

PARC NATIONAL DE L'UPEMBA

I. MISSION G. F. DE WITTE

en collaboration avec

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

Fascicule 40

NATIONAAL UPEMBA PARK

I. 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)

(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 *Opatinæ*, and introduces a new systematic division into the African *Opatinæ* 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 *Opatinæ*, 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 *Opatriini* 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 Palæarctic 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-Palaearctic-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*, *Opatriini* and *Helopinini* sensu GEBIEN.

Litoborini ANTOINE. A Pan African tribe of disjunct dispersal, and not an Atlasic element of the Palaearctic 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*, *Opatriini* 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 *Opatriini*. 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 palaearctic *Pedinini*. Euro-Mediterranean and Palaearctic-Asiatic, confined in the African Continent to a small area of the north-eastern part of North Africa.

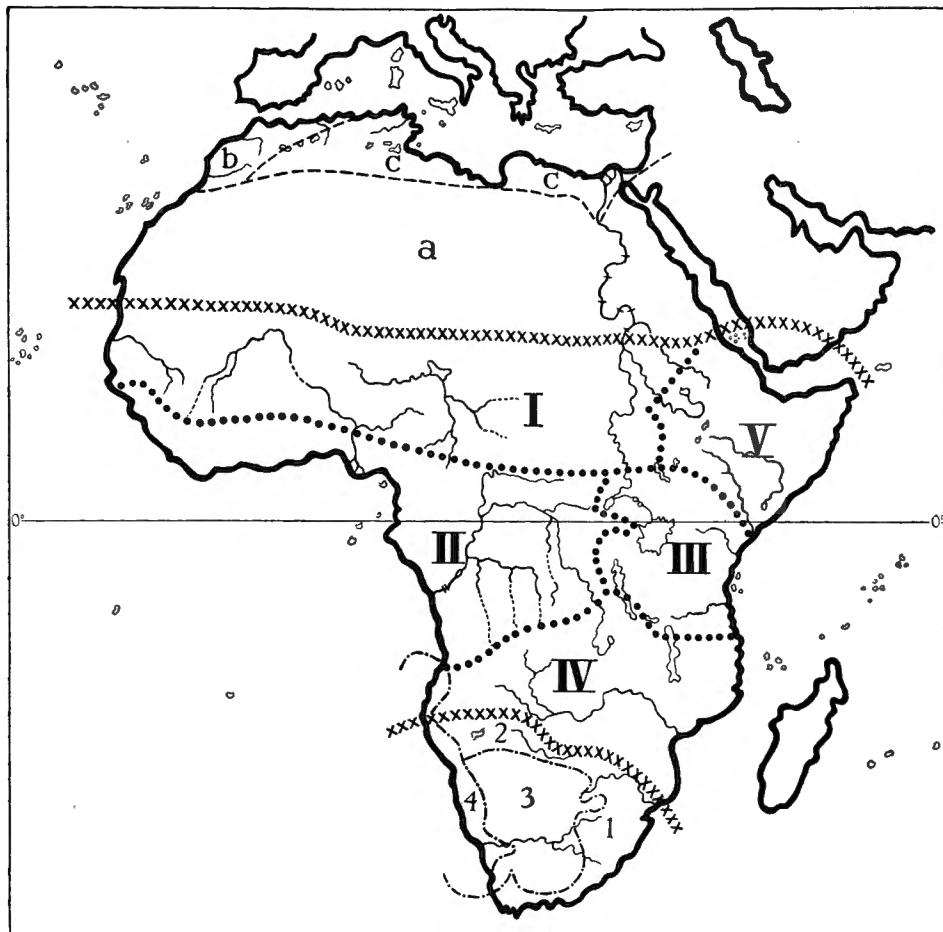
Pythiopini KOCH. An ancient and peculiar tribe, endemic to the western part of the Cape Province and Southern Namib. The only previously known genus, viz. *Meglyphus*, has been listed among the tentyrioid *Stenosini* by GEBIEN.

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

Opatriini. In its new conception and as far as the African Fauna is concerned, including the *Stizopini*, large parts of *Opatriini*, 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° 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.
- - - Palaeartic Region. — a: Saharan Province; b: Atlasic Province; c: Mediterranean Province.
- - - Southern African Region. — 1: Eastern and Cape Province; 2: Trans-Bechuana Province; 3: Karroo- and Kalahari Province; 4: Namib Province.

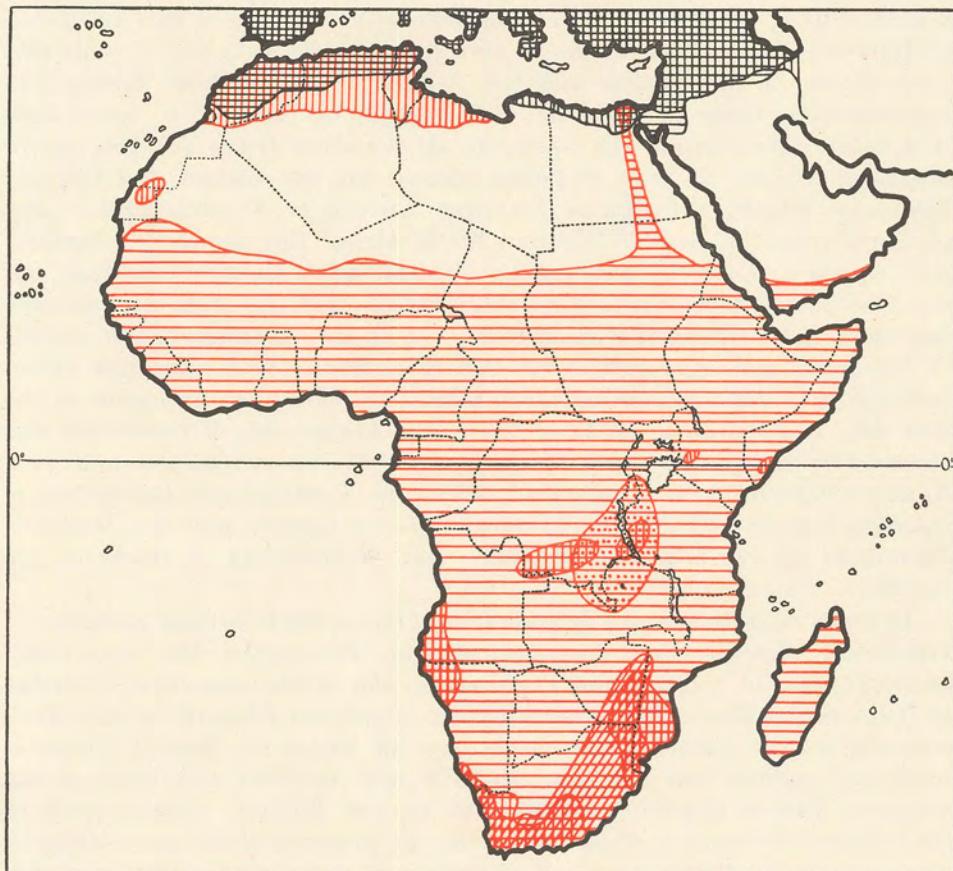
in the South into the Haut-Katanga dry forest (*Quadrideres*). Thus, apart from the clearly established southern connections, a poorly developed, but widely spreading influence can be observed only from the West. These western elements are the only *Opatrinæ* which, apart from the indifferent *Opatrinus* and *Heterotarsus*, enter into the Central Equatorial Forest District, expanding eastwards to about the middle and dividing this phytogeographic 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 Zambezi 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 *Phallocentron* and the selinoid genera *Selinus*, *Ectateus*, *Upembarus* and *Quadrideres* (map 4).



MAP N° 2.

The distribution of the stenotopic tribes of *Opatriinae* in the African Continent.

RED : Of Tropical origin. — Horizontal : *Platynotini*; Vertical : *Litoborini*;
Diagonal : *Oncotini*; Dotted : *Loensini*.

BLACK : Of Palaearctic 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 *Opatriñæ* 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 *Opatriñi*), 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 *Opatriñi*, cross the northern boundary of the Tropical African Region (with the exception of two species of *Opatriñus* and *Diphyrrhynchus*, which penetrate to a negligible extent into the Palaeartic 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 (*Opatriñus* of *Platynotini*), while the *Loensini* and *Emmallina* of *Opatriñi* are endemic to the Tropical African Region, and the *Oncotini*, *Pythiopini*, as well as the *Stizopina* and *Stenolamina* of *Opatriñi*, are Southern African (map 5).

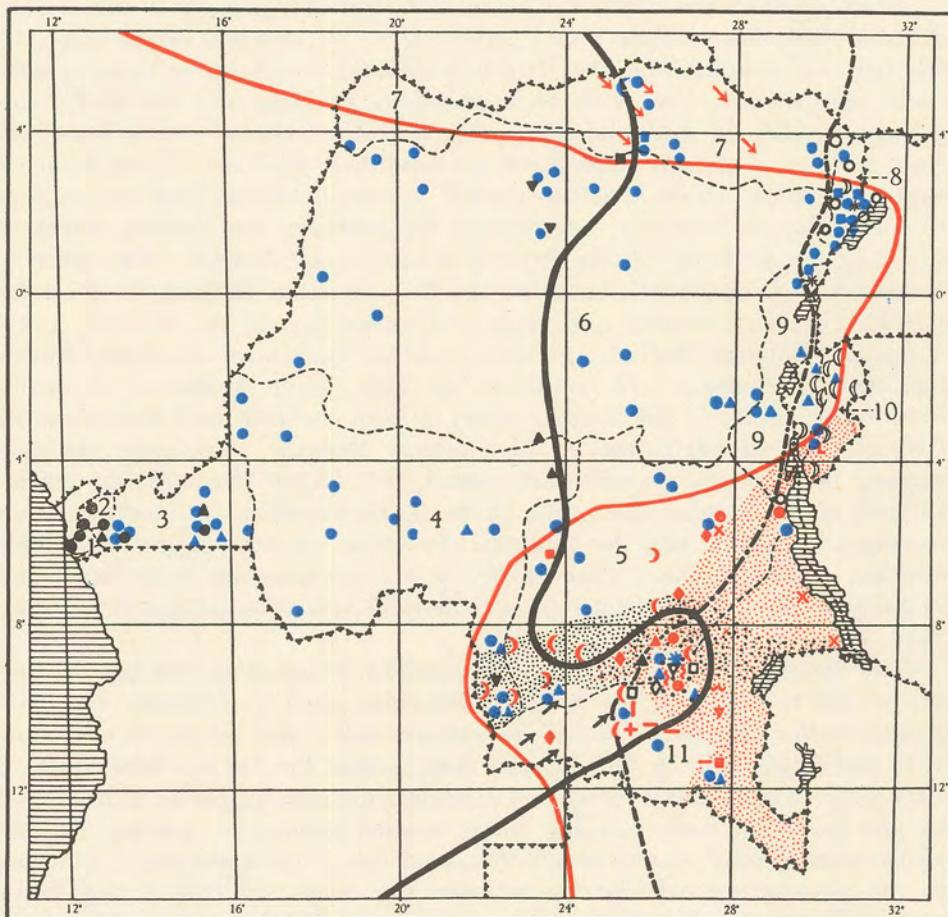
In the composition of the Belgian Congo fauna the following participate : *Litoborini*, *Heterotarsini*, *Loensini*, of the *Platynotini* the opatrinid, anchophthalmoid and selinoid *Platynotina*, and of the stenotopic subtribes of *Opatriñi* the *Emmallina*. But only the opatrinid *Platynotina* and *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 *Opatriñæ* are poorly developed (cf map 4).

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

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 (*Phallocentriion*), 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, i.e. 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*, *Phymatopla*, 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 Platynotin;

the phytogeographic Central- and Mayumbe Districts, the Guinean savannæ 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

- ▼ : *Opatinus attenuatus bottegoi* GRIDELLI;
- ▲ : *Opatinus setuliger* MUELLER;
- : *Opatinus costulatus* (GUÉRIN);
- ◆ : *Opatinus exalatus* sp. nov.;
- * : *Opatinus 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.;
- × : *Anchophthalmus plicipennis* PÉRINGUEY, forma;
- ↘ : *Phallocentron 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 (*Hanstroemium* 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* (*Saharoplarian*) 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-karrooid (bounded by the Zambesi River in the North) and its range almost covers that of the ecologically similar *Oncotini*. The West-Zambesi genus *Hanstræmum* 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 *Hanstræmum* 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.

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

Kaswabilenga, 680 m, right shore of Lufira River.

Opatriinus 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.

Opatriinus 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.]

Opatriinus 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.

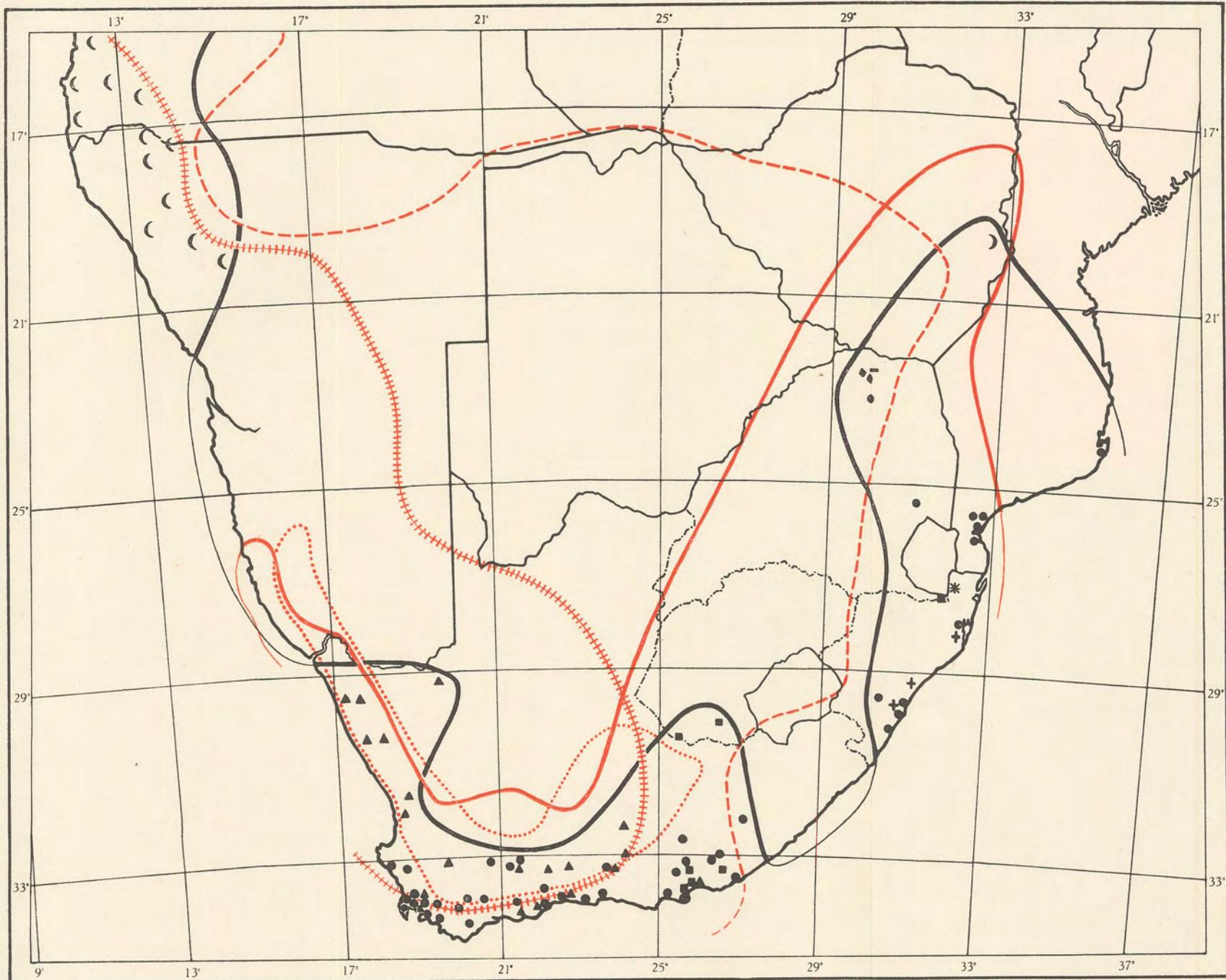
Upembarus saegeri.

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 *Opatriinae* 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.;

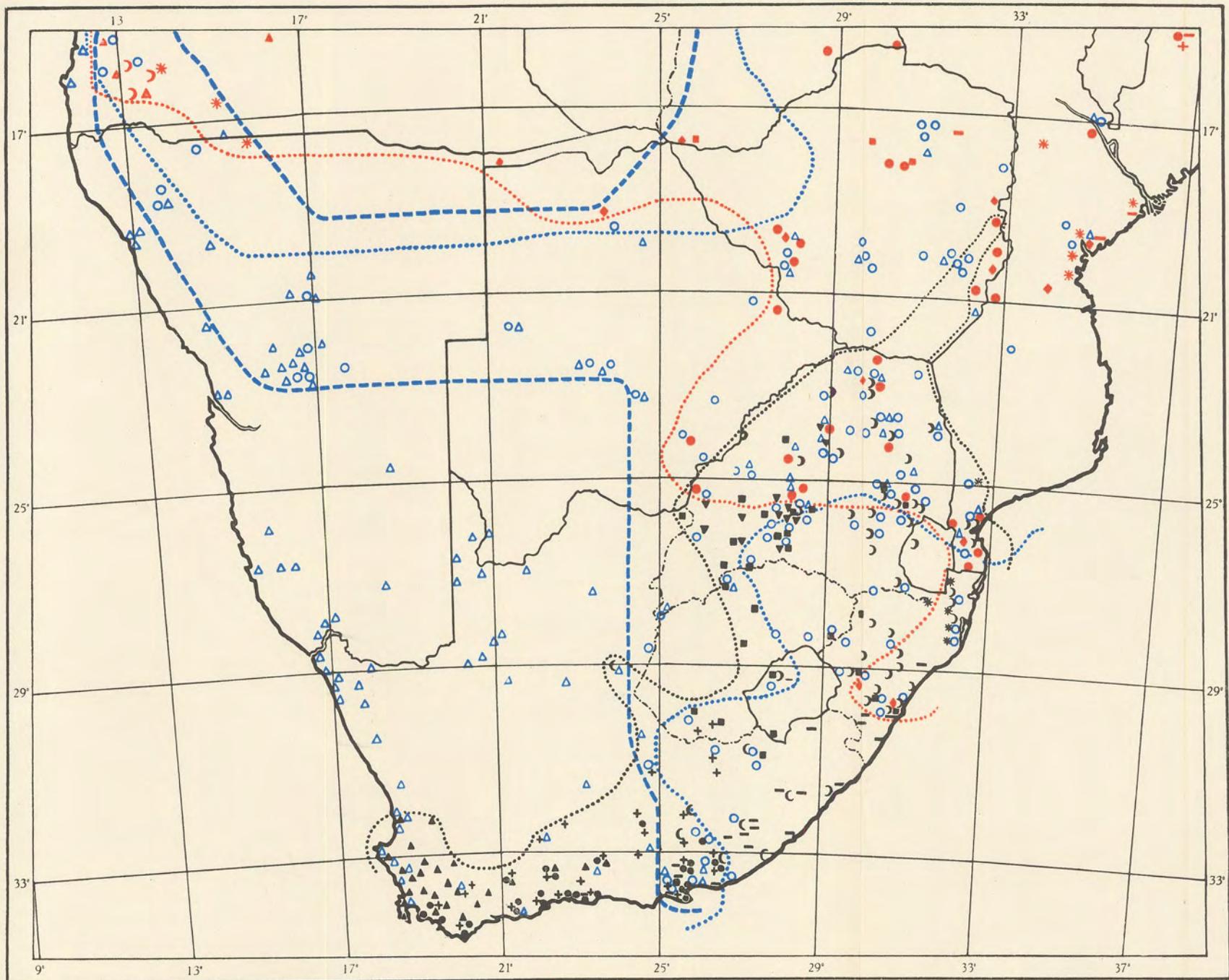
- ◆ : *Zoutpansbergia* gen. nov.;
- : *Pseudemmallus* gen. nov.;
- : *Hxmodus* (PÉRINGUEY);
- ⌚ : *Hanstræmum* KOCH.

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

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

- : *Oncotini*;
- : *Pythiopini*;

- : *Stizopina* of *Opatriini*;
- ||||| : *Stenolamina* of *Opatriini*.



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

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

● : *Anomalipus* LATREILLE;

Southern and northern limits in Southern Africa of :

Anomalipina : striolate line;

Gonopina : punctate line.

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

B. — *Platynotina*.

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

1. *Opatrinoïd Platynotina*.

◆ : *Opatrinus* LATREILLE.

2. *Anchophthalmoid Platynotina*.

● : *Anchophthalmus* GERSTAECKER;

3. *Selinoid Platynotina*.

■ : *Anchophthalmops* gen. nov.;

■ : *Quadrideres* gen. nov.;

Southern limits of Tropical *Platynotina* : punctate line.

+ : *Oncotiphallopss* gen. nov.

* : *Selinus* MULSANT & REY;

▲ : *Angolositus* KOCH.

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

● : *Melanopterus* MULSANT & REY;

▲ : *Atrocrates* gen. nov.;

▼ : *Zophodes* FÄHRAEUS;

■ : *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.

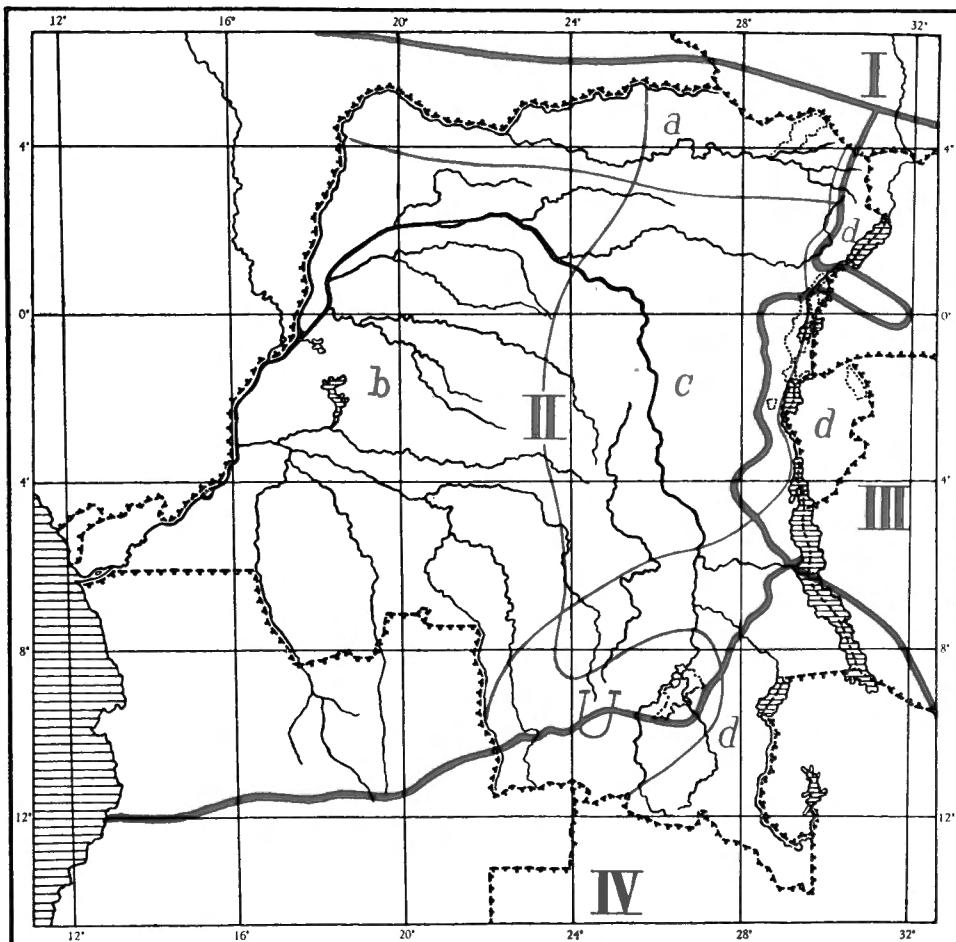
M.D. Museu Companhia de Diamantes de Angola, Dundo.

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.

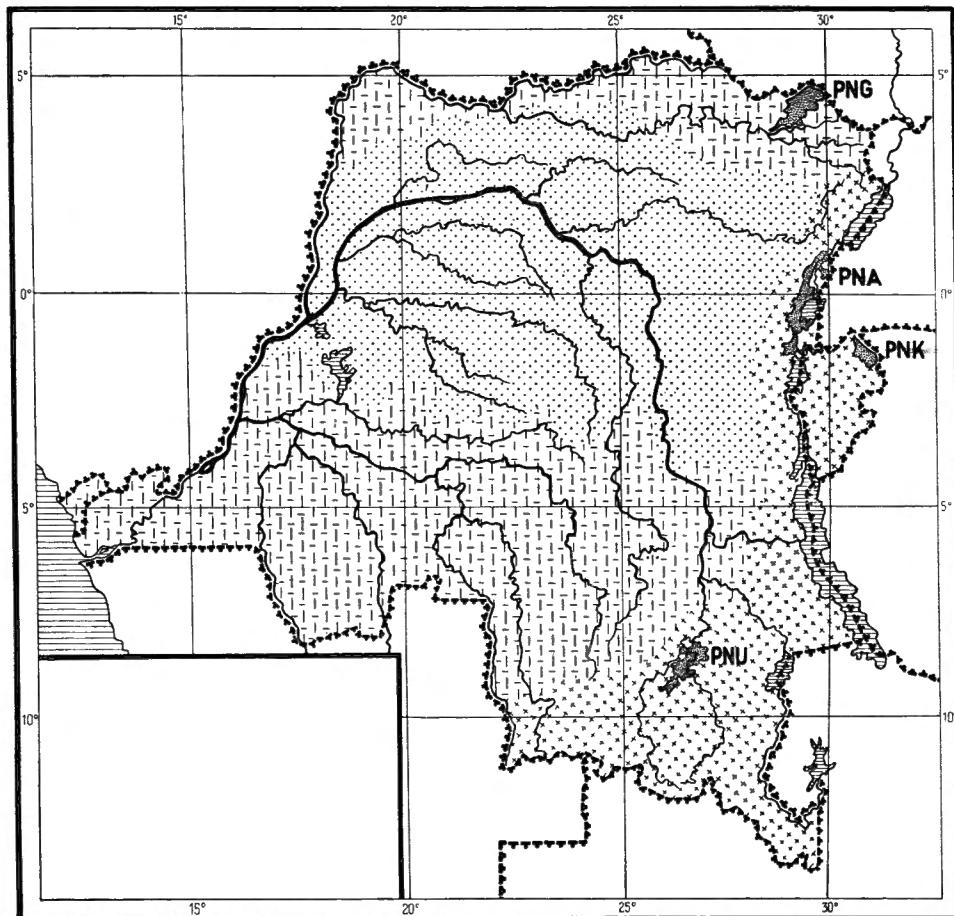


MAP N° 7. — Faunistic map of the Belgian Congo.

Provinces of the Tropical African Region and their boundaries. — I : Sudanese Province;

II : Guinean Province; III : Oriental Province; IV : Zambesi Province.

Faunistic Districts based on the distribution of the stenotopic *Opatriinx*. — 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.

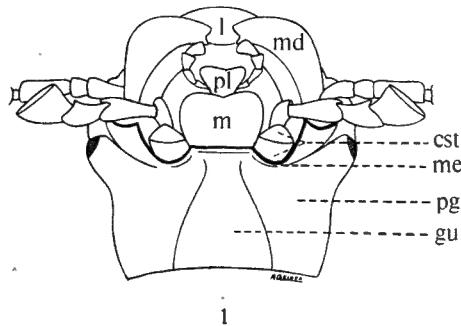


MAP N° 8. — Vegetation map of the Belgian Congo.

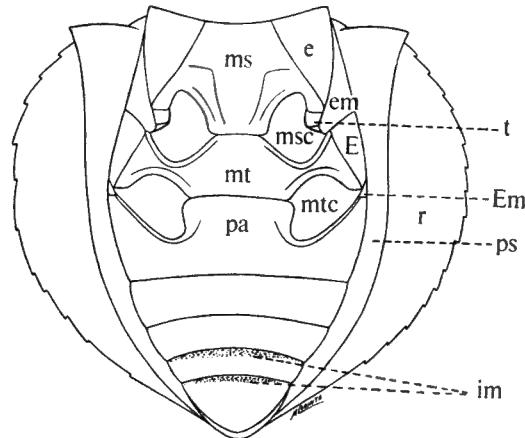
- ::::: Equatorial forest (cf. Plate XXXV, above).
- |||||: Guinean savanna (cf. Plate XXXIV, above, and Plate XXXV, below).
- ****: Oriental savanna (cf. Plate XXXIV, below).
- PNA : National Albert Park.
- PNG : National Garamba Park.
- PNK : National Kagera Park.
- PNU : National Upemba Park.

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 : metacoxal cavity; pa : inter-
 coxal process of abdomen; ps : pseudopleura; r : ventrally reflected
 portion of elytra; t : trochantin of mesocoxa.

This character which I introduced into the systematics of *Tenebrionidae* 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

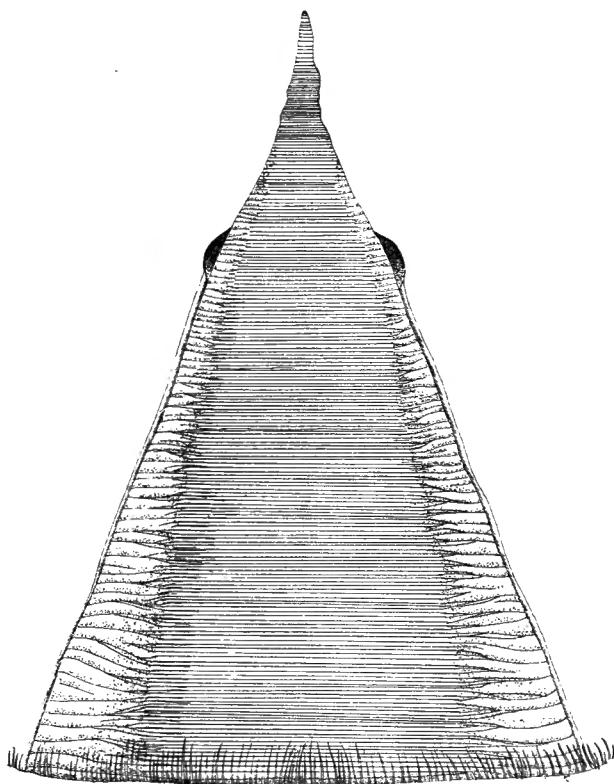


FIG. 3. — The stridulatory gula in *Platynotini*
(drawn after a ♂ specimen of *Anchophthalmus plicipennis* PÉRINGUEY,
from Elisabethville).

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 *Tenebrionidae*, 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

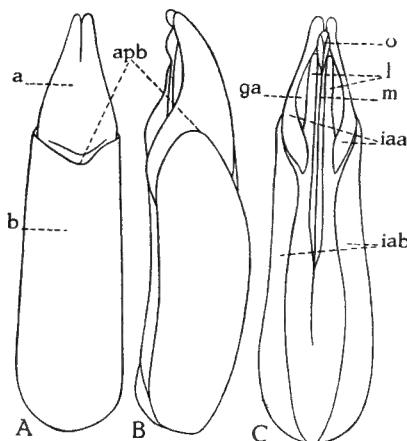


FIG. 4. — $\ddot{\text{A}}$ edeagus of *Zophodes tristis* FÄHRAEUS.
 a : apicale; b : basale; m : median lobe or penis; apb : apical margin of basale;
 l : lacinia; ga : ventral groove of apicale; iaa : inflexed alae of apicale; iab : inflexed
 alae of basale; gb : ventral groove of basale; o : apical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

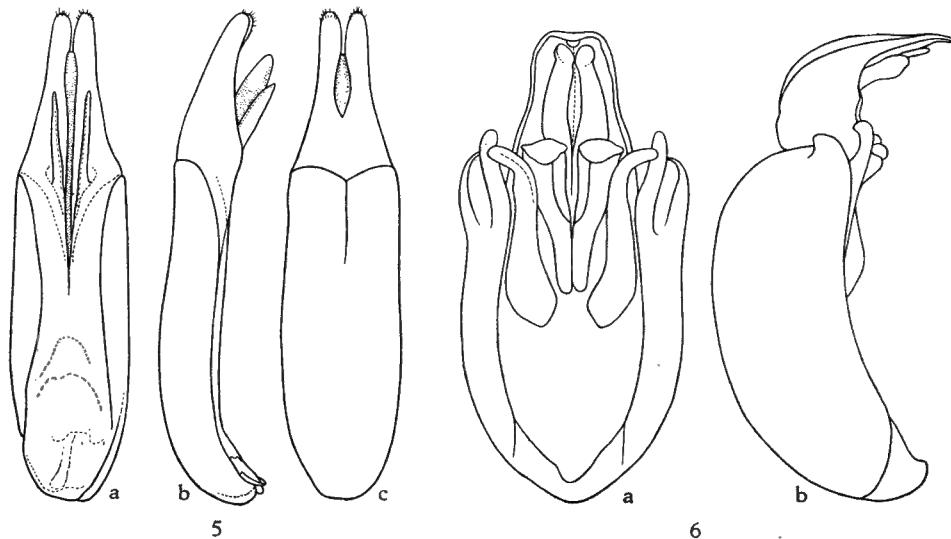


FIG. 5. — $\ddot{\text{A}}$ edeagus of a Madagascar *Melanocratus* sp.
 a : ventral surface; b : lateral aspect, with the ventral surface at right;
 c : ventral surface.

FIG. 6. — $\ddot{\text{A}}$ edeagus 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*, *Cantopibleurus* *Symphoxyycara* of *Oxyycara*, cf. KOCH, 1943) or in the Molurini in which only the genus *Sridulomus* possesses a femoral-pseudopleural stridulatory organ (cf. KOCH, 1955b).

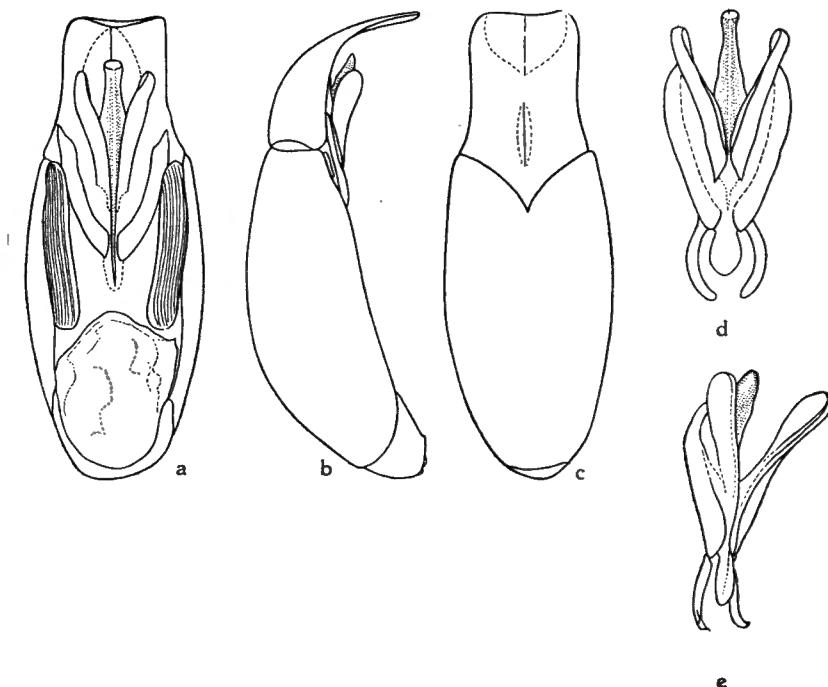


FIG. 7. — Aedeagus of an *Anomalipus* sp., with double pairs of lacinia.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface; d : outer surface of penis and double pairs of lacinia;
e : ditto, diagonal view.

- 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.

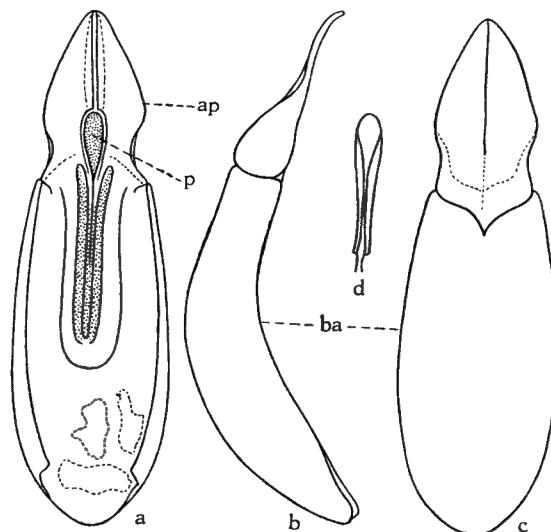


FIG. 8. — *Ædeagus* of an *Anomalipus* sp.
exhibiting a simple penis, but no lacinia (ap : apicale; ba : basale; p : penis).
a : ventral surface; b : lateral aspect; c : dorsal surface; d : the extracted penis.

- Inner sclerites of ædeagus 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.

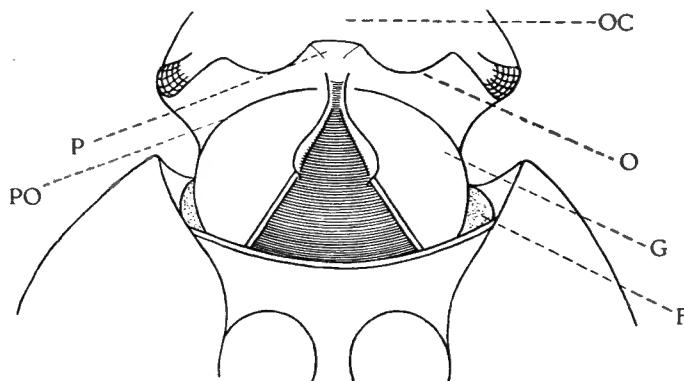


FIG. 9. — The stridulatory gula in the *Oncotini*.
G : gula; O : oral or postgenal margin; OC : oral cavity; P : pre-gular apophysis;
PO : postoral transverse sulcus; F : prothoracic foramen.

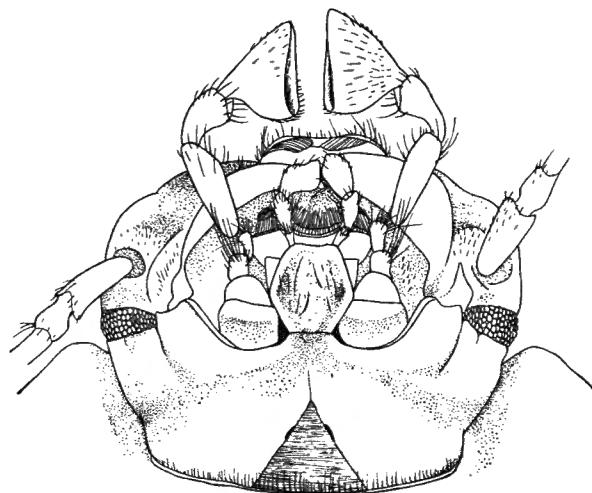


FIG. 10. — Under surface of head of *Eurynotus (Biolus) granulatus* (FABRICIUS).

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, *Onco-*

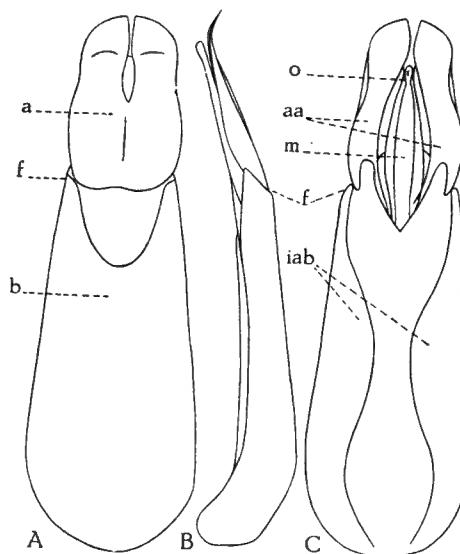


FIG. 11. — Aedeagus of *Eurynotus* (s. str.) *capensis* (FABRICIUS).
 a : apicale; b : basale; m : median lobe or penis; f : joint between
 basale and apicale; aa : ventrally separated parameres of apicale;
 iab : inflected alæ of basale; gb : ventral groove of basale; o : apical
 orifice of penis.
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

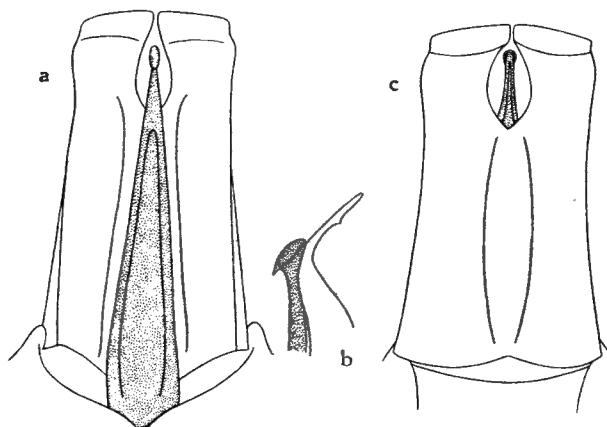


FIG. 12. — Apicale of the aedeagus of *Menederes* (s. str.) *dannheimeri* KOCH,
 with the ventrally entirely exposed and simple penis.
 a : ventral surface; b : lateral aspect of apical portion,
 with the ventral surface at left; c : dorsal surface.

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

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

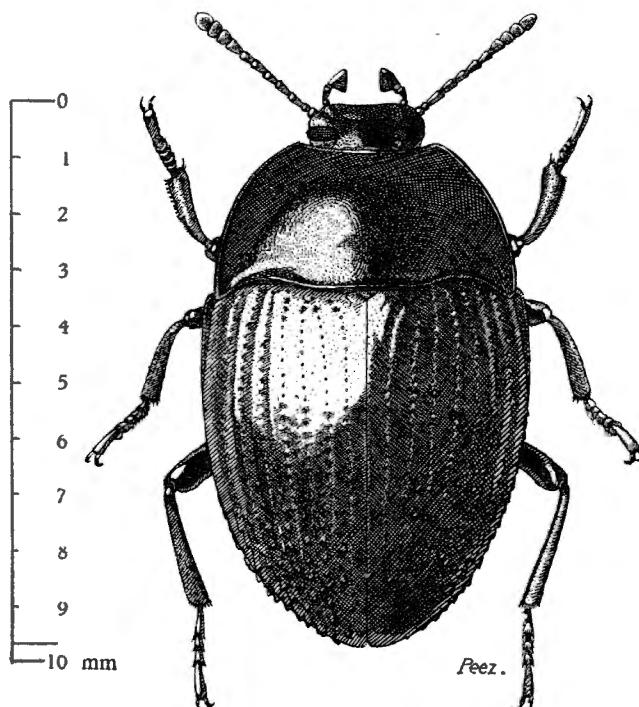


FIG. 13. — *Eurynotus* (s. str.) *barbosai* KOCH.

- 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 tibiæ 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

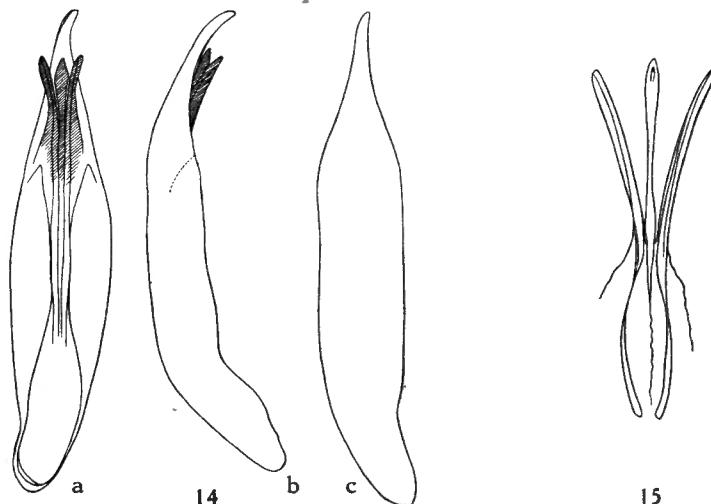


FIG. 14. — Ædeagus of *Leichenum* sp.
a: ventral surface; b: lateral aspect,
with the ventral surface at right;
c: dorsal surface.

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 tibiae 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 *Opatriini* 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 *Opatriini*, 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,

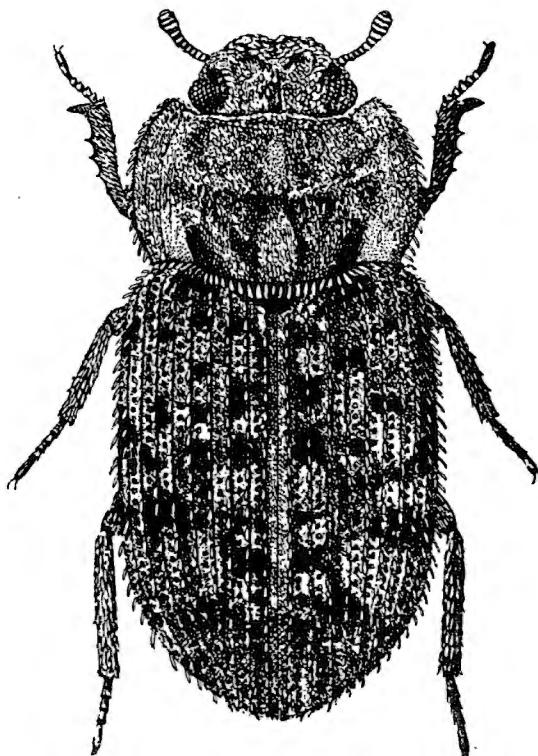


FIG. 16. — *Leichenum canaliculatum* KLUG (after GRIDELLI, 1939).

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 heteromorous (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).

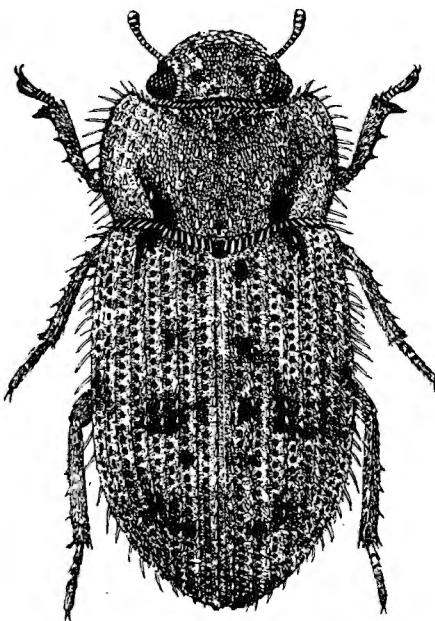


FIG. 17. — *Leichenum muelleri* GRIDELLI (after GRIDELLI, 1939).

- 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 homomerous 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.

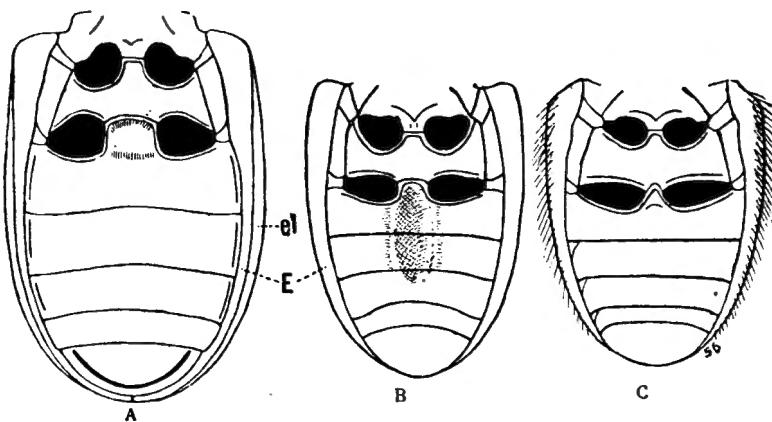


FIG. 18. — Under side of hind body in some *Opatrinæ*.
 A : *Microstus granulosus* BILLBERG; B : *Monatrum carinatum* GEBLER;
 C : *Udebra fimbriata* MÉNÉTRIES (all after REICHARDT).

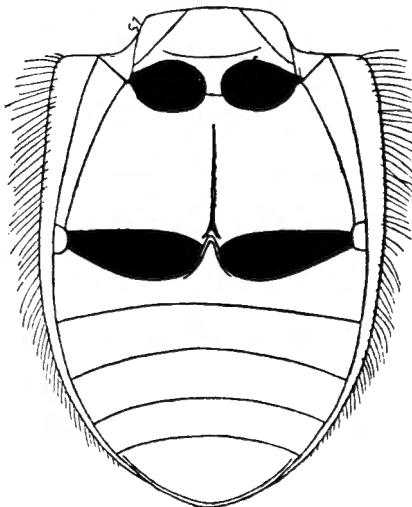


FIG. 19. — Under side of hind body in *Anemia dentipes* BALLION
 (after REICHARDT).

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

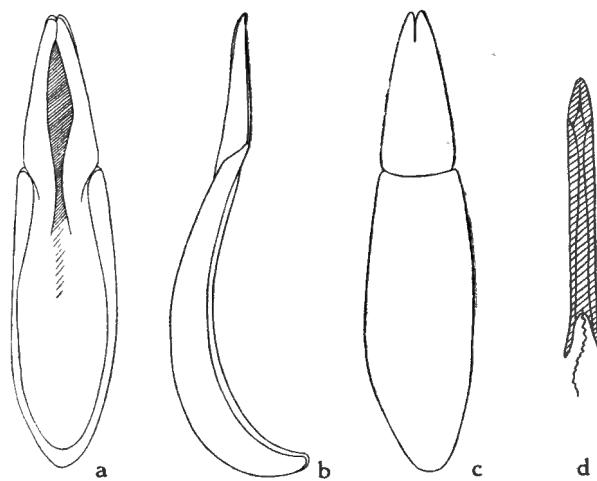


FIG. 20. — *Aedeagus of Melanimon tibialis* (FABRICIUS).
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface; d : the outer surface of the extracted penis.

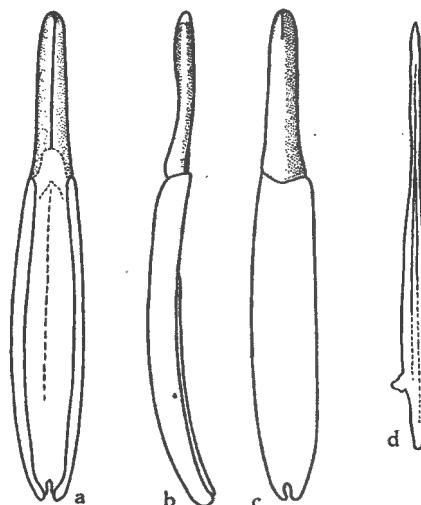


FIG. 21. — *Aedeagus of Anemia* sp. from South-west Africa (Abachaus).
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface; d : the outer surface of the extracted penis.

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

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

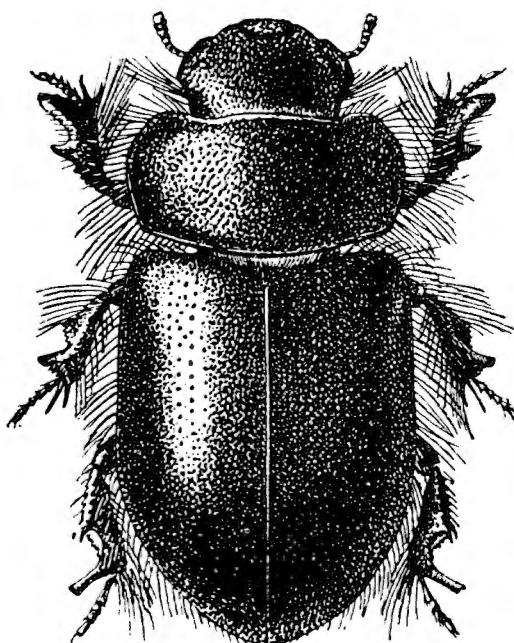


FIG. 22. — *Anemia fausti* SOLSKY (after REICHARDT).

- 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. 27c) 8
- Aedeagus without lacinia (figs. 20, 21). Body fully winged. Intercoxal process of basal sternite of abdomen very narrow and acuminate (fig. 18). Metasternum long and the apicale of aedeagus 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 *Opatriini* 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 *Opatriini*. Apart from the very characteristic morphology of their body, the neatly bi-partite aedeagus lacks the inter-

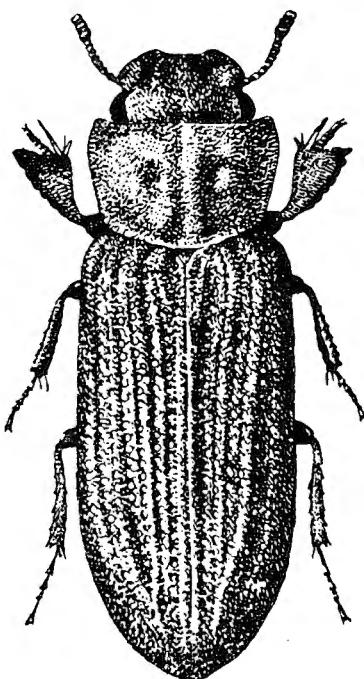


FIG. 23. — *Cnemeplatia atropos* COSTA (after REICHARDT).

mediate sclerites between apicale and basale, which are constantly developed in the *Opatriini*. 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.

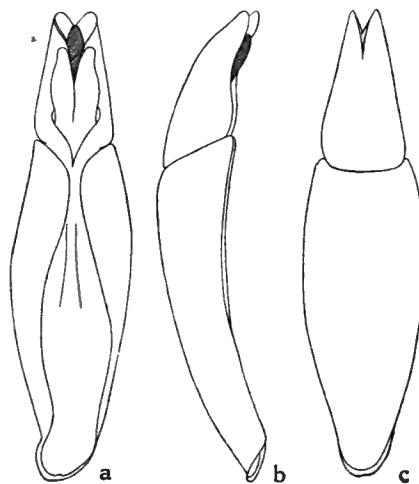


FIG. 24. — $\ddot{\alpha}$ edeagus of *Pythiopus cornutipectus* KOCH.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

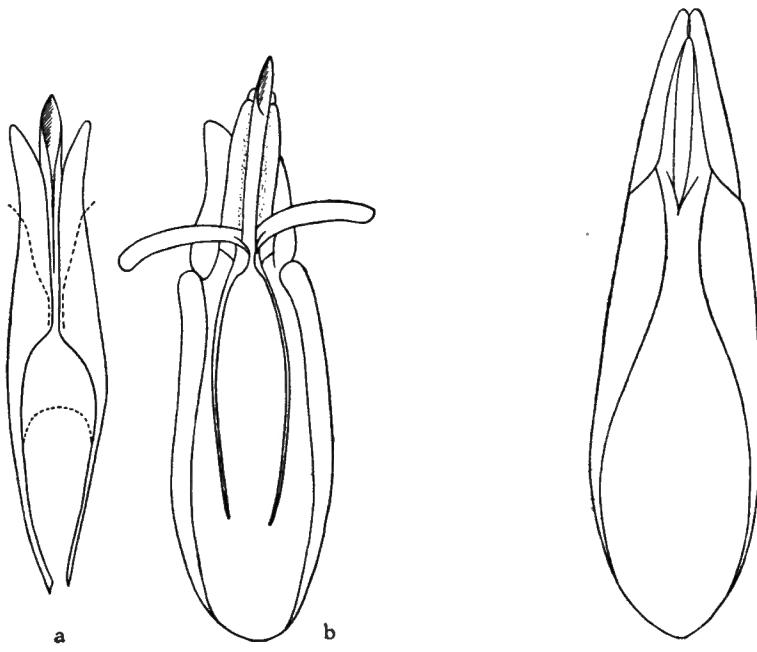


FIG. 25. — a : *Pythiopus cornutipectus* KOCH. Penis and lacinia. — b : *Meglyphus andreaei* KOCH. Ventral surface of $\ddot{\alpha}$ edeagus, with the inner sclerites layed open and the lacinia stretched outwards.

FIG. 26. — Ventral surface of the $\ddot{\alpha}$ edeagus of *Meglyphus andreaei* KOCH.

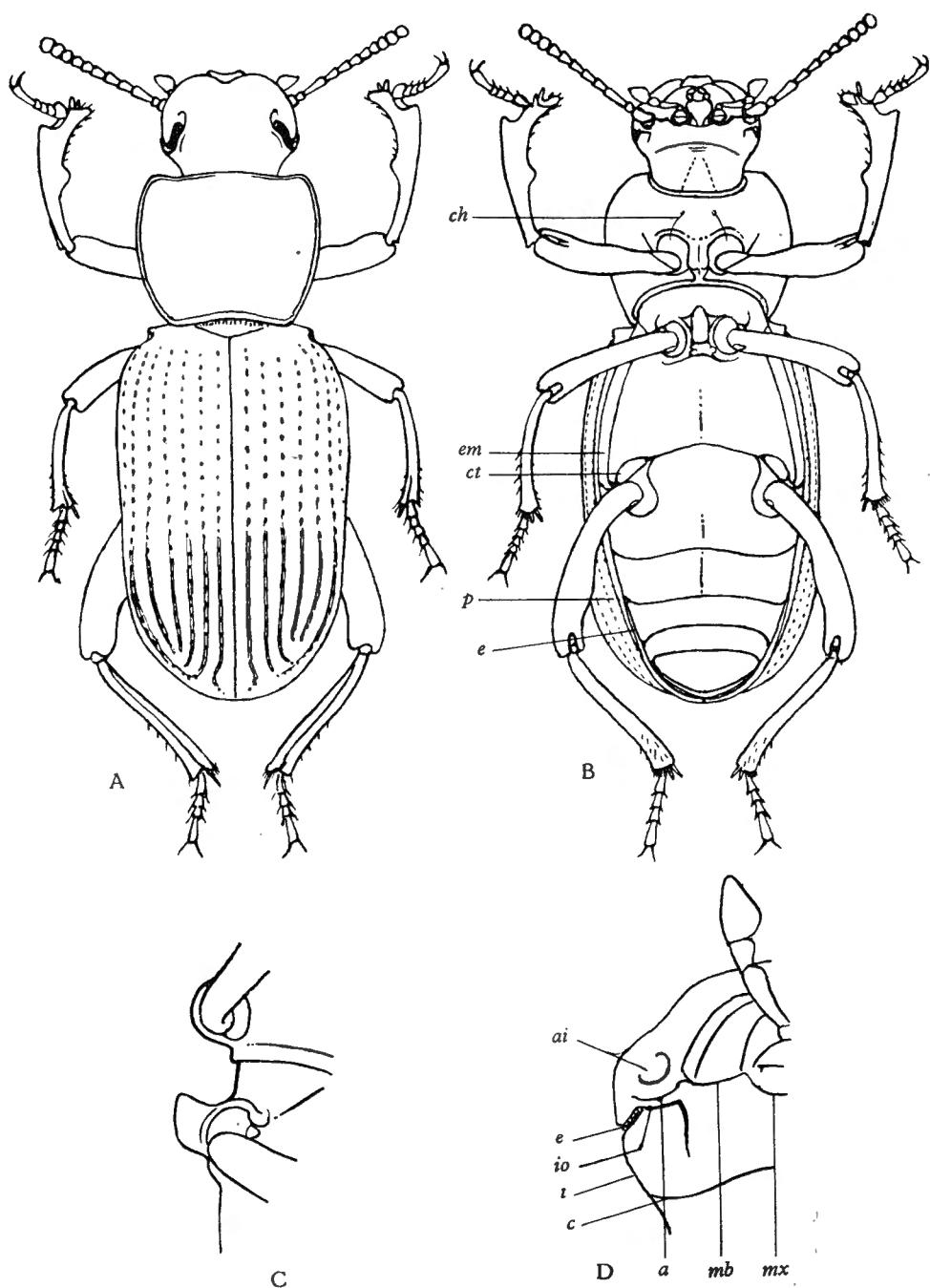


FIG. 27.

- 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 aedeagus small, considerably shorter and less than half the length of the basale (figs. 24, 26). Body of subparallel shape (figs. 27,

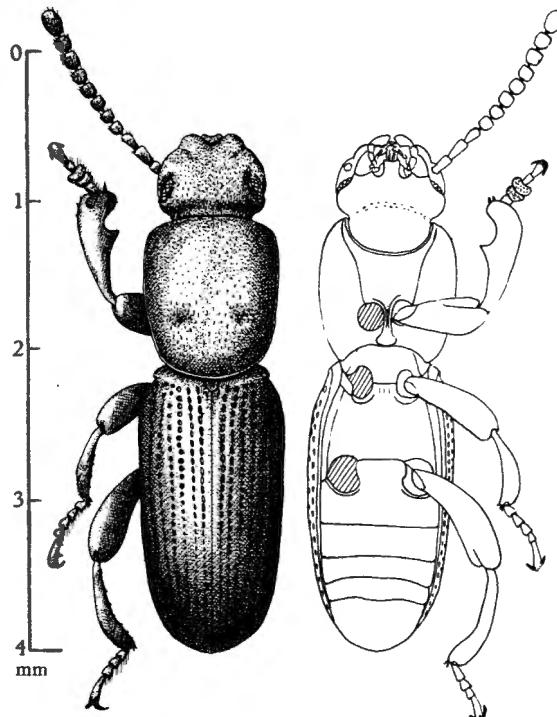


FIG. 28. — *Meglyphus andreaei* KOCH.

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* : trochantinal 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 *Opatriniæ* 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-*

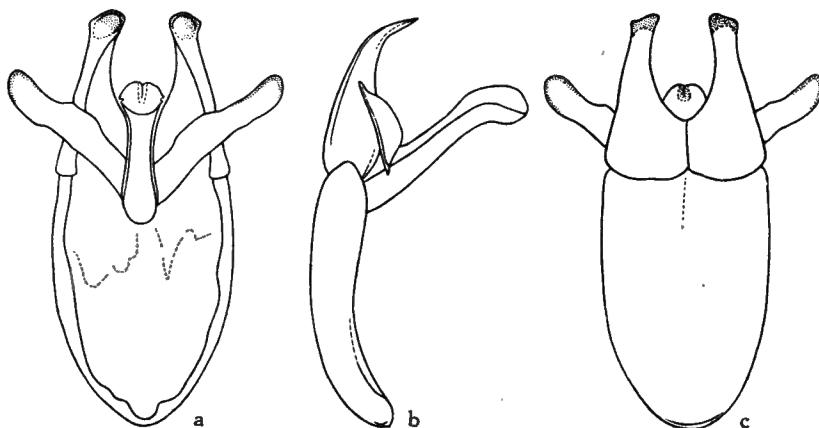


FIG. 29. — Ædeagus of *Dendarus tristis* LAPORTE DE CASTELNAU.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

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 palæarctic 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* MOTSCHOULSKY 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. Intercoxal 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 Palaeartic Asia. Of the three genera *Pedinus* LATREILLE, *Colpotus* MULSANT & REY and *Cabirutus* (MULSANT & REY) only a single species, viz.

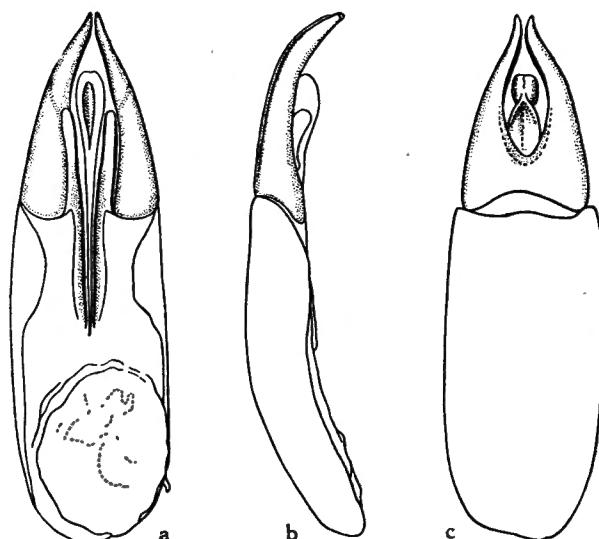


FIG. 30. — Aedeagus of *Phylan* sp. from Morocco (Azrou).
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

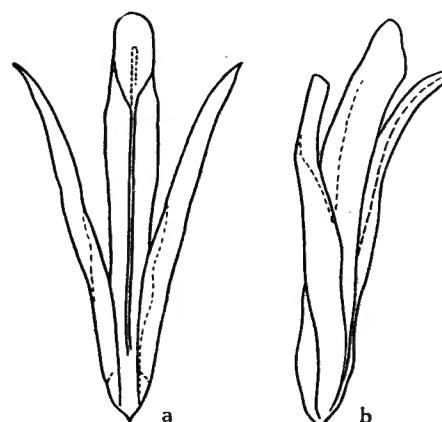


FIG. 31. — The extracted penis and lacinia of *Phylan* sp. from Morocco (Azrou).
a : outer surface; b : diagonal view.

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

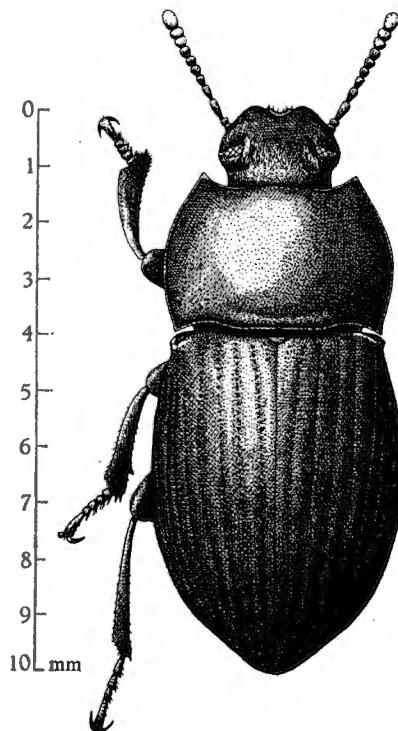


FIG. 32. — *Bioplanes meridionalis* MULSANT & REY.

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. Intercoxal 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 Transcasian Province. A single species of probably Atlantic origin, viz. *Phylan* (s. str.) *gibbus*, spreading to Northern Europe.

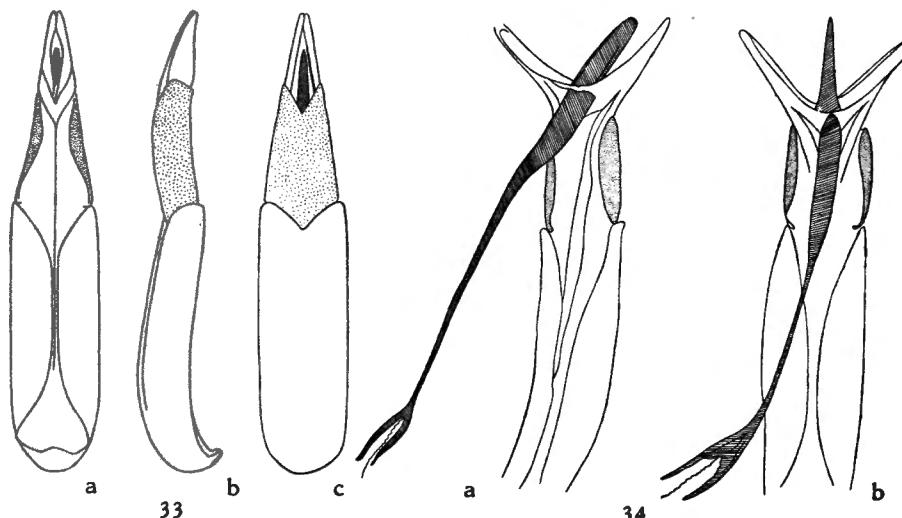


FIG. 33. — $\ddot{\alpha}$ edeagus of *Heterocheira fryeri mocambicola* KOCH
(dotted : intermediate sclerite between basale and apicale;
striolate : exposed portion of penis).

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

FIG. 34. — Ventral surface of the $\ddot{\alpha}$ edeagus of *Heterocheira fryeri mocambicola* KOCH,
with opened parameres and after removal of the covering external membranes (dotted :
inflected 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 Atlassic Province and not extending eastwards beyond Tunis (map 2).

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

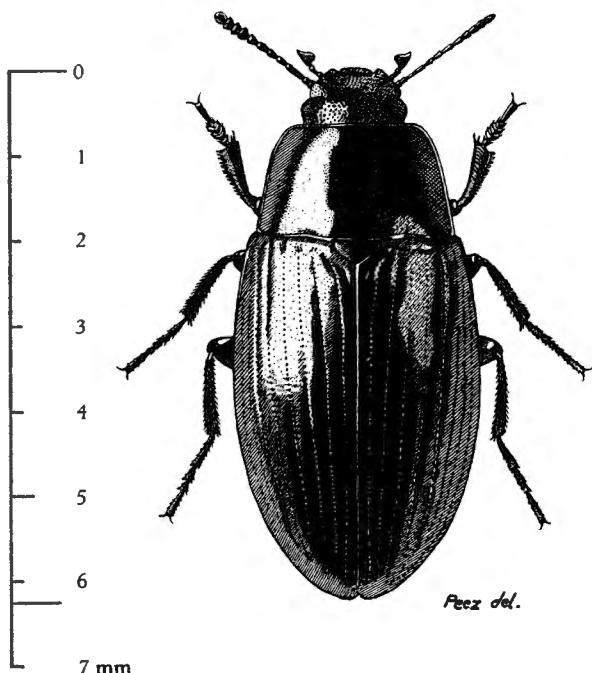


FIG. 35. — *Heterocheira fryeri mocambicola* KOCH.

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. — **HETEROCHIRINI** 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*.

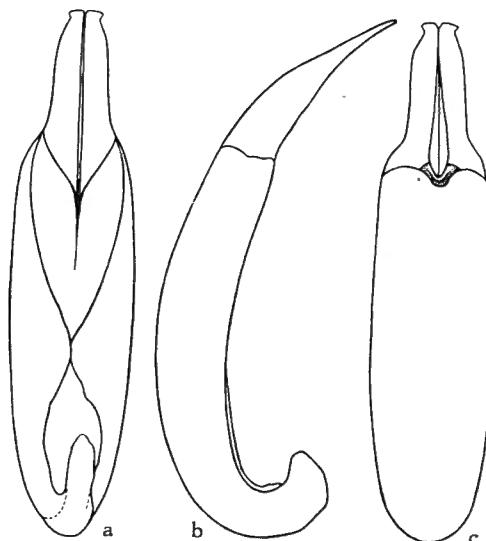


FIG. 36. — $\ddot{\alpha}$ edeagus
of a *Heterotarsus* sp. from the Belgian Congo Elisabethville Province.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

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 Palæarctic 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 penultimate 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.

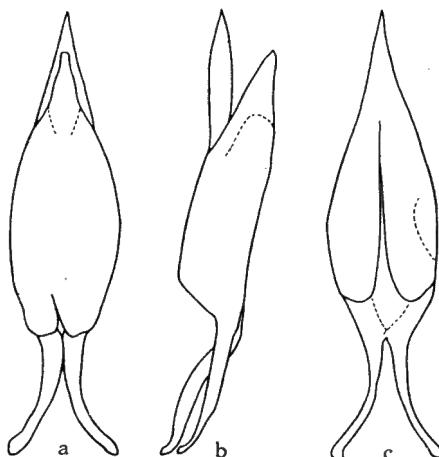


FIG. 37. — The extracted penis with the fused lacinia of ædeagus of *Heterotarsus* sp. from the Belgian Congo Elisabethville Province.
a : outer surface; b : lateral aspect; c : inner surface.

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

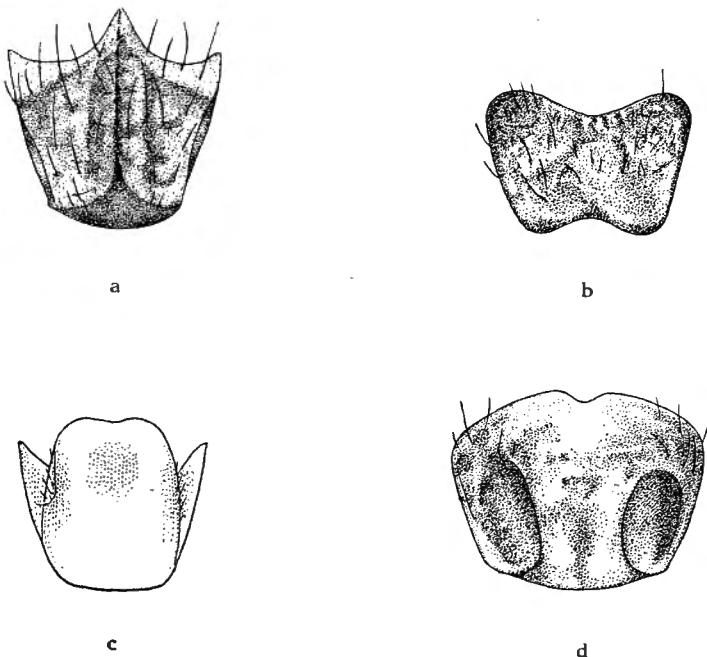


FIG. 38. — The mentum in a few *Opatrini*.
 a : *Pachypterus (Trachymetus)* sp. from Senegal (M'Bambe) (*Opatrina*);
 b : *Scleron orientale* (FABRICIUS) from Egypt (*Sclerina*); c : *Blenosia* sp. from South-west Africa (Windhoek) (*Stizopina*); d : *Stizopus* sp. from the Cape Province (Fraserburg)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

recent division of Palæarctic *Opatrinxæ*, 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*,

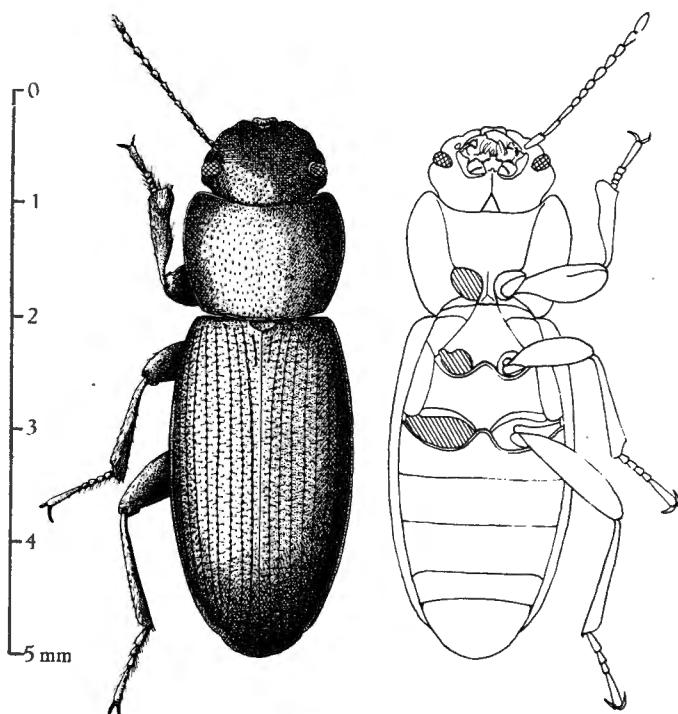


FIG. 39. — *Dilamus bottoi* KOCH, from Southern Africa.

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 Palaearctic *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.

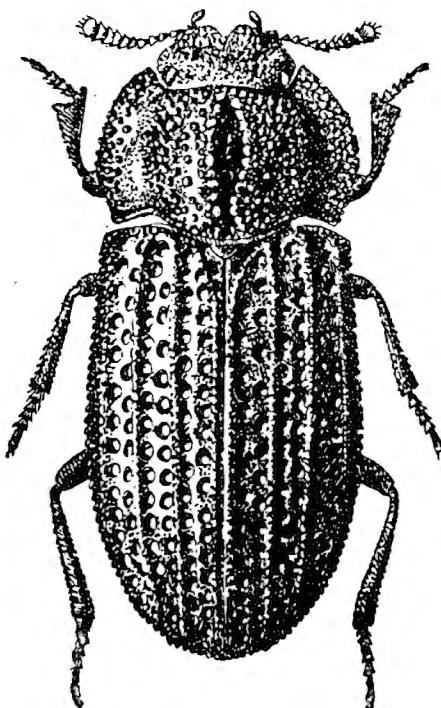


FIG. 40. — *Polycælogastridium sexcostatum* MOTSCHOULSKY
(after REICHARDT).

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 Palaeartic 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 aedeagus of *Opatrina*.

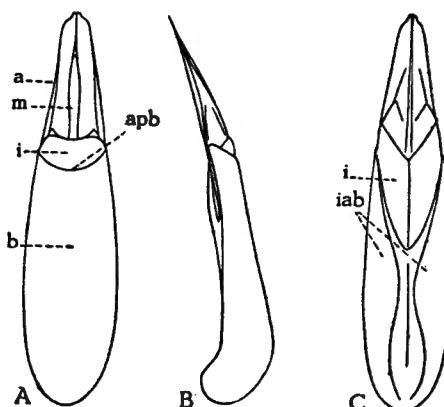


FIG. 41. — Aedeagus of *Gonocephalum gridellii* KOCH.

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

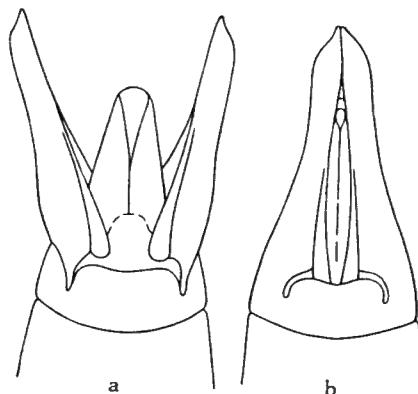


FIG. 42. — Apicale of the aedeagus of *Gonocephalum rusticum* OLIVIER.
a : with opened parameres; b : in state of rest (after GRIDELLI, 1948).

- 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 *Nesocædus* 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 Sout-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.

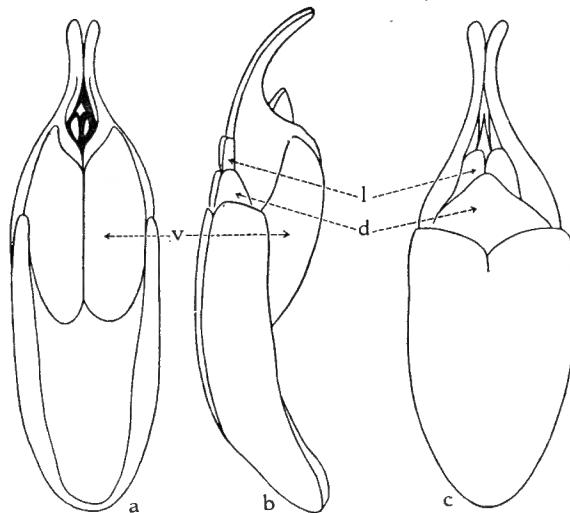


FIG. 43. — Ædeagus of a *Gonocephalum* sp. of the *perplexum* group.
v : ventral intermediate sclerite between basale and apicale; d : dorsal intermediate sclerite between basale and apicale; l : exposed portion of dorsal pair of lacinia.

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) *Heilibatus* 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.

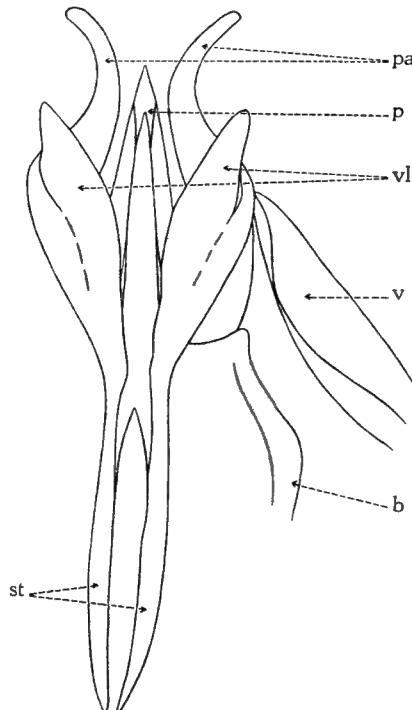


FIG. 44. — Outer surface of the extracted inner sclerites plus parameres of the aedeagus of a *Gonocephalum* sp. of the *perplexum* group. b : a part of the basale of aedeagal tegmen; p : penis; pa : the unfolded parameres of apicale; st : struts of inner sclerites; v : a part of the ventral intermediate 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.

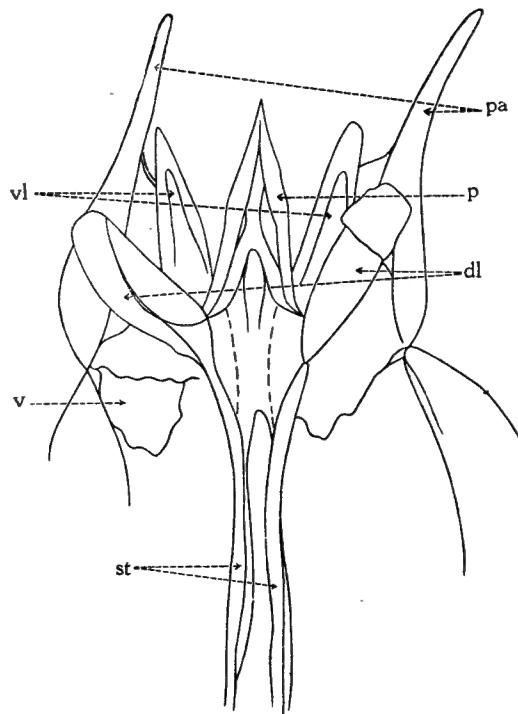


FIG. 45. — The dissected inner surface of the inner sclerites plus parameres

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.

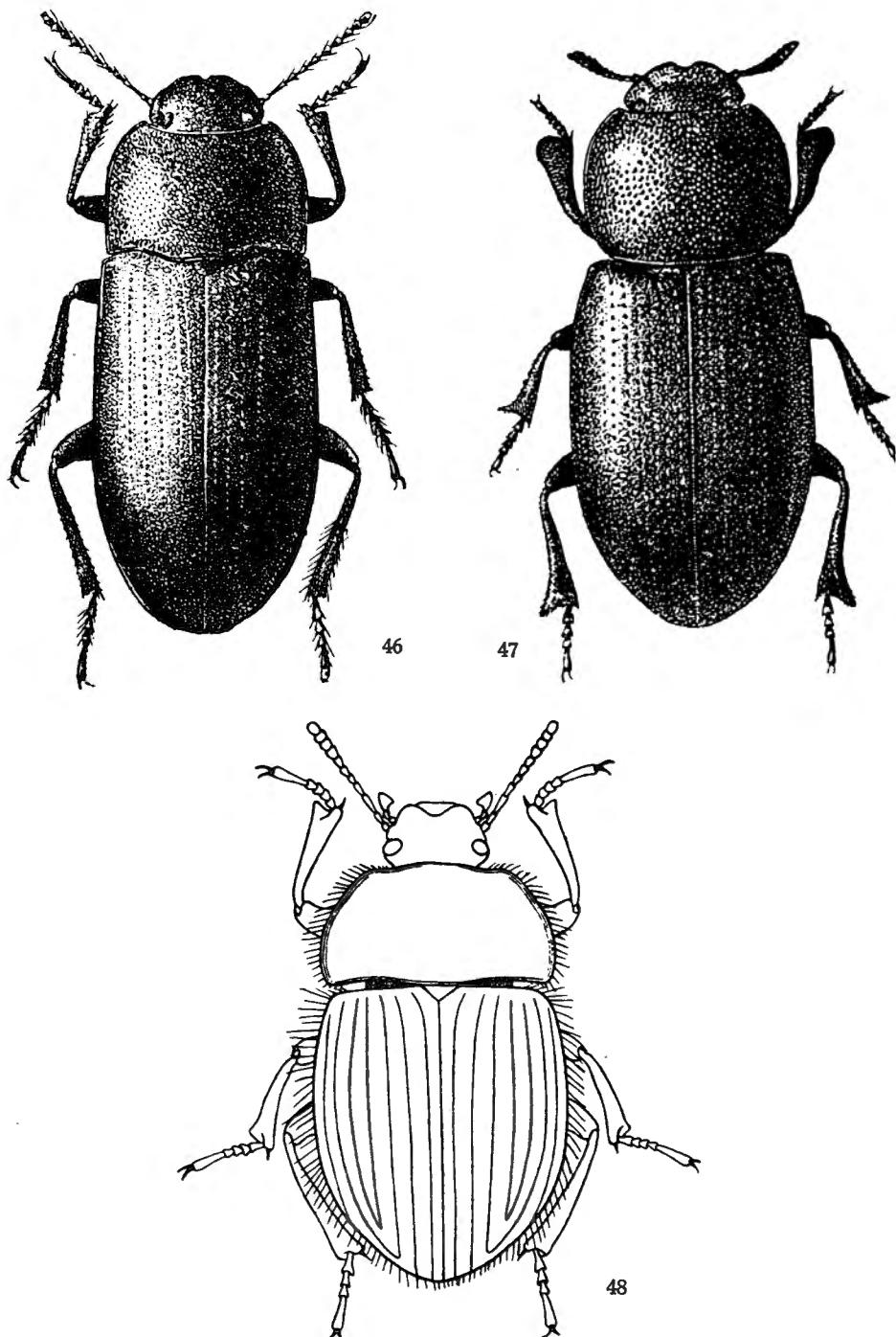


FIG. 46. — *Opatroides punctulatus* BRULLÉ (after REICHARDT).
FIG. 47. — *Proscheimus fulvipes* MÉNÉTRIES (after REICHARDT).
FIG. 48. — *Moralesia longepilosa* KASZAB (after ESPAÑOL, 1944).

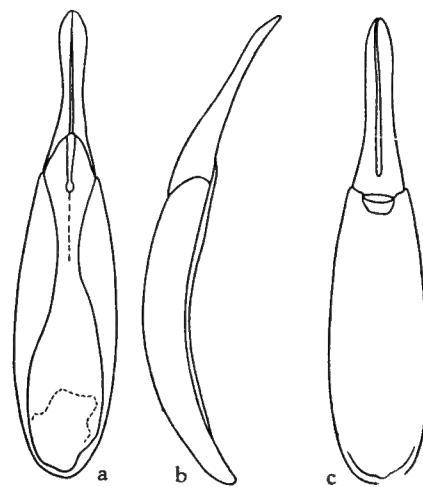


FIG. 49. — *Ædeagus* of *Moralesia longepilosa* KASZAB.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

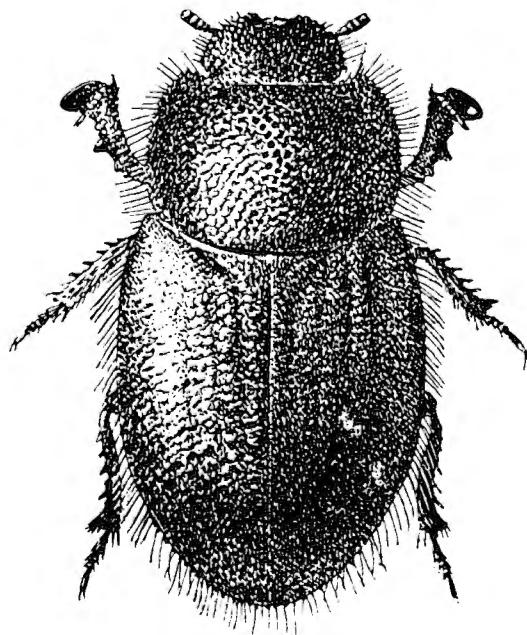


FIG. 50. — *Ammobius rufus* LUCAS (after REICHARDT).

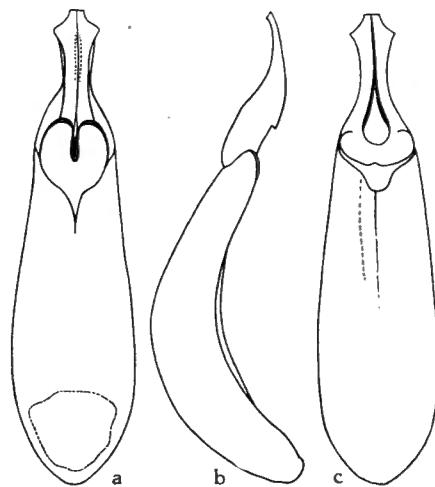


FIG. 51. — Ædeagus of a *Cædius* sp. from Ruanda-Urundi.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

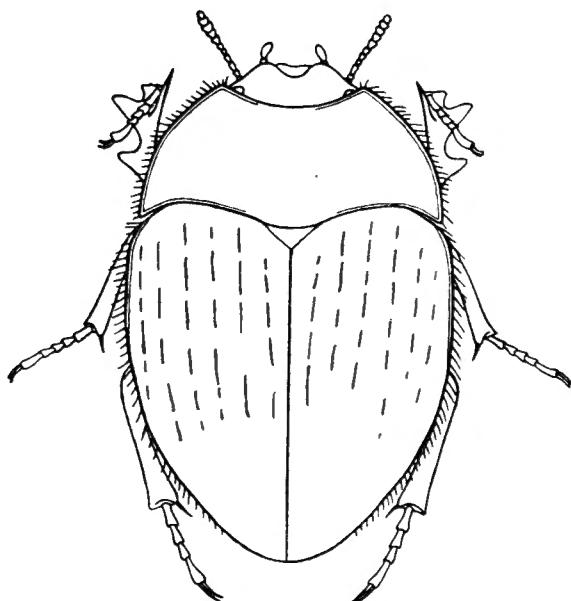


FIG. 52. — *Mateuina kaszabi* ESPAÑOL (after ESPAÑOL, 1944).

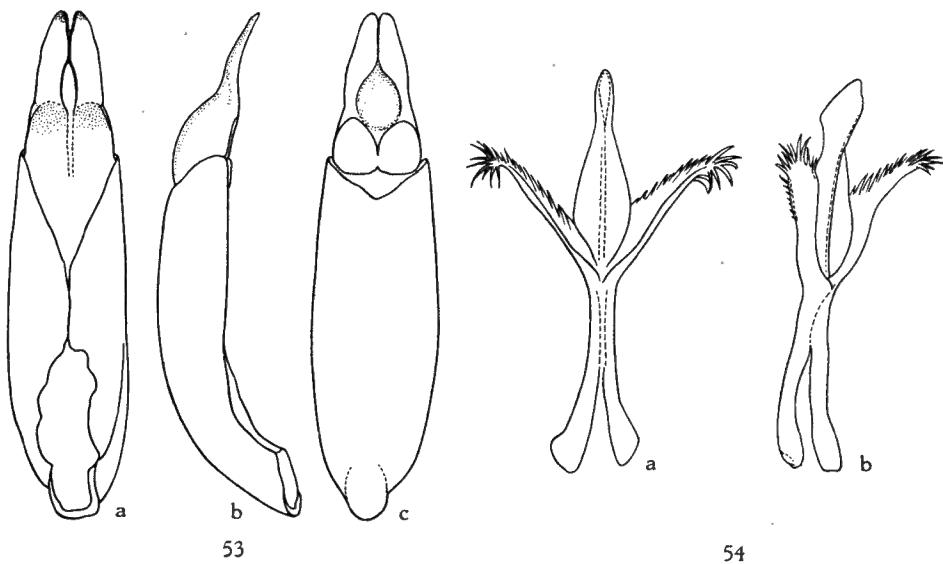


FIG. 53. — \ae deagus of an *Ammidium* sp. a : ventral surface; b : lateral aspect, with the ventral surface at right; c : dorsal surface.

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

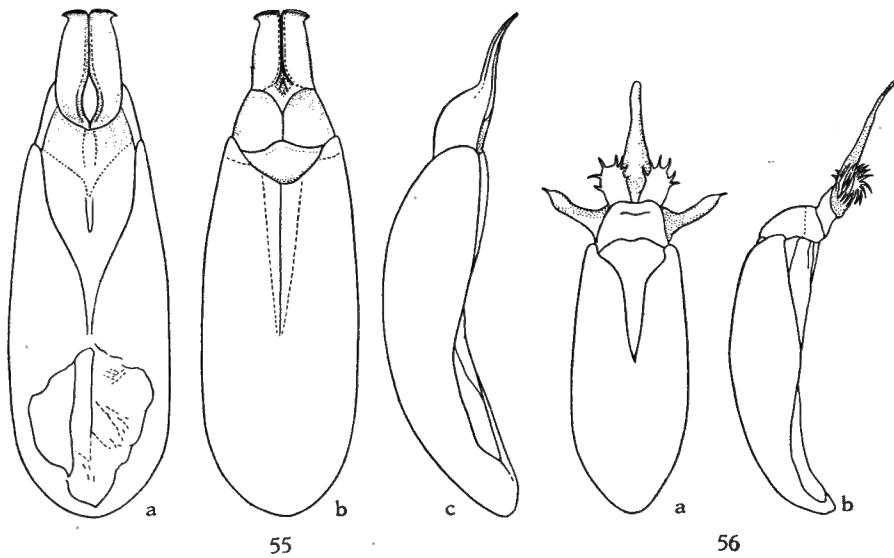


FIG. 55. — \ae deagus of a *Clitobius* sp. from Moçamedes. a : ventral surface; b : dorsal surface; c : lateral aspect, with the ventral surface at right.

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

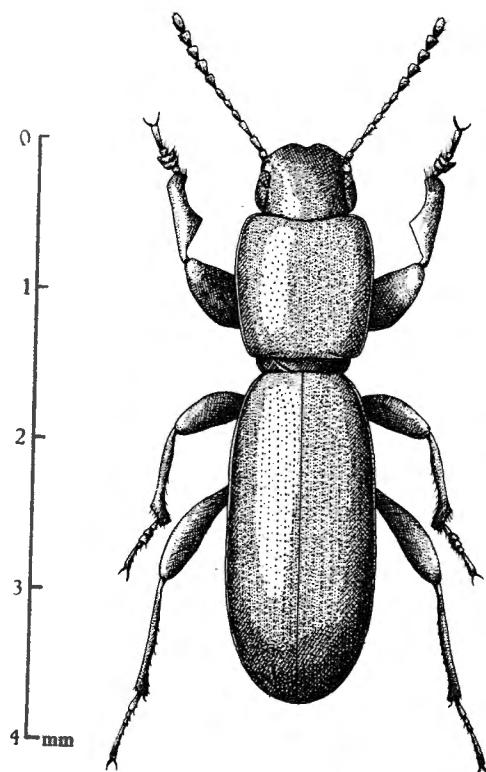


FIG. 57. — *Stenolamus furciphallus* KOCH.

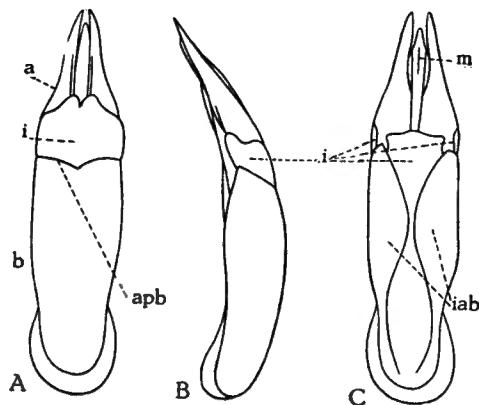


FIG. 58. — $\text{\textit{Aedeagus of Parastizopus diehli}} \text{ GEBIEN.}$

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

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

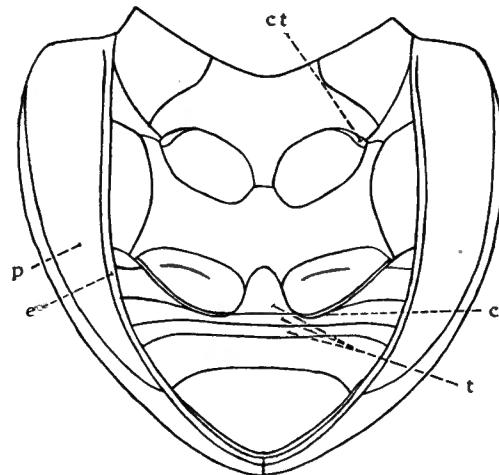


FIG. 59. — Underside of hind body in the Stizopin *Psammogaster malani* KOCH.
 e : the complete and entirely exposed epipleuron; p : the extremely broad and abruptly abbreviate pseudopleuron; c : the practically open metacoxal cavity; ct : the rudimentary mesocoxal trochantin; t : the reduced and somewhat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

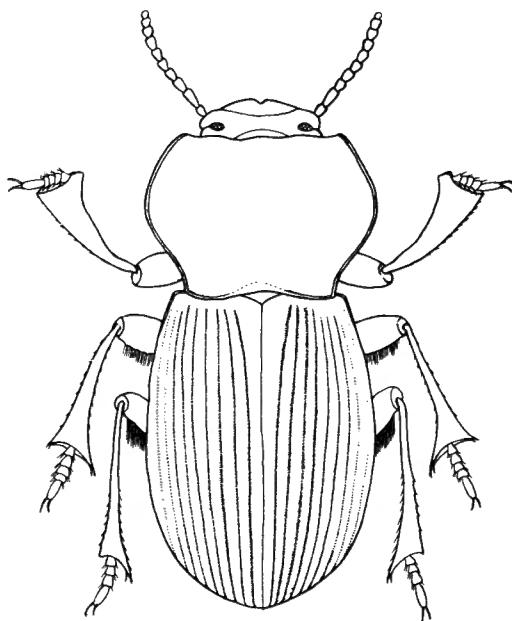


FIG. 60. — *Parastizopus armaticeps* PÉRINGUEY.

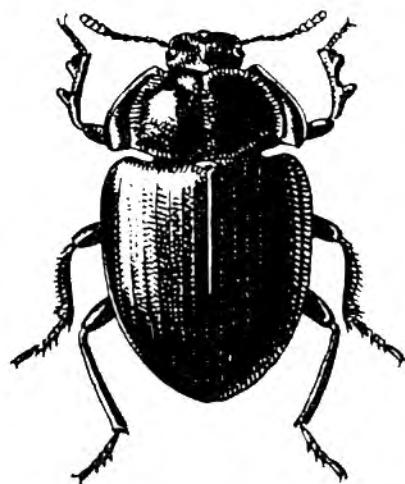


FIG. 61. — *Nemanes expansicollis* FAIRMAIRE (after GEBIEN, 1938).

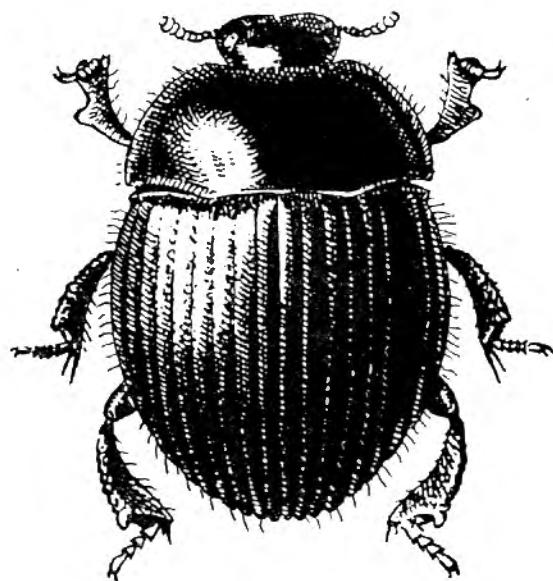


FIG. 62. — *Periloma alfkensi* GEBIEN (after GEBIEN, 1938).

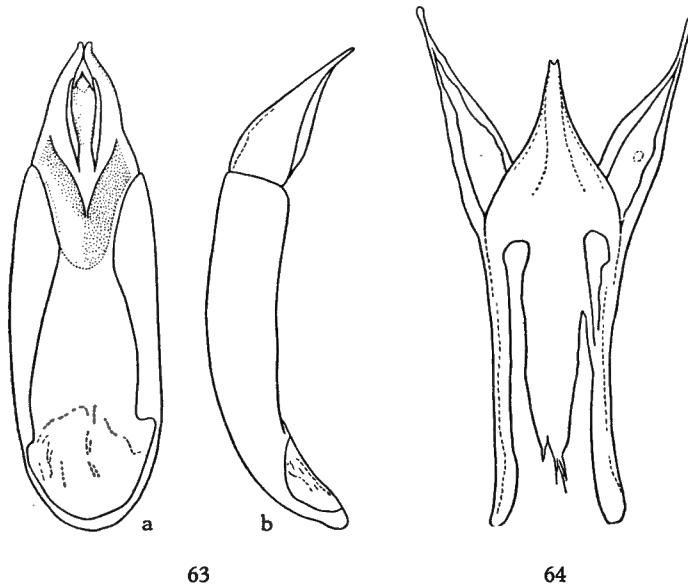


FIG. 63. — $\ddot{\alpha}$ edeagus of *Emmallus* sp. from the Upemba Park (Mabwe).
a : ventral surface; b : lateral aspect, with the ventral surface at right.

FIG. 64. — The dissected portion of the parameres and penis of $\ddot{\alpha}$ edeagus
of *Emmallus* sp. from the Upemba Park (Mabwe).

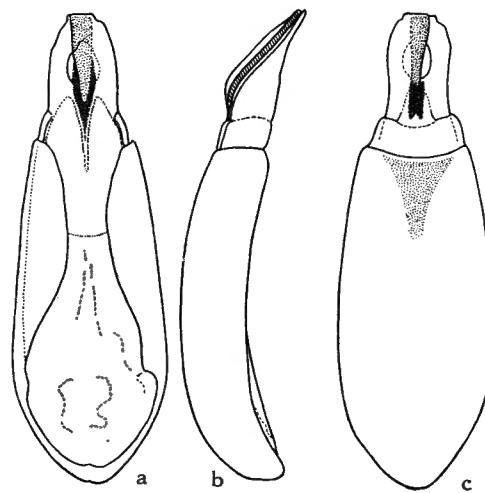


FIG. 65. — $\ddot{\alpha}$ edeagus of *Emmallus* sp. from South-west Africa.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

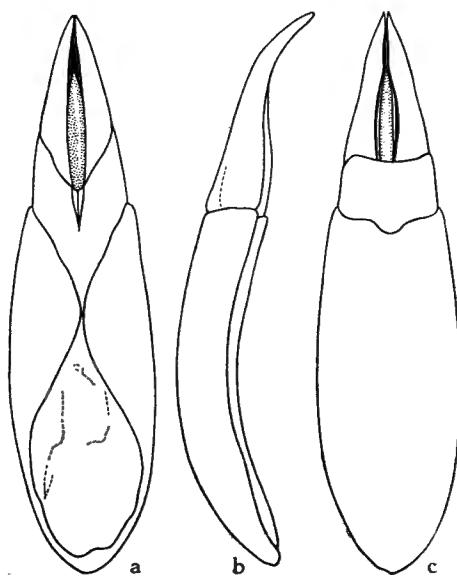


FIG. 66. — *Ædeagus* of *Eurycaulus pachecoi* ESCALERA.
a : ventral surface; b : lateral aspect, with the ventral surface at right;
c : dorsal surface.

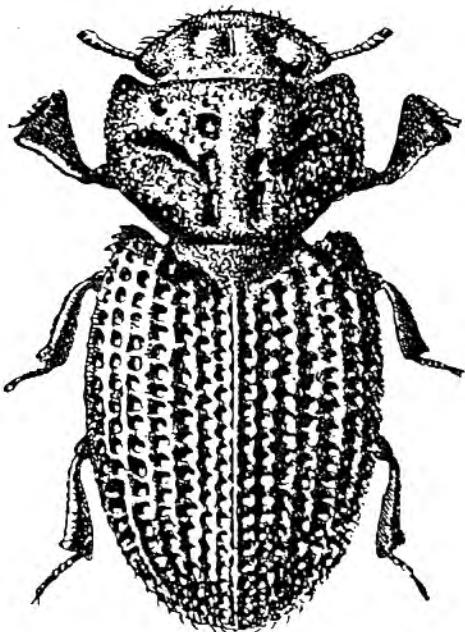


FIG. 67. — *Platynosum collare* MOTSCHOULSKY (after REICHARDT).

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.

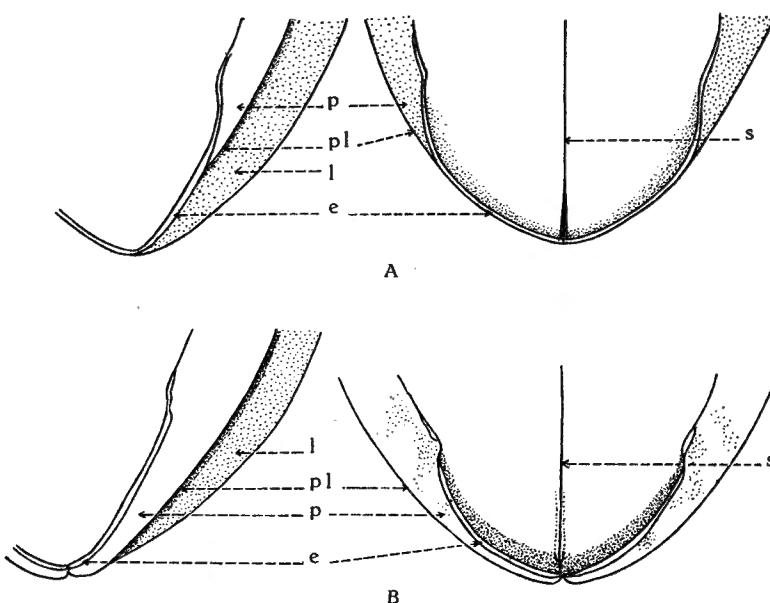


FIG. 68. — Apical construction of pseudopleura of elytra.

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 : opatrinoïd 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 tibiæ 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. Aedeagal 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.

R e l a t i o n s h i p. — 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 aedeagus. Without any exception all *Platynotini* possess a stridulatory gula, a short apicale and lacinia of aedeagus, whether coming from Africa, India or America.

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

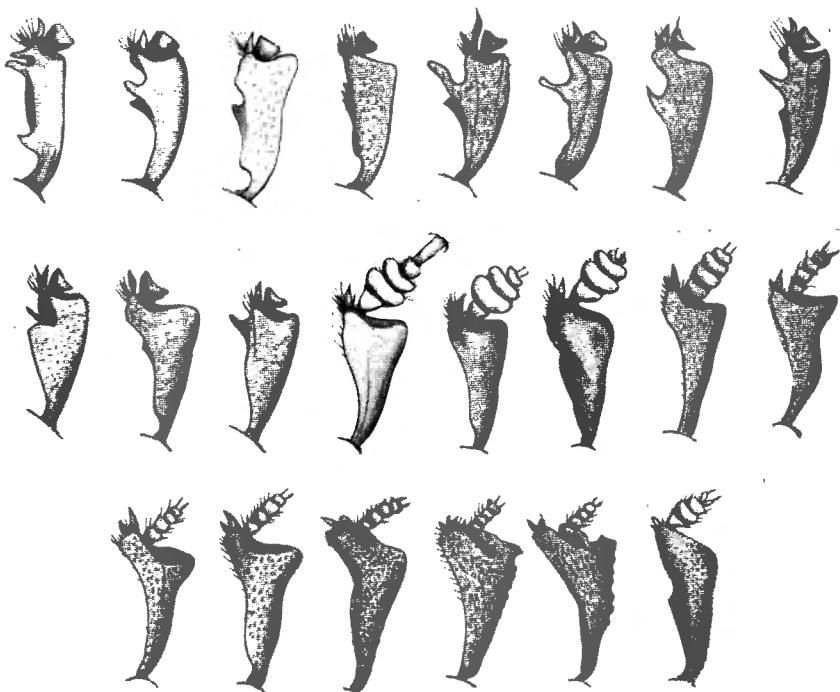


FIG. 70. — Some types of anterior tibiæ in the trigonopoid *Platynotina*.

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 tibiæ 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

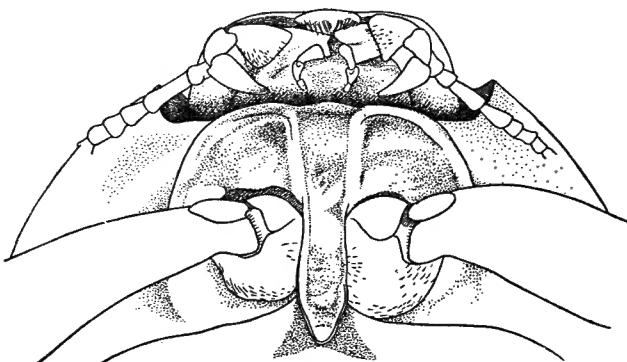


FIG. 71. — The under surface of head of *Gonopus* sp., amplected in the collar-like produced prosternum.

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 tibiæ 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 amplecting 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 tibiæ with two to six teeth or partially obtuse processes.

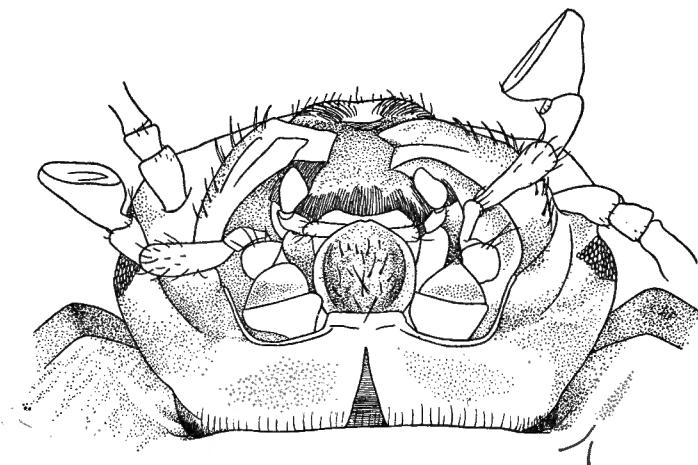


FIG. 72. — Under surface of head of *Stenogonopus* sp.

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 tibiæ 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 peri-karrooid distribution (map 6), occurring only in the Trans-Bechuana

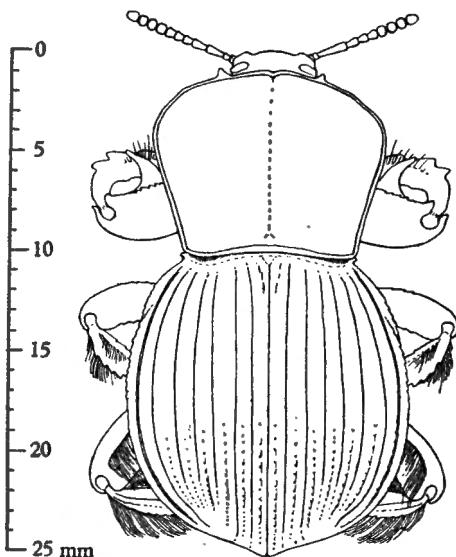


FIG. 73. — *Gonopus* (s. str.) *compachysoma* KOCH.

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 podagratus*, in which it is spiniform (fig. 267).

The aedeagus 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 *Phallocentriion* (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

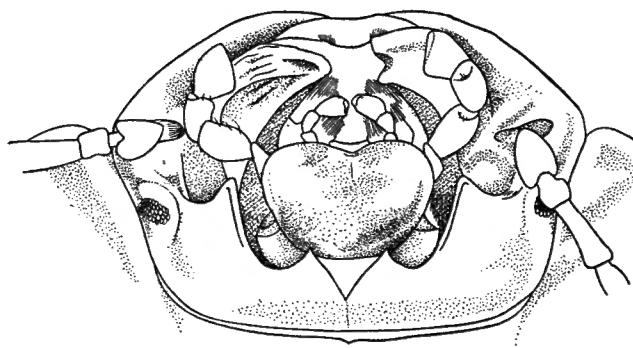


FIG. 75. — Under surface of head of *Anomalipus mastodon* FÄHRAEUS.

- 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.

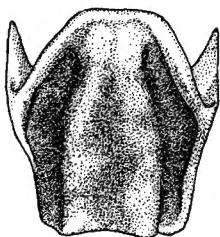
Platynotoid Platynotina.

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.

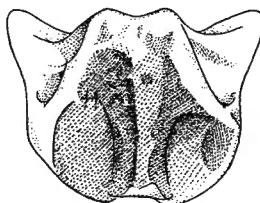
Exclusively Indian. Two genera: *Platynotus* FABRICIUS and *Pseudoblaps* GUÉRIN.

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

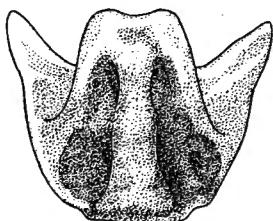
- Pseudopleura of elytra abbreviate posteriorly or fused with the epipleural crest, apically forming a uniform edge, delimited by a single carina on dorsal surface of elytral apex, but without any trace of an epipleural carina on ventral surface of apex (fig. 68).



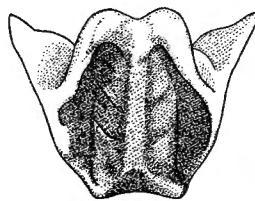
76



77



78



79

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

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

FIG. 78. — Mentum of *Atrocrates* 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.

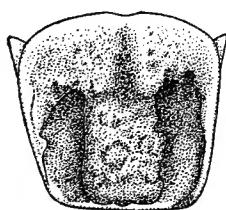
Opatrinoid *Platynotina*. Monotypical.

OPATRINUS LATREILLE.

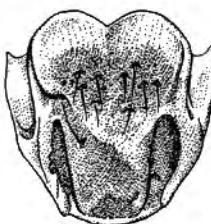
(Pl. III, Pl. IV, fig. 1.)

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

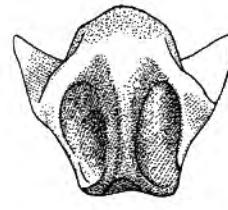
See p. 91.



80



81



82

FIG. 80. — Mentum of *Zophodes fitzsimonsi* 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 punctuation, 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.

PHALLOCENTRION 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 alæ 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).

ONCOTIPHALLOPS 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 $\frac{1}{2}$ to 20 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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. Aedeagus 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).

ANCHOPHTHALMOPS 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). Underside 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 punctuation. 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 punctuation, 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 tibiæ, 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 tibiæ.

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 tibiæ 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 tibiæ 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 tibiæ 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 $\frac{1}{2}$ 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 (*Eviropodus 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 obsoletely 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 canalication 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 sulcate, 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 $\frac{1}{2}$ to 13 mm, in a single case (*Schelodontes grandis*) 14 to 15 mm long; 3 to 6 $\frac{1}{2}$ 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.

ATROCRATES 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

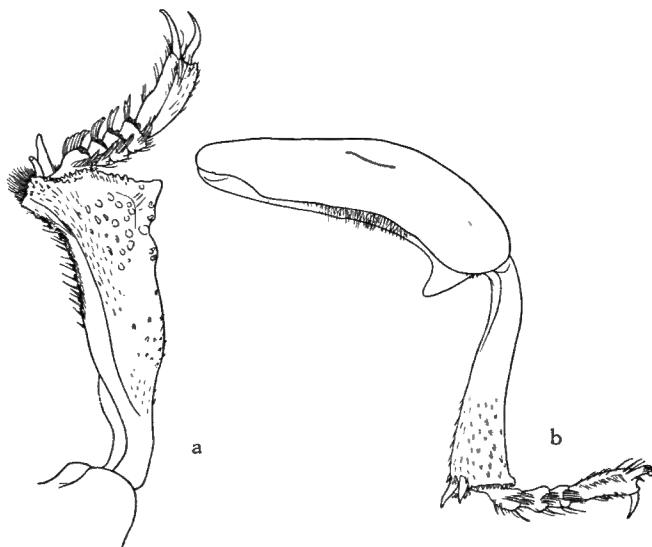


FIG. 83. — *Schelodontes immundus* (MULSANT & REY).
a : anterior tibia with tarsus of ♂; b : hind leg of ♂.

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 tibiæ with sharp outer edge; the outer contours of intermediate and posterior tibiæ distinctly sinuate in front of the minutely prominent apical angles, the upper surface of intermediate tibiæ sulcate, that of posterior tibiæ flattened to strongly sulcate. In the ♂ the anterior tarsi very weakly to inconspicuously dilated, the inner contours of tibiæ without distinctive characters, but the underside of posterior tibiæ usually with a distal brush of fine, squarrose and scattered yellowish hairs; the femora often with fringes of hairs. Ædeagus simple.

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

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

Composition. — *Trigonopus alternans* FÄHRAEUS, *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).

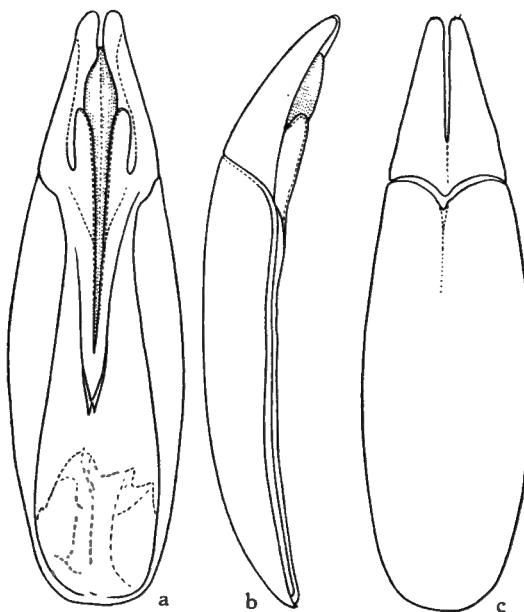


FIG. 84. — *Aedeagus of Eviropodus alternans* (FÄHRAEUS).

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 FÅHRAEUS.

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

*1870, *Zophodes FÅHRAEUS*, 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; pseudo-pleural 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. Aedeagus 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.

D i m e n s i o n s . — 8 $\frac{3}{4}$ to 13 mm long, 4 to 6 $\frac{1}{4}$ mm broad.

T y p e s p e c i e s . — *Zophodes tristis* FÅHRAEUS, 1870.

C o m p o s i t i o n . — Apart from the type species with only a few closely related, still undescribed species (see p. 440).

D i s t r i b u t i o n . — 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 punctuation 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 punctuation 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. Aedeagus 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 inermous, 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 *Atrocrates*, but on account of the different structure of mentum showing allied also to *Amblychirus*.

Shape of body similar to *Atrocrates*, 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 *Atrocrates*, 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 *Atrocrates*, but the range of variability is considerably wider; the lateral carina is usually very broad, of variable shape, the justa-lateral canalication 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

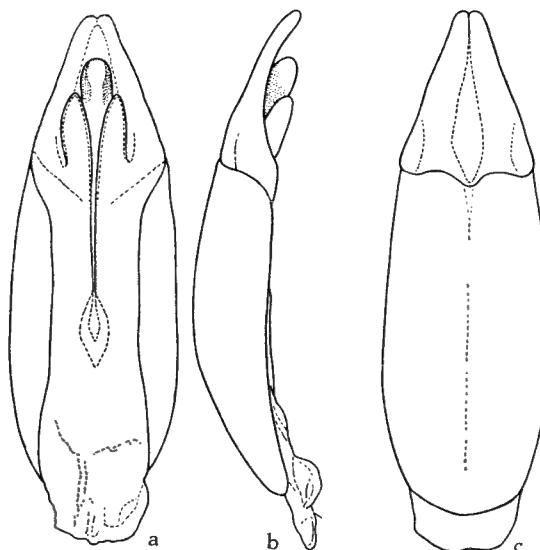


FIG. 85. — Aedeagus of *Crypticanus edwardsi* (MULSANT & REY).
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

Melanopterus, but the calcaria of posterior tibiæ elongate and longer than in the other trigonopoid genera. In the ♂ the anterior and intermediate tarsi strongly dilated, the underside of intermediate and posterior tibiæ 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 *Opatinus 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 *Opatinus 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 *Opatriinus 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.

Aedeagus. — 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*, *Phallocentron*, *Cosmogaster* and *Oncotiphallopss*; 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 *Opatriinus* 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*, *Phallocentron*, *Cosmogaster* and *Oncotiphallopss*, which all display a similar construction of the complete pseudopleura, although being constantly apterous and having a strongly abbreviate metasternum.

Type species. — *Opatum clathratum* OLIVIER, 1784. The type species belongs to an American group of *Opatriinus* (*Opatriinus* s. str. sensu MULSANT & REY). Only a careful study may prove the generic identity of the American and African *Opatriinus*. The few species of American *Opatriinus*, preserved in the collections of the Transvaal Museum, differ strongly from the African *Opatriinus* 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 Palaearctic 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 *Opatriinus* 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

*1853 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 *Opatriinus* 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 *Opatriinus* s. str. (*O. niloticus*), as well as *O. latipes* (= *O. ovalis*) which was placed to the *Zodinus*. The *Opatriinus* 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. — *Opatriinus 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. — *Opatriinus servus* MULSANT & REY, 1853.

2. Body of smaller and more slender shape. Pronotum with round, separated, rarely very dense, subrugose and finer punctuation 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 punctuation 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.

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

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

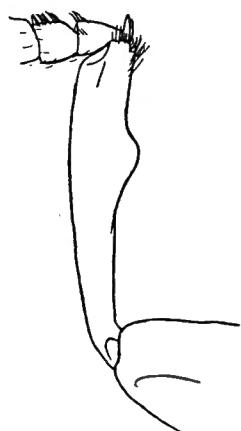
*1853 a, *Opatriinus (Zidalus) corvinus* MULSANT & REY, p. 296. — 1853 b, MULSANT & REY, p. 71. — 1870, GEMMINGER & DE HAROLD, p. 1915. — 1887, FAIRMAIRE, p. 283. — 1904, REITTER, p. 77. — 1910 b, GEBIEN, p. 276. — 1935, KOCH, p. 106. — 1938-1942, GEBIEN, p. 415, n° 5556. — 1939, GRIDELLI, p. 238. — 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. Écussion en triangle à côtés anguleux; près d'une fois plus large qu'il est long dans son milieu; ponctué. Élytres sub-arondies aux épaules, faiblement élargies ou presque parallèles ensuite jusqu'aux trois cinquièmes; assez faiblement convexes; à stries très marquées, étroites, crénélées 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; crénélés 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. »

R e m a r k s. — 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 spongiōse soleæ below; posterior tarsi elongate, with dense, long bristles



86



87

FIG. 86. — Anterior tibia of a ♂ of *Opatriinus (Zidalus) corvinus* MULSANT & REY.

FIG. 87. — Intermediate tibia of a ♂ of *Opatriinus (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.

Ædagus. — 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.

Dimensions. — 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.

Distribution. — 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 (KOCHE, 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 (OLSFUIEW, 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 typica, 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 typica. Lungh. 10 ½ to 11 ½ mm — Ritengo molto probabile che il mio *erythræus* rappresenti in realtà une 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. »

Remarks. — 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, Giumbo, 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.

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

*1853 a, *Opatinus (Opatinus) 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, *Opatinus angulicollis* FAIRMAIRE, p. 283. — 1947, *Opatinus niloticus angulicollis* GRIDELLI, p. 52, fig. 18.

*1943, *Opatinus 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 médiaire 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 médiaires 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 curvillignes ou anguleux; un peu plus large à la base qu'il est long dans son milieu; ponctué. Elytres 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 devant, 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 tarses antérieurs manquaient à l'exemplaire que nous avons sous les yeux). »

R e m a r k s. — 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.).

A e a g u s. — 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.

D i m e n s i o n s. — Length 9 $\frac{1}{2}$ to 11 mm, width 4 to 4 $\frac{1}{4}$ mm.

T y p e l o c a l i t y. — « l'Egypte ». Type (coll. DEYROLLE) probably in Museum Lyon.

S u b s p e c i e s. — 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 punctuation on primary rows on elytra. GRIDELLI adds that « singoli esemplari non sono distinguibili dalla forma typica e i caratteri sessuali sono gli stessi ».

As to *zolotarevskyi* ESPAÑOL from Ifni, GRIDELLI, 1950, having examined material from the French Sudan and Mauritania, considers *zolotarevskyi* 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 *zolotarevskyi* 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 GYLDEN-STOLPE (Prince WILHELM Exped., 6 sp., M.St.). — Erythræa : 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, Scieic Hosc, Merca, Garad, Belet Amin, Giumbo, Rahauin, 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 punctuation 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.

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

- *1853 a, *Opatriinus (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, *Opatriinus (Zodinus) ater* CL. MUELLER, p. 301, pl. 12, fig. 4. — 1922, GEBIEN, p. 273.
- *1947, *Opatriinus insularis somalicus* GRIDELLI, p. 51.

O r i g i n a l d e s c r i p t i o n . — « 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. Écussion 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 crénèlent 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; grèles; simples (σ^{σ} φ). σ^{σ} : Jambes antérieures à peine arquées; les postérieures légèrement échancrees vers le tiers de l'arête inférieure : quatre premiers articles des tarses antérieurs dilatés : les deuxième à quatrième plus que le premier. φ : Jambes droites. Tarses antérieurs à peine dilatés. Long. 10 mm, larg. 3,6 mm. »

R e m a r k s . — Shape of body as in *corvinus* and *niloticus*. In the σ^{σ} 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 tibiæ; the posterior tarsi setiferous below, with the exception of the soleate preapical segment. In the φ 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 tibiæ with excavate underside, with the inner contours inconspicuously emarginate on distal half (forma typica) or straight (ssp. *somalicus*); the intermediate tibiæ with strong preapical tooth on inner contours; posterior tibiæ straight or very slightly bent inwards in front of middle.

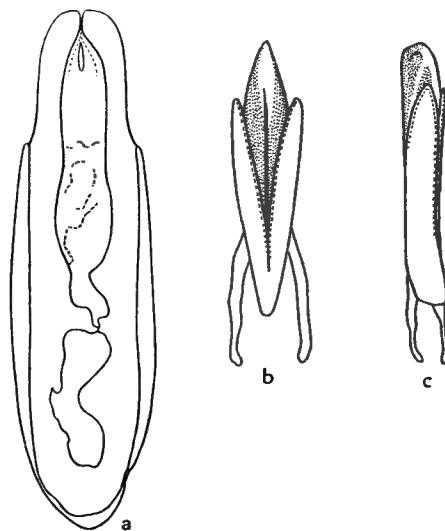


FIG. 88. — *Opatriinus (Zidalus) insularis* MULSANT & REY.

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 $\frac{1}{2}$ -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 *somalicus*. 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 *somalicus*, viz. extend to the apical quarter of elytral length. The other differential character which GRIDELLI claims for his *somalicus* is the shape of the posterior tibiae in the ♂. It is possible that he refers only erroneously to the posterior tibiae instead of correctly to the anterior tibiae, but the posterior tibiae 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. *somalicus*), Mogadiscio, Villaggio Duca Abruzzi, Margherita, Alessandria (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 pseudepleural 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.

D i m e n s i o n s . — Length 10 $\frac{1}{2}$ to 12 mm, width 4 $\frac{3}{4}$ to 5 $\frac{3}{4}$ mm.

R e m a r k s. — 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 punctuation 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*.

D i s t r i b u t i o n (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 punctuation. 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. Hopatrinus) 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.

O r i g i n a l d e s c r i p t i o n. — *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 médiaire 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. Écussion en triangle à côtés anguleux; de moitié plus large à la base que long dans son milieu; ponctué. Élytres 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 grèles : 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 grèles, arquées sur leur tiers ou leurs deux-cinquièmes basilaires, échancrées en dessous vers le tiers. Quatre premiers articles des tarses antérieurs dilatés : les deuxième et troisième plus fortement que le premier surtout : quatre premiers articles des tarses 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 tibiæ; the underside of posterior tarsi very densely setiferous, with divided soleæ 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 $\frac{1}{2}$ to 15 mm, width 4 $\frac{1}{2}$ to 6 $\frac{3}{4}$ 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 typica, 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 *costatus*, 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 $\frac{1}{2}$ 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 subrectiform 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, Gemenia, Karawa, Likimi, Mandungu)]; [Oriental Province (Barumbu, Mobwasa, Yangambi, Buta, Tukpwo, Bambesa, Stanleyville, Zobia, Sassa country, Ibembo, Amadi, Poko, Dundu, 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, Kondu, 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 ssp. *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 punctuation. 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. GHEŚQUière, 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. MERTENS, SH. NEAVE, N. NEUMAN, G. F. OVERLAET, PUTNAM, C. SCOOPS, H. SCHOUTEDEN, H. TAZIEFF, P. VANDERIJST, P. VANDERPLAS, P. VANHEYEN, P. VANKERCKHOVEN, VANHEEKE, J. VRIJDAGH, Q. WALLIN and Mission G. F. DE WITTE.

on distal half; the inner contours of intermediate tibiae almost simple, slightly curved and shallowly emarginate on distal half; the posterior tibiae 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 antennae 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 punctuation 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 antennae.

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♀, 2♂, 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

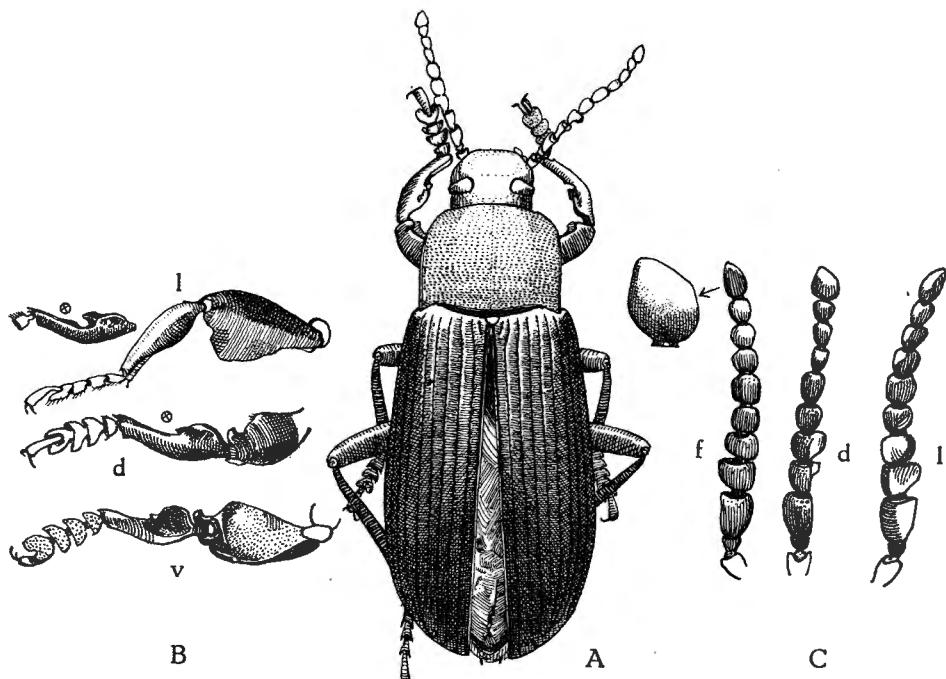


FIG. 89. — *Opatriinus (Zidalus) mirabilis* n. sp.

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.

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

(Pl. III, fig. 4.)

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

1870, *Opatriinus 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 *Opatriinus* 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. »

Ædagus. — 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.

D i m e n s i o n s . — Length 9 to 11 $\frac{1}{2}$ mm, width 4 to 4 $\frac{3}{4}$ mm.

T y p e l o c a l i t y . — Abyssinia.

D i s t r i b u t i o n (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.

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

*1853 a, *Opatinus (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.

O r i g i n a l d e s c r i p t i o n . — « 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 médiaire 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 subparallèle ensuite; fortement bisinué à la base, avec la partie médiaire 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. Écussion en demi-hexagone, de moitié plus large que long; ponctué. Élytres subparallèles 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 grèles : 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. »

R e m a r k s. — 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 tibiæ are strongly curved as in *costulatus*.

Æ d 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.). GEBIEN'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, *Eurygnathus 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 médiaire du menton presque ovale. 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 devant, 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 devant 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. Écussion 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 médiaires, 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 juxtapostural 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 intermédiaires et les deux derniers.

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

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

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

D i m e n s i o n s. — Length 8 to 11 mm, width 3 $\frac{1}{2}$ to 4 $\frac{3}{4}$ mm.

T y p e l o c a l i t y. — Madagascar. Type in Museum Berlin.

S u b s p e c i e s. — 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, adherente, 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*.

D i s t r i b u t i o n (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. BRÉDO (2♀ ♀, BCM.).

- Secondary intervals on elytra with dense, conspicuous punctuation; 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 tibiæ without any trace of emargination, slightly curved and more strongly dilated towards apex.

Opatinus (Zodinus) setuliger CL. MUELLER.

(Pl. IV, fig. 1.)

*1887, *Opatinus (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, *Opatinus 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 sehr fein punktiert. Auf der Unterseite die Seitentheile 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 ».

Remarks. — Very closely related to *O. attenuatus*. In the ♂ the inner contours of intermediate tibiæ 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.

Dimensions. — Length 8 $\frac{1}{2}$ to 12 $\frac{3}{4}$ mm, width 3 $\frac{1}{2}$ to 5 $\frac{1}{4}$ mm.

Type locality. — « Zambesi Gebiet, leg. BRADSHAW ». Type probably in Museum Amsterdam.

Subspecies. — 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 tibiæ 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.

Distribution (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 tibiæ)]; [Bulawayo, IX.1938 (1 spec., M.S.Rh.)]; [Penkridge, Melsetter 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. VANHEYEN, 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. BABAUT (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). Camerons : Bamum (type locality of ssp. *camerunensis*).]

ANCHOPHTHALMOID PLATYNOTINA.

ANCHOPHTHALMUS GERSTAECKER.

*1854, *Anchophthalmus* 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.

D i a g n o s i s. — 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

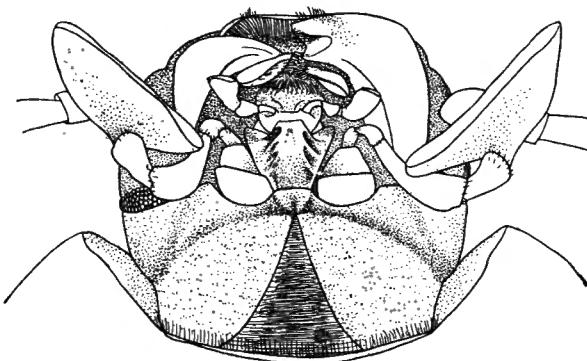


FIG. 90. — Under surface of head of *Anchophthalmus plicipennis* PÉRINGUEY
(drawn after a ♂ specimen from Elisabethville).

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 punctuation, 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 punctuation, the anal sternite sometimes with very fine marginal sulcus on basal third of sides. Legs moderately slender. Tibiae inconspicuously dilated, with non-prominent outer apical angle, the

upper surface of intermediate and posterior tibiæ evenly convex, that of anterior tibiæ 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 tibiæ 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 ♂.

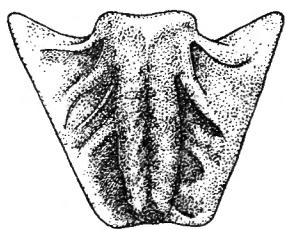
Aedeagus. — Simple and rather homogeneous. The apicale much shorter than the basale, with divided, converging to subparallel or spiniform parameres. Ventral groove variable, the penis and lacinia therefore sometimes almost concealed, sometimes entirely and broadly exposed. Basale from one and a half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

Dimensions. — 9 to 20 mm long.

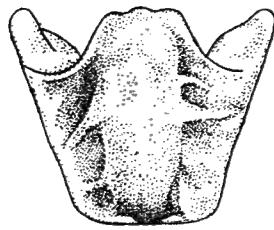
Relationship. — LACORDAIRE, in his mania of synthesis, considered *Anchophthalmus* a simple synonym of *Opatrinus*. In actual fact, however, *Anchophthalmus* is one of the best characterized genera of *Platynotini*, clearly cut from all the other genera by the complete pseudopleura in association with 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 descendant 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 trigonopoid *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.

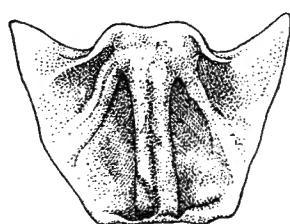
Distribution (maps 4, 6). — East African, from the southern parts of the Anglo Egyptian Sudan to Southern Rhodesia, Transvaal and Southern Portuguese East Africa, in the West not expanding beyond Eastern Bechuanaland and the eastern parts of the Belgian Congo.



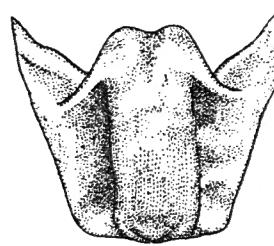
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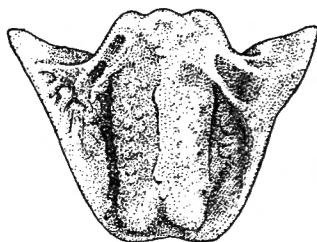
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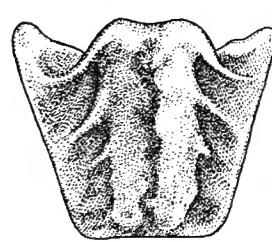
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d



e



f

FIG. 91. — The mentum in a few species of *Anchophthalmus*.

a : *A. altioricola* 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 (♀). — 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 punktiert, 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 und stumpfer; die Punktierung ist fast dieselbe, nur ist von einer glatten Mittellinie keine Spur vorhanden. Das Schildchen ist dicht punktiert. 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 gefurct, 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.

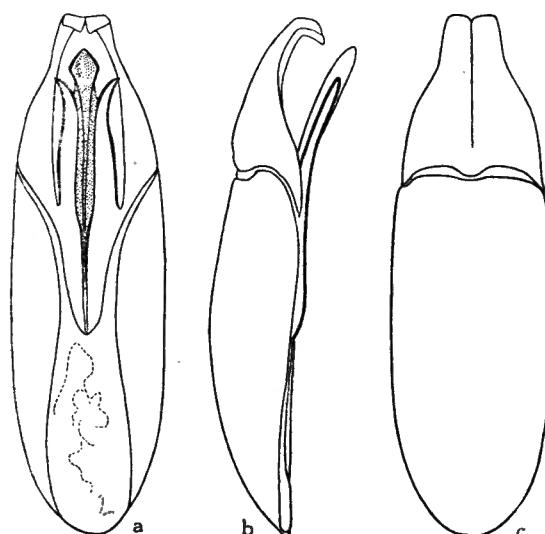


FIG. 92. — *Ædeagus* of *Anchophthalmus dentipes* GERSTAECKER.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

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. LEBOED (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.).

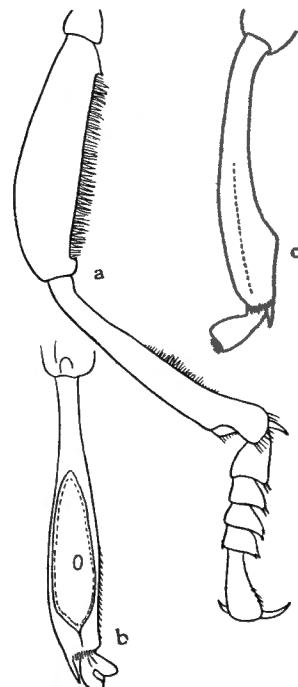


FIG. 93. — *Anchophthalmus dentipes* GERSTAECKER.

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.

O r i g i n a l d e s c r i p t i o n . — « *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 punktiert. 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 punktiert, mit schmaler, glatter, nach vorn abgekürzter Mittellinie. Schildchen dicht punktiert. 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 punktiert. Die Beine sind schwarz, mit pechbraunen Tarsen. »

R e m a r k s . — 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 ædeagus 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*.

D i m e n s i o n s . — Length 16 to 17 $\frac{1}{2}$ mm, width 7 $\frac{3}{4}$ to 8 $\frac{3}{4}$ mm.

T y p e l o c a l i t y . — « Inhambane » (Sul do Save Province of Portuguese East Africa). Type probably in Museum Berlin.

D i s t r i b u t i o n . — 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.

D i m e n s i o n s. — Length 16 $\frac{1}{4}$ to 16 $\frac{3}{4}$ mm, width 8 to 8 $\frac{1}{4}$ mm.

D i s t r i b u t i o n. — Northern Portuguese East Africa. — Southern Nyassa Province: Mutuali, IV.1954, A. J. BARBOSA (1♂ ♀, types Centro Investigação 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 strioles; punctures or strioles 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.

O r i g i n a l d e s c r i p t i o n. — « ♀ : 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 subrectiform, 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. 91d. Pronotum with posteriorly rounded and narrowed sides, strong and broad submarginal depression and rather narrow lateral carina; the latter distinctly narrower than the third

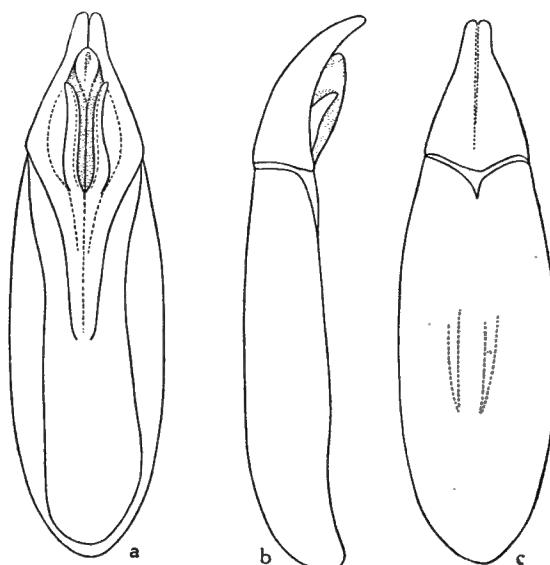


FIG. 94. — *Ædeagus of Anchophthalmus algoensis* PÉRINGUEY.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

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

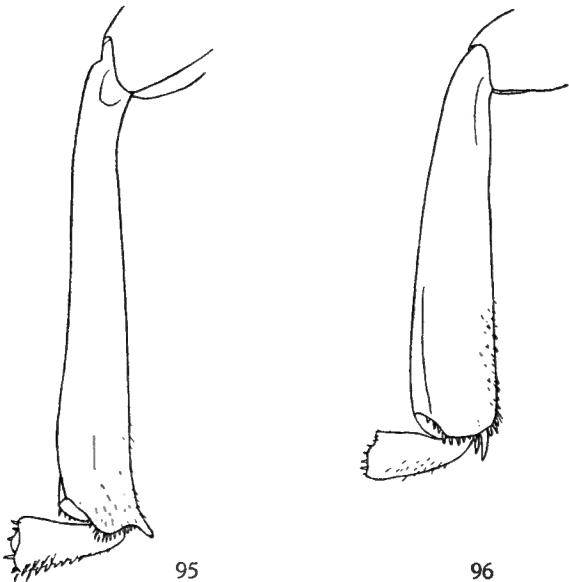


FIG. 95. — The intermediate tibia of a ♂ of *Anchophthalmus algoensis* PÉRINGUEY.

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

distinctius punctatum, abdominis segmentis 3 anterioribus strigosis, reliquis tenuiter punctulatis. Pedes subtenues, subtiliter punctati, tarsis 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 luxuriant 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.

D i m e n s i o n s . — Length 12 to 13 $\frac{3}{4}$ mm, width 5 $\frac{3}{4}$ to 7 mm.

T y p e l o c a l i t y . — « Caffraria ». Types in Naturhistoriska Riksmuseum, Stockholm (examined !).

D i s t r i b u t i o n . — 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 strioles. 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 strioles. 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

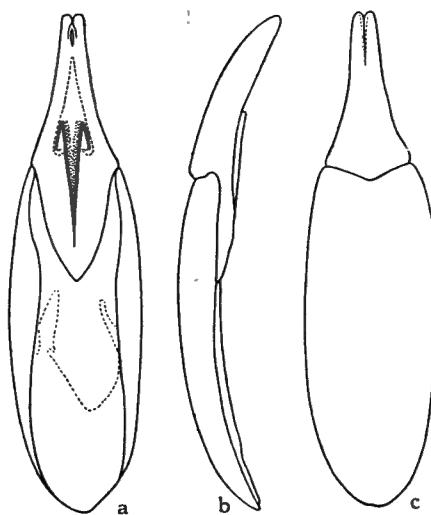


FIG. 97. — Aedeagus of *Anchophthalmus striolipennis* n. sp.
a : ventral surface; b : lateral view,
with the ventral surface at right;
c : dorsal surface.

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 posthumeral 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. Pseudopleura 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 tibiae very shallowly curved inwards apically, those of intermediate and posterior tibiae almost straight, inconspicuously curved inwards apically; all tibiae inermous.

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

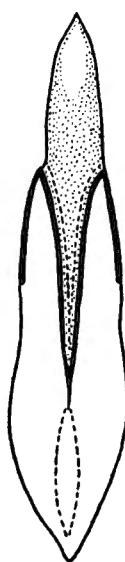


FIG. 98. — Outer surface of the extracted penis plus lacinia
of ædeagus of *Anchophthalmus striolipennis* n. sp.

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 SACGHEM (8 spec., BCM.); Elisabethville, J. BEQUAERT, TERNEST, G. F. OVERLAET, M. LIPS, Mme 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 tibiae straight 9
- In the ♂ the anterior tibiae 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 genae in line with those of eyes and tempora. In the ♂ the apical segment of maxillary palpi almost as broad as the third

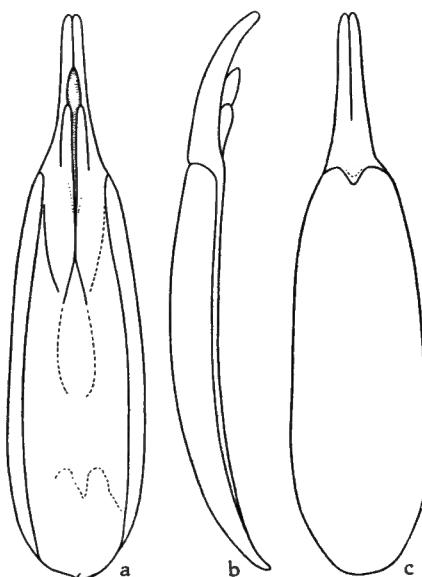


FIG. 99. — Aedeagus of *Anchophthalmus curvipes* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

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 obsoletely 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 strioles; 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 soleæ on underside of second and third segments; inner contours of anterior tibiæ more or less strongly curved on distal half, with rectangular to acute apical angle; both the intermediate and posterior tibiæ straight, but the inner apical angle produced into a strong, inwardly bent spine; femora simple.

Aedagus (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 $\frac{1}{2}$ mm, width 6 $\frac{1}{2}$ to 6 $\frac{3}{4}$ 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 tibiæ strongly produced inwards 10
- In the ♂ the inner contours of posterior tibiæ 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 antennæ 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 strioles 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 tibiæ (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 tibiæ with simple inner apical angle; the inner apical spine of posterior tibiæ small, shorter than the conspicuous spine of intermediate tibiæ.

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 strioles of primary rows. In the ♂ (fig. 102) the underside of the basal, second and third segments of anterior tarsi with entire poriferous soleæ, 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 soleæ below; all tibiæ with sharp, inwardly bent inner apical spine; the spines of intermediate and posterior tibiæ 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. Tibiæ 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.)].

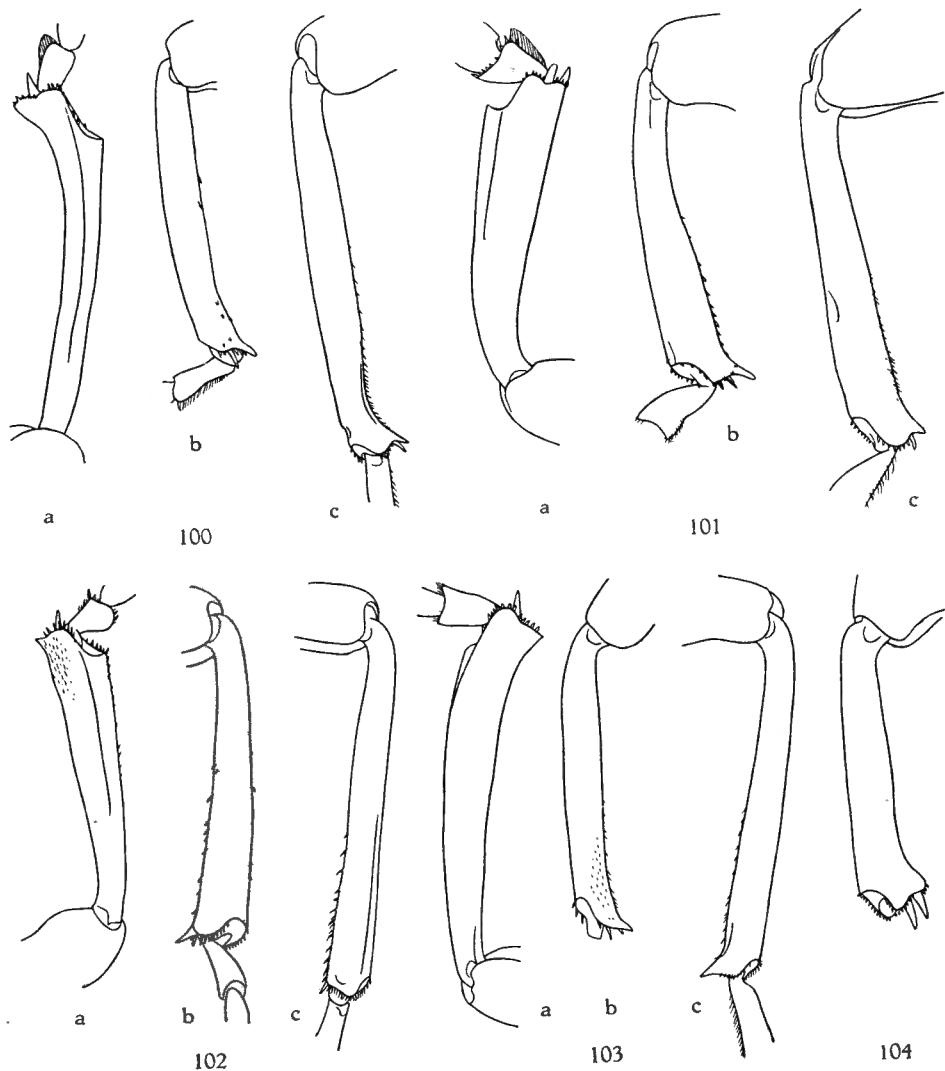


FIG. 100. — *Anchophthalmus curvipes* n. sp. — FIG. 101. — *Anchophthalmus katangicus* n. sp. — FIG. 102. — *Anchophthalmus soleatus* n. sp. — FIG. 103. — *Anchophthalmus spinipes* n. sp. — FIG. 104. — The intermediate tibia of a ♂ of *Anchophthalmus plicipennis* PÉRINGUEY from Pemba.

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 punctuation; 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*.

Aedeagus (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 punctuation 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.

O r i g i n a l d e s c r i p t i o n . — « 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 schmäler 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 abgesetzt 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 Aussenraum 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 punktiert, die Oberfläche zwischen den Punkten stellenweise leicht gerunzelt. Alle drei Schienenpaare einfach und gerade. »

R e m a r k s. — 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.

Æd e a g u s (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.

D i m e n s i o n s. — Length $11\frac{1}{4}$ to $14\frac{1}{2}$ mm, width 5 to $7\frac{1}{2}$ mm.

T y p e l o c a l i t y. — « Am Jippe See » (North-eastern Tanganyika Territory). Types probably in Museum Berlin.

D i s t r i b u t i o n. — 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.

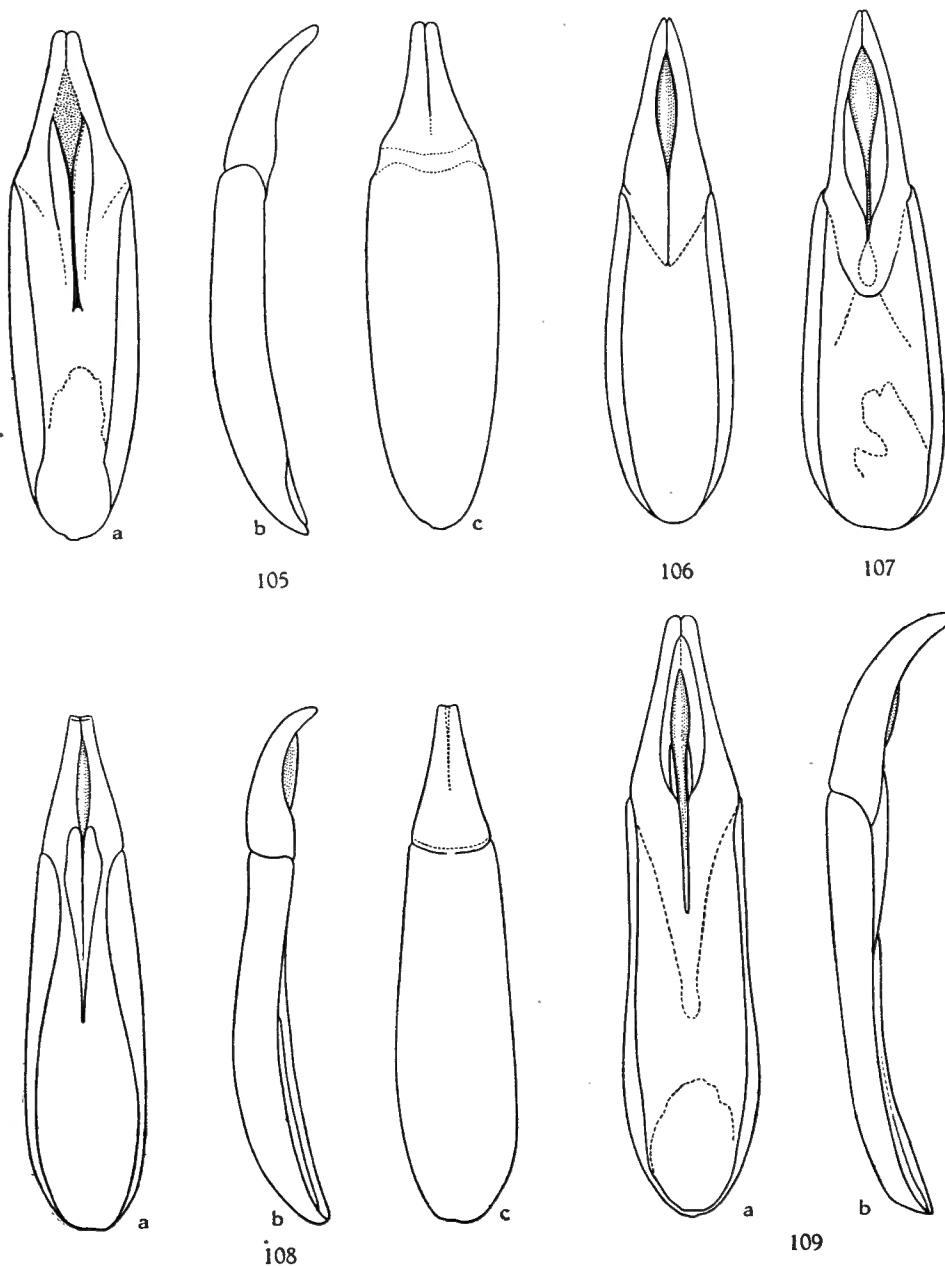


FIG. 105. — $\ddot{\alpha}$ edeagus of *Anchophthalmus oncotipes* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 106. — Ventral surface of the $\ddot{\alpha}$ edeagus of *Anchophthalmus altioricola* n. sp. — FIG. 107. — $\ddot{\alpha}$ edeagus of *Anchophthalmus plicipennis* PÉRINGUEY, typical form from Salisbury (ventral surface). — FIG. 108. — $\ddot{\alpha}$ edeagus of *Anchophthalmus clathratus* GERSTAECKER (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 109. — $\ddot{\alpha}$ edeagus 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 punctuation, flat, very weakly convex towards sides. Pseudopleural carina entirely exposed dorsally. Pseudopleura smooth. Legs robust; in the ♂ the anterior tarsi distinctly dilated, with spongiouse 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♂ 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, Cotyphen im 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. »

R e m a r k s. — 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.

D i m e n s i o n s. — Length 11 to 12 $\frac{1}{2}$ mm, width 5 $\frac{1}{2}$ to 6 mm.

T y p e l o c a l i t y. — « Kilimandjaro : Mwika und Meru Niederung ». Type probably in Museum Frey.

D i s t r i b u t i o n. — 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 $\frac{1}{2}$ 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.

Æd 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 $\frac{1}{2}$ mm, width 7 to 7 $\frac{1}{2}$ mm.

D i s t r i b u t i o n. — Ruanda-Urundi. — Rumonge, 800 m, III.1953, P. BASILEWSKY (1♂ 2♀, 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 vestitus; prothorace longitudine duplo latiore, lateribus rotundatis, basi leviter sinuatis, intus haud depresso, 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 laevibus, externis punctatis, intervallis subtilissime punctulatis, modice convexis, externis paulo angustioribus et magis convexis; subtus cum pedibus dense punctulatus, prosterno apice breviter dentiforme. — Long. 13 $\frac{1}{2}$ mm — Forme 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.

O r i g i n a l d e s c r i p t i o n . — “ ♀ : 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 striae 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. »

R e m a r k s. — 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, Zambezi 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. Aedeagus 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 strioles. 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 aedeagus similar to *A. plicipennis*. Apicale of aedeagus 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, subtus 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 gracieles. — 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 punctuation; 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-

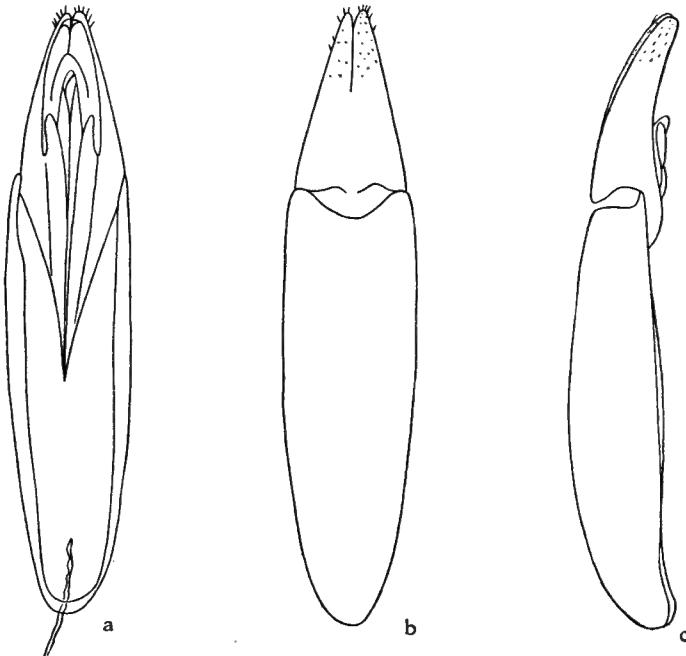


FIG. 110. — *Aedeagus of Anchophthalmus obsoletus* (ANCEY).
a : ventral surface; b : dorsal surface; c : lateral aspect,
with the ventral surface at right.

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.

Aedeagus (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.

D i m e n s i o n s. — Length 11 to 15 mm, width 6 to 9 mm.

T y p e l o c a l i t y. — « Uzagara » (Central Tanganyika Territory). Type probably in Museum Paris.

D i s t r i b u t i o n (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 SAEGER (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 strioles 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 punctuation 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.

Dedication. — 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 punctuation 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.

Distribution. — Northern Rhodesia. — Abercorn, XII.1942, H. J. BRÉDO (1♂, 2♀, types I.R.); Mweru—Wantipa, Buleya, IV.1944, H. J. BRÉDO (1♀, I.R.).

Dedication. — 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*.

Dimensions. — Length 9 $\frac{1}{2}$ to 12 mm, width 5 $\frac{1}{2}$ to 6 $\frac{1}{2}$ mm.

Distribution (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 canalulation 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 punctuation, 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 *bredoii*; the legs non-dimorphic, as in *bredoii*, but of more robust build. Mentum fig. 91f.

Aedeagus. — 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 carina. 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

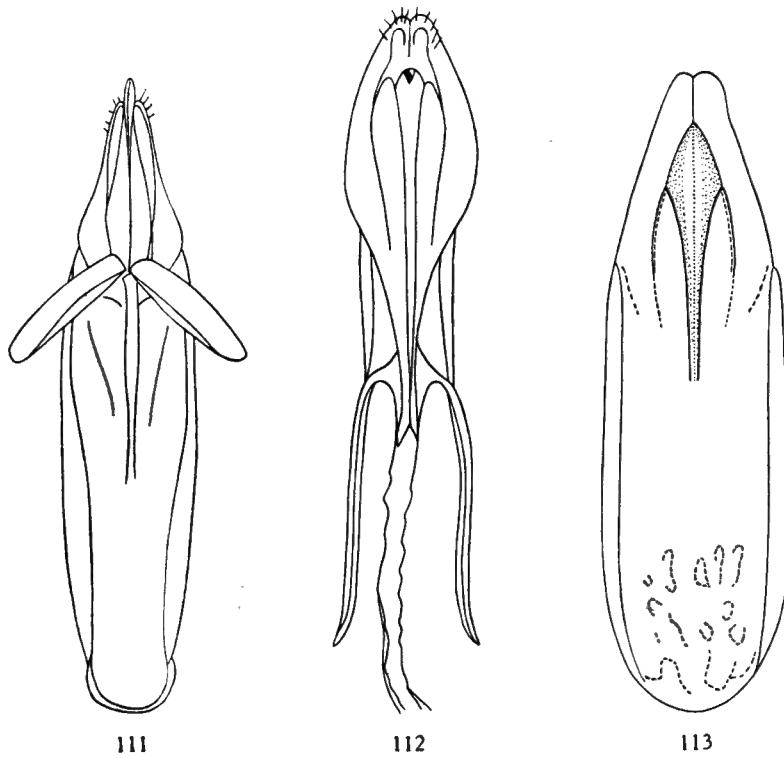


FIG. 111. — *Anchophthalmus straeleni* n. sp.
Ventral surface of aedeagus with the unclasped lacinia
stretched outwards.

FIG. 112. — *Anchophthalmus pulvereus* n. sp.
The apicale of aedeagus with the extracted basal parts of inner sclerites
(basale of aedeagal tegmen removed).

FIG. 113. — Aedeagus of *Anchophthalmus cariniceps* 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. Antennæ 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.

Aedeagus (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.); Kanzaenze, 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 antennae 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 microscopic. 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.

Aedeagus (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.); Tshibamba. XII.1931, G. F. OVERLAET (2 spec., BCM.); Kafakumba, XI.1933, G. F. OVERLAET (13 spec., BCM., I.R.); Katompe, VI.1930, P. GÉRARD (1 spec., BCM.).

- In the ♂ the anterior tarsi rather strongly dilated, about as broad as the preapical segments of antennae 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.

Aedeagus. — 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. OVERLAFT (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 *Oncotiphallopis barbosai* from Central Portuguese East Africa. Monotypical.

[**Oncotiphallopis 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*. Antennae 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 *Oncotiphallopis 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 laminiform 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 laminiform, 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. barbosai* is very closely allied to the *Anchophthalmus* of the *silphoides* group. It recalls strongly the sympatric *A. nyassicus*, 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 aedeagus 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♂ 3, 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 carinulæ enclosing a small, immarginate, slightly concave space on middle of apical margin of sternite. Legs as in *Anchophthalmus*, with slender tibiæ, distinguished in the ♂, and with simple, non-dimorphic tarsi. Ædeagus 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. — 1910 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 sesquiloniore, 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. Antennæ 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 punctuation, 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.

Aedeagus. — 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 *Phallocentriion 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 tibiæ with broad subtomentose stripe of yellowish hairs.

Aedeagus. — 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 aedeagus, 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 *Phallocentron* 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; punctation 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. Aedeagus with very broad, entirely complanate, laminiform parameres; lacinia short and subcylindrical throughout, extending only to the basal quarter of parameres.

[**Phallocentron 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 Härcchen; 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 ½ 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 quergerieft, 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 lederrunzig 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 *angulatus*, *crenatus*, *convexipennis*, *planus*, *striatus*, *plicicollis*, *calcaripes*, *curtulus*, durch ungezähnte Beine der ♂♂ verschieden; bei *lævistriatus* sind die Vordertibien innen winklig erweitert. Es bleibt der mir unbekannte *S. punctatostriatus* GERSTAECKER, 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 tibiæ 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.

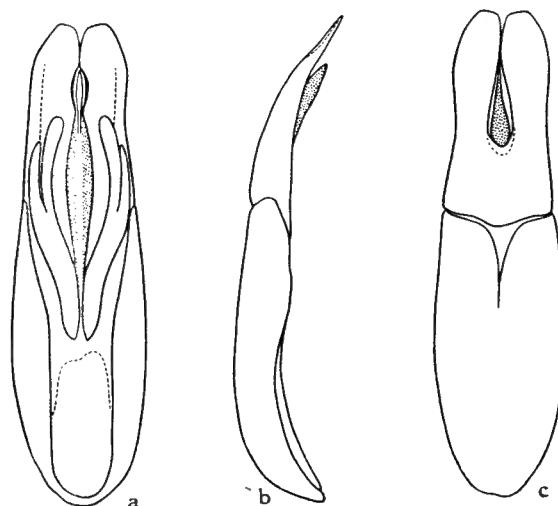


FIG. 116. — Aedeagus of *Phallocentrion edentatum* (GEBIEN).
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

In the ♂ the underside of anterior tibiæ 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 *Oncotiphallopss*; 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.

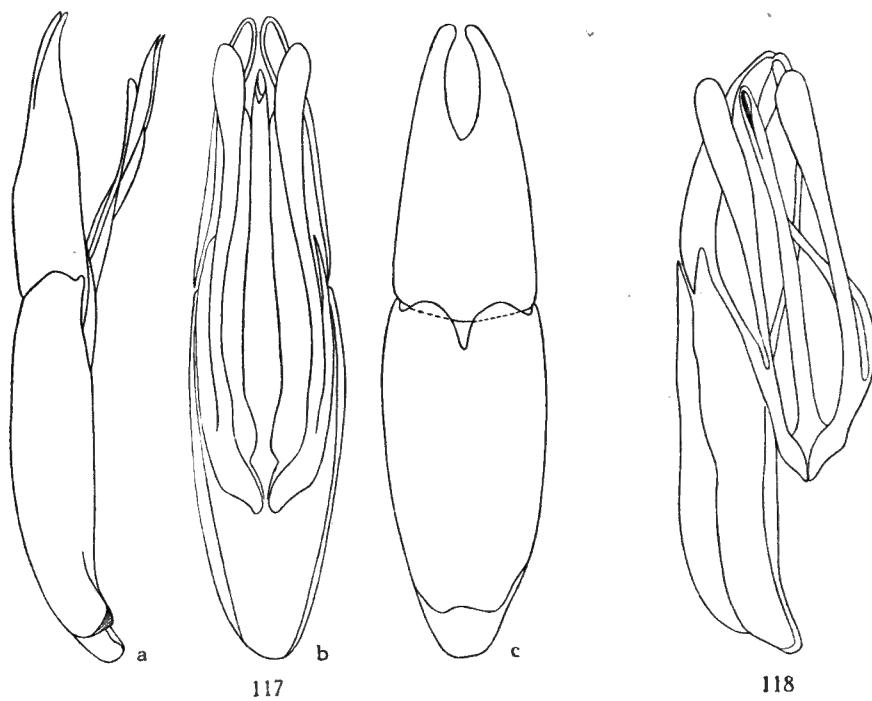


FIG. 117. — Aedeagus of *Phallocentrion prælacinatum* n. sp.

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

FIG. 118. — *Phallocentrion prælacinatum* n. sp.

Aedeagus in diagonal view, with lifted inner sclerites and inflexed alæ 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 punctuation. 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.

Aedeagus. — 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 $\frac{1}{2}$ 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 *Anchophtalmus* 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 aedeagus.

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

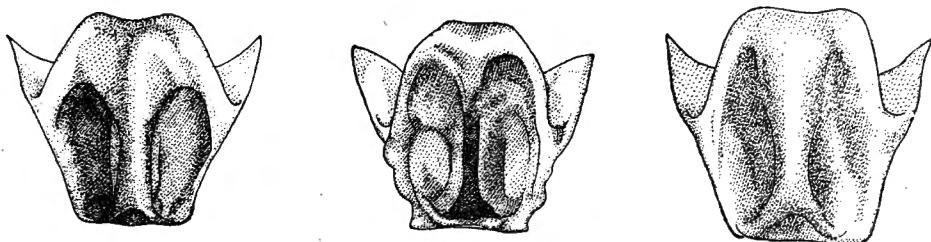


FIG. 119. — Mentum of various specimens of *Anchophthalmus brevipleurum* n. sp.

the ♂ the anterior tarsi moderately dilated, considerably narrower than the apex of anterior tibiæ, about as broad as the penultimate segment of antennæ; the anterior tibiæ 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 tibiæ sulcate, the inner contours straight and inermous; posterior femora with a dense brush of reddish brown to testaceous hairs on proximal two-thirds.

Aedeagus (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 $\frac{1}{2}$ 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 $\frac{1}{2}$ to 15 mm long.

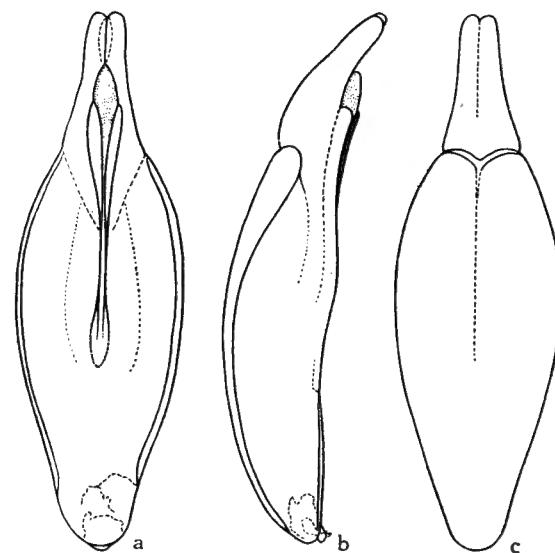


FIG. 120. — Aedeagus of *Anchophthalmus brevipleurum* n. sp.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

[***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, matt-schwarz, 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 runderliche Tuberkel. Die Hinterschenkel flach ausgehöhlt und unten in den ersten $\frac{2}{3}$, die Mittelschenkel 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.

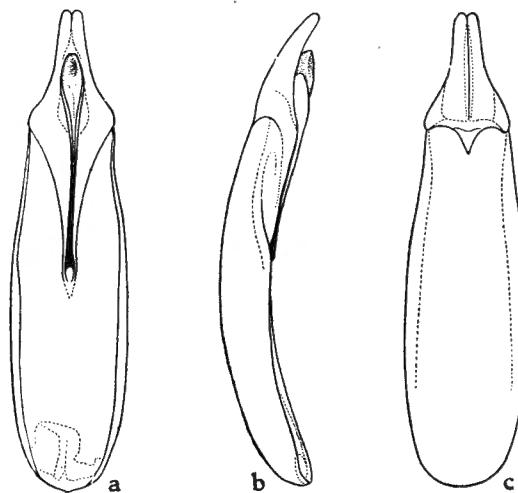
Distribution. — North and Central-western Tanganyika Territory.
— Dar-es-Salaam (1♂ cotype ex Museum Frey); Mombo in the Usambara District (teste GEBIEN).

- 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 punctuation 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 ♂.

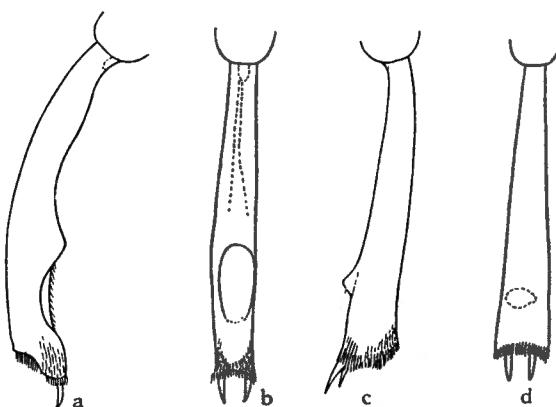


FIG. 122. — *Anchophthalmus maximus* n. sp.

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

Ædeagus (fig. 121). — 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.); Ziwanzi, IV.1933, C. G. MACARTHUR (1♀, allotype, C.M.); same locality, VI.1913, BAYER (1♀, BCM.); Nibulola, V.1913, BAYER (1♂, 2♀♀, BCM.).

MONODIUS 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 aedeagus, 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

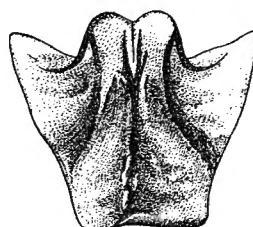


FIG. 123. — Mentum of *Monodius malaisei* n. sp.

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.

Aedeagus 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 aedeagus.

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 tibiae 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 $\frac{1}{2}$ 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 convexitipennis** (GEBIEN).]

(Pl. IX, fig. 3; Figs. 124, 125, 126.)

*1904, *Selinus convexitipennis* GEBIEN, p. 2, pl. 1, figs. 1a and 1b. — 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 Mittelkieles, 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 paralleelseitig, 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. Vorderschenkel nach unten etwas verbreitert. An den Hintertarsen ist das erste Glied so lang wie die beiden folgenden zusammen. ♂ : Vorderschienen gekrümmmt, 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 verbeitert. ♀ : 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 tibiæ, but considerably broader than the slender preapical segment of antennæ; the second and third segments of posterior tarsi soleate below; the posterior tibiæ 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

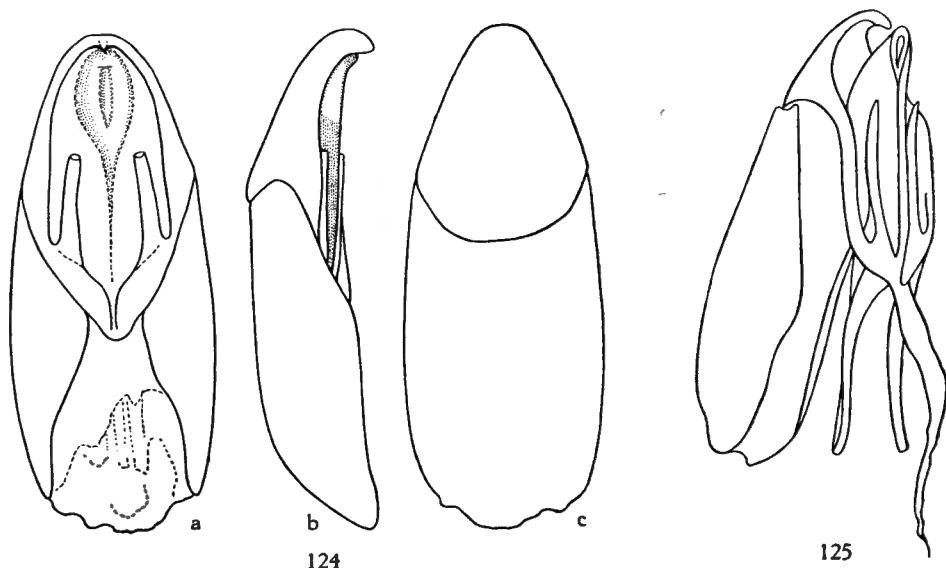


FIG. 124. — Ædeagus of *Monodius convexipennis* (GEBIEN) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 125. — *Monodius convexipennis* (GEBIEN) (ædeagus in diagonal view, with lifted inner sclerites and inflexed alæ of parameres, at which the lacinia are fastened).

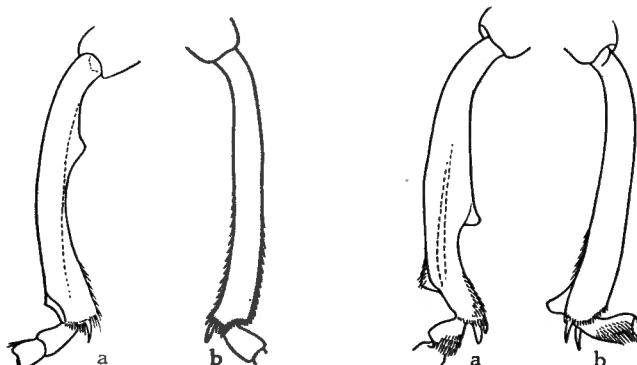
straight line converging lateral outlines, smooth on dorsal surface and there with almost fused parameres, as the median division is extremely fine and confined to the extreme apex; apex pointed and strongly bent ventrad, forming a transverse hook in lateral aspect. Ventral groove very broad, with entirely 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. — « Cameroons », 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 tibiæ with post-median tooth, the inner contours of intermediate tibiæ with the apical angle produced into a large, inwardly bent tooth.



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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 punctuation, 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 tibiæ with a strong tooth behind middle (in front of middle in *convexipennis*), thence deeply emarginate; the posterior tibiæ very slightly curved; the posterior femora with dense brush of reddish brown hairs on proximal three-quarters of underside.

Aedeagus (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 $\frac{1}{2}$ mm.

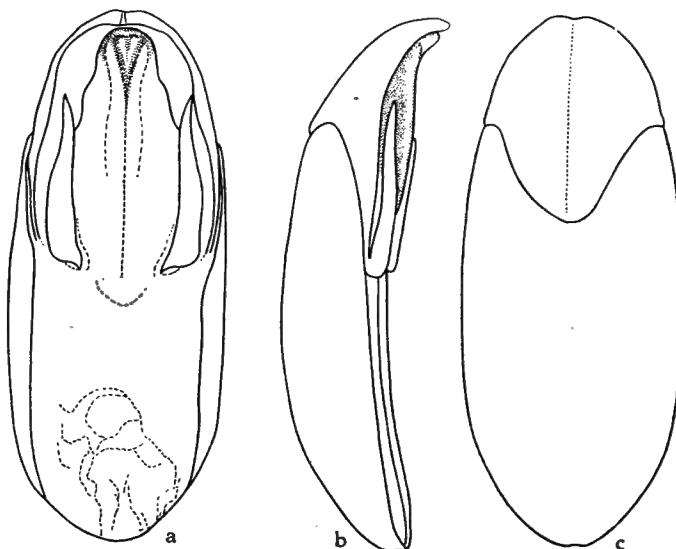


FIG. 128. — *Aedeagus of Monodius gravis* n. sp.

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 tibiae 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.

*1930, *Selinus angulatipes* GEBIEN, p. 21. — 1938-1942, GEBIEN, p. 416, n° 5579. —
(=syn. nov.).

Original description. — « Tout à fait intermédiaire entre *Selinus lœvistriatus* 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 atténues 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 längsrundlig, Analsegment ungerandet. Schenkel staubartig, weitläufig punktiert, die vorderen mit scharfer, vollständiger Vorderrandkante, 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

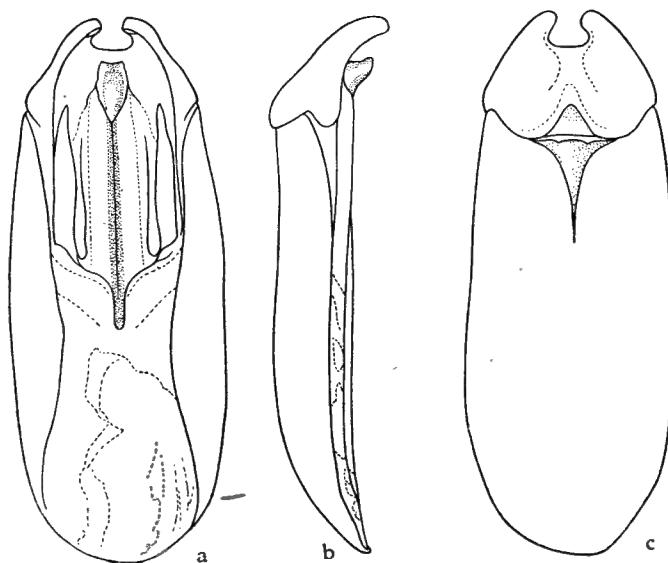


FIG. 129. — *Ædeagus* of the holotype of *Monodius medius* (FAIRMAIRE).
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

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.

Ædeagus (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 $\frac{1}{2}$ 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.

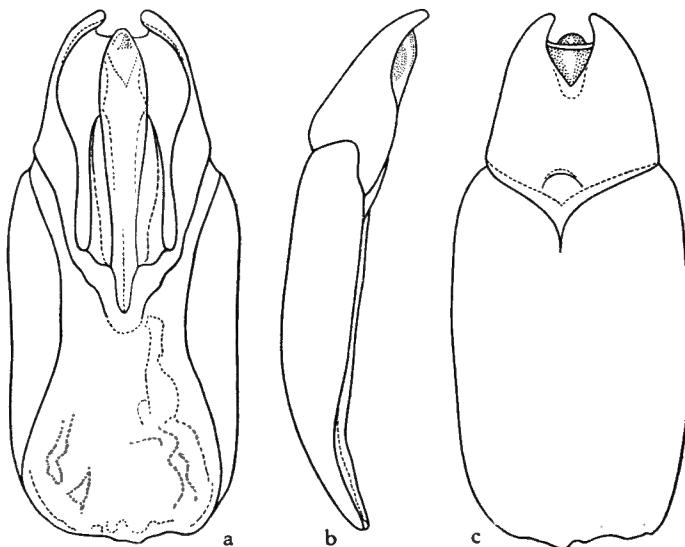


FIG. 130.

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.

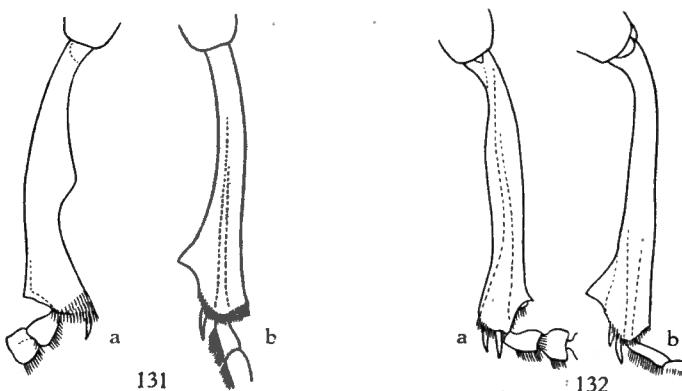


FIG. 131. — *Monodius medius* (FAIRMAIRE).

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 Riksmuseum, 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 obsoletely 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

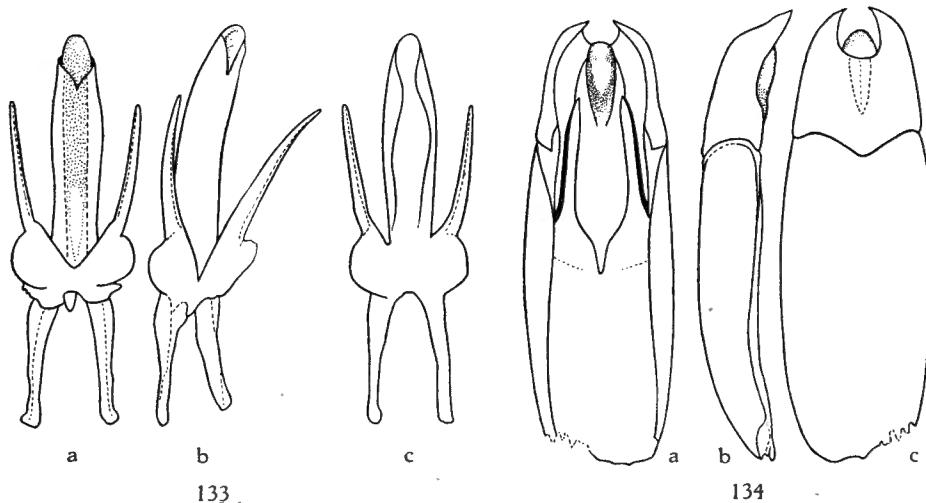


FIG. 133. — The extracted penis plus lacinia of *Monodius malaisei* n. sp. (a : outer surface; b : diagonal view; c : inner surface). — FIG. 134. — Aedeagus of *Monodius malaisei* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface).

or weakly dilated towards base. Integument with fine and rather scattered to exceptionally 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 carinæ 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 punctuation. 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 dilatatae. Femores postici marginé interno glabro. ♀ : Tibiæ anticæ subgraciles, ad medium haud dilatatae. Femora postica marginé 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 notamment 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 (« saepius 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 punctuation. 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.

Aedeagus. — 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.

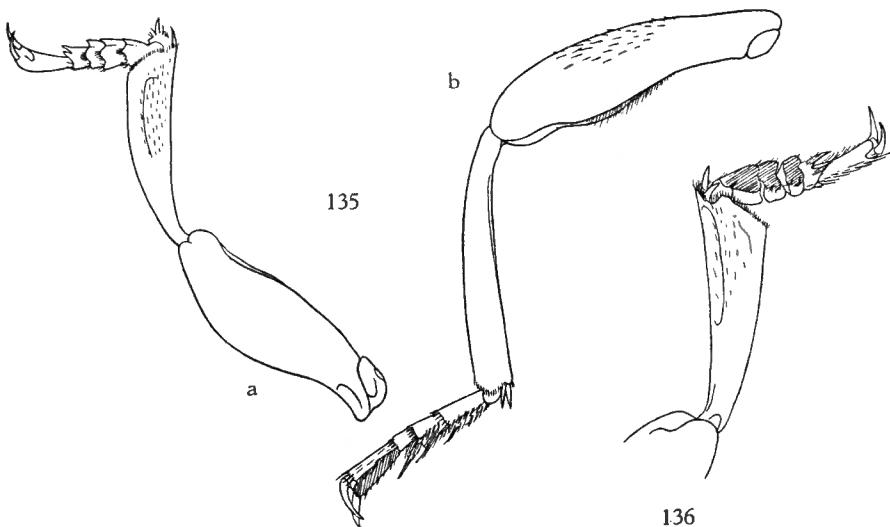


FIG. 135. — *Quadrideres femineus* (LESNE) (a : anterior leg of ♂; b : posterior leg of ♂). — FIG. 136. — Anterior tibia with tarsus of a ♂ of *Quadrideres lineatus* n. sp.

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. BABAUT, 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 punctuation. The elytra broader, less convex, shaped as in *femineus*. The primary rows, if with discernible punctuation, 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 punctuation; 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 tibiæ in the ♂ (fig. 136) shaped as in *femineus*.

Aedeagus. — 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 tibiæ 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 lineæ 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 punctuation; 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*) affinissima, 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.

[**Quadrideres montis-kenyæ n. sp.**]

Very closely related to *Qu. modestus*, of identical shape and size of body, but readily recognized from all *Quadrideres* by the plane and only obsoletely sculptured apical declivity of elytra, and the very scattered punctuation 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. COBLEY (1♂ ♀, types C.M.); Sirimon River, 8,000 ft., XII.1942, H. COBLEY (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 canalication) 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 punctuation. 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 tibiæ; posterior femora simple, the lower edge of outer lateral surface very shallowly and elongately emarginate distally.

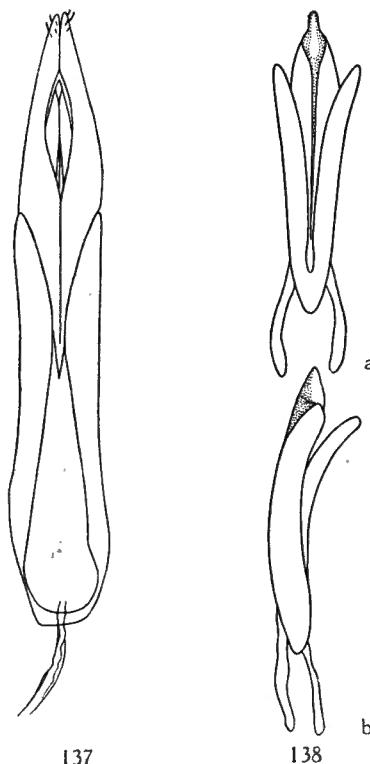


FIG. 137. — Aedeagus of *Quadrideres witteanus* n. sp. (ventral surface).

FIG. 138. — The extracted penis plus lacinia of the aedeagus of *Quadrideres witteanus* n. sp. (a : outer surface; b : diagonal view).

Aedeagus (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 genae. 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 ♀. Antennae 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 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 punktirt. 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 punktiert, 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 punktiert. 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 punctuation on pronotum and the anteriorly narrowing submarginal depression of pronotal sides, particulars which are not found in the *Anchophthalmus*. FAIRMATRE'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.

Aedeagus. — 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 umboonate, 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 tibiæ 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 justa-pseudopleural 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 justa-pseudopleural 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*. Ædeagus 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 verrunderter, 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 ♂ gekrümmmt, 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 Vorderschienen 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. SJÖSTEDT ».

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 punctuation 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.

[**Quadrideres ruandanus n. sp.**]

(Pl. XI, fig. 3; Fig. 140.)

Readily distinguished from the preceding species by the conspicuous and dense punctuation 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 punctuation. 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. Pseudopleural crest not distinctly visible behind middle (dorsal aspect), with very fine justa-pseudopleural canaliculation, becoming broadened basally. Metasternum plane. Abdomen with very fine, scattered punctures, concentrated and stronger on anal sternite.

Aedeagus. — 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.); Gatsibus, 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 punctuation 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 antennae, soleate below; intermediate tarsi not soleate; the anterior tibiae slender, not thickened, with only very small and shallow distal cavity on underside, with practically straight inner contours; the inner contours of intermediate tibiae 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 punctuation 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 punctuation, almost flat discally, but strongly convex to subcostate on lateral portions and apical declivity, the lateral intervals scarcely broader than the adjacent primary rows. Punctuation 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 : Kitenga, I.1935, P. LEFÈVRE (2 spec., BCM.); Mt. Mbude, south of I. Luhondo, 2000 m, I.1953, P. BASILEWSKY (1 spec., BCM.). — Tanganyika Territory : Mwamgongo, 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.

[**Quadrideres 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 ½ 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° gross, der basale Ausschnitt nicht sehr tief

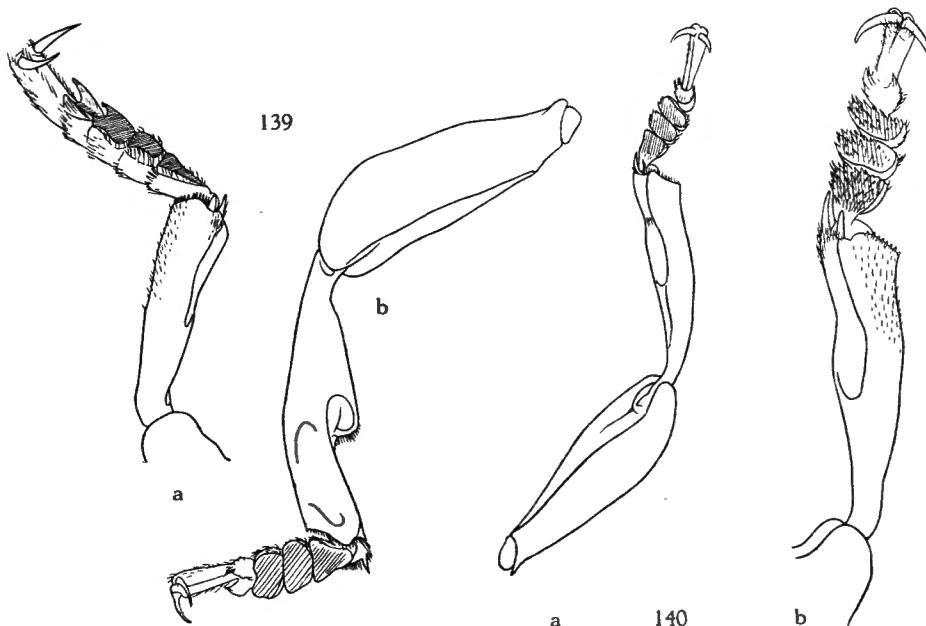


FIG. 139. — *Quadrideres interioris* (GEBIEN).

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 ange deutet; 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 punctuation of primary rows, size of body and development of the distinctive characters in the ♂.

Aedeagus. — 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 tibiae 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 punctuation 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 punctuation 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 punctuation. 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 $\frac{1}{2}$ to 11 mm, width 3 $\frac{3}{4}$ to 4 $\frac{3}{4}$ 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. BABAUT (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

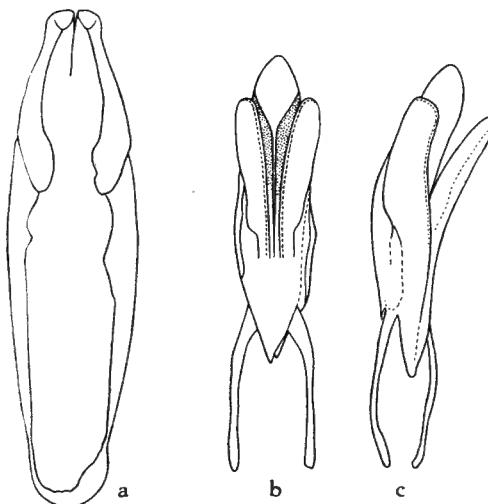


FIG. 141. — *Quadrideres volcanicus* n. sp.

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 subparallel; 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. Aedeagus (fig. 141) as in *lesnei* and *femineus*, but with the apicale being intermediate in length.

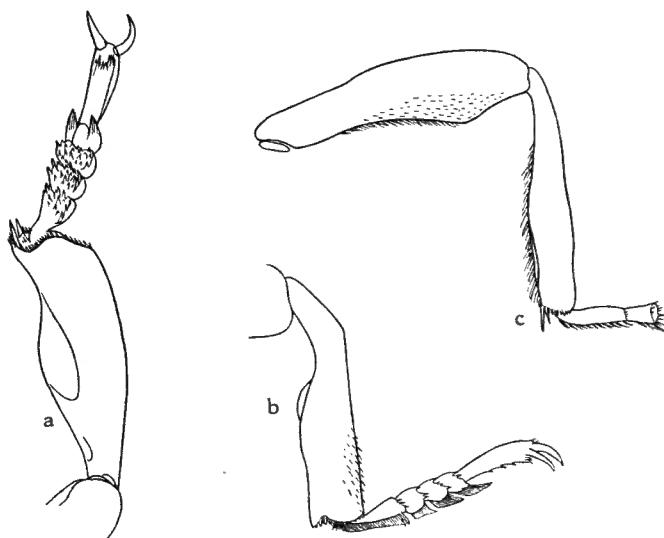


FIG. 142. — *Quadrideres volcanicus* n. sp.

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 lærior. 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 tenuissime punctulata. — Cette espèce provient, comme la précédente (*Selinus obsoletus*), de l'Uzagara; elle se rapproche du *S. menouxi* 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 notamment 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 *Oncotiphallopis 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; punctuation 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 canalication 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 $\frac{1}{2}$ 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 canalication 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 punctuation; 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♂ 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. — 1910 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 $\frac{1}{2}$ 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 *Glyptopteryx* is a true Platynotin, agreeing with all the other *Platynotina* in the structure of ædeagus (short apicale, presence of lacinia), as well as in the stridulatory gula.

Glyptopteryx 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. *Glyptopteryx* is the only known genus of *Platynotina* exhibiting carinate costæ on elytra.

Type species. — *Selinus quadricollis* FAIRMAIRE, 1887 (= *Glyptopteryx forticostis* GEBIEN, 1910 a). Monotypical.

Distribution. — Northern and central Tanganyika Territory, south-eastern British East Africa.

[***Glyptopteryx 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, *Glyptopteryx 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 facies 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 forticostis*. 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 *Opatriini*. 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 längstrigos punktiert, der Clypeus feiner punktulierte, 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 schmäler, 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 ½ 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 Hals schild 1 ¼ 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

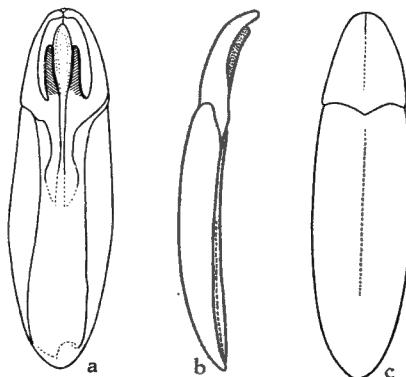


FIG. 143. — Aedeagus of *Glyptopteryx quadricollis* (FAIRMAIRE).

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 *Hanstræmum*. 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 obsoletely 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 punctuation 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 obsoletely impressed supra-antennal portion of head, the basally non-dilated justa-pseudopleural canaliculation of elytra, the coarse punctuation 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 $\frac{1}{2}$ 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.

Aedeagus (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 $\frac{1}{2}$ 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 tibiæ 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

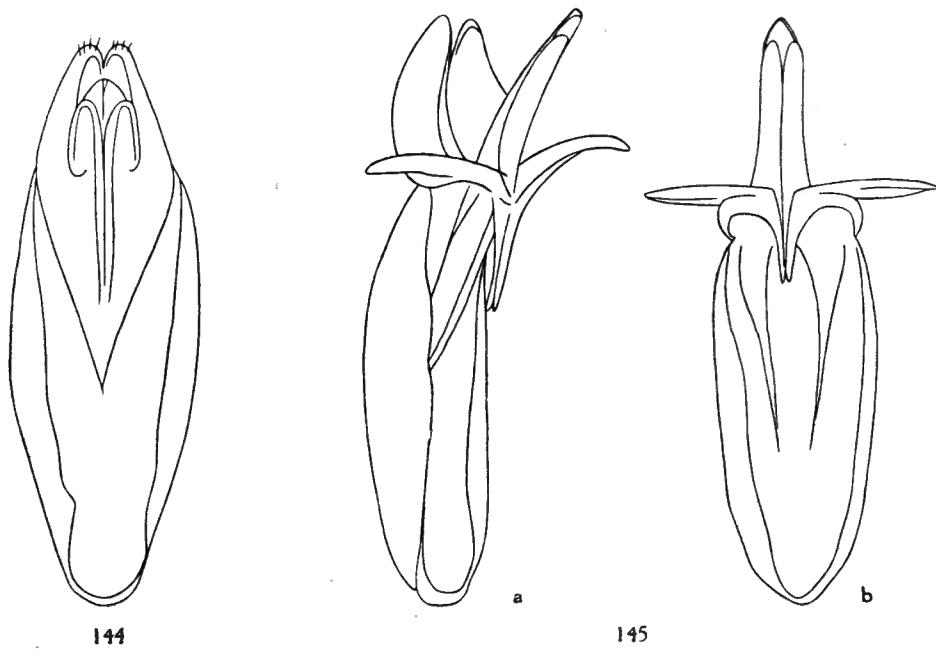


FIG. 144. — Ventral surface of aedeagus of *Upembarus saegeri* n. sp. — FIG. 145. — Aedeagus of *Upembarus saegeri* n. sp. (a : diagonal view, with lifted inner sclerites and inflexed alæ of parameres, at which the lacinia are fastened; b : exact ventral view, the apicale of aedeagal tegmen removed and the lacinia deflected).

- In the ♂ the inner contours of intermediate tibiæ 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 punctuation 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 Céntral 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 tibiæ; the inner contours of anterior tibiæ slightly curved in a continuous line without discernible distal emargination; the inner contours of intermediate tibiæ 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 tibiæ 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 tibiæ; the inner contours of anterior tibiæ with weakly arcuate median dilation and shallow preapical emargination; the inner contours of inter-

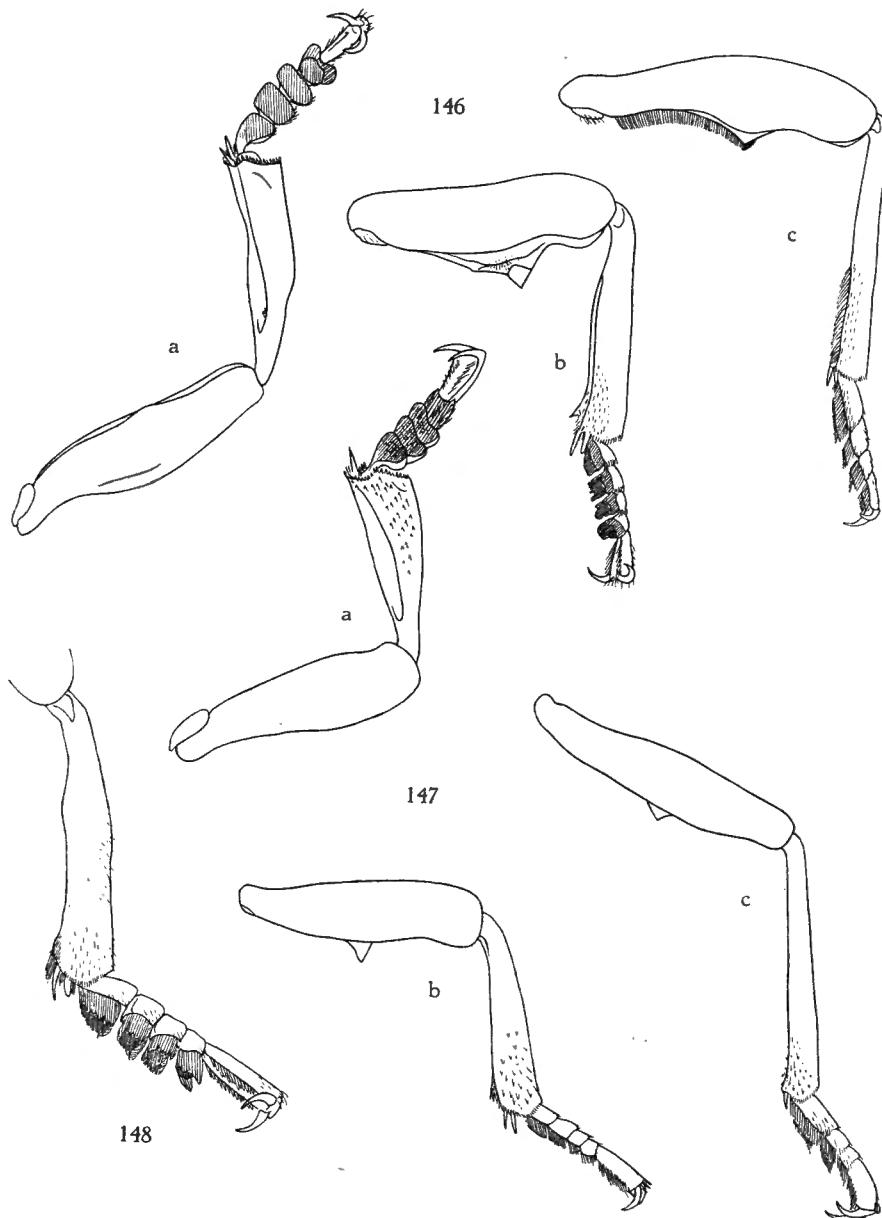


FIG. 146. — *Upembarus saegeri* n. sp. — FIG. 147. — *Upembarus wittei wittei* n. sp. (a : anterior leg of ♂; b : intermediate leg of ♂; c : posterior leg of ♂). — FIG. 148. — Intermediate tibia with tarsus of a ♂ of *Upembarus wittei masculinus* n. ssp.

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 tibiae (fig. 149). In this sex the anterior tibiae as in the typical form of *wittei*, the inner contours of intermediate tibiae with very slight to weakly angular (ssp. *glabrior* nov.) postbasal dilation, the posterior tibiae 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 tibiae 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 tibiae 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.

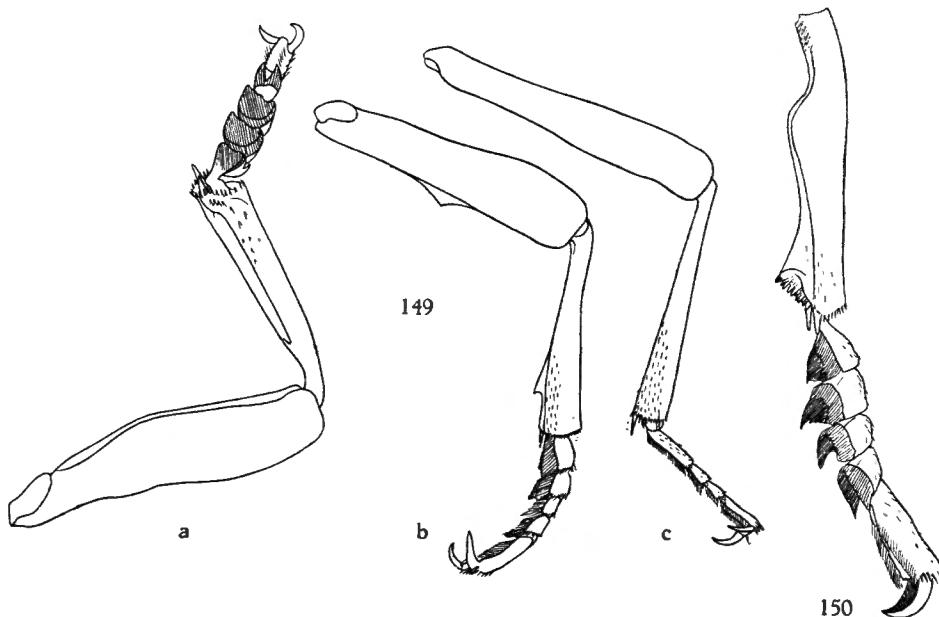


FIG. 149. — *Upembarus upembaensis* n. sp. (a : anterior leg of ♂; b : intermediate leg of ♂; c : posterior leg of ♂). — FIG. 150. — Intermediate tibia with tarsus of a ♂ of *Upembarus sympatrius* n. sp.

***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 tibiæ with almost inconspicuous, very shallow emargination on distal two-thirds of inner contours, the intermediate tibiæ (fig. 150) excavate and smooth below, with strongly dimorphic inner contours, the posterior tibiæ almost straight; femora as in *upembaensis*. Aedeagus very similar to *upembaensis*.

Dimensions. — Length 11 $\frac{1}{2}$ to 12 mm; width 5 $\frac{1}{2}$ to 5 $\frac{3}{4}$ 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. Antennæ 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. levistriatus*) 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 punctuation, in one case (*E. lœvistriatus*) 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 punctuation. 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.

Aedeagus. — 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 aedeagus, the subparallel, spiniform parameres of aedeagus, 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 aedeagus, 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 punctuation, 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 spongiōse 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.

Aedeagus (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 inermous femora in the ♂.

Distribution (map 4). — Central-western and Central Belgian Congo. — Kasai Province: Kondue, E. LUJA, LEONARD (7 spec., types BCM.); Komi, Sankuru, V.1930, J. GHEQUIÈRE (1 spec., BCM.). — Léopoldville Province: Mayidi, 1942, P. VANEYEN (3 spec., BCM.); Matadi, II-III.1937, DARTEVELLE (1 spec., BCM.).

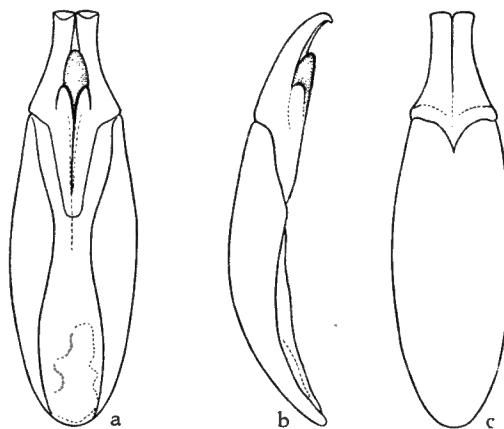


FIG. 151. — *Aedeagus of Ectateus ghesquierei* n. sp.

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

Dedication. — Named in honour of Mr. J. GHEQUIÈRE.

- Disc of pronotum without median sulcus. In the ♂ the intermediate femora with strong tooth on proximal third of underside, the inner contours of intermediate tibiæ 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

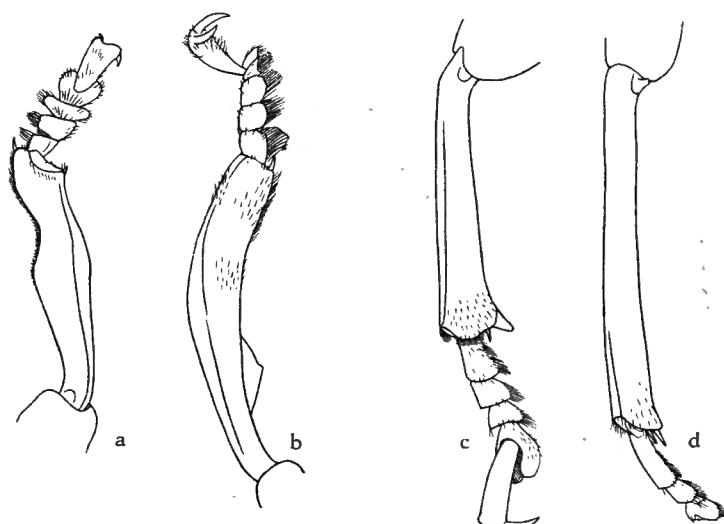


FIG. 152. — *Ectateus ghesquierei* n. sp.

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 tibiæ (fig. 153) very similar to *ghesquierei*, but the median dilation slightly stronger and more dentiform; the intermediate tibiæ with a strong preapical tooth, between the latter and the simple, inner apical angle straight; the posterior tibiæ 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.

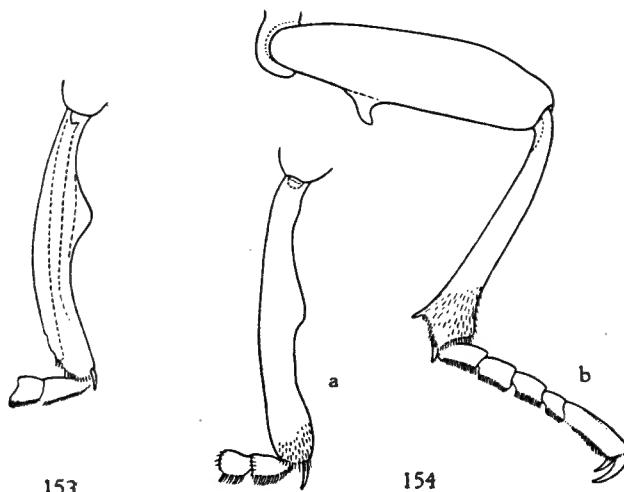


FIG. 153. — Anterior tibia of a ♂ of *Ectateus latipennis* n. sp. — FIG. 154. — *Ectateus laevistriatus* (FAIRMAIRE) (a : anterior tibia of ♂; b : intermediate leg of ♂).

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 convexis, lœvibus; subitus 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-crenelés 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 tibiae 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 tibiae with a strongly prominent dilation in front of middle, thence emarginate; the posterior femora without brush.

[**Ectateus lœvistriatus** (FAIRMAIRE).]

(Fig. 154.)

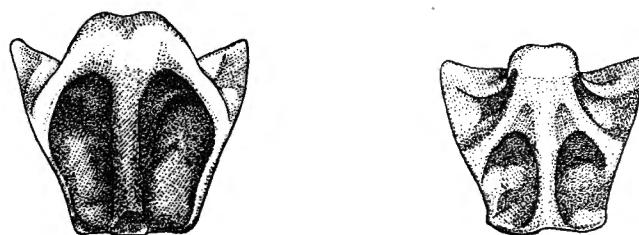
*1897, *Selinus lœvistriatus* FAIRMAIRE, p. 122. — 1910 b, GEBIEN, p. 278. — 1938-1942, GEBIEN, p. 416, n° 5581.

O r i g i n a l d e s c r i p t i o n . — « 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. »

R e m a r k s . — 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 *Cyphostethus*; 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 bificeolato, 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, subitus 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-ponctués. »

S y n o n y m y. — 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 Pubeszenz. ♂ : 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, spitzen 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 gekrümmmt; alle Beine einfach. Länge 12 mm, Breite 6 mm. »

R e m a r k s. — 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 punctuation, 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.).

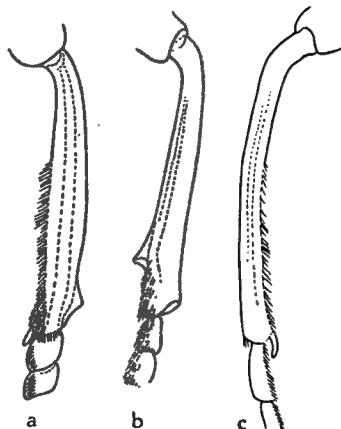
- In the ♂ the anterior tibiæ with a fringe of rather dense to scattered, squarrose pale bristles along median half, projecting beyond inner contours; the latter almost straight, inconspicuously emarginate on distal third.

[**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 impressiusculo, 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. »

R e m a r k s. — 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 punctuation 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.

Aedeagus. — 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. VANHEYEN (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. placicollis*), 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. punctostriatus*) 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. Aedeagus 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 aedeagus, from *Anchophthalmops* by the non-dimorphic maxillary palpi, the simple and inermous proximal sternites of abdomen and the non-spiniform parameres of apicale of aedeagus. 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 *Oncotiphallopss*) 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 punctuation; 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 punctuation 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 inermous *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 *punctatostriatus* 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 inermous, 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 canalication 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 canalication nor submarginal depression on lateral portions. In the ♂ the intermediate femora inermous; 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 *Oncotini*, 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 pre-apically, 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 punctuation. 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 tibiæ and about the width of the preapical segment of antennæ; underside of intermediate tarsi as in the ♀, not soleate, but with a row of long, dense bristles on both sides; inner contours of anterior tibiæ with very shallow, inconspicuous preapical emargination; intermediate and posterior tibiæ straight; the underside of anterior femora with a row of minute bristles along the strongly carinate inner edge.

Aedeagus. — 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 punctuation; 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 punctuation, 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,

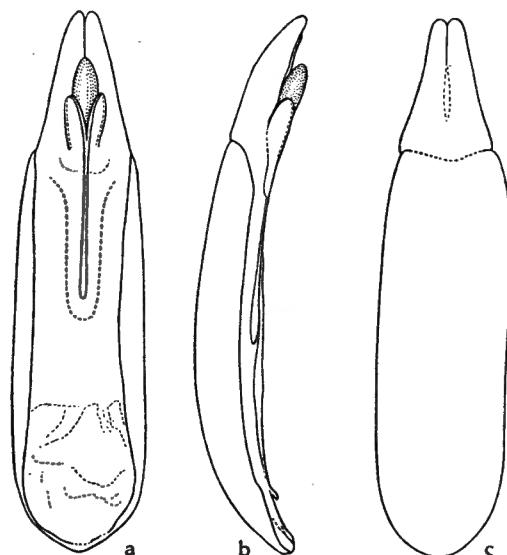


FIG. 158. — Aedeagus of *Selinus raposoi* n. sp.

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 punctuation (which is extremely fine on disc in *punctatostriatus*), stronger lateral carina, posteriorly subparallel sides, distinct justa-lateral canaliculation and more briefly rounded and deeper lateral emarginations of base. The punctuation 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 punctuation, becoming distinctly convex towards sides and apex. The justa-lateral canali-

culation slightly broader and well developed also posteriorly. Metasternum shorter, sculptured as in *punctatostriatus*. The abdomen only sparsely punctured discally, but with coarse punctures on sides of proximal two sternites. Anal sternite as in *punctatostriatus*. In the ♂ (fig. 160) the anterior tarsi rather strongly dilated, about as broad as apex of anterior tibiæ and broader than the preapical

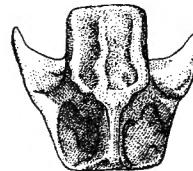


FIG. 159. — Mentum of *Selinus raposoi* n. sp.

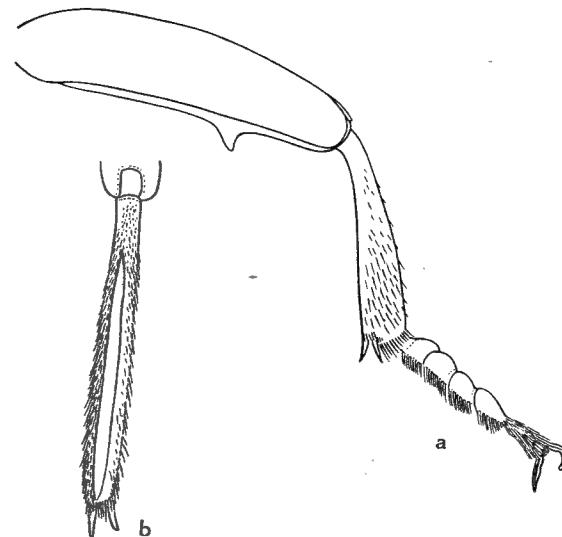


FIG. 160. — *Selinus raposoi* n. sp.

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.

Aedeagus (fig. 158). — Very similar to *punctatostriatus* 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. STAUDINGER (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, *Opatrium 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

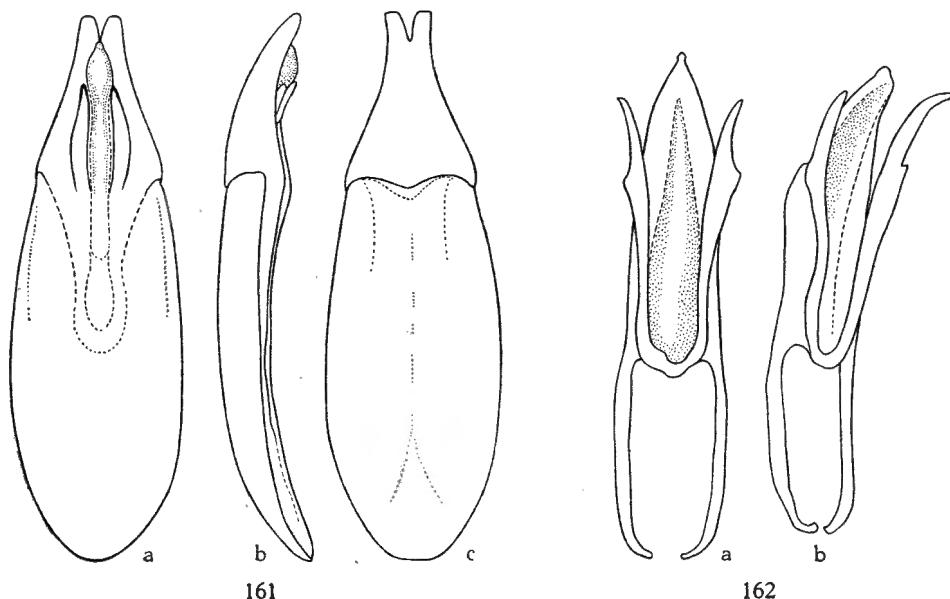


FIG. 161. — Ædeagus of *Selinus planus* (FABRICIUS) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 162. — The extracted penis plus lacinia of the ædeagus of *Selinus planus* (FABRICIUS) (a : outer surface; b : diagonal view).

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. »

R e m a r k s. — Very similar to the species of the *punctatostriatus* 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 punctuation, the episternum almost smooth. Elytra as in *punctatostriatus*, slightly less convex laterally, with sharply lineate

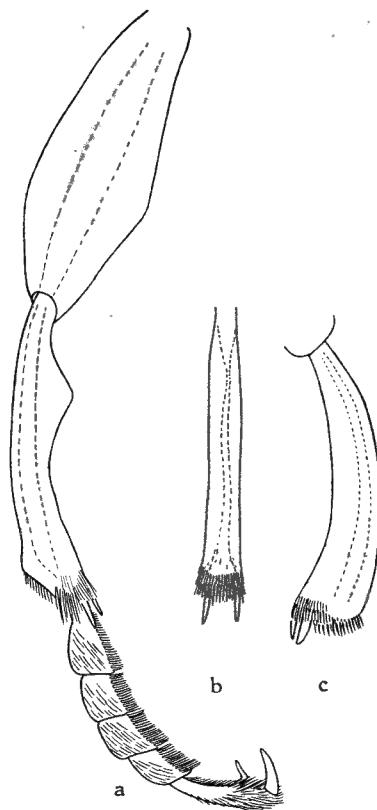


FIG. 163. — *Selinus planus* (FABRICIUS).

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 punctuation 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 tibiæ and almost twice as broad as the slender preapical segment of antennæ; the posterior tibiæ 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 tibiae 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 tibiae 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 gekrümmmt. »

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 punctuation. 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

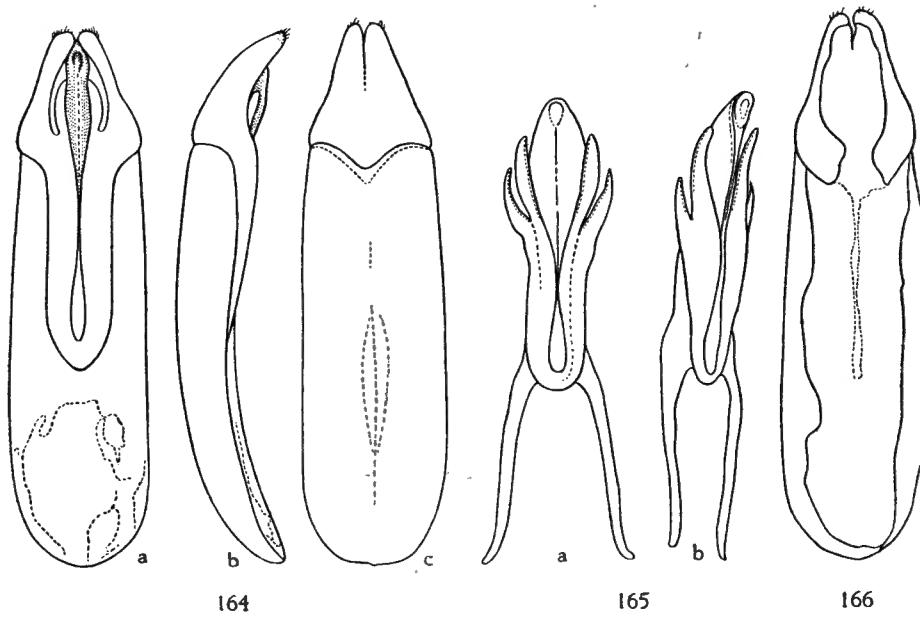


FIG. 164. — *Ædeagus* of *Selinus striatus* (FABRICIUS) (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 165. — The extracted penis plus lacinia of the *ædeagus* of *Selinus striatus* (FABRICIUS) (a : outer surface; b : diagonal view). — FIG. 166. — The dissected and emptied *ædeagal* 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 $11\frac{1}{2}$ mm, width 5 $\frac{1}{2}$ 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.

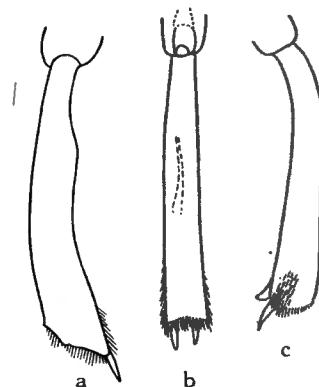


FIG. 167. — *Selinus striatus* (FABRICIUS).

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 pseudo-pleural 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 obsoletely sculptured. Abdomen with dense, partially confluent punctuation on proximal three sternites, more strongly and densely punctured on anal sternite. The latter with moderately strong, complete marginal sulcus. ♂ unknown.

R e m a r k s. — This species is remarkable by the dense and coarse punctuation 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 punctuation on pronotum.

D i m e n s i o n s. — Length 10 to 10 $\frac{1}{2}$ mm, width 4 $\frac{1}{2}$ to 4 $\frac{3}{4}$ mm.

D i s t r i b u t i o n. — South-eastern Tanganyika Territory. — Lukuledi (4♀ ♀, holotype M.St.).

D e d i c a t i o n. — 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 $\frac{1}{2}$ 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 $\frac{3}{4}$ to 10 $\frac{1}{4}$ 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* depresso-niger, opacus, capite thoraceoque crebre punctatis, elytris punctato-sulcatis, interstitiis convexis, subtiliter punctulatis. — Der Körper ist flachgedrückt, matt schwarz. Der Kopf ist dicht, an den Seiten sogar runzlig punktiert, 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 punktiert. Schildchen einzeln punktiert. 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 punktiert, 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.

Aedeagus (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

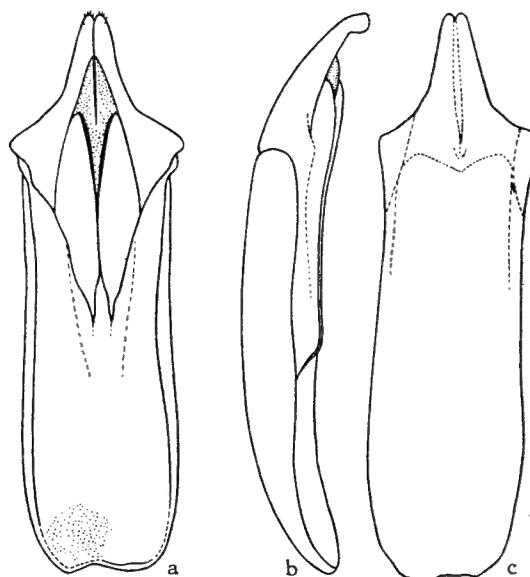


FIG. 168. — *Ædeagus* of *Selinus infernalis* (GERSTAECKER).
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

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.); Donde 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.); Usambara (5 spec., BCM.).

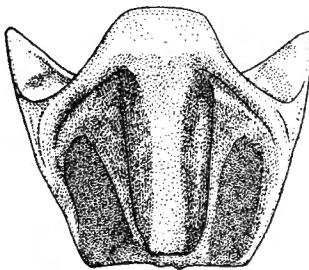


FIG. 169. — Mentum of *Selinus infernalis* (GERSTAECKER).

- Body slender. The sides of pronotum subparallel posteriorly; base considerably narrower than elytra. In the ♂ the inner contours of intermediate tibiae 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, *Opatriinus 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 échantré 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. Écussion très petit; en triangle une fois plus large qu'il est long dans son milieu; lisse ou presque lisse. Élytres 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 crénèlent 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 tarses 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 *Opattrinus 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 tibiæ shorter and slightly moved more proximad; the intermediate tibiæ sharply differentiated and as described above; the inner contours of posterior tibiæ more or less distinctly and elongately emarginate on distal three-fifths and there more conspicuously hairy than in *internalis*; the underside of all femora bare. Mentum fig. 172.

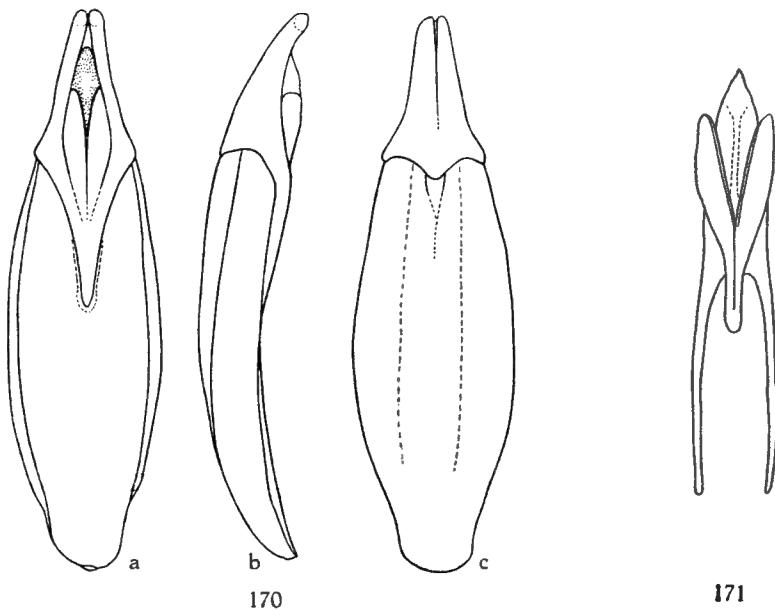


FIG. 170. — \ae deagus of *Selinus menouxi* MULSANT & REY (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 171. — The extracted penis plus lacinia of the \ae deagus of *Selinus menouxi* MULSANT & REY, outer surface.

\AE deagus (figs. 170, 171). — Strongly differing from *S. internalis*, 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 *internalis*. 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); Bagamoyo (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-

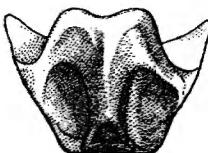


FIG. 172. — Mentum of *Selinus menouxi* MULSANT & REY.

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 punktiert. Flügeldecken merklich kürzer, nach hinten jedoch kaum stumpfer zugerundet, die Punkte in den Furchen mindestens doppelt so breit als bei *Opatriinus trivialis* und letztere daher nur wenig schmäler als die Zwischenräume erscheinend; diese fein und zerstreut punktiert, 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 punktiert; Mesosternum im Bereich der vorderen Hälfte fein gekielt, hinterwärts tief gefurcht. Hinterleib glänzend, fein und zerstreut punktiert, 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 punktiert. Long. 8 $\frac{1}{2}$ - 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 $\frac{3}{4}$ to 4 $\frac{1}{4}$ 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. Aedeagus 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 aedeagus 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 punctuation 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 canalication of sides narrower than in *elevatus*. The punctuation 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 pre-median 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.

Aedeagus (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-

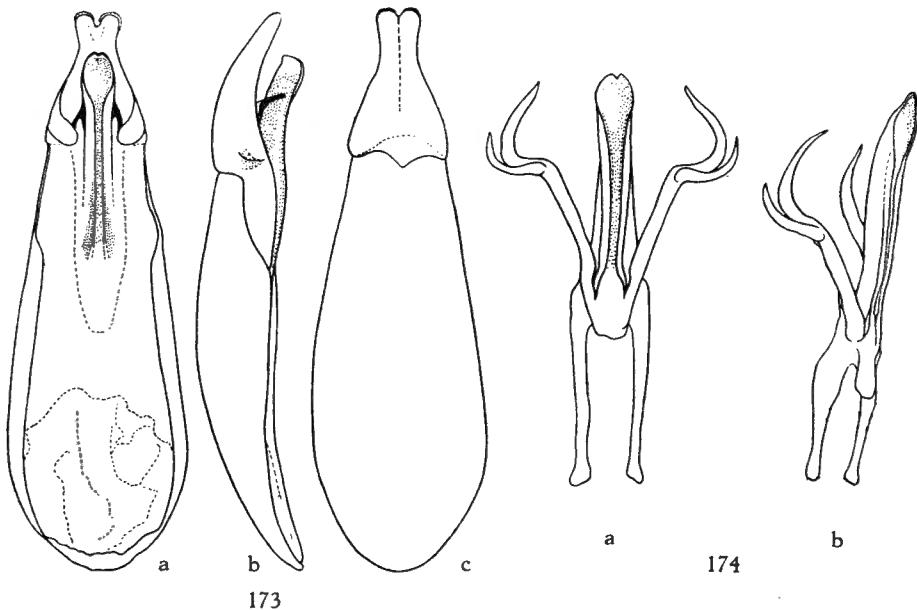


FIG. 173. — \ae deagus of *Selinus leakeyi* n. sp. (a : ventral surface; b : lateral view, with the ventral surface at right; c : dorsal surface). — FIG. 174. — The extracted penis plus lacinia of the \ae deagus of *Selinus leakeyi* n. sp. (a : outer surface; b : diagonal view).

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.); Sekope, 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

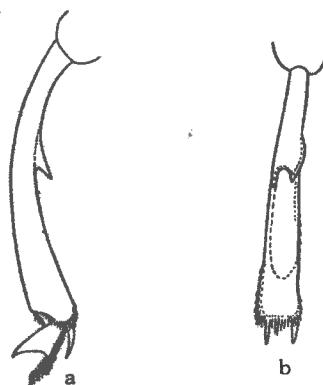


FIG. 175. — *Selinus leakeyi* n. sp.

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. »

R e m a r k s. — 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 ♀♀.

T y p e l o c a l i t y. — « 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 punctuation. 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.

O r i g i n a l d e s c r i p t i o n. — « *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 arcuatiss 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. »

R e m a r k s. — 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.

[**Phymatoplatia 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 rugueuse; les pattes et les antennes sont aussi d'un rougeâtre obscur, les dernières plus claires et surtout bien plus grèles; 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 punctuation 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 punctuation, 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.

Aedeagus. — 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. Antennae with strongly dilated distal segments. Pronotum transverse, very densely and rather strongly punctured, convex, with only weakly to obsoletely indicated, narrow, submarginal 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 punctuation, 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.

Aedeagus. — 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 punctuation 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 sudabandeirus KOCH.

(Fig. 176.)

*1955 a, *Angolositus sudabandeirus* 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. »

Aedeagus. — 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.

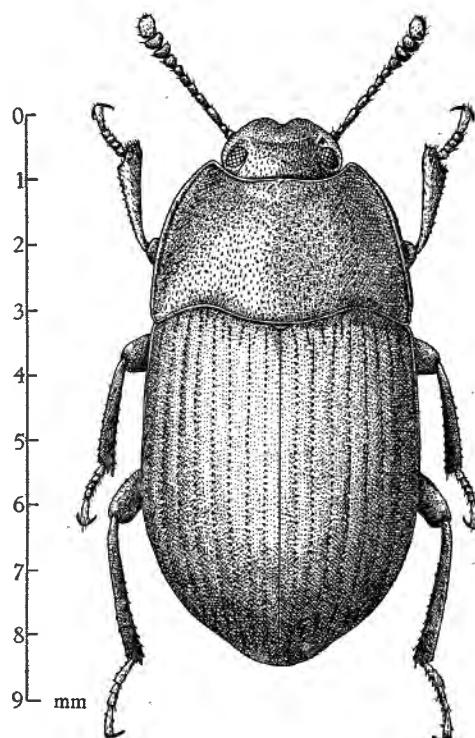


FIG. 176. — *Angolositus sadabandeirus* KOCH.

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, *Opatriinus rufimanus* HAROLD, p. 116.

1910 b, *Selinus rufimanus* GEBLEN, p. 278. — 1938-1942, GEBLEN, 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 Punkttrihen, die Zwischenräume fein und dicht punktiert, durch schwache Quereindrücke etwas uneben; die breiten Epipleuren 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 *Opatriinus*, 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 Vorrägung des Kinns und die in beiden Geschlechtern einfachen Vorderfüsse gestatten eine sichere Scheidung der Opatriinen 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.

D e f i n i t i o n . — 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.

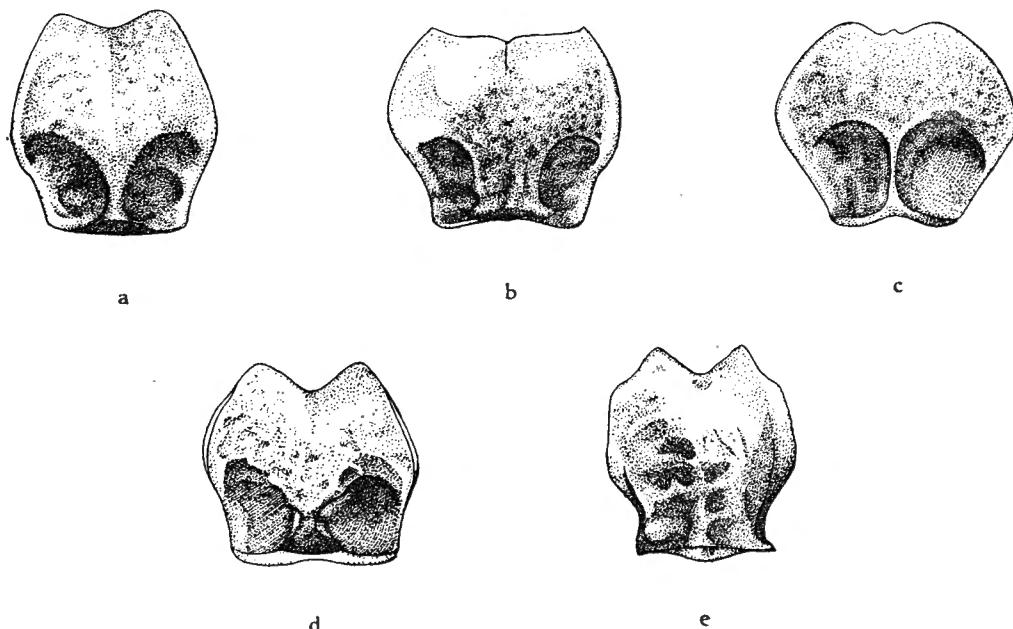


FIG. 177. — The mentum in a few *Zadenina* of *Litoborini*.

a : *Zadenos (Euzadenos) costifer* n. sp.; b : *Zadenos* (s. str.) *longipalpus* (WIEDEMANN);
c : *Zadenos (Serridenos) solenopistoma* n. sp.; d : *Minorus rugicollis* (MULSANT & REY);
e : *Hanstroemium adelostomoide* KOCH.

R e l a t i o n s h i p. — 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 (*Hanstroemium*, 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 *Hanstrœmum* (fig. 223).

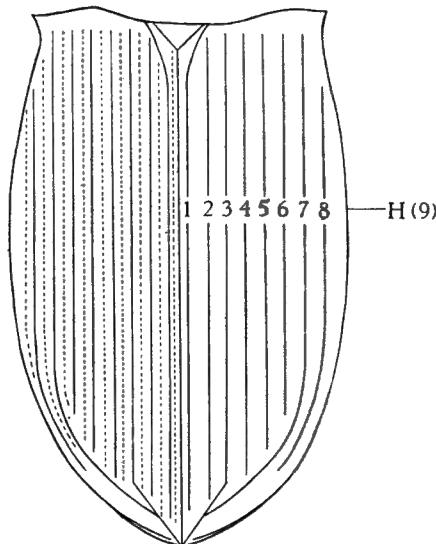


FIG. 178. — Scheme of the arrangement of sculpture on dorsal surface of elytra in the *Zadenina* of *Litoborini*.

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), *Hanstrœmum* 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 palaeartic *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 palaeartic 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 palaeartic 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.

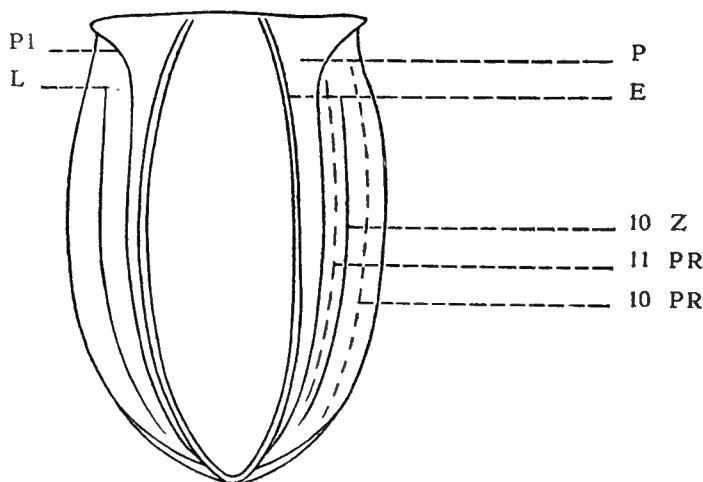


FIG. 179. — The ventrally reflected portion of elytra in *Zadenos*.
E : epipleura; L : lateral interval; P : pseudopleura; P1 : pseudopleural crest; 10 PR : tenth primary row; 11 PR : eleventh primary row; 10 Z : costa on tenth secondary interval.

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.
Palaeartic *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.

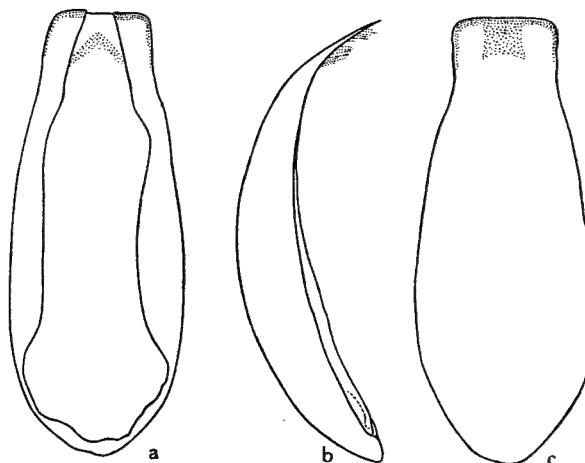


FIG. 180. — The dissected and emptied aedeagal tegmen of *Litoborus* spec. from « Algeria ».

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*

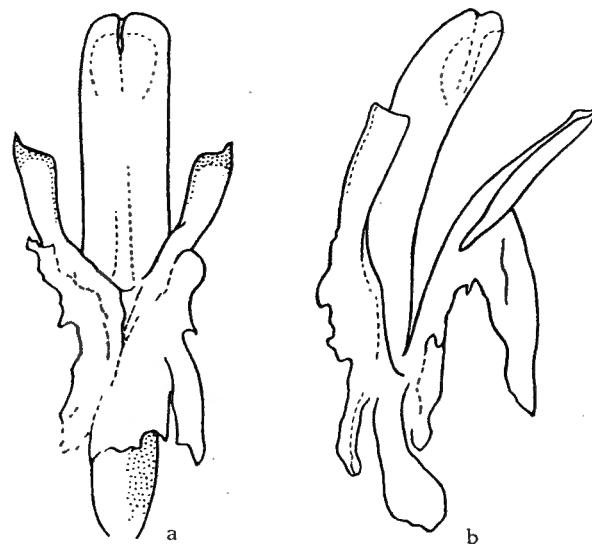
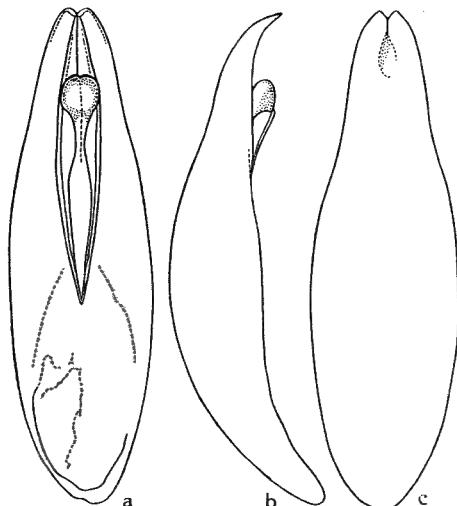
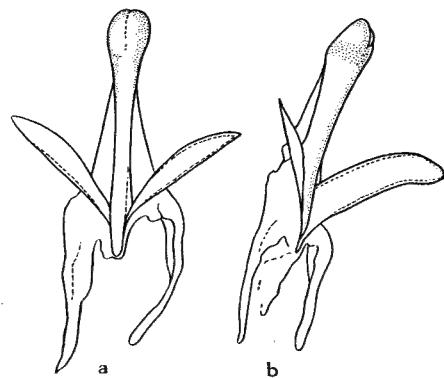


FIG. 181. — The extracted penis with lacinia of *Litoborus* spec.
from « Algeria ».

a : outer surface; b : diagonal view.



182



183

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.

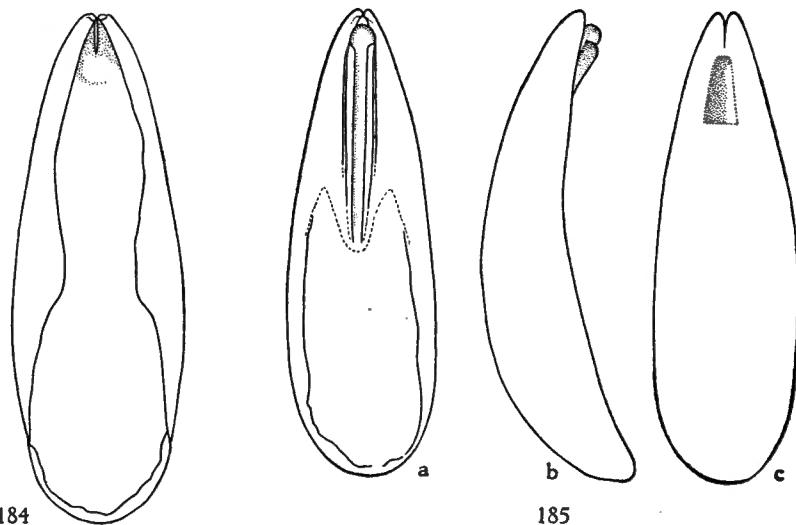


FIG. 184. — The dissected and emptied aedeagal tegmen of *Hoplariion* (s. str.) *attritum* BEDEL. — FIG. 185. — Aedeagus of *Hoplariion* (*Saharoplarion*) *compactum* (FAIRMAIRE) (a : ventral surface; b : lateral aspect, with the ventral surface at right; c : dorsal surface).

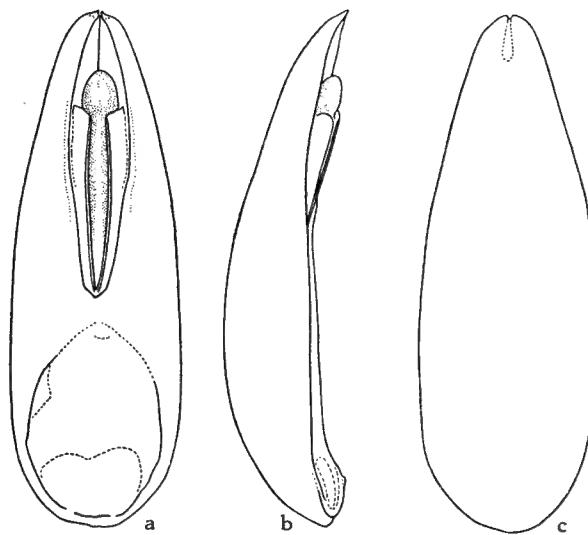


FIG. 186. — Aedeagus of *Hoplariobius* (*Glyptariobius*) *excavatus* KOCH.
a : ventral surface; b : lateral view, with the ventral surface at right;
c : dorsal surface.

(*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.

[Palaearctic genera and subgenera (cf. KOCH, 1948, p. 405)] 71

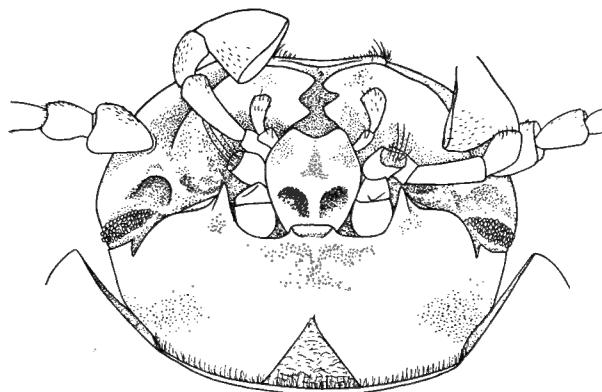


FIG. 187. — Under surface of head of *Zadenos (Serridenos) solenopistoma* n. sp.

(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 pseudopleura 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

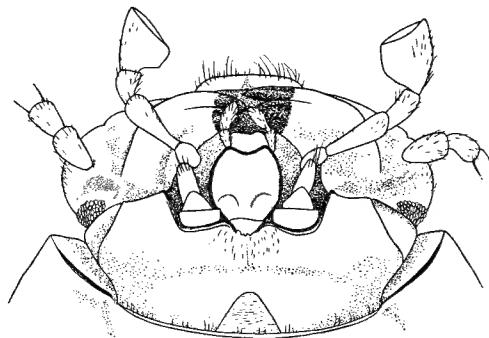


FIG. 188. — Under surface of head of *Minorus sculpticeps* n. sp.

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 $\frac{1}{2}$ to 13 $\frac{1}{2}$ 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 bistriatus* 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 $\frac{1}{4}$ to 10 $\frac{1}{4}$ 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 : <i>Eurynotus (Zadenos) delalandei</i> 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 sub-granular or substriolated sculpture; the intervals between punctures forming raised rugosities	20
8. Body of larger size, 7 to 10 $\frac{1}{2}$ mm long	9
— Body of smaller size, 4 $\frac{1}{2}$ to 6 $\frac{1}{4}$ 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 punctuation, 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 punctuation, 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 $\frac{1}{4}$ - 7 $\frac{1}{2}$ mm; width 3 $\frac{1}{2}$ 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, *Eurygnatus (Zadenos) delalandii* MULSANT & REY, p. 182. — 1854 b, MULSANT & REY, p. 38.

1870, *Eurygnatus delalandi* GEMMINGER & DE HAROLD, p. 1914.

1910 b, *Eurygnatus delalandei* GEBIEN, p. 276. — 1938-1942, GEBIEN, p. 414, n° 5544.

1897, *Eurygnatus 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 hissinué 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 tarses antérieurs garnis en dessous d'une brosse serrée ou de sortes de ventouses : les deuxième et troisième, dilatés. ♀ Tarses 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 *delalandei* and can not be referred to any of the other related species.

Type locality. — « L'Afrique méridionale », type probably in Museum Paris.

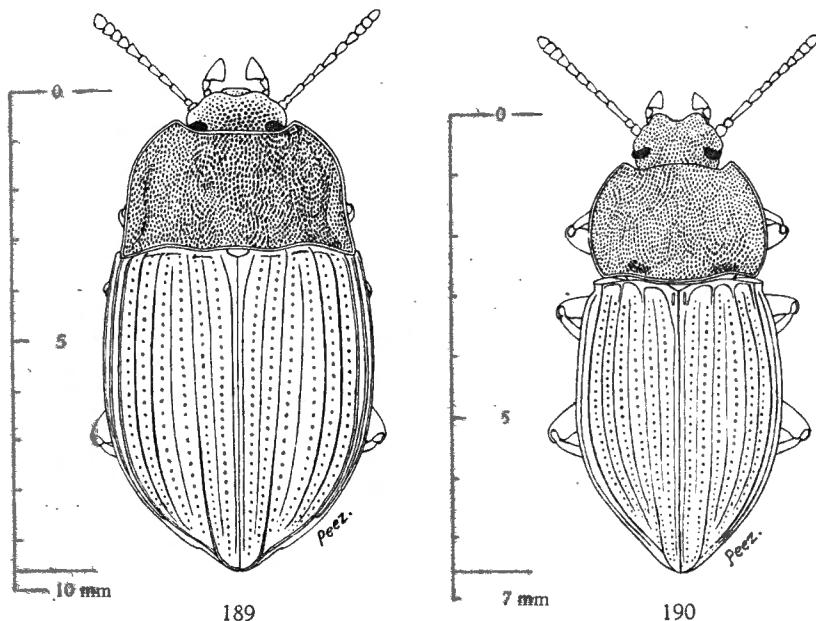


FIG. 189. — *Zadenos (Euzadenos) capriciosus* (MULSANT & REY).

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 médiaire 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 punctuation, sparsely and briefly pilose, with rather strongly rounded, posteriorly sinuate sides and bi-sinuate, obsoletely 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 punctuation; 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); Amanzimtoti, 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.

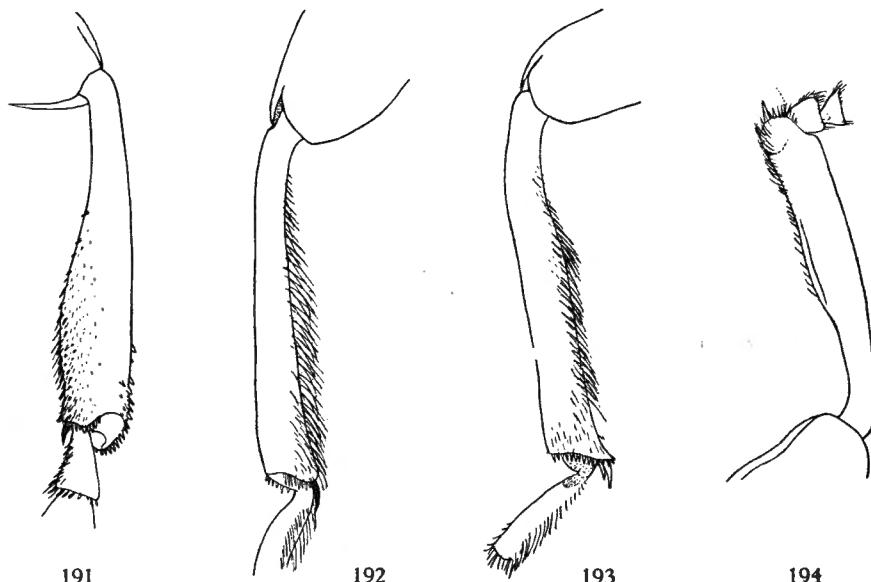


FIG. 191. — Intermediate tibia of a ♂ of *Zadenos (Euzadenos) capriciosus* (MULSANT & REY). — FIG. 192. — Posterior tibia of a ♂ of *Zadenos (Euzadenos) rotundicollis rotundicollis* n. sp. — FIG. 193. — Posterior tibia of a ♂ of *Zadenos (Euzadenos) monticola monticola* n. sp. — FIG. 194. — Anterior tibia of a ♂ of *Zadenos (Euzadenos) externus* n. sp.

Intervals and pseudopleura of elytra sericeous, without discernible punctuation; 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 punctuation; 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 punctuation, more concentrated on anal sternite. Legs reddish brown, shaped as in *delalandei*. ♂ unknown.

R e m a r k s. — *Z. zuluensis* shows also related to *natalensis* on account of the well separated, setiferous punctuation 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, *zuluensis* 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.

D i m e n s i o n s. — Length 7 $\frac{1}{2}$ mm, width 3 $\frac{1}{4}$ mm.

D i s t r i b u t i o n. — Zululand. — Junction Mfolozi and Onkudu Rivers, VII.1905, I. TRÄGÅRDH (1♀, holotype M.St.).

- Pronotum bare, with very dense punctuation, 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. zuluensis*, 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.

Aedeagus. — 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 costa 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.