellier), J.-F. MANIER (Paris) et P. JOLIVET (Bruxelles); 5. *Grégarines*, par O. TUZET (Montpellier), J.-F. MANIER (Paris) et P. JOLIVET (Bruxelles); 6. *Cocci-nellidae*, von L. MADER (Wien) (Sous presse.) (Ter pers.)

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1. W. ROBYNS (Bruxelles), *Gymnospermes et Choripétales* 1948
2. W. ROBYNS (Bruxelles), *Sympétales* 1947
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I. — Mission J. LEBRUN (1937-1938).

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I. — Mission H. DE SAEGER en collaboration avec
P. BAERT, G. DEMOULIN, I. DENISOFF, J. MARTIN,
M. MICHA, A. NOIRFALISE, P. SCHOEMAKER.
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P. BAERT, G. DEMOULIN, I. DENISOFF, J. MARTIN,
M. MICHA, A. NOIRFALISE, P. SCHOEMAKER,
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3. E. MARCUS (São Paulo), *Turbellaria* 1955
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5. H. DE SAEGER (Bruxelles), *Entomologie; Renseignements éco-biologiques* 1956
6. A. NOIRFALISE (Bruxelles), *Le milieu climatique* 1956
7. J. VERSCHUREN (Bruxelles), *Chétopères* (Sous presse.) (Ter pers.)
8. C. VUYLSTEKE (Geluwe), *Nématodes parasites d'Oiseaux* (Sous presse.) (Ter pers.)

I. — Mission G. F. DE WITTE en collaboration avec
W. ADAM, A. JANSSENS, L. VAN MEEL et R. VERHEYEN
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W. ADAM, A. JANSSENS, L. VAN MEEL en R. VERHEYEN
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2.	K. LINDBERG (Lund), <i>Cyclopides (Crustacés Copépodes)</i>	1951
3.	A. JANSSENS (Bruxelles), <i>Onitini (Coleoptera Lamellicornia, Fam. Scarabæidæ)</i>	1951
4.	1. <i>Coleoptera : Pausidæ</i> , par E. JANSSENS (Bruxelles); <i>Megalopodidæ</i> , par P. JOLIVET (Bruxelles); <i>Sagridæ</i> , par P. JOLIVET (Bruxelles). — 2. <i>Diptera : Muscidæ (Genre Glossina)</i> , par C. HENBARD (Bruxelles)	1951
5.	C. FR. ROEWER (Bremen), <i>Solifuga, Opiliones, Pedipalpi und Scorpiones</i>	1952
6.	G. F. DE WITTE (Bruxelles), <i>Reptiles</i>	1953
7.	H. F. STROHECKER (Miami), <i>Endomychidæ</i>	1952
8.	1. <i>Plecoptera : Perlidæ</i> , by H. B. N. HYNES (Liverpool); 2. <i>Coleoptera : Histeridæ</i> , par J. THÉRON (Nîmes); 3. <i>Chrysomelidæ</i> , par P. JOLIVET (Bruxelles); 4. <i>Scolytoidea</i> , par K. E. SCHEDL (Lienz); 5. <i>Diptera : Bibionidæ and Dorilaidæ</i> , by D. E. HARDY (Honolulu, Hawaii)	1952
9.	L. VAN MEEL (Bruxelles), <i>Contribution à l'étude du lac Upemba. — I. Le milieu physico-chimique</i>	1953
10.	P. BASILEWSKY (Tervueren), <i>Carabidæ</i>	1953
11.	A. JANSSENS (Bruxelles), <i>Oniticellini (Coleoptera Lamellicornia, Fam. Scarabæidæ)</i>	1953
12.	P. VANSCHUYTBROECK (Bruxelles), <i>Dolichopodidæ (Diptera Brachycera Orthorrhapha)</i> .	1952
13.	R. JEANNEL (Paris), <i>Pselaphidæ</i>	1952
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15.	A. VILLIERS (Dakar), <i>Languridæ et Cladoxeninæ</i>	1952
16.	G. OCHS (Hannover), <i>Gyrinidæ</i>	1953
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18.	A. VILLIERS (Dakar), <i>Reduviidæ</i>	1954
19.	R. VERHEYEN (Bruxelles), <i>Oiseaux</i>	1953
20.	M. BEIER (Wien), <i>Mantidea und Pseudophyllinæ</i>	1954
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24.	C. KOCH (Pretoria), <i>Tenebrionidæ (Pycnocerini)</i>	1954
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26.	S. G. KIRIAKOFF (Gand), <i>Lepidoptera Heterocera</i>	1954
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28.	E. UHMANN (Stolberg, Sachsen), <i>Hispinæ (Coleoptera Phytophaga)</i>	1954
29.	Y. JOLIVET (Bruxelles), <i>Dictyoptera : Blattodea</i>	1954
30.	C. FR. ROEWER (Bremen), <i>Aranea Lycosæformia I.</i>	1954
31.	R. POISSON (Rennes), <i>Hémiptères aquatiques</i>	1954
32.	1. <i>Pseudoscorpionidea</i> , von M. BEIER (Wien); 2. <i>Hemiptera Homoptera : Fam. Flatidæ</i> , par H. SYNAVE (Bruxelles); 3. <i>Diptera : Culicidæ</i> , par P. F. MATTINGLY (London); 4. <i>Diptera : Tabanidæ</i> , par M. LECLERCQ (Liège); 5. <i>Lepidoptera : Geometridæ</i> , by D. S. FLETCHER (London)	1955
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34.	J. LECLERCQ (Liège), <i>Sphecina (Hymenoptera Sphecoidea)</i>	1955
35.	1. <i>Dermoptera</i> , par W. D. HINCKS (Manchester); 2. <i>Coleoptera : Macroductyla, Fam. Dryopidæ</i> , par J. DELEVE (Bruxelles); 3. <i>Coleoptera : Heteromera, Fam. Mordellidæ</i> , von K. ERMISCH (Freiberg Sa.); 4. <i>Coleoptera : Chrysomeliadea, Fam. Clytridæ</i> , par P. JOLIVET (Bruxelles); 5. <i>Coleoptera : Phytophaga, Fam. Anthribidæ</i> , par H. E. K. JORDAN (Tring); 6. <i>Diptera : Nematocera, Fam. Chironomidæ</i> , by P. FREEMAN (London)	1955
36.	J. G. BAER (Neuchâtel) et A. FAJN (Astrida), <i>Cestodes</i>	1955
37.	W. EVANS (Sydney), <i>Cicadellidæ (Hemiptera-Homoptera)</i>	1955
38.	1. <i>Odonata</i> , by F. F. FRASER (Bornemouth); 2. <i>Coleoptera Clavicornia, Fam. Colydiidæ</i> , by R. D. POPE (London); 3. <i>Coleoptera Lamellicornia, Trax-Arten</i> , von E. HAAF (München); 4. <i>Coleoptera Chrysomeloidea, Fam. Crioceridæ</i> , par P. JOLIVET (Bruxelles); 5. <i>Diptera Acalyptrata, Fam. Neriidæ</i> , by MARTIN L. ACZEL (Tucuman); 6. <i>Dermestidæ</i> , von VLADIMIR KALIK (Pardubice)	1955
39.	G. FAGEL (Bruxelles), <i>Osoriinæ (Coleoptera Polyphaga, Fam. Staphylinidæ)</i>	1955
40.	C. KOCH (Pretoria), <i>Platynotini, Litoborini, Loensini (Coleoptera Polyphaga, Fam. Tenebrionidæ II)</i>	1956
41.	P. BASILEWSKY (Tervueren), <i>Cetoniinæ, Trichinæ, Valginæ (Coleoptera Polyphaga, Fam. Scarabæidæ)</i>	1956
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I. -- Mission G. F. DE WITTE en collaboration avec
W. ADAM, A. JANSSENS, L. VAN MEEL et R. VERHEYEN
(1946-1949) (*suite*).

I. -- Zending G. F. DE WITTE met medewerking van
W. ADAM, A. JANSSENS, L. VAN MEEL en R. VERHEYEN
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Exploration des Parcs Nationaux du Congo Belge — Exploratie der Nationale Parken van Belgisch Congo.

I. — Mission H. HEDIGER - J. VERSCHUREN (1948).

I. -- Zending H. HEDIGER - J. VERSCHUREN (1948).

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AVIS

Les Aspects de Végétation des Parcs Nationaux du Congo Belge paraissent par fascicules de six planches, accompagnées de notices explicatives.

La publication est divisée en séries, consacrées chacune à un Parc National du Congo Belge.

Les fascicules peuvent s'acquérir séparément.

L'Institut des Parcs Nationaux du Congo Belge n'accepte aucun échange.

BERICHT

De Vegetatiebeelden der Nationale Parken van Belgisch Congo verschijnen in afleveringen van zes platen, van verklarende aantekeningen vergezeld.

De publicatie is ingedeeld in reeksen, waarvan elke aan één der Nationale Parken van Belgisch Congo gewijd is.

De afleveringen kunnen afzonderlijk aangeschaft worden.

Het Instituut der Nationale Parken van Belgisch Congo neemt geen ruilingen aan.

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Volume I.

- Fasc. 1-2. — W. ROBYNS (Bruxelles), *Aperçu général de la végétation* (d'après la documentation photographique de la mission G. F. DE WITTE) 1937
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VERSCHEENEN AFLEVERINGEN

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- Afl. 1-2. — W. ROBYNS (Brussel), *Algemeen overzicht der vegetatie* (volgens de fotografische documentatie der zending G. F. DE WITTE) 1937

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- Beschermde Dieren in Belgisch Congo en in het Gebied onder mandaat van Ruanda-Urundi, evenals de Soorten waarvan de bescherming verzekerd is in Afrika (met inbegrip van Madagascar) door de Internationale Overeenkomst van Londen van 8 November 1933 voor de bescherming van de Afrikaansche Flora en Fauna, met de Wetgeving betreffende de Jacht, de Visscherij, de Natuurbescherming en de Nationale Parken van Belgisch Congo en in het Gebied onder mandaat van Ruanda-Urundi*, door S. FRECHKOP, in medewerking met G. F. DE WITTE, J.-P. HARROY en E. HUBERT, met Inleiding van V. VAN STRAELEN (1943) (Épuisé.) (Uitgeput.)
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